



CENTER FOR
HEALTHCARE
QUALITY &
PAYMENT REFORM

Saving Rural Hospitals and Sustaining Rural Healthcare

Harold D. Miller



First Edition
September 2020

CONTENTS

EXECUTIVE SUMMARY	1
I. THE ROLE OF RURAL HOSPITALS AND THE IMPACT OF CLOSURES	1
A. The Two Types of Hospitals in America.....	1
B. The Importance of Rural Hospitals to Rural Communities.....	2
C. The Importance of Rural Hospitals to the Rest of the Country	5
D. The Problem of Rural Hospital Closures.....	8
E. Will the Future Be Better or Worse for Small Rural Hospitals?	12
II. THE CAUSES OF FINANCIAL PROBLEMS AND CLOSURES	13
A. The Magnitude of Financial Losses at Small Rural Hospitals	13
B. Sources of Revenues in Rural Hospitals.....	15
C. Causes of Losses in Small Rural Hospitals	16
1. Causes of Losses at Hospitals That Closed	18
2. Causes of Losses in the Smallest Rural Hospitals	18
3. The Key Role of Private Payers in Rural Hospital Losses.....	19
4. The Impact of Patient Bad Debt on Rural Hospital Losses	20
5. The Impact of Medicaid on Rural Hospital Finances.....	20
6. The Impact of Medicare Payments on Rural Hospital Finances.....	21
7. The Key Role of Other Sources of Revenue in Sustaining Rural Hospitals	22
D. Differences by State.....	23
E. Which Private Payers Contribute Most to Hospital Losses?.....	27
F. Causes of Losses on Services to Patients With Private Insurance	32
G. Reducing Financial Problems That Cause Closures.....	34
III. THE COST OF DELIVERING SERVICES IN SMALL RURAL HOSPITALS.....	36
A. The Major Categories of Expenses in Small Rural Hospitals.....	36
B. The Cost of Delivering Rural Emergency Department Services	38
C. The Cost of Inpatient Care in Small Rural Hospitals.....	46
D. The Cost of Ancillary Services in Small Rural Hospitals.....	53
E. The Cost of Delivering Rural Health Clinic and Primary Care Services	60
F. The Impact of Eliminating Inpatient Care.....	65
G. Why Fee-for-Service Payment Will Never Sustain Rural Hospitals.....	66
IV. THE STRENGTHS AND WEAKNESSES OF COST-BASED PAYMENT.....	67
A. Cost-Based Payment as an Alternative to Fees for Services.....	67
B. How Cost-Based Payment for Rural Hospitals Works	68
C. Examples of How Cost-Based Payment Affects Hospital Margins	70
D. The Many Problems With Cost-Based Payment	74
E. Cost-Based Payment Doesn't Solve Rural Hospital Problems	77

V. THE STRENGTHS AND WEAKNESSES OF GLOBAL BUDGETS	78
A. Global Budgets in Maryland	79
B. The Pennsylvania Rural Health Model	84
C. The CMS CHART Model	87
D. Will a Global Budget Help a Small Rural Hospital?	88
E. The Shift Away from Hospital Global Budgets in Other Countries	99
VI. THE PROBLEMS WITH ACOs, SHARED SAVINGS, AND GLOBAL PAYMENTS.....	100
A. The Promise and Problems of ACOs	100
B. How “Shared Savings” Actually Works.....	100
C. Why Shared Savings Programs Don’t Fix the Problems With Current Payment Systems.....	101
D. Why Shared Savings Programs Are Particularly Problematic for Small Rural Hospitals	103
E. How Shared Savings Programs Can Harm Patients	105
F. Greater Risk for Hospitals ≠ Better Quality Care for Patients	106
VII. A BETTER WAY TO PAY RURAL HOSPITALS	108
A. Goals for Rural Hospital Payment	108
B. Effectiveness of Current Payment Systems in Achieving the Goals.....	109
C. A Patient-Centered Payment System for Rural Hospitals & Clinics	111
1. Standby Capacity Payment to Support the Fixed Costs of Essential Services.....	111
2. Service-Based Fees for Diagnostic and Treatment Services Based on Marginal Costs.....	114
3. Patient-Based Payments for Primary Care Management.....	117
4. Accountability for Quality and Spending	120
5. Value-Based Cost-Sharing for Patients	123
D. Examples of How Patient-Centered Payments Would Work	126
E. Impact on Healthcare Spending of a Patient-Centered Payment System	133
F. Operationalizing Patient-Centered Payments.....	136
VIII. HOW TO SAVE RURAL HOSPITALS BEFORE IT’S TOO LATE	138
A. The Need for Rapid Action to Prevent Closures and Sustain Rural Healthcare	139
B. The Need for a Better Payment System for Rural Hospitals	141
1. What Will <i>Not</i> Solve the Problem.....	141
2. What <i>Will</i> Solve the Problem.....	142
3. The Cost of the Solution.....	143
C. Achieving Multi-Payer Payment Reform for Rural Hospitals.....	145
1. Changing Payments from Private Insurance Plans	145
2. Changes Needed in Medicaid.....	147
3. Changes Needed in Medicare	148
D. What Rural Hospitals Need to Do	150
APPENDIX: Data and Methodology	152
ENDNOTES	157

EXECUTIVE SUMMARY

Saving Rural Hospitals and Strengthening Rural Healthcare

The Crisis Facing Rural Healthcare in America

More than 800 rural hospitals – 40% of all rural hospitals in the country – are at risk of closing in the near future. Most of these are small rural hospitals that provide not only emergency care, inpatient care, and outpatient services, but also primary care, rehabilitation, and long-term care services for their communities. Moreover, most of the hospitals are located in isolated communities where loss of the hospital could severely limit access to health care services. More than 20 million people could be directly harmed if these hospitals close, and people in all parts of the country could be affected through the impacts on workers in agriculture and other industries.

The Causes of the Financial Problems at Small Rural Hospitals

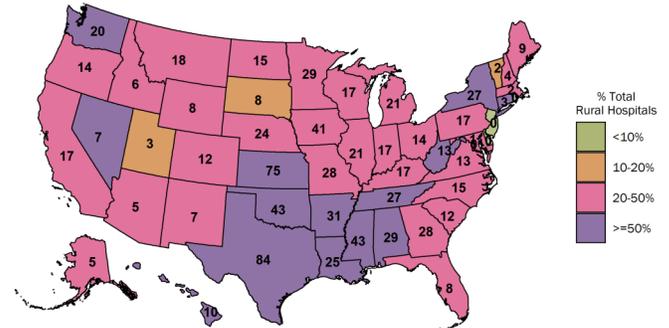
The smallest rural hospitals are facing closure because the payments they receive for services are less than the cost of delivering care to patients in rural communities. Most of the smallest rural hospitals (those with less than \$20 million in total hospital expenses) lose significant amounts of money delivering patient services, while the majority of larger rural hospitals make profits delivering services to patients.

Most of the smallest rural hospitals lose money delivering patient services in almost every state.

In more than half the states, the majority of very small rural hospitals lose more than 5% on delivery of services to patients.

The largest causes of losses at the smallest rural hospitals are low payments by private health insurance plans and patient bad debt. Private insurance plans pay less than it costs to deliver essential services such as emergency care and primary care in very small rural communities, whereas payments from private plans are significantly higher than the costs of delivering services at most large hospitals. Although the majority of very small hospitals also lose money on Medicaid and charity care patients, losses or low payments on patients with private insurance (including Medicare Advantage) plans have a bigger impact on the hospitals' total margins because there are far more patients who have private insurance. The smallest rural hospitals also lose a significant amount on bad debt, i.e., insured patients who cannot pay required amounts of cost-sharing and patients who cannot afford insurance but do not qualify for charity care. Large hospitals can offset bad debt losses using margins from private-pay patients, but most small rural hospitals cannot do that because they don't make profits on private-pay patients. Medicare payments are not the biggest problem because most small rural hospitals are classified as Critical Access Hospitals and receive cost-based payments from Medicare.

Rural Hospitals at Immediate or High Risk of Closure



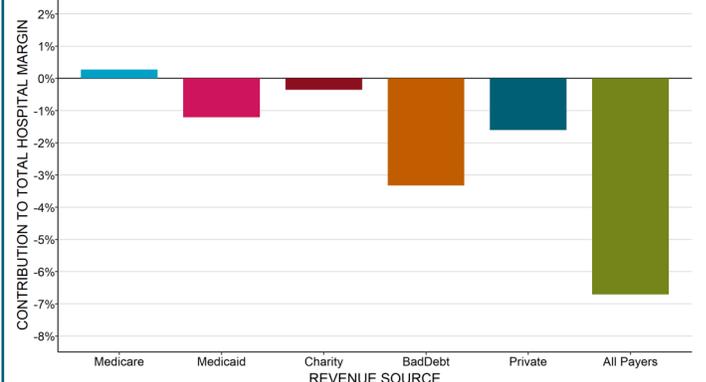
Risk of closure is based on persistent financial losses and low financial reserves, or high dependence on grants, local taxes or other revenues not derived from patient services. See the full report for details on the data and methodology.

Median Margins on Patient Services at Rural Hospitals by Size of Hospital



Amounts shown are medians for 2016-18. See the full report for details.

Payer Contributions to Margins at the Smallest Rural Hospitals



Amounts shown are medians for 2016-18 at rural hospitals with less than \$20 million in total annual expenses. See the full report for details on the data and methodology.

There is tremendous variation across the country in both the magnitude of losses and the causes of losses at very small rural hospitals. In many states, low payments from private insurance plans are the primary cause of financial problems in small rural hospitals, but in other states, low Medicaid payments and low rates of insurance coverage are the largest causes of losses.

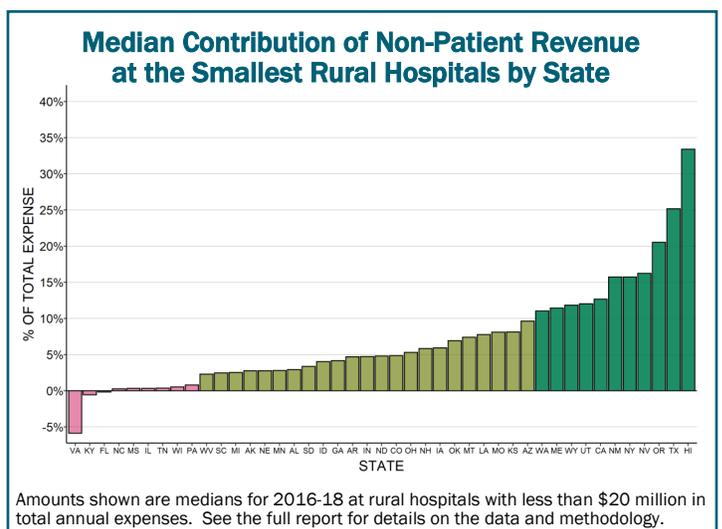
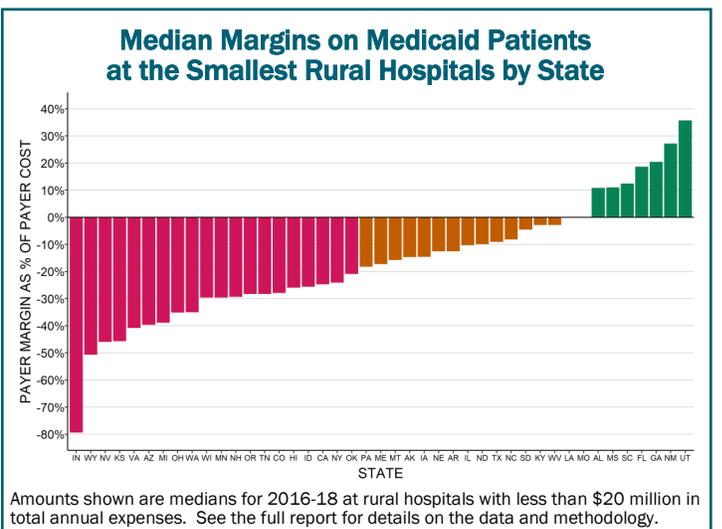
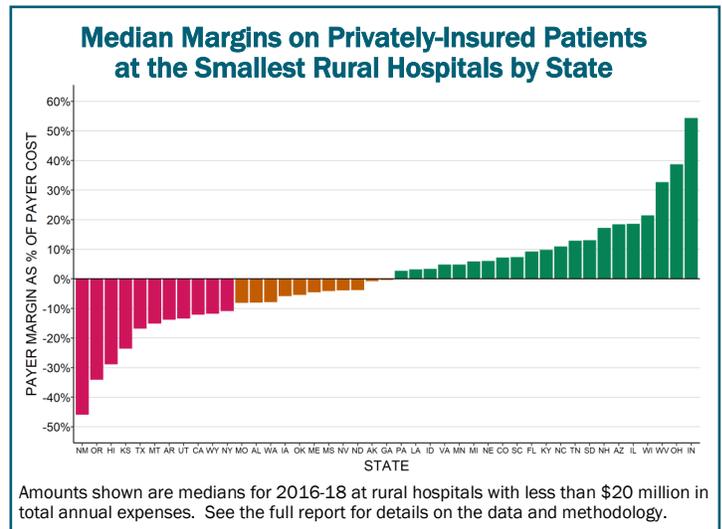
Many small rural hospitals remain open only because they receive significant supplemental funding from state grants or local taxes. In some states, state governments provide grants that reduce or eliminate losses at small rural hospitals, while there is little or no such assistance in other states. Small rural hospitals in some states are organized as public hospital districts, and residents of these communities tax themselves to offset underpayments by private health plans and Medicaid. It is not clear that these hospitals can continue receiving these large amounts of revenue in the future, and without them, the hospitals would likely be forced to close.

The Problems With Current Payment Methods

Standard fee for service payments are not large enough to cover the cost of delivering services in small rural communities. The average cost of an emergency room visit, inpatient day, laboratory test, imaging study, and primary care visit is inherently higher in small rural hospitals and clinics than at larger hospitals because there is a minimum level of staffing and equipment required to deliver each of these services regardless of how many patients need to use them. For example, a hospital Emergency Department has to have at least one physician available around the clock in order to respond to injuries and medical emergencies quickly and effectively, regardless of how many patients actually visit the ED. A smaller community will have fewer ED visits, but the standby capacity cost of the ED will be the same, so the average cost per visit will be higher. Consequently, fees that are high enough to cover the average cost per service at larger hospitals will fail to cover the costs of the same services at small hospitals. Many private health plans pay small rural hospitals less than they pay larger hospitals for the same services, even though the cost per service at the smaller hospitals is inherently higher.

Critical Access Hospital status reduces the hospital's losses only on services to Original Medicare beneficiaries, and it makes services less affordable for the patients. Although the cost-based system for Critical Access Hospitals results in higher payments for patients with Original Medicare, it does nothing to reduce losses on uninsured patients and those with other types of insurance. Under Medicare rules, patients have to pay higher cost-sharing amounts in order to receive services at Critical Access Hospitals than at other hospitals.

Current methods of payment penalize hospitals for efforts to improve the health of rural residents. If community residents are healthier and need fewer ED visits and other services, the hospital's fee-for-service revenues will decrease, but the cost of maintaining the essential services will not change, thereby increasing financial losses at the hospital. The same problem occurs under Medicare's cost-based payment system for Critical Access Hospitals and Rural Health Clinics



The Serious Problems With Commonly Proposed Solutions

The four policies that are most commonly proposed to help rural hospitals are: (1) paying a rural hospital more if it eliminates inpatient services; (2) creating a “global budget” for the hospital; (3) paying a hospital “shared savings” bonuses if it reduces total healthcare spending for its patients; and (4) expanding Medicaid eligibility.

Requiring rural hospitals to eliminate inpatient services would increase their financial losses while reducing access to inpatient care for local residents. In most cases, the revenues generated by inpatient care at a small rural hospital exceed the direct costs of delivering that care, so even though eliminating the inpatient unit would reduce the hospital’s costs, its revenues would decrease even more, making it worse off financially. Moreover, residents who have a medical condition that requires a short hospital admission would have to be transferred to another city, and local residents who currently receive inpatient rehabilitation and/or long-term nursing care in the hospital’s swing beds could no longer receive those services close to home.

Global budget programs would increase losses and reduce access to services for patients. Most global budget programs have been created in order to limit or reduce payments to hospitals, not to address shortfalls in payment or prevent closure of small rural hospitals. Hospitals in communities that are experiencing significant population losses or that deliver unnecessary services could benefit from a global budget program in the short run, but hospitals that experience higher costs or higher volumes of services due to circumstances beyond their control would likely be harmed, since their revenues would no longer increase to help cover the additional costs. Access to care for patients can be harmed if budgets are not large enough to support the costs of services, which has led many other countries to modify or replace their global budget systems.

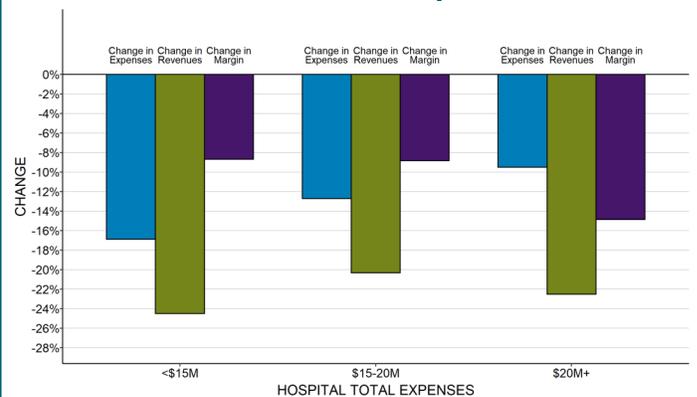
- Although Maryland’s global budget program has been cited as an example of how rural hospitals can benefit from this approach, the smallest rural hospital in Maryland closed in 2020 despite operating under the global budget system for over a decade.
- Under the Pennsylvania Rural Health Model that was created by CMS, hospitals receive global budgets that are based on the amount of *revenues* they received in the *past*, with no assurance the budgets will be adequate to support the *current* cost of delivering essential services.
- Under the Community Health Access and Rural Transformation (CHART) Model announced by CMS in August 2020, the “capitated payments” to rural hospitals would be even lower than the inadequate amounts they currently receive.

Small rural hospitals would be unlikely to benefit from “shared savings” programs, and most would be harmed by taking on downside risk for total healthcare spending. The majority of Accountable Care Organizations (ACO) in the Medicare Shared Savings Program have been unable to qualify for shared savings bonuses, and it is particularly difficult for small rural ACOs to do so

because the minimum savings threshold is higher and there are fewer opportunities to generate savings. “Downside risk” is especially problematic for small rural hospitals, because they do not deliver and cannot control many of the most expensive services their residents may need, and a requirement that the rural hospital pay penalties when community residents need expensive services at urban hospitals would worsen the rural hospitals’ financial problems.

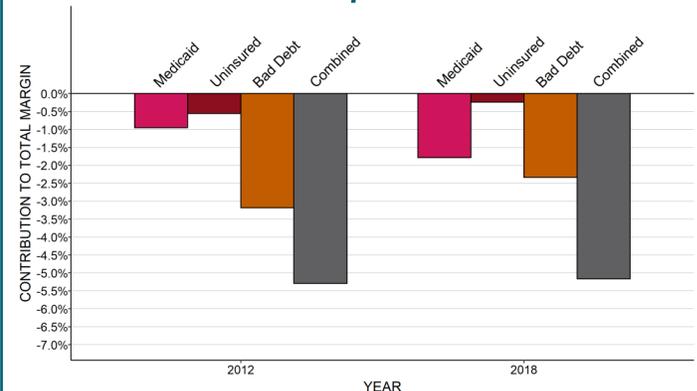
Expansion of eligibility for Medicaid reduces a portion of hospitals’ losses on uninsured patients and bad debt, but it does not eliminate all of those losses and it does not reduce the losses caused by the low amounts paid for services delivered to Medicaid patients in most states. In states that have expanded Medicaid, losses on uninsured charity cases and bad debt decreased, but losses on services to Medicaid patients nearly doubled, resulting in relatively little net benefit for the small hospitals.

Financial Impact of Eliminating Inpatient Services at Small Rural Hospitals



Amounts shown are medians for 2016-18 based on estimated reduction in costs and revenues for inpatient care. See the full report for details on the data and methodology.

Medicaid, Uninsured, and Bad Debt Contributions to Small Rural Hospital Margins in States That Expanded Medicaid



Amounts shown are medians for rural hospitals with <\$20 million total expenses in states that expanded Medicaid between 2012 and 2018. See the full report for details on the data and methodology.

A Better Way to Pay Rural Hospitals & Clinics

A good payment system for rural hospitals and clinics must achieve three key goals:

- (1) Ensure availability of essential services in the community;
- (2) Enable safe and timely delivery of the services patients need at prices they can afford; and
- (3) Encourage better health and lower healthcare spending.

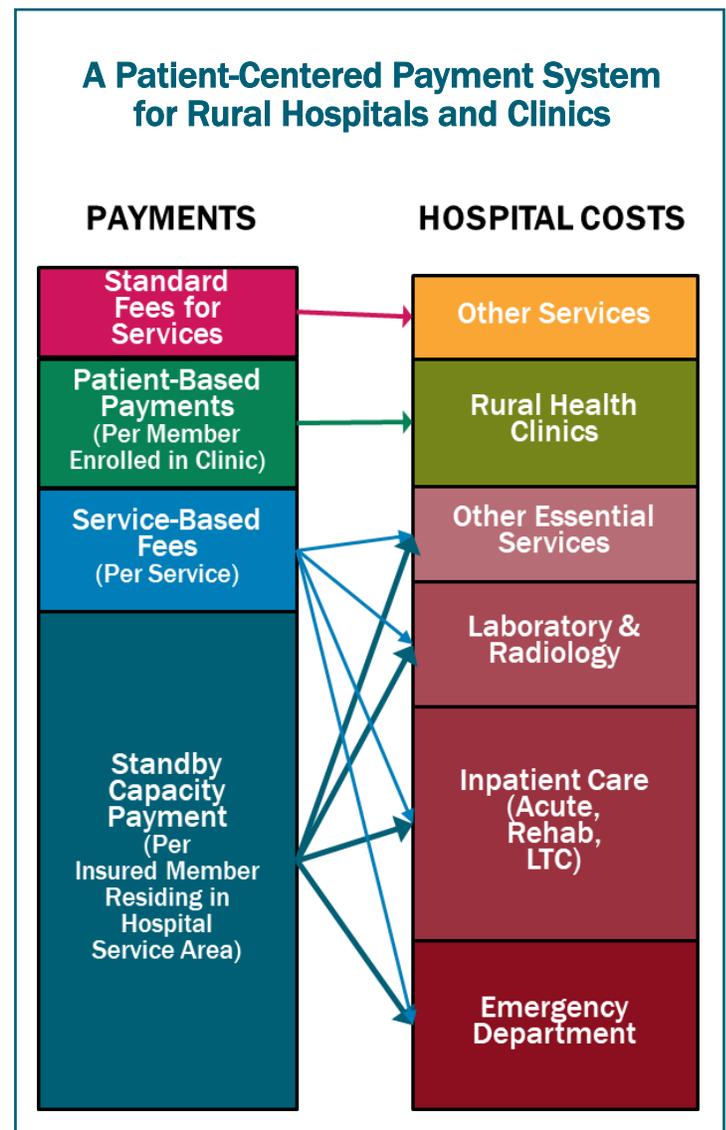
A **Patient-Centered Payment System** for rural hospitals and primary care clinics can achieve all three goals using the following five components:

- **Standby Capacity Payments to support the fixed costs of essential services.** Standby Capacity Payments would be paid to a rural hospital by each health insurance plan (Medicare, Medicaid, Medicare Advantage, and commercial insurance) based on the number of members of that plan who live in the community, not based on the number of services the patients receive. This ensures that the hospital has adequate revenues to support the minimum standby costs of essential services such as the emergency department, inpatient unit, and laboratory regardless of how many patients actually need services during any given month or year.
- **Service-Based Fees for diagnostic and treatment services based on marginal costs.** Under Patient-Centered Payment, hospitals would continue to receive fees for delivering individual services, but the Service-Based Fees will be much lower than current fees. Since the Standby Capacity Payments support the *fixed* costs of essential services, the Service-Based Fees only need to cover the small amount of *additional* costs incurred when additional services are delivered. This means that if patients stay healthy and need fewer services, revenues and costs will decrease by similar amounts, so the hospital's margin will not be harmed.
- **Patient-Based Payments for primary care management.** The Rural Health Clinic or primary care practice would receive a monthly Comprehensive Primary Care Management Payment from a health insurance plan for each insured member who enrolls with the clinic for ongoing primary care. This payment would give the clinic the flexibility to deliver services in ways that work most effectively for patients, rather than being restricted to delivering only in-person visits at the clinic. The payments would be higher for patients who have higher needs to ensure they can receive high-quality care.
- **Accountability for quality and spending.** In return for receiving adequate, predictable, flexible payments to support essential services, rural hospitals and primary care clinics would take accountability for delivering high-quality services and improving patient outcomes. Standards and measures of quality would be used that are appropriate for small rural hospitals and clinics.

- **Value-based cost-sharing for patients.** The high deductibles, copayments, and co-insurance used in most health insurance plans today cause many patients to delay or avoid receiving services they need. Rural hospitals and primary care clinics should have the flexibility to set lower cost-sharing rates for high-value services and to help pay for transportation or provide other assistance that would help patients to adhere to their care plans.

Rural hospitals that want to deliver desirable but non-essential services would need to support them using the standard fees for those services paid by Medicare and other payers.

A Patient-Centered Payment System would do a better job of matching payments to costs than either fee-for-service payments or global budgets, without problematic incentives to deliver unnecessary services or to stint on care.



How to Save Rural Hospitals and Strengthen Rural Healthcare

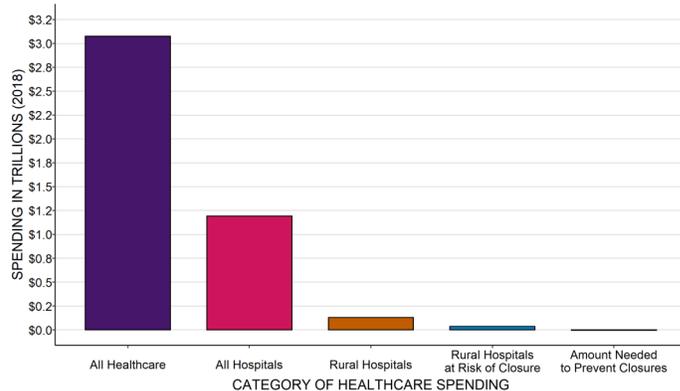
It will cost about \$3.7 billion per year to prevent closures of the at-risk hospitals and preserve access to rural healthcare services, an increase of only 1/10 of 1% in total national healthcare spending. No payment system will sustain rural hospitals and clinics unless the amounts of payment are large enough to cover the cost of delivering high-quality care in small rural communities. Because current payments are below the costs of delivering services, an increase in spending will be needed to keep rural hospitals solvent, but \$3.7 billion is a tiny amount in comparison to the more than \$3 trillion currently spent on healthcare and the more than \$1 trillion spent on all hospital services nationally. Moreover, most of the increase in payments to small rural hospitals will support primary care and emergency care in rural communities, since these are the services where the biggest shortfalls in current payments exist.

Spending would likely increase even if the hospitals close. Reduced access to preventive care and prompt treatment will cause residents of the rural communities to experience additional and more serious health problems and increase their need for services and for more expensive services in the future. Paying more now to preserve local healthcare services is a better way to invest resources.

Citizens, businesses, local governments, state government, and the federal government must all take action to ensure that every payer provides adequate and appropriate payments for small rural hospitals and clinics:

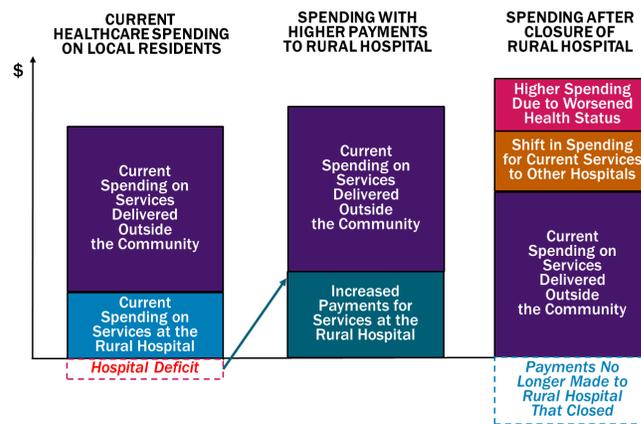
- Businesses, local governments, and rural residents must demand that private health insurance companies change the way they pay small rural hospitals.** The biggest cause of negative margins in most small rural hospitals in most states is low payments from private insurance plans and Medicare Advantage plans. Not only do the payments fail to cover the costs of services to the patients with insurance, the lack of any profit margin on the services makes it impossible for the hospitals to offset losses due to bad debt. Private insurance plans are unlikely to increase or change their payments unless businesses, local governments, and residents choose health plans based on whether they pay the local hospital adequately and appropriately. State insurance departments and state insurance exchanges can help by requiring health plans to disclose their payment methods and amounts for small rural hospitals and by encouraging the plans to use Patient-Centered Payments instead of traditional fees.
- Medicaid programs and managed care organizations need to pay small rural hospitals adequately and appropriately for their services.** Expanded eligibility for Medicaid will help more rural residents afford healthcare services, but small rural hospitals will benefit most from receiving higher Medicaid payments for their services. CMS should authorize states to require Medicaid MCOs to use Patient-Centered Payments and to pay adequately for services at small rural hospitals.

Increased Spending Needed to Eliminate Deficits at Small Rural Hospitals Compared to National Healthcare Spending



Amount needed to prevent closures is the average annual loss in the most recent three years for which data were available for hospitals classified as being at immediate or high risk of closure. See full report for details on methodology.

Spending May Increase Even More if Rural Hospitals Are Allowed to Close



- Congress should create a Patient-Centered Payment program in Medicare for small rural hospitals.** Although Medicare is not the primary cause of deficits at small rural hospitals, creation of an appropriate Medicare payment system for rural hospitals and clinics could serve as a model for other payers. However, the “global budget” demonstration programs proposed to date are unlikely to help most rural hospitals and they could harm the smallest hospitals.

Rural hospitals need to be transparent about their costs, efficiency, and quality, and they should do what they can to control healthcare spending for local residents.

In order to support higher and better payments for hospitals, the purchasers and patients in rural communities need to have confidence that their local hospitals will use the payments to deliver high-quality services at the lowest possible cost, and that the hospitals will proactively identify and pursue opportunities to control healthcare costs for community residents. Small rural hospitals should estimate the minimum feasible costs for delivering essential services, they should proactively work to improve the efficiency of their services, and they should publicly report on the quality of their care.

I.

THE ROLE OF RURAL HOSPITALS AND THE IMPACT OF CLOSURES

KEY POINTS

There are two very different types of hospitals in America: (1) large and urban hospitals, and (2) small rural hospitals. The more than 1,500 small rural hospitals represent 36% of all the short-term general hospitals in the country, but they receive less than 5% of total national hospital spending.

Small rural hospitals provide most or all of the healthcare services in the small communities they serve. Small rural hospitals deliver not only traditional hospital services such as emergency care, inpatient care, and laboratory testing, but also rehabilitation, long-term care, maternity care, home health care, and primary care. The majority of the communities they serve are at least a 25-minute drive from the nearest alternative hospital, and many communities have no alternate sources of healthcare.

Small rural hospitals are struggling to survive and rural communities are being harmed. The majority of small rural hospitals are losing money delivering patient services. More than 120 rural hospitals have closed in the past decade, and most of these were small rural hospitals. In most cases, the closure of the hospital resulted in the loss of both the emergency department and other outpatient services, and residents of the community must now travel much farther when they have an emergency or need other healthcare services. This increases the risk of death or disability when accidents or serious medical conditions occur, but it also increases the risk of health problems going undiagnosed or inadequately treated due to lack of access to care.

Residents of urban areas can also be harmed by rural hospital closures. Most of the nation's food supply and energy production comes from rural communities. Farms, ranches, mines, drilling sites, wind farms, and solar energy facilities cannot function without an adequate, healthy workforce, and people are less likely to live or work in rural communities that do not have an emergency department and other healthcare services. Many popular recreation, historical, and tourist sites are located in rural areas, and visitors to those sites need access to emergency services if they have an accident or medical emergency.

A. The Two Types of Hospitals in America

The United States spends more than \$1 trillion per year on hospital services.¹ Hospitals receive 39% of total healthcare spending, more than any other healthcare sector. In the decade between 2008 and 2018, spending on hospital services increased by 64%, far more than spending increased on either physician services (51%) or prescription drugs (40%)², and far more than the 43% growth in national personal income during the same period.³

There is growing recognition that it will be almost impossible to make health care or health insurance more affordable unless methods are found to control and reduce the amount spent on hospital care. However, proposals to reduce payments to hospitals have met with strong resistance because of concerns about reducing patients' ability to obtain high-quality care in a timely fashion. Hospitals save the lives of thousands of individuals every year and they provide many types of services that cannot be safely delivered in any other setting. This has perhaps never been clearer than in 2020, when hospitals provided care for tens of thousands of patients with COVID-19, and some communities were forced to erect temporary hospitals in order to ensure there would be adequate hospital capacity to treat all patients who needed care.

As the country searches for policies that will reduce hospital spending while preserving access to quality care, it is essential to recognize that American hospitals fall into two very different categories: (1) small rural hospitals, and (2) large and urban hospitals. These two groups of hospitals differ dramatically, not just in size and location, but in terms of spending, prices, and profits:

- The majority (52%) of the nation's more than 4,500 short-term general hospitals have fewer than 100 beds, but they only receive about 10% of total national hospital spending. The hospitals with over 100 beds receive almost 90% of total hospital spending and 98% of total hospital profits.⁴
- Most (77%) of the hospitals with under 100 beds are located in rural communities, whereas the vast majority (84%) of the larger hospitals are in urban areas.⁵
- Most of the rural hospitals are very small: 74% had fewer than 15 acute inpatients per day on average in 2018, whereas only 13% of urban hospitals had so few patients. One-third of urban hospitals had an average daily acute census of more than 150 patients in 2018, but less than 1% of rural hospitals had that many patients.⁶
- Although most small rural hospitals have a "monopoly" over hospital services in their community, pricing policies differ significantly between small rural hospitals and larger hospitals. In 2018, the prices most large hospitals charged for their services were

more than four times what it cost them to deliver the services, whereas most of the small rural hospitals charged less than two times the cost they incurred to provide services.⁷

- The majority of large hospitals in both urban and rural areas make significant profits (more than 10%) on patient services. In contrast, the majority of small rural hospitals lose money on the services they deliver to the patients in their communities.⁸
- As shown in Figure 1-1, the small rural hospitals (those with fewer than 15 inpatients per day) represent more than one-third of all the hospitals in the country, but they receive only 5% of total hospital spending and in aggregate, they lose money.

Clearly, there are very significant differences between small, rural hospitals and other hospitals. **Failure to recognize these differences when creating programs and policies to control hospital spending or encourage higher-value care could seriously harm small rural hospitals and the communities they serve.**

B. The Importance of Rural Hospitals to Rural Communities

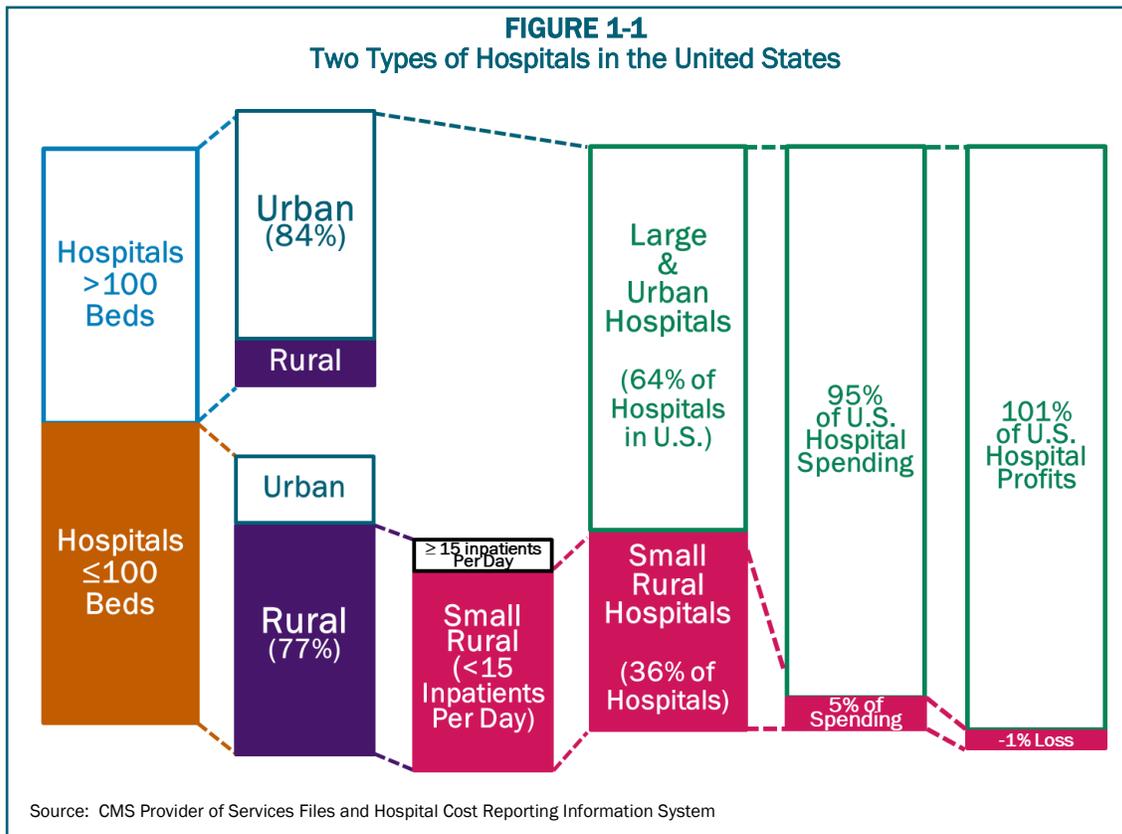
1. Why Rural Hospitals Are Small

Across the U.S., there are over 1,500 rural hospitals with fewer than 15 acute inpatients per day on average. Most of these hospitals are small because the communities they serve have a small number of residents, and there are hundreds of these small rural hospitals because most of the country consists of small communities. There are 3,200 counties in the U.S., and the majority have fewer than 26,000 residents.⁹ In counties this small, the number of people requiring a hospital admission during the course of a typical day would only result in 14-15 patients in beds at the local hospital.¹⁰ In the smallest counties, the average number of people needing to be hospitalized would be even lower.¹¹

2. Rural Hospitals Provide Far More Than Inpatient Care

However, it is very misleading to describe rural hospitals solely in terms of the number of inpatient beds they have or the number of acute patients in those beds. Inpatient care represents only a minority of the services delivered by most hospitals, and this is particularly true in small, rural hospitals. In addition to inpatient acute care, all small rural hospitals provide their communities with two other essential services:

- **Emergency care.** In 2017, the average small rural hospital saw 7,000 patients in its Emergency Department (ED).¹² Although most of these visits are made



by residents of the community, the hospital ED also provides care for individuals who work in the community, are visiting, or are merely passing through.

- **Laboratory tests and imaging studies.** A hospital's laboratory and radiology services are available to any individual in the community who needs a lab test or imaging study, not just those who visit the ED or are admitted to the hospital.

In addition, the majority of small rural hospitals also provide:¹³

- **Primary care.** Over 60% of small rural hospitals operate one or more Rural Health Clinics, and an additional 20% operate some other type of medical clinic for patients. The Rural Health Clinics operated by small rural hospitals have an average of 19,000 patient visits per year.
- **Surgery.** Over 80% of small rural hospitals offer at least outpatient surgeries or short-stay procedures.
- **Rehabilitation.** In addition to outpatient physical therapy services, over 85% of small rural hospitals offer inpatient Skilled Nursing Facility (SNF) services so that community residents can receive rehabilitation in their own communities.
- **Long Term Care.** In addition to skilled nursing care, over 70% of small rural hospitals offer long-term nursing care or assisted living services.

A subset of small rural hospitals provides additional services beyond those described above:

- **Maternity Care.** Over one-third of small rural hospitals deliver babies and provided basic maternity care.
- **Ambulance.** Although most rural communities rely on community or volunteer-operated Emergency Medical Services, it has become increasingly difficult to find enough volunteers to deliver EMS services, particularly in remote areas where each ambulance trip is very lengthy. As a result, more than 20% of small rural hospitals operate an ambulance service.
- **Home Health and Hospice.** 19% of small rural hospitals operate a home health agency and 10% operate a hospice program in order to enable community residents to receive health care and/or palliative care services in their homes.

Although many other rural hospitals would like to provide these and other additional services to their communities, they may not be able to do so because they do not have the resources to start the service and/or they cannot sustain the services financially.

3. The Limited Alternative Sources of Healthcare in Small Rural Communities

In most counties where small rural hospitals are located, the rural hospital is the only hospital in the entire county. In contrast, in most of the counties where large urban hospitals are located, there is at least one and generally two or more other hospitals located in the same county. Some rural counties have two or more small hospitals simply because the county is so large in terms of land area or so problematic in terms of topog-

raphy, and each of the hospitals serves as the sole hospital for the subset of the county that it serves.

Moreover, in many rural areas, the rural hospital is not just the sole provider of *hospital* services, but the sole or primary source of *all* healthcare services in the community. In contrast to urban areas, in many rural areas:

- there is no urgent care center as an alternative to the hospital ED;
- there is no separate clinical laboratory or imaging facility;
- there is no other nursing home or assisted living facility for seniors;
- there is no other home health agency willing or able to provide services to the community because of the difficulty and cost of delivering home health services in sparsely-populated areas; and
- there are few, if any, alternative sources of primary care in the community. 95% of the counties in which small rural hospitals are located are designated by the Health Resources and Services Administration (HRSA) as Primary Care Shortage Areas in part or all of the county.

4. Distance from Other Sources of Healthcare

The significance of this is even greater when one realizes how remote many rural communities are and how far the residents would have to travel to find alternative sources of care. There are more than 1,100 hospitals in the country that are at least a 30-minute drive from the nearest alternative hospital, and more than 270 of them are at least a 45-minute drive away.¹⁴ The majority of these isolated hospitals are small rural hospitals.

Moreover, the distance between hospitals does not necessarily reflect the distance or time for all of the individuals served by rural hospitals. Although the travel time from the rural hospital to an alternative hospital may be a reasonable estimate of the travel time for the residents of the town where the rural hospital is located, many people who rely on a rural hospital live outside of the town where the hospital is located. If an individual lives 15 minutes away from the rural hospital, an alternative hospital that is 30-45 minutes away from the current rural hospital might then be as much as 45-60 minutes away for that individual.¹⁵

In the majority of cases, the next closest hospital to these rural communities is not a large hospital but another small rural hospital. In farming and ranching areas with low population densities, people live and work in small communities that are widely separated, and a network of small rural hospitals is needed in order to provide accessible healthcare services for the residents and workers.

Distance Means Delays in Receiving Emergency Care

The most obvious benefit of having a hospital close by is when an individual experiences a medical emergency, such as a serious injury or symptoms of a heart attack or stroke, and they need to quickly reach an emergency

(Continued on page 5)

EXAMPLE: Forks Community Hospital

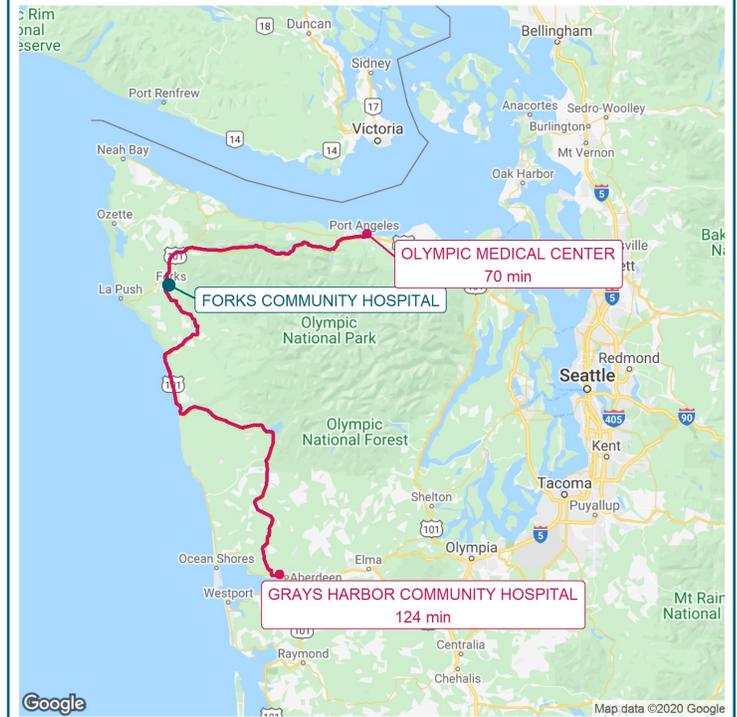
Forks is a small town in the Pacific Northwest that is located on the western side of the Olympic National Park. Many people have heard of Forks because it was the setting for the popular *Twilight Saga* novels written by Stephenie Meyer that were also made into a series of movies. Thousands of tourists visit the area every year for fishing, hiking, or other recreation, and the timber industry also still has a significant presence in the community.

Forks Community Hospital is the only hospital in Forks and the surrounding area. It is a small Critical Access Hospital with 25 licensed beds but an average daily acute census of less than 4 patients. Although the estimated population of Forks was only 3,862 in 2018, it is the closest hospital for a group of communities with over 10,000 residents in total. As a result, its Emergency Department has more than 5,000 visits per year, and its two Rural Health Clinics have 17,000-19,000 patient visits each year. Forks Community Hospital is one of the minority of rural hospitals that still offer maternity care services. Forks Community Hospital also operates a nursing facility so that elderly residents of the community can receive long-term care close to their families and friends.

The next-closest hospital to Forks is the Olympic Medical Center in Port Angeles, which is a 70-minute drive. The travel time is even longer for patients who don't live directly in Forks. For example, for people who live or work in LaPush on the Pacific Coast, Forks Hospital is more than 20 minutes away, and travel to the Olympic Medical Center would require a more than 90-minute drive. Forks Hospital is also the closest hospital to the Clallam Bay Correction Center, one of Washington State's most secure prisons. The Clallam Bay Correction Center is a 38-minute drive to Forks Community Hospital, whereas it would take over 70 minutes to reach the Olympic Medical Center in Port Angeles, an additional delay of more than a half hour.

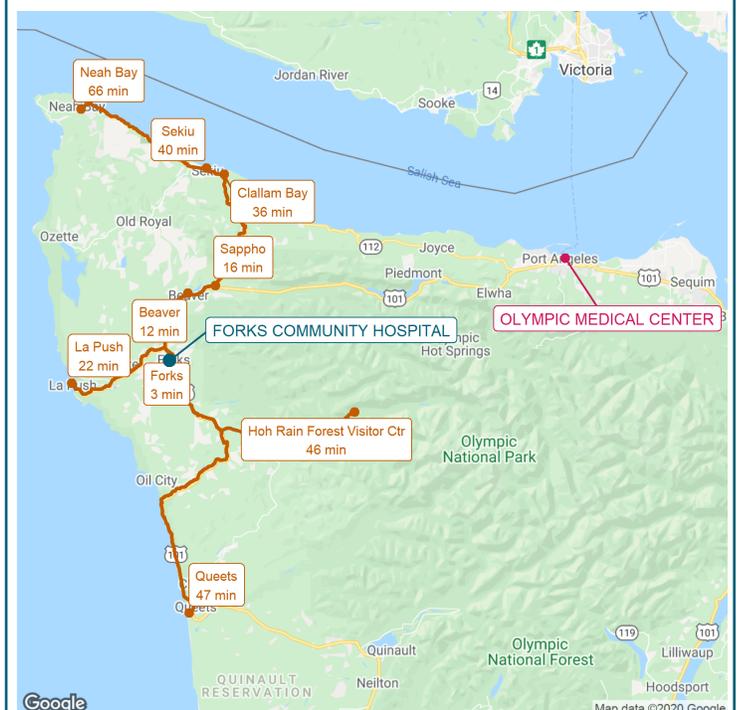
Despite the key role it plays in the community, Forks Community Hospital loses a significant amount of money on its patient services. Every year between 2012 and 2019, patient service revenues fell short of costs by 7%-17%. The hospital has only been able to continue operating because it is supported by a local property tax levy. This means that, in addition to paying premiums on their health insurance and paying deductibles and copayments for healthcare services, the residents of the community have to tax themselves in order to keep the hospital open and enable the continuation of healthcare services in their community.

FIGURE 1-2
Forks Community Hospital



The red line shows the most direct driving routes from Forks Community Hospital to the next-closest hospitals and the estimated travel times.

FIGURE 1-3
Communities Near Forks Community Hospital



(Continued from page 3)

room. In serious cases, even short delays in treatment can be problematic, and a delay of 30-45 minutes or more in receiving treatment could result in a death or serious disability that could have otherwise been prevented.

Although a helicopter ambulance could potentially transport an emergency patient to an alternative hospital more quickly than the time required to drive to a local hospital, this depends on whether a helicopter ambulance is available and whether the weather is safe for flying. A helicopter ambulance trip is extremely expensive, so the cost of this service will be much higher than a visit to a nearby emergency room. Many patients with non-life threatening injuries, chest pain, or other symptoms will not need surgical intervention or other types of treatment that can only be provided at tertiary or quaternary hospitals, and it is much more cost-effective to triage and treat these cases in a local hospital than at a distant hospital that requires air transport to reach.¹⁶

Distance Means Failure to Receive Other Forms of Care

Patients who are not experiencing an emergency would also have to travel farther to receive many types of diagnostic and treatment services if there is no nearby hospital. The greater the time, distance, and cost of travel, particularly during the winter or bad weather, the less likely it is that patients would obtain those services in a timely fashion. Delays in diagnosis or treatment could result in more serious health problems and more expensive treatment than if the patient had been able to obtain services more easily and quickly. For example:

- **Primary Care.** As noted earlier, the majority of small rural hospitals operate one or more Rural Health Clinics, and they generally do so because there would otherwise be a shortage of primary care practices in the community. Access to primary care is increasingly recognized as essential for preventive care and early identification and treatment of health problems. However, patients are far less likely to make visits to a primary care provider if they have to travel a long distance to do so, and the resulting delays in diagnosis and treatment can result in higher healthcare costs in the longer-term.
- **Maternity Care.** There is growing concern about the high rates of both maternal death and infant mortality in the country, both of which are significantly higher in rural areas.¹⁷ Successfully addressing these problems requires that women receive regular prenatal care during pregnancy and that both the mother and infant receive high-quality care after birth, but these services are less likely to be available in a community that lacks primary care and obstetric care. It is also important that women with higher-risk pregnancies receive timely, high-quality care during childbirth, and that is less likely if the woman has to travel a long distance to reach a hospital.
- **Laboratory Testing.** The highest-volume service at most hospitals, both urban and rural, is laboratory testing. Many patients with chronic conditions such as diabetes and heart disease need regular testing in order to properly manage their conditions, and failure

to do so can lead to serious complications. In addition, many diseases can only be accurately diagnosed through appropriate laboratory testing, and delays in testing can result in delayed or incorrect treatment. This can not only harm the patient, but if the patient has an infectious disease (such as during the coronavirus pandemic in 2020), delayed or inaccurate diagnosis and treatment can harm many others in the community.

C. The Importance of Rural Hospitals to the Rest of the Country

The more than 1,500 small rural hospitals represent over one-third of the total hospitals in the country. However, most people have never seen one of them in person because most people don't live in the rural counties they serve. In fact, the majority of the nation's population lives in a relatively small number of urban counties, and most of those counties are many miles away from the communities served by rural hospitals.

Should residents of urban areas care what happens to hospitals in small, distant rural communities? The answer is yes, for several reasons:

- **Food Supply.** Most of the nation's food supply comes from rural communities because of the large amounts of land needed to grow crops and raise cattle. Rural hospitals provide healthcare services to the owners and workers on the farms and ranches in these areas, to the owners and workers at the businesses that supply the farms and ranches, and also to their family members. Most of these hospitals are small because of the low population densities in agricultural areas.
 - ◆ 38% of agricultural crops are produced in counties in which the only hospitals are small rural hospitals. (Figure 1-8) An additional 4% of crops come from counties that have no hospital at all and the closest hospital is a small rural hospital in another county.¹⁸
 - ◆ 47% of the country's production of animals for food occurs in counties in which the only hospitals are small rural hospitals. An additional 6% are in counties that have no hospital at all and the closest hospital is a small rural hospital in another county.
- **Energy Production.** Rural communities are home to most of the nation's coal mining and gas and oil production, as well as wind farms and solar energy facilities. As shown in Figure 1-8, 40% of those communities rely on small rural hospitals for healthcare services. 35% of the country's mining and oil and gas production occurs in counties in which the only hospitals are small rural hospitals. An additional 6% of fossil fuel production comes from counties that have no hospital at all and the closest hospital is a small rural hospital.¹⁹
- **Recreation and Tourism.** Many popular recreation, historical, and tourist sites are located in rural areas. If visitors to these sites have accidents or medical problems that require hospital treatment, their initial care will often be provided by a small rural hospital. For example, the top 10 most-visited National Parks,

(Continued on page 8)

EXAMPLE: Hospitals in Eastern Washington State

One of the largest agricultural areas in the U.S. is located in Washington State east of the Cascade Mountains. This region produces over \$8 billion in agricultural products each year, including almost half (49%) of the nation's apples, 18% of the potatoes, and 8% of the country's wheat, as well as other fruits, vegetables, grains, and livestock. The 20-county region includes 2 of the top 10 counties in the country in terms of total agricultural sales, 7 of the top ten apple-producing counties in the country, 4 of the top 10 wheat-producing counties in the country, 3 of the top 10 potato-producing counties in the country, and 2 of the top 10 vegetable-growing counties in the nation.²⁰

This area is also a popular destination for tourists and vacationers because of the Cascade Mountains, the Columbia River, and other natural features.²¹

Ready access to quality healthcare in this area is particularly important for the nearly 200,000 farmworkers who support the agricultural industry, including more than 50,000 migrant workers, since injuries are common on farms and ranches because of the manual nature of the work. For example, farm workers must stand on ladders to pick apples by hand. Tourists and visitors also experience injuries while boating, hiking, and skiing.

As shown in Figure 1-5, 38 hospitals provide services in the region. The largest hospitals are located at the eastern end of the region in Spokane, and in the southern and southwestern portions of the region (in Kennewick, Richland, Walla Walla, Wenatchee, Yakima, and Lewiston, Idaho).

Most (27) of the hospitals are Critical Access Hospitals with 25 or fewer beds. They are primarily located in the northern and central parts of the region and in the southeastern and southwestern corners. The majority of these small hospitals have an average of less than 4 acute inpatients per day, but inpatient care represents only a small proportion of the healthcare services the hospitals provide to their communities. In addition to 24-hour emergency care at all of the hospitals (the majority have over 5,000 ED visits per year), 80% of the hospitals provide skilled rehabilitation and long-term nursing care services, three-fourths offer surgery services, half offer maternity care services, two-thirds operate one or more Rural Health Clinics, and an additional 20% provide some other kind of outpatient clinic services.

(Continued on page 7)

FIGURE 1-4
Counties in Eastern Washington State

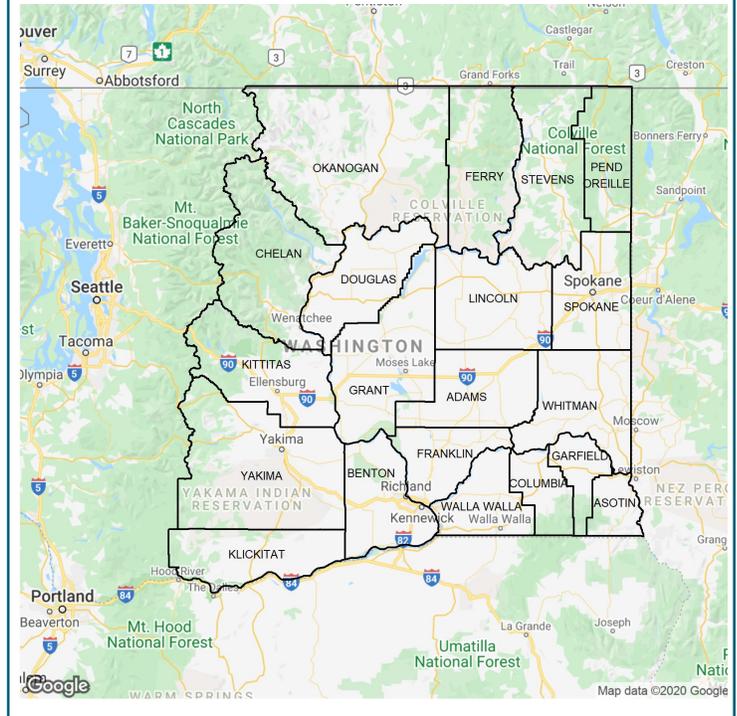
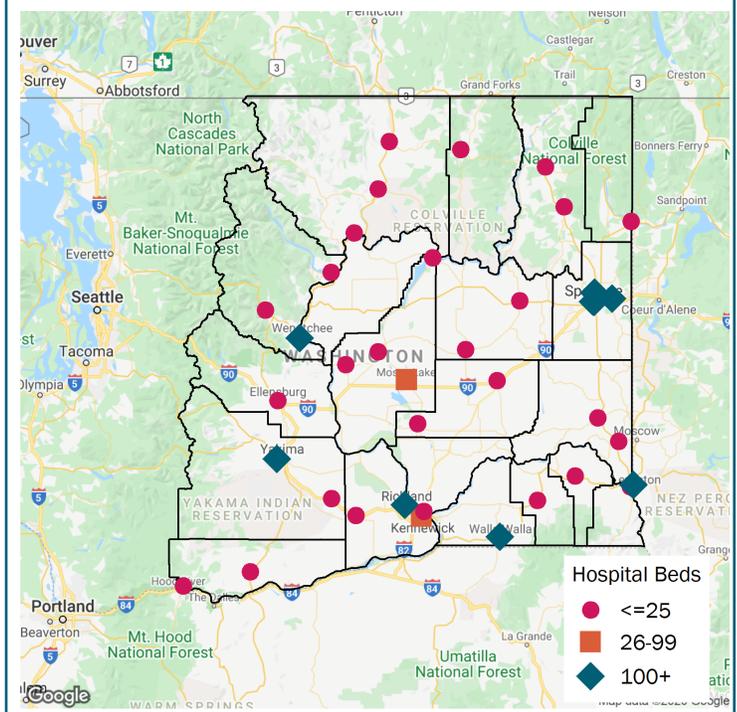


FIGURE 1-5
Hospitals in Eastern Washington State



Hospitals in Eastern Washington State (continued)

(Continued from page 6)

Over two dozen small hospitals might seem like a lot for a region with 1.6 million residents until one realizes that those residents are spread out across a 42,000 square mile region, most of which is farmland. Six of the 20 counties have fewer than 10 residents per square mile. Moreover, it would be impossible to have fewer, larger hospitals in the northern and central portions of the region because the topography – mountain passes, deep river gorges, and canyons – would prevent most people from using them.

For example, Figure 1-6 shows the communities and hospitals in the Columbia River valley from Wenatchee north to Tonasket and east to the Grand Coulee Dam and Republic. The seven small Critical Access Hospitals in the area are each at least a half hour drive away from the next-closest hospital, which in almost every case is yet another small Critical Access Hospital. The closest large hospital to these communities is in Wenatchee, which requires a 1-2-hour drive along two-lane roads from most of the communities.

Similarly, in the central and southern portions of the region, ten 25-bed Critical Access Hospitals and one 50-bed hospital (designated by Medicare as a Sole Community Hospital) provide emergency care, inpatient and outpatient hospital care, and primary care to farming communities, tourists, and those traveling along Interstate 90. As shown in Figure 1-7, each of these hospitals is a half-hour or more away from the next-closest hospital, which in many cases is another small Critical Access Hospital. Many farmworkers and tourists in the areas served by each hospital already have to travel a distance to reach that hospital, and an alternative hospital could be an hour away. For example, Dayton General Hospital is a half hour drive from the Bluewood Ski Resort, and it would take over an hour to reach the next closest hospital in Walla Walla.

The majority of the small rural hospitals in Eastern Washington State lose money on patient services. In contrast, most of the larger hospitals make profits on patient services. In most cases, the small hospitals are only able to continue operating because they are structured as Public Hospital Districts and local residents and businesses tax themselves to keep the hospitals open.

FIGURE 1-6
Upper Columbia River Valley Hospitals

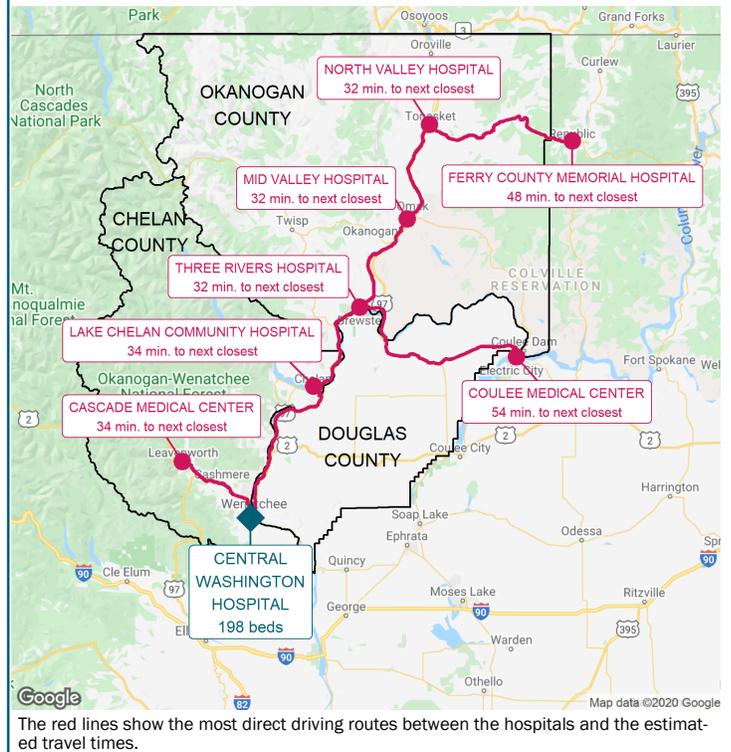


FIGURE 1-7
Columbia Basin/I-90 Hospitals

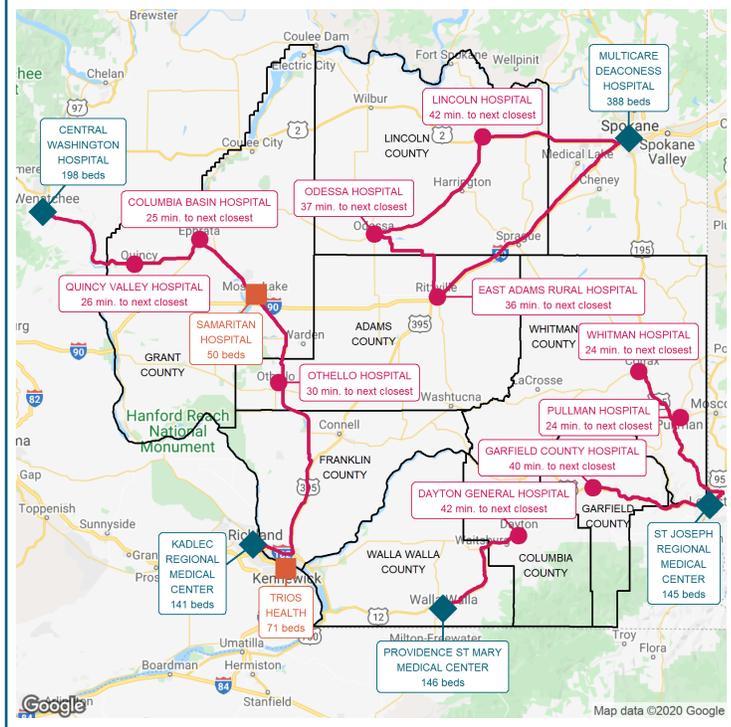
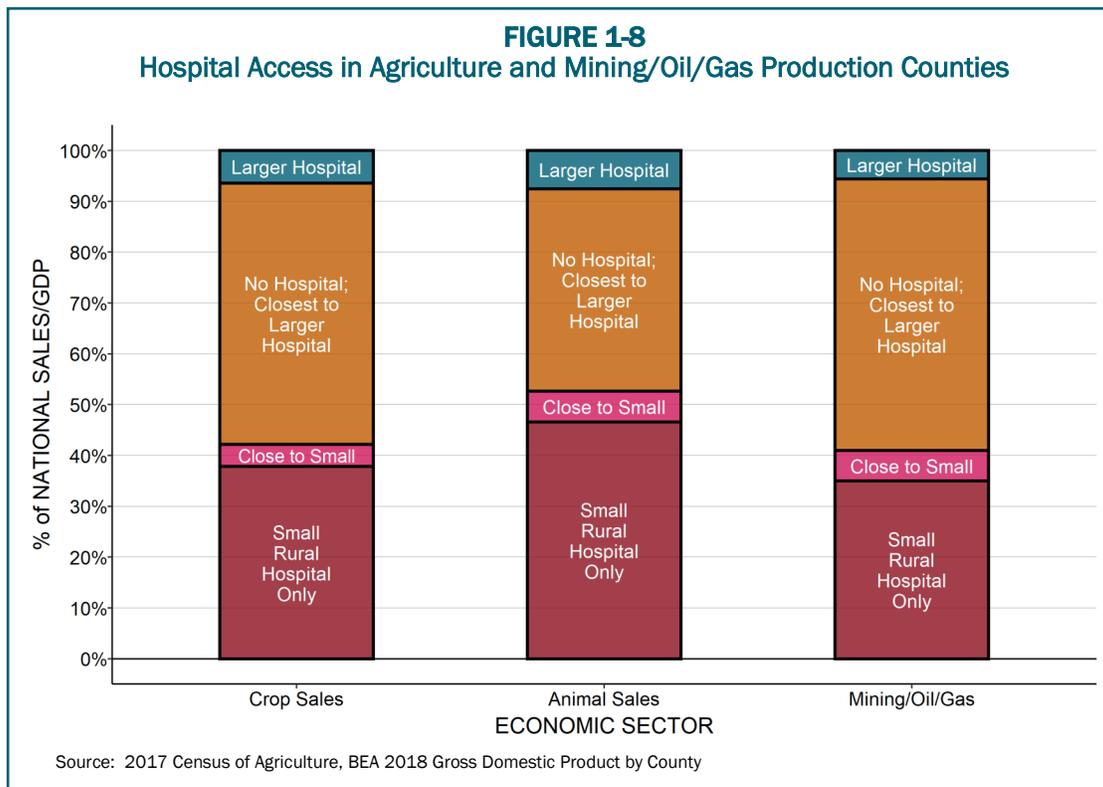


FIGURE 1-8
Hospital Access in Agriculture and Mining/Oil/Gas Production Counties



including the Grand Canyon, Yosemite, and Yellowstone, had almost 50 million visits in 2019, and all are located in rural areas.²² For 7 of these, the closest hospital to all of the entrances and visitor centers at the Park was a small, rural hospital, while the closest large hospital was over 90 minutes away in the majority of cases.²³

- **Shipping and Other Travel.** Interstate highways connect the nation’s urban areas to each other, to the nation’s agricultural areas, and to recreation sites, and they pass through rural areas to do so. A trucker, traveler, or tourist who has an accident or medical problem on an interstate highway is likely to depend on a small rural hospital located near a highway interchange for emergency care.

The coronavirus pandemic in 2020 made many city dwellers realize for the first time how dependent they are on rural communities for their food supply and how much that supply could be affected by health problems in rural communities.²⁴ The pandemic has also made healthy individuals all across the country realize how important it is to have hospitals with adequate capacity, not only where they live or work, but where they might be quarantined during travel.

D. The Problem of Rural Hospital Closures

Many small rural hospitals have closed over the past decade, and the rate of closures has accelerated in the last few years. Because of the important role small rural hospitals play individually and collectively, these closures have the potential to create serious negative impacts both for the communities they serve and for the national economy.

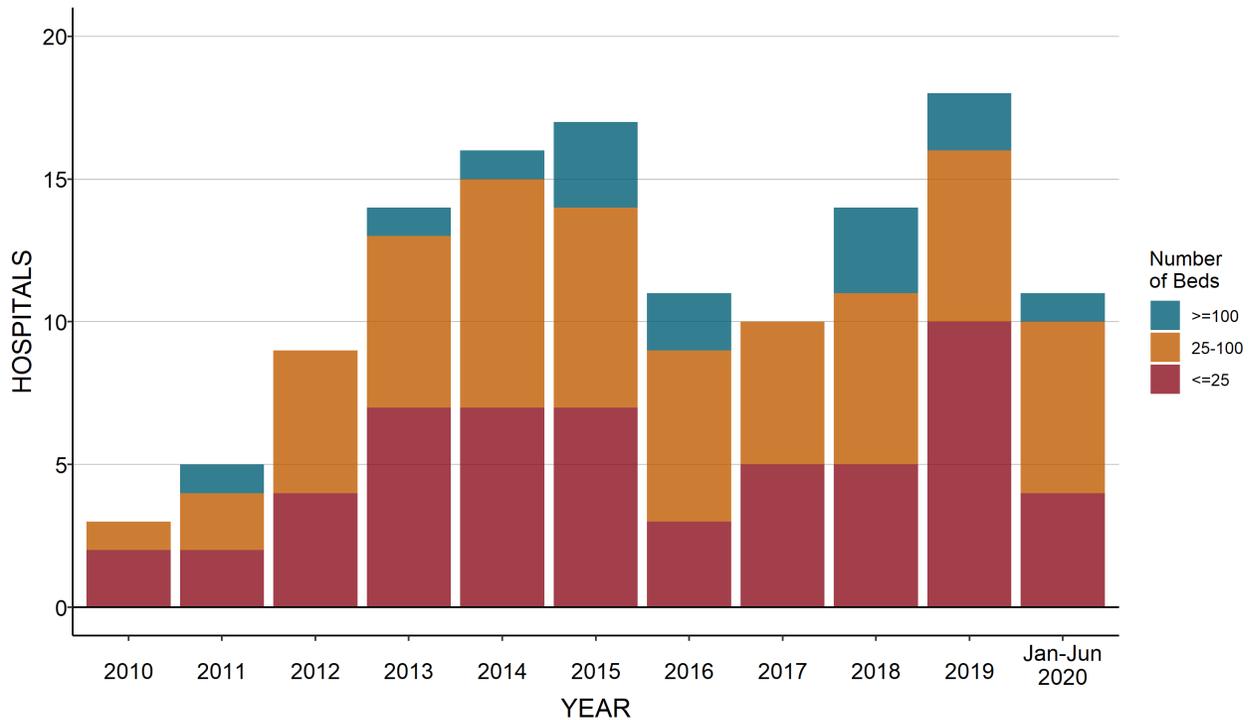
1. How Many Small Rural Hospitals Have Closed?

The most up-to-date data on rural hospital closures are maintained by the Cecil G. Sheps Center for Health Service Research at the University of North Carolina. When the Sheps Center identifies a potential closure, it investigates to determine whether the hospital has actually closed, has reduced services, or has merged with or been acquired by a larger system, and it also monitors over time to identify whether a closed hospital later reopened.²⁵

The Sheps Center reports that more than 120 rural hospitals closed between January 2010 and June 2020. There were 18 closures in 2019, more than in any year in the previous decade, and there were 11 closures in the first six months of 2020.

As shown in Figure 1-9, the majority of these rural closures were small hospitals. More than 40% of the hospitals that closed had 25 beds or less, while only 11% had more than 100 beds. 92% of the hospitals that closed had an average daily census of less than 15 prior

FIGURE 1-9
Rural Hospital Closures



Source: University of North Carolina, Cecil G. Sheps Center for Health Services Research

to closure, and over 60% had an average daily census of less than 5.

2. The Impacts of Closures on Rural Communities

However, the total number of rural hospital closures reported by the Sheps Center is only a rough indication of the severity of the closure problem, and the change in the total number is not the best way to measure how the impact of closures is changing. Not all rural hospitals are alike, and the impacts of closures can differ dramatically from one community to the next, so the aggregate impact of closures is not necessarily proportional to the number of hospitals that have closed.

a. Closures Close to Other Hospitals

For example, a number of the reported closures over the past decade have likely had a relatively small impact on their community:

- In 11% of the closures, the hospital didn't completely shut down, and there is still an emergency room and other services operating at the same location.²⁶ The hospital is classified as "closed" because it stopped offering *inpatient* care, and therefore it can no longer be considered a *hospital*, even though community residents can still receive the same kinds of emergency and outpatient services they received in the past.
- In an additional 13% of the closures, another hospital is located less than a 15-minute drive from the hospi-

tal that closed.²⁷ In almost 90% of these cases, the next-closest hospital is a larger hospital than the hospital that closed, and the majority have positive financial margins. In some cases, there were two hospitals in the same town, so there was still a hospital in the same community even after one closed. For example, one rural hospital that closed was a small physician-owned hospital that had been located a block away from a larger facility that still continues to operate.²⁸

Of course, even a 15-minute drive could be problematic for people in the community who lived near the closed hospital and do not have transportation to reach the alternative hospital. On the other hand, people who live in between the closed hospital and another hospital may have to travel only a small additional distance to reach the alternative hospital.

b. Closures Far from Other Hospitals

At the other extreme, in more than 25% of the closures in the last decade, there was no longer an ED in the community and the nearest alternative hospital was more than 30 minutes away. Some people who already had to travel a distance to reach the hospital that closed now have to travel 45 minutes or more to reach a hospital.

In 80% of these cases, the community not only lost emergency department and inpatient services, there are no longer any outpatient services at all being delivered. Moreover, in many cases, the next-closest hospi-

tal is smaller than the hospital that closed, and so the time required to reach a hospital with equivalent services may therefore be even longer than 30 minutes.

c. The Remaining Closures

The circumstances surrounding the remaining hospital closures are in between these two extremes. In about half of the cases where a rural hospital closed, there is no longer a 24-hour ED, but there is another hospital within a 15-minute to 30-minute drive of the hospital that closed. The implications of this distance vary from community to community:

- In some cases, outpatient services continue to be offered at the site of the closed hospital, although not a 24-hour ED. However, in most cases, all hospital services were terminated and the residents of the community need to travel 15-30 minutes to a hospital in another community for all or most of the outpatient services they received locally before.

- In the majority of the cases, the next-closest hospital is a larger hospital than the hospital that closed. However, in some cases, the next-closest hospital is a smaller hospital than the hospital that closed, and reaching a hospital of equal or larger size requires traveling more than 30 or 40 minutes rather than only 15-30 minutes.
- As discussed previously, the travel time from one hospital to an alternative hospital does not accurately measure the difference in travel time for people in outlying communities. In the majority of cases where the next-closest hospital is 15-30 minutes away, some people would now have to travel more than 30 minutes to reach a hospital. This could well create disparities in health and healthcare access for residents of the area, or exacerbate existing disparities, based on their access to transportation and other factors.

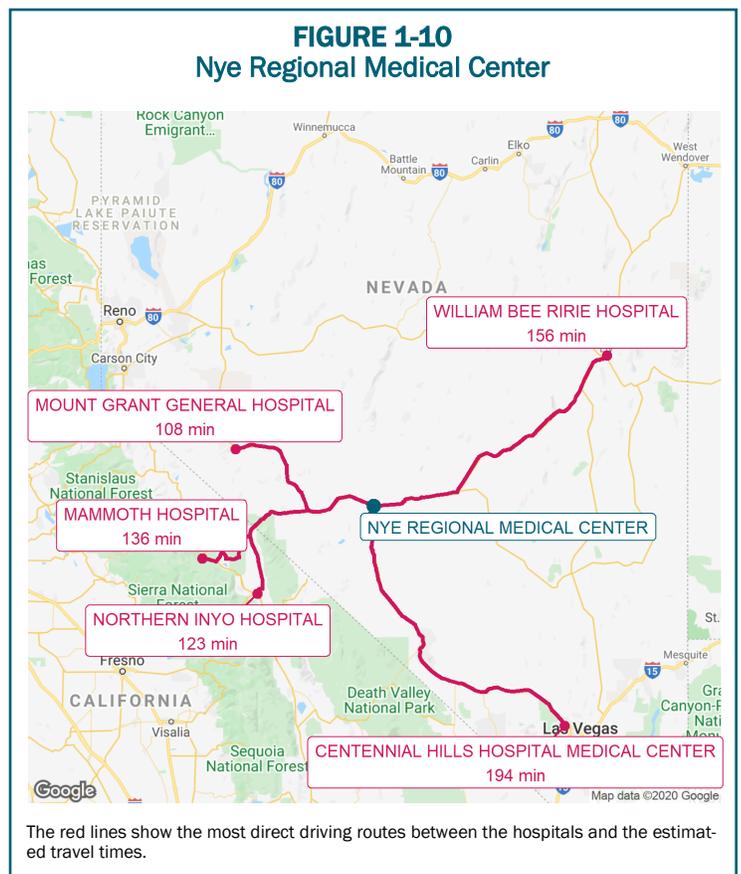
EXAMPLE: Nye Regional Medical Center

The most isolated hospital that closed in recent years was the Nye Regional Medical Center in Tonopah, Nevada. Tonopah is the county seat of Nye County, the county that is the third-largest in land area in the country outside of Alaska.²⁹ Originally a gold mining town, Tonopah is located near the midpoint of the more than 400-mile drive between Las Vegas and Reno. Although Tonopah has only about 2,500 residents, Nye County has more than 40,000 residents, spread over 18,000 square miles of land.³⁰

The hospital closed in 2015 after years of financial problems and filing for bankruptcy in 2013.³¹ As shown in Figure 1-10, the closest hospitals to the community are over two hours away in northern California and Nevada, and more than a three-hour drive is required to reach the hospitals in Las Vegas.

The Emergency Department provided emergency treatment both for residents of the community and for travelers on U.S. 95, the major north-south route through western Nevada that passes through the town. The hospital also served as a principal source of primary care and outpatient services for community residents. Although ambulance services have been enhanced and clinics were established in an effort to fill some of the gaps in healthcare services caused by the closure, the area still has no 24-hour emergency treatment facility and lacks many other healthcare services. Local businesses report that the lack of a hospital has made it more difficult to attract employees, and that workers may have to take off a day or more of work in order to get more than basic medical testing.³² The residents of the community have formed a hospital district supported by local property taxes in the hope of being able to reopen a hospital in the community.³³

FIGURE 1-10
Nye Regional Medical Center



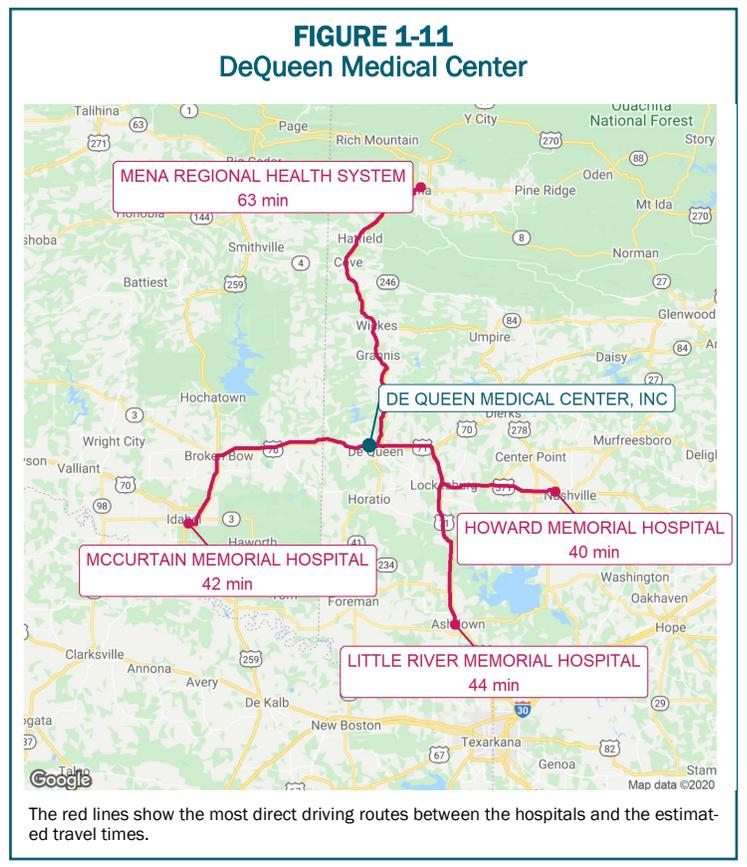
EXAMPLE: DeQueen Medical Center

The DeQueen Medical Center closed in May 2019, after having financial difficulties for many years.³⁴ The 25-bed Critical Access Hospital was the only hospital in DeQueen, Arkansas and surrounding Sevier County, which are located in the southwestern corner of the state next to Oklahoma.

As shown in Figure 1-11, the closest emergency rooms and other hospital services are now 40 minutes away for the 6,500 residents of DeQueen and the more than 5,000 additional people who live in the immediately surrounding community. The median income in Sevier County is below the national average and the poverty level is higher than average, so it is likely that many residents will have difficulty traveling that far in order to receive healthcare services. The three closest hospitals are also small Critical Access Hospitals that have experienced financial losses in recent years.

As the coronavirus spread across the nation in 2020, the lack of a hospital in DeQueen was particularly problematic because Pilgrim's Pride operates a large poultry processing plant there, and poultry and meatpacking plants were sites of significant outbreaks of COVID-19.³⁵ At the end of June, 2020, Sevier County had had more than 700 COVID-19 cases, representing one of the highest per capita infection rates in the U.S.³⁶

Sevier County has issued bonds to finance construction of a new hospital³⁷, but it is unclear whether or how the new hospital will avoid the financial problems that caused the previous hospital to close.



d. Summary of Closure Impacts

In summary, as shown in Figure 1-12, rural hospital closures over the past decade fall into the following four categories:

- 1. Limited Impact on Emergency Care.** In about one-fourth of rural hospital closures, the impact has likely been limited, either because there is still an ED at the same site or another hospital is less than 15 minutes away from the hospital that closed.
- 2. Moderate Impact on Emergency Care.** In about one-eighth of cases, some outpatient services continue to be offered at the site (typically including some type of urgent care), but residents need to travel a total of at least 15-30 minutes to reach a 24-hour ED or to receive inpatient services.
- 3. Moderate Impact on All Outpatient Care.** In one-third of cases, residents of the community where the hospital closed have to travel 15-30 minutes to receive both 24-hour ED services and other types of hospital outpatient services, and some residents of surrounding areas have to travel 30 minutes or more. Over 1.2 million people live in these communities.
- 4. Large Impact on Emergency Care and Other Services.** The remaining closures, representing more than one-quarter of the total, have likely created the largest negative impacts overall, because there is no longer a 24-hour emergency department in the com-

munity and generally no outpatient hospital services at all, and the next-closest hospital, particularly a hospital of equivalent size and services, is over 30 minutes away. Over 1 million people live in these communities.

As discussed earlier, delays in receiving emergency services have the potential to cause death or disability for people who are injured or experiencing a heart attack or stroke. Studies have found that mortality rates for heart attack, stroke, respiratory problems, and life-threatening injuries are higher for people who have to travel farther to reach a hospital emergency department.³⁸ Because of the greater travel times in rural areas, closure of a small rural hospital is likely to have a greater negative impact than closure of a small hospital in an urban area; in fact, a study of hospital closures in California found that closures of rural hospitals increased mortality for both heart attacks and strokes, but closures of urban hospitals had no negative impact on mortality.³⁹ Several studies have found that mortality rates for heart attacks were as much as 30% higher following closures of emergency departments that increased travel times by 30 minutes or more, with more limited impacts when travel times increased by 10-30 minutes.⁴⁰ As a result, closures that fall into Category 4 above are likely to have more negative impacts on mortality than those in the other categories.⁴¹

Additional negative impacts can be caused by the reduction in non-emergency services resulting from closure of

a small rural hospital. Increases in the time required to obtain lab tests and other outpatient services can discourage people from obtaining those services in a timely fashion, which in turn can result in failure to diagnose and treat their health problems in a timely fashion. These impacts are more difficult to measure because they will involve a variety of different health conditions and they are likely to accrue over a longer period of time. One study found that patients with colon cancer who had to travel more than 50 miles for diagnosis were significantly more likely to have advanced disease at the time of diagnosis.⁴² Another study found that rural counties not adjacent to urban areas that lost hospital-based obstetric services had significant increases in preterm births.⁴³ Hospital closures in Category 4 above are likely to have the largest negative impacts, since in most cases outpatient services have been eliminated and an alternative site of outpatient care is a long distance away.

Finally, loss of a hospital can negatively impact the economy of the community, not only because of the loss of jobs from the hospital itself, but because it is more difficult to attract and retain businesses and workers in other industries.⁴⁴ Here again, the impact depends on the nature of the closing; one study of rural hospital closures found significant reductions in per capita income and significant increases in unemployment in communities that lost their sole hospital but not in communities with alternative sources of hospital care.⁴⁵

3. Negative Impacts of Rural Closures Have Been Increasing

Clearly, rural hospital closures in Category 4 (i.e., where there is no longer a 24-hour ED in the community and the next-closest hospital is over a half-hour away) are of far greater concern than closures in Category 1 because of the much larger negative impacts they will have on the communities where they are located. The proportion of closures falling into this highest-impact category has increased over time: one-third of the closures between 2016 and 2020 were in this category, compared to only 21% from 2010-2015, and so the total number of people affected also increased significantly.

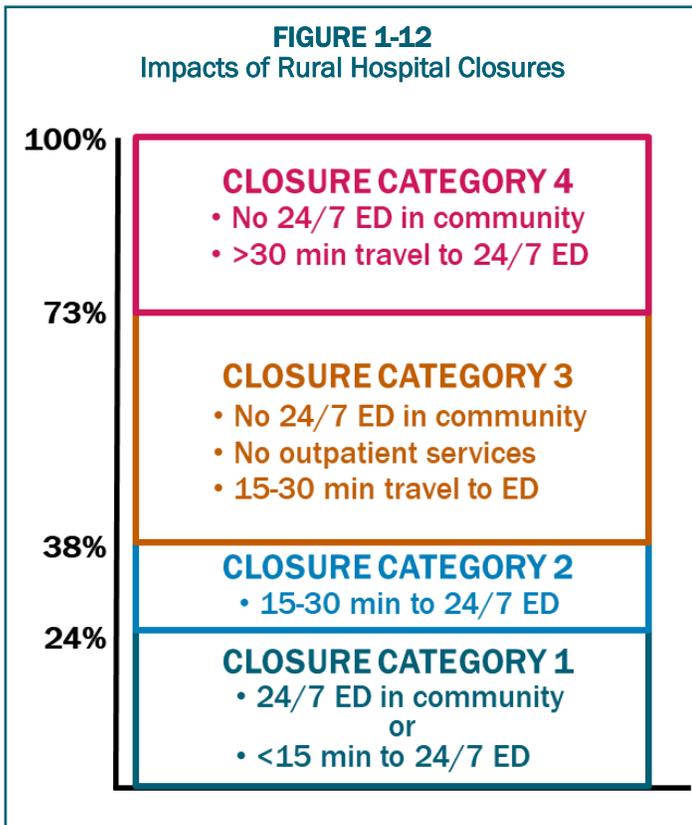
The second-largest impacts are likely associated with the closures in Category 3, where there are no ED or outpatient services remaining and an alternative hospital is at least 15-30 minutes away. About one-third of the rural hospital closures fell into this category in both the 2010-2015 and the 2016-2020 periods. In contrast, the proportion of hospital closures in the lowest-impact groups (Categories 1 and 2) decreased from 44% in 2010-2015 to 32% in 2016-2020, and the proportion of people living in the communities affected by these types of closures has also decreased.

E. Will the Future Be Better or Worse for Small Rural Hospitals?

The data show that not only has the total number of rural closures been increasing in recent years, the overall impact of the closures has increased even more. Many small rural hospitals have been losing money on patient services in recent years, creating a serious risk that many more rural hospitals will close in the future, reducing access to healthcare for many more rural residents. In 2019 and the first half of 2020, in addition to the 29 rural hospitals that closed, an additional 34 rural hospitals declared bankruptcy.⁴⁶ Like all hospitals, small rural hospitals experienced higher costs and significant losses of revenue during the pandemic in 2020, but most small rural hospitals have far less in financial reserves to cover those costs and losses than larger hospitals do, and this could well accelerate bankruptcy and closure for many small hospitals.

Solving the problems facing rural hospitals requires a clear understanding of what is causing them. Chapter II will examine in detail the various factors that help or harm the financial status of a rural hospital and identify the primary causes of the financial problems that rural hospitals have been experiencing. Subsequent chapters will then examine alternative approaches for addressing these causes in order to determine what policies and programs can best sustain current rural hospitals and allow them to create even more effective healthcare services for the communities they serve.

FIGURE 1-12
Impacts of Rural Hospital Closures



II.

THE CAUSES OF FINANCIAL PROBLEMS AND CLOSURES

KEY POINTS

Rural hospitals have been forced to close because they are not paid enough to cover the cost of delivering care to patients. More than half of the hospitals that have closed had losses of 10% or more in the year prior to closure, and one-fourth had losses greater than 20%.

The primary causes of losses at the hospitals that closed were inadequate payments from private health plans and inability of patients to pay their bills. Losses on patients with private health insurance and self-pay patients were greater than losses on Medicare, Medicaid, and uninsured charity care patients at most of the hospitals.

More than one-third of the small rural hospitals that remain open are also losing money. The losses are concentrated among the smallest rural hospitals: the majority of rural hospitals with annual expenses below \$15 million are experiencing losses, and almost half of the rural hospitals with annual expenses between \$15 million and \$20 million are losing money.

Low payments from private health plans and patient bad debt are the largest causes of losses at the smallest rural hospitals. At the majority of rural hospitals with less than \$20 million in annual expenses, losses on patients with private health insurance plans and self-pay patients were greater than losses on Medicare, Medicaid, and uninsured charity care patients combined, although the magnitude of the losses varies significantly across states. Private health plans pay small rural hospitals less than they pay larger hospitals for the same services, and Medicare Advantage plans appear to be among the worst payers at small rural hospitals. Most small rural hospitals operate one or more Rural Health Clinics, and the low payments for primary care services from private payers are a major cause of losses at these hospitals.

The majority of rural hospitals lose money on Medicaid patients. The losses on individual Medicaid patients are generally larger than the losses on patients with private insurance. However, the much smaller proportion of Medicaid patients means that the overall impact on the hospital due to private insurance losses is still larger. In states that expanded Medicaid, losses on uninsured patients and bad debt were reduced, but losses on services to Medicaid patients increased due to the low amounts the Medicaid programs paid for services.

Medicare payments do not cause significant losses at most small rural hospitals. Most small rural hospitals are classified as Critical Access Hospitals and receive cost-based payments from Medicare.

Many small rural hospitals remain open only because they receive significant supplemental funding from local taxes or state grants. Over 70% of the smallest rural hospitals lose money on the delivery of patient services, but 40% of those hospitals receive enough revenue from other sources to maintain a positive overall margin. Small rural hospitals in some states are organized as public hospital districts, and residents of these communities tax themselves to offset underpayments by private health plans and Medicaid.

There is tremendous variation across the country in both the magnitude of losses and the causes of losses at very small rural hospitals. In many states, low payments from private insurance plans are the primary cause of financial problems in small rural hospitals, but in other states, low Medicaid payments and low rates of insurance coverage are the largest single cause of losses. In some states, state grants or local taxes reduce or eliminate losses at small rural hospitals, while there is little or no such assistance for hospitals in other states.

Changes in payments from all payers will be needed to eliminate losses at small rural hospitals. No individual payer (Medicare, Medicaid, or a private insurance plan) is the sole cause of financial losses at small rural hospitals, and the relative magnitude of their contributions varies from state to state and hospital to hospital, so multi-payer solutions will be needed to solve the problem of rural hospital closures.

A. The Magnitude of Financial Losses at Small Rural Hospitals

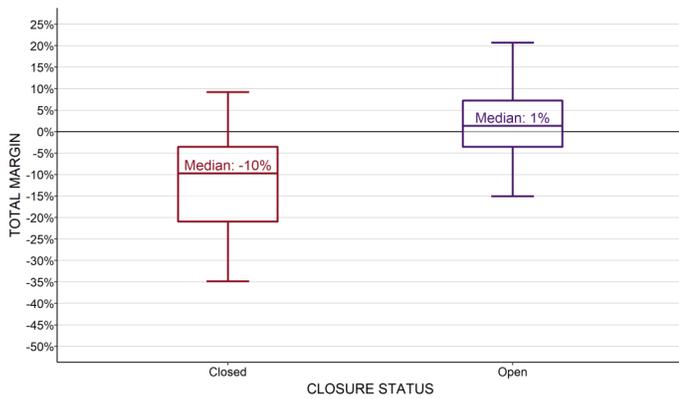
1. Losses at Rural Hospitals That Closed

Most of the small rural hospitals that have closed were forced to do so because the hospital could not afford to pay for the staff and supplies needed to continue delivering services to patients. As shown in Figure 2-1⁴⁷, the rural hospitals that closed between 2013 and 2020⁴⁸

had a median loss of 10% in the year prior to closure, and one-fourth had losses greater than 20%.⁴⁹ In contrast, the majority of small rural hospitals that have not closed had positive financial margins in 2018.⁵⁰

Closures do not occur suddenly or because a hospital loses money in one single year. Instead, hospitals that close typically experience losses for several years and reach the point where they no longer have sufficient financial reserves available to cover their losses and no method of paying their staff or creditors.

FIGURE 2-1
Total Margin in Small Rural Hospitals



Hospitals with acute census < 15. For open hospitals, 2018 data is shown. For closed hospitals, the most recent year before closure is shown.

2. Losses at Hospitals That Have Not Closed

Although the majority of small rural hospitals are profitable, over 40% are not. This is why the median margin shown in Figure 2-1 for open hospitals is positive, but very small. Over 600 small rural hospitals lost money in 2018, and over 300 had losses of 5% or more. More than 300 small rural hospitals had losses in every year from 2016 to 2018.⁵⁵

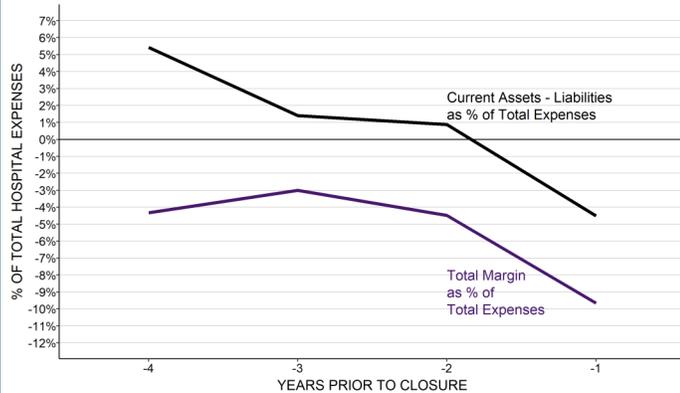
Large, persistent losses deplete a hospital's financial reserves, so the higher losses experienced by smaller hospitals means they are more likely to have unpaid bills and difficulties in making payroll. This makes smaller rural hospitals more susceptible to closure.

Figure 2-3 shows that financial losses are highest among the smallest-of-the-small rural hospitals.⁵⁶

- The majority of hospitals with total annual expenses below \$15 million lost money during the 3-year period from 2016-2018, and almost half of the hospitals with \$15-\$20 million in annual expenses lost money. In contrast, nearly two-thirds of the hospitals with annual expenses greater than \$20 million made profits.
- Hospitals with total expenses below \$15 million had significantly lower margins than those with expenses between \$15 million and \$20 million, and the latter group had significantly lower margins than the hospitals with more than \$20 million in total expenses.

There were over 600 rural hospitals with less than \$20 million in total expenses in 2018, representing nearly one-third of the rural hospitals in the country. These hospitals are clearly at the greatest risk of closure; in fact, two-thirds of the rural hospitals that have closed over the past decade had total revenues below \$20 million, and over one-half had revenues below \$15 million. Even if a hospital does not close, large and persistent losses mean that the hospital will likely have to reduce the healthcare services it provides to the community. As a result, failure to address the significant financial problems facing the majority of these hospitals could lead to significant reductions in access to healthcare services for residents of many parts of the country.

FIGURE 2-2
Financial Trend for Closed Small Rural Hospitals

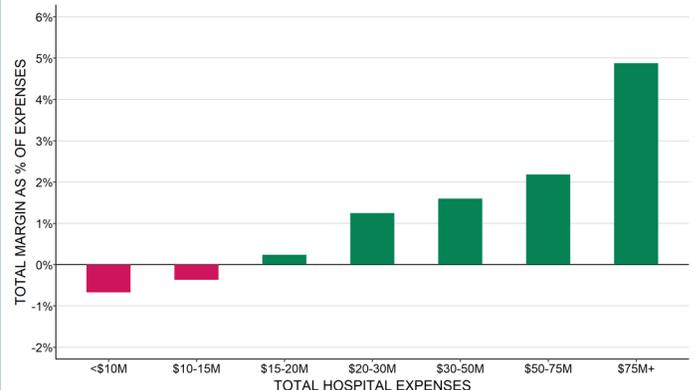


Values shown are medians for all rural hospitals with acute census < 15 that closed from 2016 through June 2020.

As shown in Figure 2-2, in the small rural hospitals that closed between 2016 and the first half of 2020, persistent annual losses in the years prior to closure had reduced the hospitals' resources to the point where the majority had current liabilities that exceeded current assets⁵¹ in the year before they closed.

Several of the rural hospitals that closed were owned by EmpowerHMS, a company that was indicted for fraudulent billing.⁵² However, these were originally community hospitals that only became part of EmpowerHMS because the hospitals were struggling financially and EmpowerHMS promised to rescue them.⁵³ Other hospitals that closed had been bought or managed by individuals or companies that had promised to address their financial problems but failed to do so.⁵⁴

FIGURE 2-3
Total Margin for Small Rural Hospitals 2016-18



Values shown are medians for rural hospitals with acute census < 15.

B. Sources of Revenues in Rural Hospitals

Revenues at a hospital can be divided into four major categories:

- **Health Insurance Plans:** Since most patients have health insurance, the majority of revenues at every hospital comes from insurance plans. However, different insurance plans pay a hospital different amounts for the same service, and insurance plans pay different amounts for the same service at different hospitals. As a result, a hospital's profitability will depend on the specific types of insurance its patients have and the amounts each of those plans pays the hospital for its services.
- **Patients:** Patients themselves are also an important source of revenue for hospitals. Obviously, if a patient has no insurance, the patient will be the primary payer for any services they receive. However, insured patients also serve as partial or even full payers for many of the services they receive because most health insurance plans require patients to pay copayments, co-insurance, and deductibles for services.⁵⁷ In addition, if a service is not covered by the patient's insurance plan, the patient will be responsible for the full charge. If patients cannot afford to pay some or all of the amounts they owe, this will reduce a hospital's overall margin on services.
- **Government Funding:** Many rural hospitals receive government appropriations or tax revenues that are intended to support the hospital's operations but are not directly tied to specific services for individual patients. For example, a number of rural hospitals are organized as public hospital districts and raise revenues from local tax levies. Some states provide special grants to rural hospitals to offset losses from the provision of care to uninsured patients.⁵⁸
- **Non-Patient Service Activities:** Finally, most hospitals will receive some revenues for activities that are not directly associated with the hospital's own healthcare services, e.g., operating a cafeteria, a gift shop, or a parking lot. Depending on the costs incurred for these activities, they may generate either a net profit or a loss for the hospital. In addition, a hospital will receive earnings on any investments it has made, and it may also have to pay interest on loans or bonds; the net revenue from these interest earnings and payments increases the total margin at some hospitals and reduces it at others.

The most detailed data available on the types of revenues received by hospitals come from the cost reports hospitals submit to the Centers for Medicare and Medicaid Services (CMS) each year. The cost reports do not allow revenues to be fully disaggregated into the categories above, but they do allow the following categories of revenues to be analyzed:

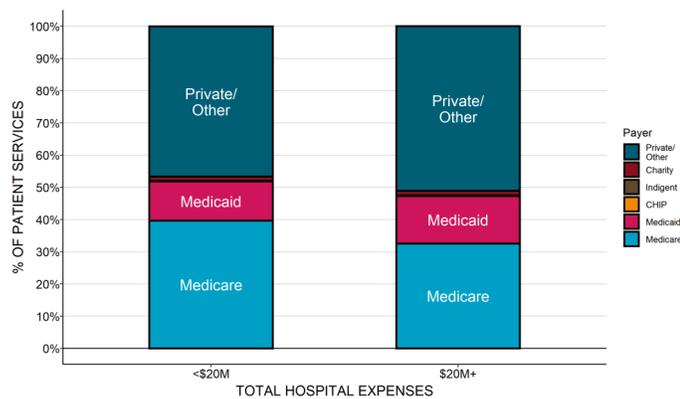
- **Health Insurance Plans:**
 - ◆ **Medicare Fee-For-Service:** The most detailed information is available on payments associated with Medicare beneficiaries who are enrolled in the "Original Medicare" (i.e., individuals who are en-

rolled in Medicare Part A and Part B and are not enrolled in a Medicare Advantage plan).⁵⁹

- ◆ **Medicaid:** The cost reports include the total amount the hospital receives for services delivered to patients on Medicaid. This includes both payments hospitals receive directly from the state Medicaid agency as well as payments received from the Medicaid Managed Care Organizations (MCOs) that serve as payment intermediaries in many states.⁶⁰
- ◆ **CHIP and Indigent Care.** Hospitals identify any payments for patients who are enrolled in Children's Health Insurance Programs (CHIP) and state indigent care programs.
- ◆ **Private/Other Payers:** The remaining revenue from patient services – i.e., the total net revenue the hospital receives for all patient services⁶¹ minus the payments in the four categories above – represents the total amount of payments received from three types of payers: (1) private insurance plans (including Medicare Advantage plans⁶²), (2) other governmental insurance programs⁶³, and (3) self-pay patients.⁶⁴ Since most of revenue in this category typically comes from private insurance plans and patients, the analyses below will generally refer to this category of payers as "private payers" and the patients as "private-pay patients."
- **Patients:**
 - ◆ **Patient Bad Debt:** The cost reports do not distinguish how much of the revenue in the Private/Other Payers category comes directly from patients rather than insurance plans. However, they do include information on patient bad debt, i.e., what patients owe but fail to pay.⁶⁵ This includes both unpaid amounts of cost-sharing for patients with insurance as well as unpaid amounts for uninsured patients who do not qualify for charity care. (Amounts that a health plan owes the hospital but does not pay are also considered bad debt on the hospital's books, but these amounts are not included here.)
 - ◆ **Uninsured Charity Care Patients:** Hospitals report the amount of revenues they would have received for services they delivered to patients who did not have insurance and met the hospital's standards for charity care.⁶⁶
- **Other.** Revenues that are not directly associated with patient services are reported separately on the cost reports. This includes payments from governmental sources that are intended to offset losses on patient services, but are not tied directly to the number or types of services that individual patients receive, such as local tax levies and state grants. However, hospitals vary in how they classify these payments, and many hospitals report all or most other revenues simply as "other revenue," so it is impossible to reliably separate government grants, tax levies, etc. from other sources for all hospitals.

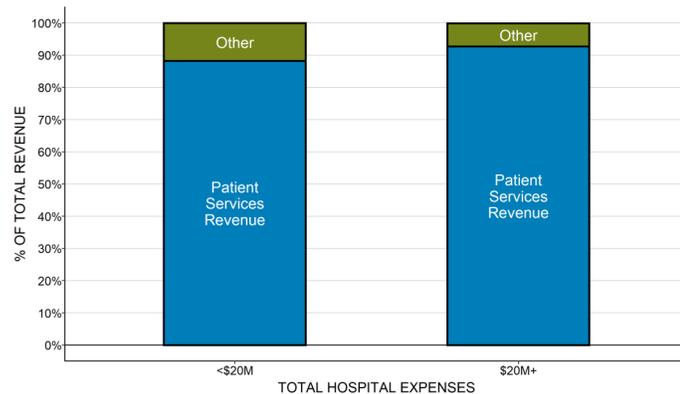
Figure 2-4 shows that about half (47%-51%) of patient services are associated with privately-insured patients and patients who pay for their care directly. A smaller share (33%-40%) of services is associated with patients who have coverage under Original Medicare.

FIGURE 2-4
Payers for Patient Services at Small Rural Hospitals



Data are for 2016-18 for Rural Hospitals with Acute Census < 15.

FIGURE 2-5
Revenue from Patient Services vs. Other Sources



Data are for 2016-18 for Rural Hospitals with Acute Census < 15.

Patients on Medicaid receive only 12-15% of services at most hospitals, and CHIP and indigent care programs pay for only a very small portion of services (less than two-tenths of a percent). The smallest hospitals have a slightly higher share of Medicare and Medicaid patients than larger hospitals (52% vs. 48%), but on average, about half of the patient services at rural hospitals are delivered to patients with public insurance and half are for patients with private insurance.

A portion of the patients with private insurance are Medicare beneficiaries who have a Medicare Advantage plan, so the proportion of services delivered to Medicare beneficiaries is higher than what is shown in the chart. However, Medicare Advantage plans are not required to pay the same amounts or in the same way as for patients in "Original Medicare," so the figure accurately represents the different categories of payers that support the hospital's services.⁶⁷

It is important to recognize, however, that even though the differences in payer mix between smaller and larger hospitals are relatively small on average, individual hospitals can have very different mixes of payers. For ex-

ample, some hospitals have much larger percentages of Medicaid patients and/or uninsured patients, and this can cause greater financial losses for these hospitals. The proportion of Medicare beneficiaries who have selected a Medicare Advantage plan rather than Original Medicare varies significantly from state to state and also from county to county within individual states, and that can cause the proportion of patient services paid for directly by the Medicare program to vary significantly for individual hospitals. As will be discussed further below, this can have a significant impact on a hospital's financial condition.

The vast majority of hospitals' revenues and expenses are associated with services delivered to patients, so if a hospital is losing money overall, it is usually because the payments it receives for services are below the costs incurred in delivering services. However, a hospital that is losing money on patient services could still be profitable overall if it receives enough other types of revenue. As shown in Figure 2-5, other revenue, i.e., revenue that is not directed tied to patient services, represents more than 10% of the total revenues at the smallest rural hospitals, and more than 7% of revenues at larger rural hospitals.

C. Causes of Losses in Small Rural Hospitals

Understanding why some small rural hospitals are losing money and why others are not requires understanding not only how much each hospital receives from each category of payer, but how that revenue compares to the costs of the services the hospital delivered to the patients associated with that payer. Each category of payer described above can contribute either positively or negatively to the hospital's overall profit or loss, depending on whether the amount paid was higher or lower than the cost of the associated services delivered by the hospital.

Measuring Payer-Specific Margins

The relative magnitudes of these contributions can be measured in two ways:

- **The margin (profit/loss) generated by the payer.** The dollar amount of margin is determined by subtracting the estimated cost of the services/activities in the category⁶⁸ from the amount of revenue received for that category.⁶⁹ For example, the margin for Medicare Fee-for-Service is determined by subtracting the total cost of the services delivered to patients with Original Medicare from the total payments the hospital receives from Medicare for those services.

Since the same dollar margin will have a bigger impact on a smaller hospital than a larger hospital, the percentage margin is a better way to compare multiple hospitals. The percentage margin is determined by dividing the margin for the category by the cost in the category.⁷⁰

- **The payer's contribution to the hospital's total margin.** The hospital's overall profitability is determined not by how many payers generate profits or losses but by the relative sizes of those profits and losses. To

measure this, the dollar amount of margin associated with a payer category is divided by the hospital's *total* expenses, rather than just the cost associated with that category.⁷¹

Because of the large differences in the relative sizes of different categories of payers and the variations in payer mix across hospitals, the second measure (the contribution to the hospital's total margin) will generally provide the clearest indication of the relative importance of different payers and other revenues in causing profits or losses.⁷²

Measuring Payer-Specific Costs

Calculating payer-specific margins requires knowing not only the *revenues* the hospital receives from that payer but also the *cost of the services* received by the patients associated with that payer. Determining this cost is challenging to do accurately and fairly:

- Most of the hospital's costs are for facilities, equipment, and personnel that do not change when one more patient or one fewer patient receives a service, which means that the *marginal* (i.e., incremental) cost of a delivering even a complex service to an individual patient is very small. For example, when a patient visits the Emergency Department, even with a serious condition, the hospital will not incur any significant additional expense in the ED to diagnose and treat the condition, because it will not need to hire additional physicians or purchase any additional equipment to do so.⁷³
- Although the incremental cost of each service is small, no patient could receive any service at all if the hospital does not have adequate staff and equipment available, and so some portion of that overall cost must be recovered from each patient. A way to measure this is to calculate the *average cost per service*, i.e., divide the total cost of the service line by the total number of services delivered. However, since some services require more time than others (e.g., a longer ED visit or a lab test that takes longer to perform), it would be misleading to assign the same average cost to every patient, regardless of the intensity of the service they received.

In order to adjust the average cost based on the intensity of individual services, the standard approach is to use the amounts the hospital charges for a service as a measure of the relative intensity of the service. (This assumes that a hospital will charge more for delivering a higher-intensity service.) The amount the hospital *charged* for the service is used (i.e., the hospital's "full price" for the service), not the amount that it was *actually paid* for the service, because the charge for a service is the same for every patient, whereas different payers pay very different amounts for services, and some patients cannot afford to pay anything at all.

The cost of an individual hospital service is estimated by first calculating the "cost-to-charge ratio" for the service line (i.e., the ED or the laboratory), and then multiplying the amount the hospital charged for the service by that ratio. For example, if the total cost of operating the hospital Emergency Department is \$2 million, and the total amount that the hospital charged for all ED visits was

\$4 million, then the cost-to-charge ratio for the Emergency Department would be 0.5. If an individual patient made a visit to the ED and the hospital charged \$200 for that visit, the cost of the visit would be estimated to be \$100 (\$200 x 0.5).

Using this service-line specific approach for an individual category of payers requires knowing how much the hospital billed those payers for services in each separate service line. Hospital cost reports are required to provide this level of detail for Medicare fee-for-service beneficiaries, but not for other payers. When only the total charges for a group of patients is known, but not the service-line specific charges, what is typically done is to calculate an overall cost-to-charge ratio for the entire hospital, and to use that for all service lines rather than service-line specific cost-to-charge ratios. For example, although Medicare requires hospitals to estimate the cost of services delivered to Medicare beneficiaries using service line cost-to-charge ratios, it only requires the hospital to estimate the cost of services to Medicaid patients using the *aggregate* (non-service specific) cost-to-charge ratio for the hospital because hospitals do not separately record the amounts charged for each category of services delivered to Medicaid patients.

Caution is needed when using a single cost-to-charge ratio for the entire hospital because it can be much less accurate than the service-line specific approach for specific hospitals or specific payers. This is because the cost-to-charge ratio typically varies dramatically from service line to service line at most hospitals. For example, the cost-to-charge ratio for an ED visit might be 0.5, but the cost-to-charge ratio for a laboratory test might be only 0.25 (i.e., on average, the hospital charges four times as much for lab tests as it costs to deliver them) or even less. If some payers' patients receive a different mix of services than the patients of other payers, the cost of services ascribed to some payers will be underestimated and the costs will be overestimated for others.⁷⁴

The magnitude of the inaccuracy will depend on the extent to which different sets of patients use very different types of services at a hospital and the extent to which some hospitals set higher charges relative to costs in specific service lines more than other hospitals do. One study that examined the issue using data on California hospitals concluded the overall the error was relatively small, but it is not clear whether similar conclusions would be drawn for other hospitals or more recent years.⁷⁵ However, even the service line specific approach will be inaccurate if hospitals set the charges for specific services in a service line using a much higher mark-up than other services.⁷⁶

The cost estimates used in the margin calculations shown below are calculated using the most detailed level of information about services and charges included in Medicare cost reports. The estimates are most accurate for Medicare fee-for-service patients because the charges for them are reported separately for each individual service line. Costs for Medicaid and private-pay patients can generally only be estimated at a service line level for inpatient care, not for any other service line.

1. Causes of Losses at Hospitals That Closed

Figure 2-6 shows the median amounts that each category of payer contributed to the margins of small rural hospitals that closed between 2015 and June 2020. Although the majority of hospitals lost money on every category of insurance, low payments from private payers and bad debt from private-pay patients are the primary reason why these hospitals lost money prior to closing. Moreover, the low payments from private payers were so large that the hospitals would have had significant overall losses even if there had been no bad debt.

Figure 2-7 shows that the biggest difference between hospitals that closed and those that did not was the margins the hospitals made on privately-insured patients. The majority of both closed and open rural hospitals lost money on Medicare, Medicaid, charity care patients, and there was no significant difference in the margins on any of those categories between the hospitals that closed and those that didn't. In contrast, while most of the closed hospitals lost money on private-pay patients, most open hospitals made profits on these patients. Although the amounts of bad debt were signifi-

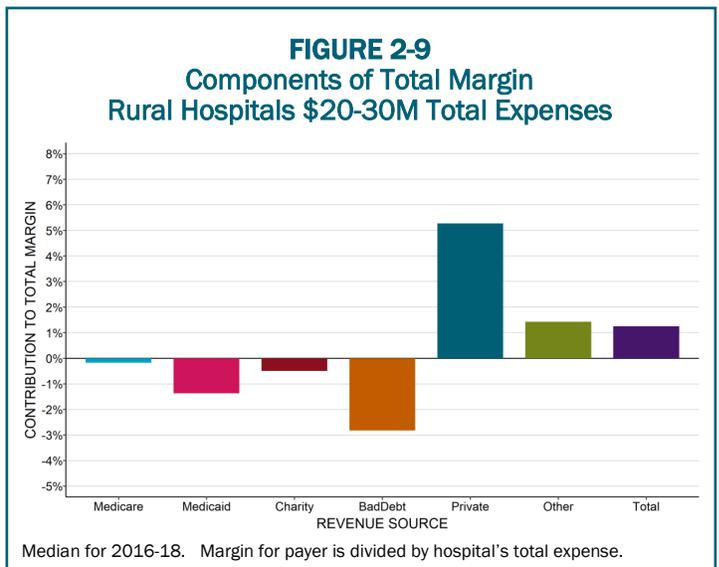
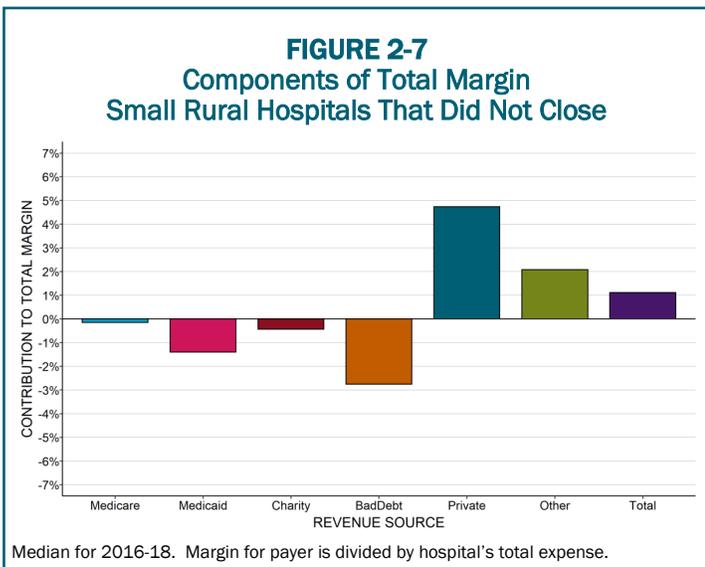
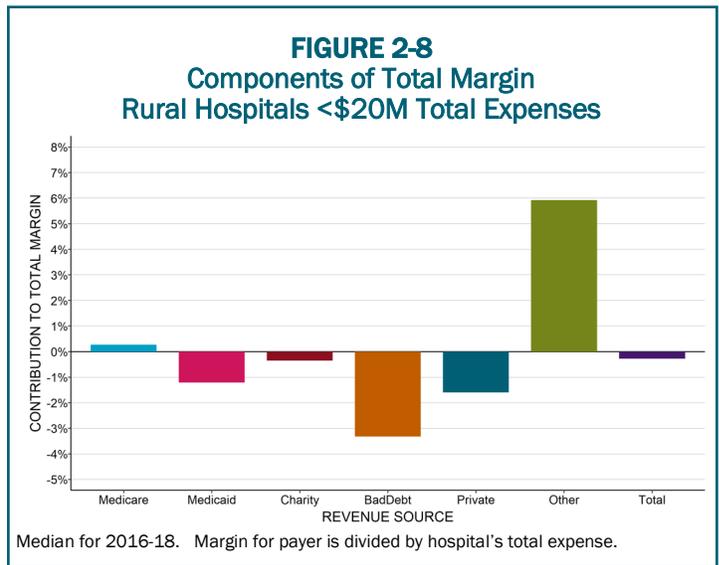
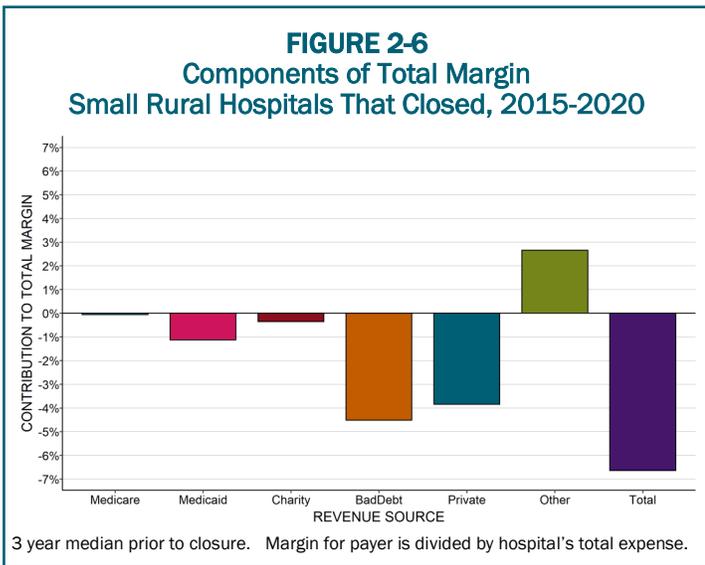
cantly larger for hospitals that closed, this only contributed a small amount to the differences in the overall margins.

2. Causes of Losses in the Smallest Rural Hospitals

As shown earlier in Figure 2-3, the smallest rural hospitals – those with less than \$20 million in total annual expenses – are significantly more likely to lose money than larger rural hospitals. Figure 2-8 shows how each of the different revenue categories contributes to the generally negative total margins at the smallest hospitals, and Figure 2-9 shows the same breakdown for hospitals with \$20-30 million in annual expenses.

There are no statistically significant differences in the contributions from Medicaid or charity care, and the differences in Medicare and bad debt are statistically significant but small in magnitude. Only two categories have significant differences that are large in size:

- **Private-Pay Patients:** The majority of the smallest hospitals lose money on private-pay patients, whereas



the majority of the larger hospitals make profits on private-pay patients. At the larger hospitals, profits on private-pay patients more than offset the losses from bad debt, whereas the smallest hospitals lose large amounts on private-pay patients through a combination of payments below costs and patient bad debt.

- **Other Revenues:** Other revenues are much larger relative to total expenses and revenues at the smallest hospitals than at larger ones. Many more of the smallest hospitals would have lost money in total, and the losses would have been even larger, had it not been for the revenues they received that were not tied directly to patient services.

3. The Key Role of Private Payers in Rural Hospital Losses

As shown in Figure 2-10, the biggest losses on private-pay patients occur at the smallest rural hospitals. The smaller the hospital, the less likely it is that the hospital will make profits on private-pay patients and the more likely it will have losses. Moreover, the smaller the hospital, the lower the profits will be on private-pay patients and the larger the losses will be in percentage terms. Because rural hospitals deliver about half of their services to private-pay patients, profits or losses on those patients represent a large portion of the hospital's total margin.

Low payments from private payers also help explain why, in every size category, some hospitals have bigger financial losses or smaller profits than others. Although rural hospitals deliver about half of their services to private-pay patients on average, the mix of patients varies significantly from hospital to hospital. If hospitals are paid less for patients with private insurance than patients with public insurance, then hospitals will do worse financially if they have more privately-insured patients, and vice versa.

In fact, Figure 2-11 shows that the smallest hospitals do worse financially if more than half of their services are paid for by private payers, and they do better financially if most of their services are delivered to Medicare and

Medicaid patients. In contrast, larger hospitals do better financially if they have a higher share of privately-insured patients, because at larger hospitals, payments for patients with private insurance are higher than the cost of services and offset losses on uninsured patients and patients insured by Medicaid.

The amount that small hospitals lose on private-payer patients also depends on the kinds of services the hospital delivers. As discussed in Section I, the majority of rural hospitals operate one or more Rural Health Clinics (RHCs) in order to ensure that the residents of their community have access to primary care services. On average, the RHCs represent about 1/6 of the hospitals' patient service costs, so profits or losses on the clinics can have a large impact on the hospitals' overall profitability.

Primary care is difficult to sustain financially everywhere, and it is particularly hard to sustain in small rural communities because of the significantly higher costs with smaller patient populations. To support the higher costs of primary care in rural areas, Medicare pays for RHC services based on their costs when the RHC is operated by a rural hospital with less than 50 beds. The average cost per visit in 2018 at rural hospital-based RHCs was \$239, and Medicare paid an average of \$215 per visit at those RHCs, more than double what Medicare paid for visits at primary care practices and non-hospital-based RHCs.⁷⁷

Private health plans, however, typically pay the same amounts for primary care services at hospital-based RHCs as they pay other primary care practices, which is far less than the cost per visit at most RHCs. Figure 2-12 shows that small rural hospitals that operate a Rural Health Clinic lose significantly more on private payments than hospitals without an RHC, and larger hospitals that operate an RHC make smaller profits than hospitals that do not.

Whereas primary care is one of the lowest-paid services in healthcare, surgery is one of the highest paid procedures. Figure 2-13 shows that hospitals which perform surgery have smaller losses or higher profits than hospitals which do not.

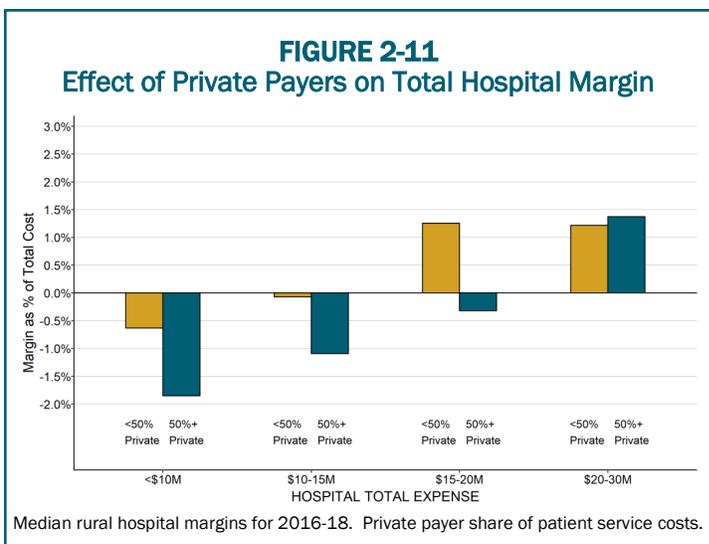
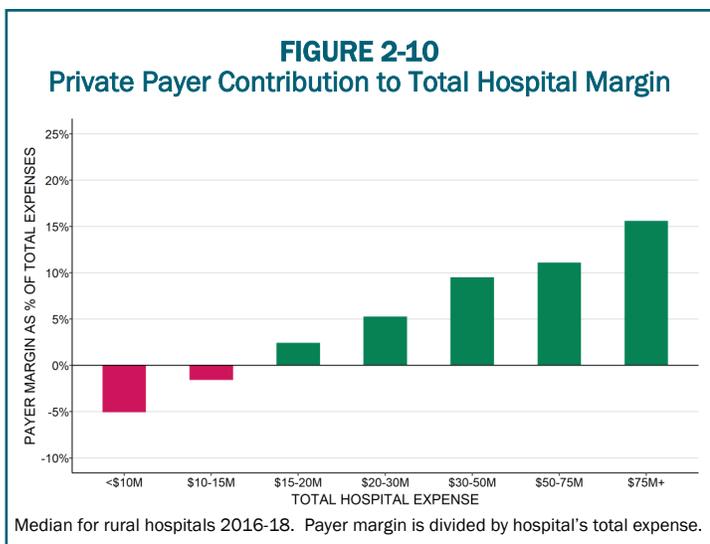
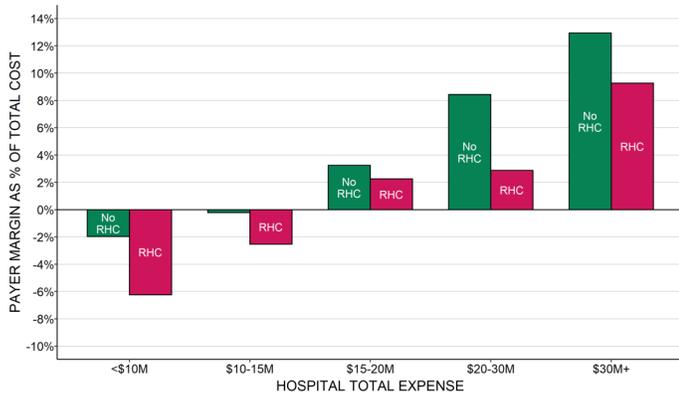
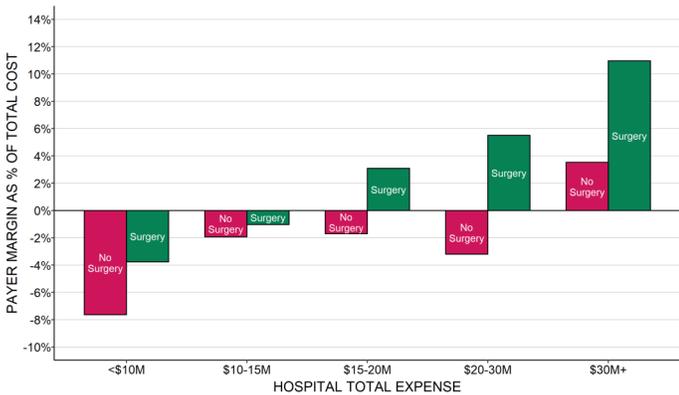


FIGURE 2-12
Private Payer Contribution to Total Hospital Margin



Median for rural hospitals, 2016-18. RHC = Hospital operates a Rural Health Clinic.

FIGURE 2-13
Private Payer Contribution to Total Hospital Margin



Median for rural hospitals, 2016-18. Surgery = Hospital performs surgeries.

Although the majority of small rural hospitals perform surgical procedures, one-third of the smallest hospitals (those with less than \$20 million in total expenses) do not, and as shown in Figure 2-13, these hospitals have bigger financial losses than those that do offer surgery.

4. The Impact of Patient Bad Debt on Rural Hospital Losses

For services delivered to patients with private insurance, the insurance company determines the total amount the hospital is eligible to be paid (what is commonly referred to as the “allowed amount”), but the insurance company rarely pays that full amount itself. Patients are generally required to pay all or part of the amount based on the cost-sharing requirements in their insurance – i.e., deductibles, copayments, and co-insurance. The private insurance payments shown in the previous section represent the allowed amounts determined by the health insurance plan, including both the portion paid directly by the health plan and the portion paid by patients.

Cost-sharing requirements in private insurance plans have increased significantly over time, and a growing

number of patients cannot afford to pay them. As a result, hospitals receive less actual revenue for privately-insured patients than their insurance company has “allowed” the hospital to receive. If a patient with private insurance does not pay all or part of the portion of charges for which they are responsible, this is classified on hospital cost reports as either “charity care for insured patients” (for patients who meet the hospital’s charity care standards) or as “bad debt” (for the remaining patients who do not qualify for charity care). Patients who do not have insurance but who do not qualify for charity care (typically described as “self-pay” patients) are responsible for the hospital’s full charge for their services or any discounted amount the hospital offers them; any portion of this amount that they fail to pay is also classified as bad debt.⁷⁸ (Patients who do not have insurance and who meet the hospital’s standards for charity care are shown as “charity” in the earlier figures.)

The cost of services associated with these unpaid charges represents a significant loss for most hospitals and it is shown as “Bad Debt” in the figures.⁷⁹ For most hospitals, the cost associated with bad debt⁸⁰ is much larger than the cost of charity care for insured patients.⁸¹

As shown in Figure 2-8, bad debt for private-pay patients represents more than 3% of the total cost of services at most of the smallest rural hospitals, i.e., it causes total margins at most rural hospitals to be more than 3% lower than what they would otherwise be. Bad debt losses are somewhat larger at the smallest rural hospitals than at larger hospitals, which is likely due to a combination of lower incomes in small rural communities and higher cost-sharing requirements in the health insurance plans available in these communities. Out-of-pocket medical costs for people with employer-sponsored insurance are significantly higher than average in a number of states that have large rural populations. In many of these states, more than one-fifth of the people with employer-sponsored insurance had out-of-pocket medical expenses greater than 10% of their household income.⁸²

5. The Impact of Medicaid on Rural Hospital Finances

As shown in Figure 2-14, the majority of small rural hospitals lose money on Medicaid patients, regardless of size. The losses are somewhat smaller at the smallest hospitals, partly because some states have special payment programs for Critical Access Hospitals and other small rural hospitals.

A comparison of Figures 2-10 and 2-14 shows that at the smallest hospitals, the losses on private-payer patients have a bigger negative impact on the hospitals’ overall profitability than the losses on Medicaid patients. (For example, for hospitals with less than \$10 million in total annual expenses, the loss on Medicaid patients reduced the hospital’s total margin by a median of 1%, whereas the loss on private-pay patients reduced the total margin by a median of 5%.)

The reason hospitals lose more on privately-insured patients is not because private payers pay less than Medicaid for individual services, but because there are more private-pay patients than Medicaid patients. The amount that a particular type of payer contributes to a

hospital's total profit or loss is determined by two separate factors: (1) the difference between what the payer pays for *each* service and how much it costs the hospital to deliver the service, and (2) what *proportion* of the hospital's total patients and services are paid for by that payer. A small profit or loss for a large number of patients can have a bigger impact on the hospital's overall profitability than a larger profit or loss for a small group of patients.

Figure 2-15 shows that most of the smallest rural hospitals are paid less for individual services by Medicaid than by private payers.⁸³ However, as shown earlier in Figure 2-4, a much smaller portion of hospitals' services are delivered to Medicaid patients than to private-pay patients. As a result, even though the loss on services delivered to private-pay patients shown in Figure 2-15 is smaller than the loss on Medicaid patients, the private-pay losses have a much bigger negative impact on the very small hospitals' overall margins, as shown in Figure 2-8. Conversely, while larger hospitals lose larger amounts on individual services to Medicaid patients than smaller hospitals, they make profits on private-pay patients (in contrast to the losses at small hospitals for

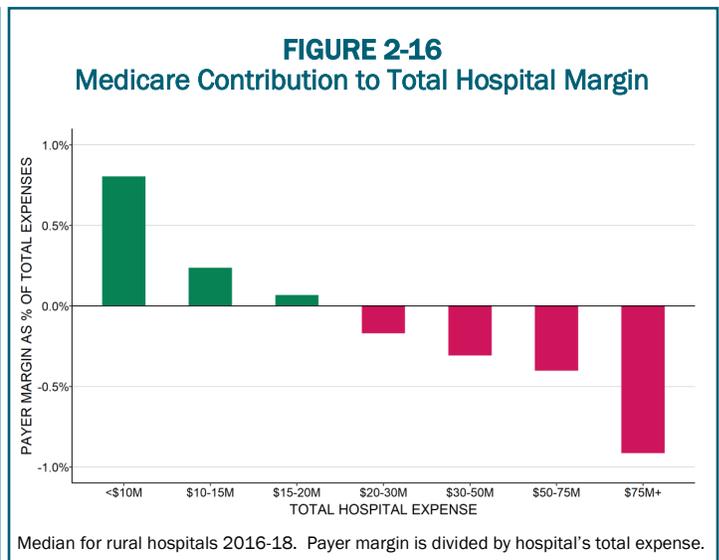
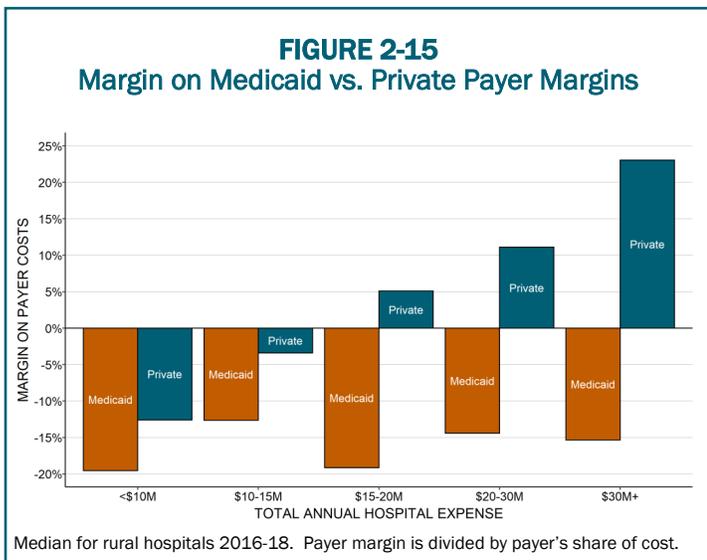
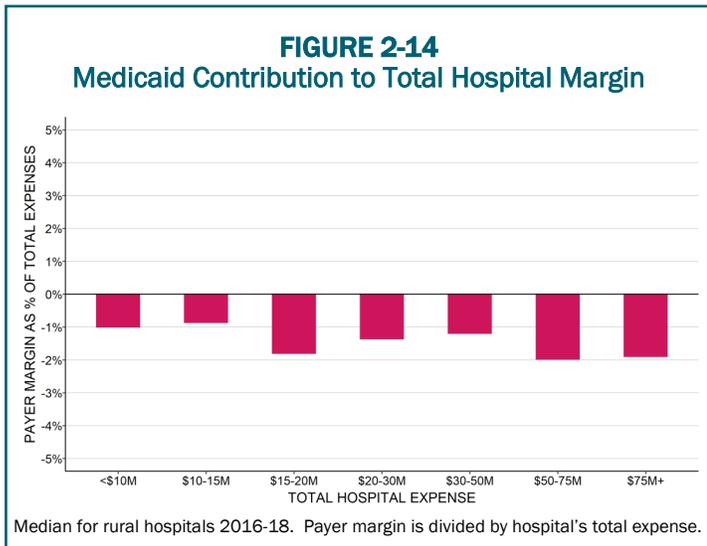
private-pay patients), and because there are more private-pay patients than Medicaid patients, the profits on the private-pay patients at the larger hospitals more than offset the higher losses on Medicaid patients, as shown in Figure 2-9.⁸⁴

6. The Impact of Medicare Payments on Rural Hospital Finances

In contrast to private payers and Medicaid, Medicare provides *better* financial support to small rural hospitals than to larger hospitals. As shown in Figure 2-16, the majority of very small rural hospitals receive payments for Original Medicare beneficiaries that are slightly higher than the costs of services to those beneficiaries, whereas at larger hospitals, most hospitals lose money on Original Medicare patients.

It is important to recognize that the axis scales in Figures 2-10 and 2-16 differ by a factor of 10 – the range in the median contribution to total margin for private payers is more than 20%, whereas the range for Medicare is less than 2%. As a result, the small profits on Medicare patients at some of the smallest hospitals do not offset the losses on private-pay patients. In contrast, the positive margins on private-pay patients at many larger hospitals can more than offset their losses on Medicare patients.

Medicare payments for the smallest hospitals are higher because smaller hospitals are more likely to be classified as Critical Access Hospitals and qualify for cost-based payment.⁸⁵ As shown in Figure 2-17, except for Critical Access Hospitals, the majority of hospitals lose money on Medicare patients, although the losses are smaller for hospitals classified as Sole Community Hospitals or Medicare Dependent Hospitals and for hospitals that receive low-volume adjustments to their inpatient payments. The strengths and weaknesses of the Critical Access Hospital payment system will be discussed in more detail in Chapter IV.



7. The Key Role of Other Sources of Revenue in Sustaining Rural Hospitals

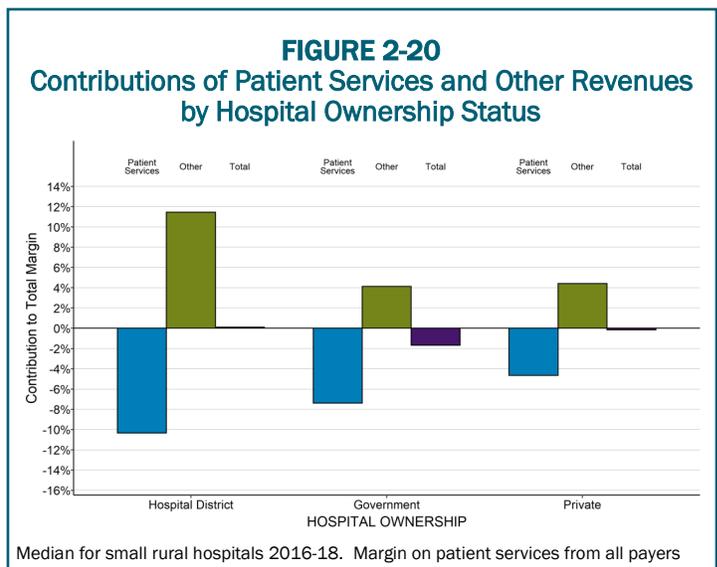
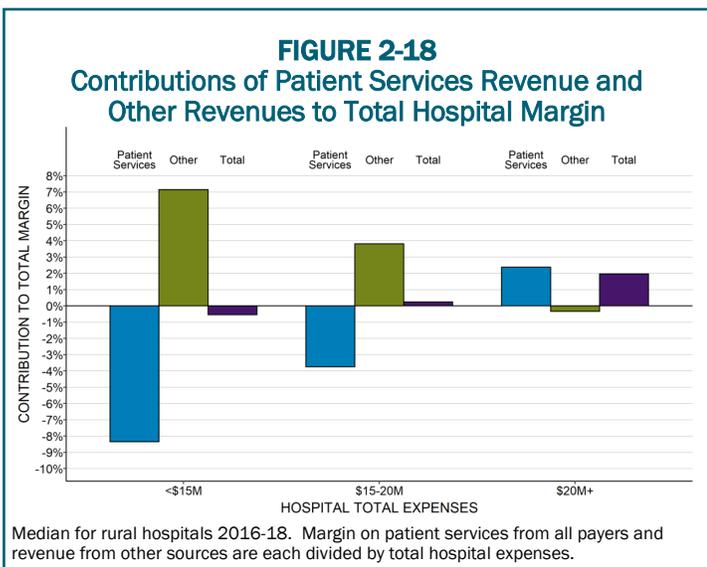
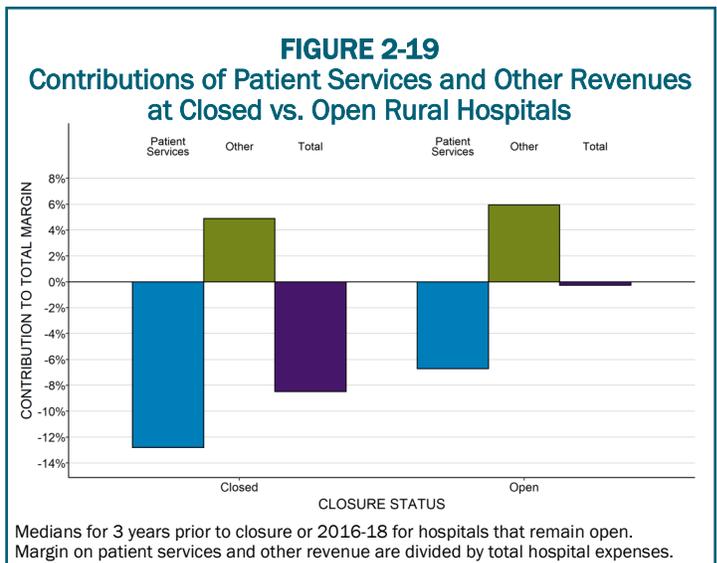
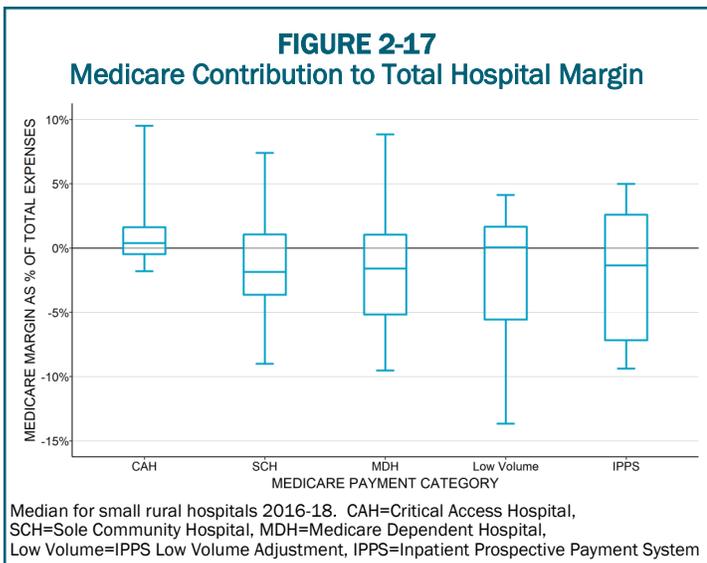
As a result of the large losses on private-pay, Medicaid, and uninsured patients, over 70% of the smallest rural hospitals (those with total expenses below \$20 million) lose money on the delivery of patient services. The majority have losses of 6% or more, and one-fourth have losses of 15% or more. In contrast, two-thirds of larger rural hospitals make profits on patient services.

If a hospital is losing significant amounts of money on patient services, the only way it can continue to operate is if it has sources of revenue other than payments for patient services. As shown in Figure 2-18, most of the smallest rural hospitals receive a significant amount of other revenues that offset the losses they incur on patient services, whereas larger rural hospitals do not.

Of course, if the losses on patient services are too large or the other sources of revenue are too small, a small rural hospital will end up with overall losses and it could

be forced to close as a result. Figure 2-19 shows that the small rural hospitals that closed between 2015 and 2020 had losses on patient services that were nearly double what other small rural hospitals experienced, and they received less in other revenues as a percentage of their total expenses that could help offset these losses. As a result, they incurred significant overall losses, which likely led to their closure.

Rural hospitals vary significantly in their ability to obtain “other revenues” to offset losses on patient services. Hospitals that are organized as public hospital districts or owned by a governmental entity (e.g., a county or municipality) often have access to public funding sources that are not available to other hospitals, such as the ability to impose tax levies on local residents. Figure 2-20 shows that the more than 180 small rural hospitals operated by hospital districts have significantly higher losses on patient services than other similarly-sized hospitals, but they also have more revenue from taxes and other sources that has enabled half of them to balance their budgets and continue operating.



D. Differences by State

The analysis above demonstrates that in general, losses on services to private-pay patients contribute more to overall losses at very small rural hospitals than do losses on Medicaid or Medicare patients. However, not all of these very small rural hospitals lose money, not all lose money on private-pay patients, and not all lose more on private-pay patients than on Medicaid or Medicare patients.

One of the primary determinants of this variation is the state in which the hospital is located. Payment amounts, patient cost-sharing, and eligibility in private insurance and Medicaid programs differ dramatically from state to state, this causes the financial status of rural hospitals to also differ dramatically across states.

1. Variation in Total Margin

Figure 2-21 shows that in more than half of the states, the majority of the very small rural hospitals had positive margins, but in the other states, most of the smallest rural hospitals had negative margins,⁸⁶ in some cases very large negative margins. More than 260 rural hospitals with less than \$20 million in total expenses – representing 40% of the small rural hospitals across the country – are in the states where the majority of such hospitals have negative margins.

As shown in Figure 2-22, the states in which the majority of very small rural hospitals have had negative margins are concentrated in the southeastern part of the country. Because of this, it is not surprising that the vast majority of hospital closures have been in the southeast, as the map also shows.

2. Variation in Private Payer Payments

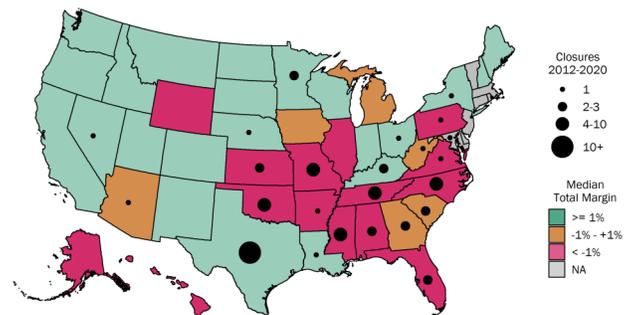
A major reason for the variation in total margins by state is the variation in the margins for private-pay patients. Although the median margin for private-pay patients at very small rural hospitals in 2016-2018 was -4%, there was wide variation above and below that median. 25% of the hospitals had losses of 20% or more, while 25% of the hospitals made profits of 15% or more.

Figure 2-23 shows that much of that variation is driven by where the hospital is located. In almost half of the states, the majority of very small rural hospitals lose money on private-pay patients, and in eleven states, the majority of the very small rural hospitals have losses of 10% or more on private-pay patients.

A comparison of Figure 2-24 with Figure 2-22 shows that the states where private payer losses are the greatest are not the same as the states where overall losses are the greatest. Margins on private-pay patients tend to be lower in the western states than in eastern states.

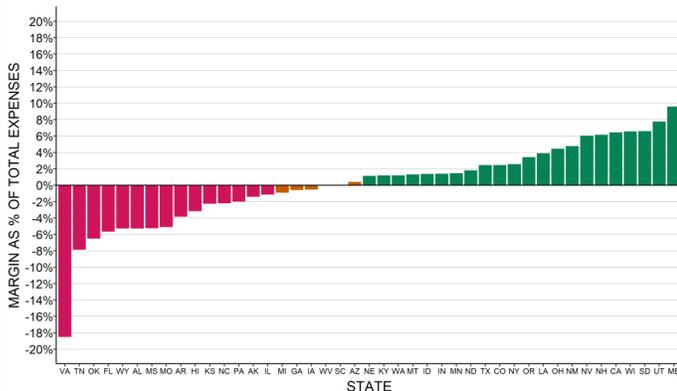
Although the majority of slightly larger rural hospitals in the country (those with total annual expenses between \$20 million and \$30 million) are not losing money on their private pay patients, that is not true in every state. As shown in Figure 2-25, in one-fourth of the states, the majority of hospitals of this size are also losing money on their private-pay patients.

FIGURE 2-22
Total Margin at Rural Hospitals <\$20M Expenses and Rural Hospital Closures by State



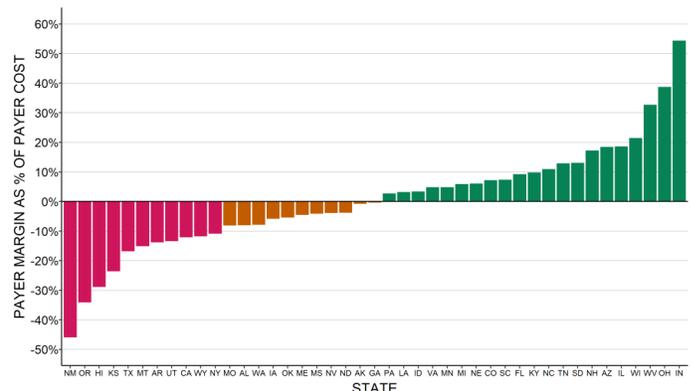
Median total margin in 2016-18 for rural hospitals located in the state. Closures are those reported by the Sheps Center for Health Services Research. NA = states with no rural hospitals <\$20M in expenses

FIGURE 2-21
Median Total Hospital Margin by State
Rural Hospitals <\$20M Expenses



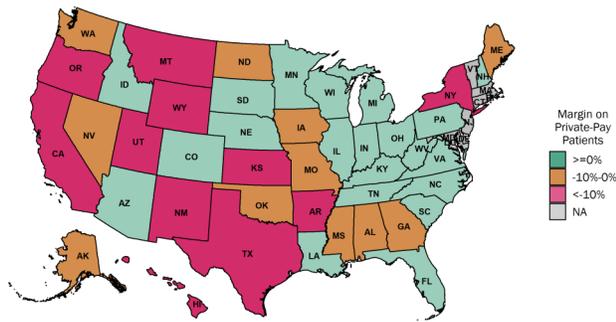
Median total margin in 2016-18 for rural hospitals located in the state.

FIGURE 2-23
Median Margin on Private-Payer Patients
Rural Hospitals <\$20M Expenses



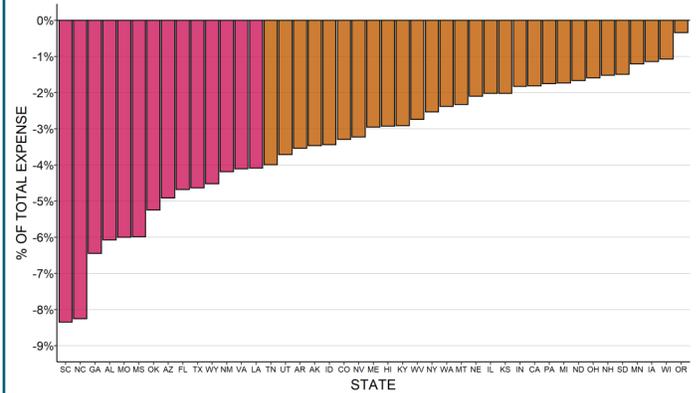
Median margin in 2016-18 for private-payer patients.

FIGURE 2-24
Median Margin on Private-Payer Patients
Rural Hospitals <\$20M Expenses



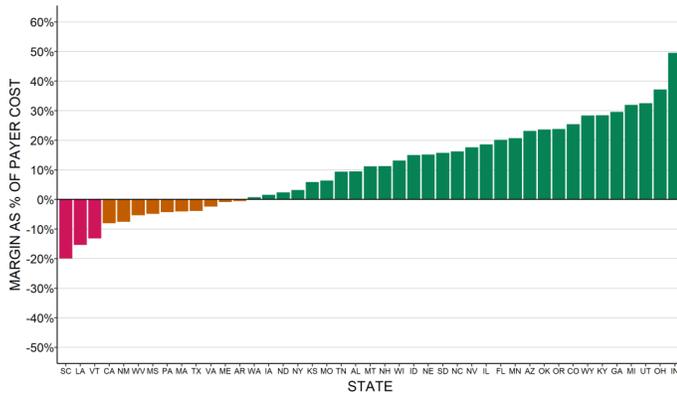
Median margin in 2016-18 for private-payer patients. NA = state has no rural hospitals <\$20M in total expenses.

FIGURE 2-26
Median Bad Debt as % of Total Hospital Expenses



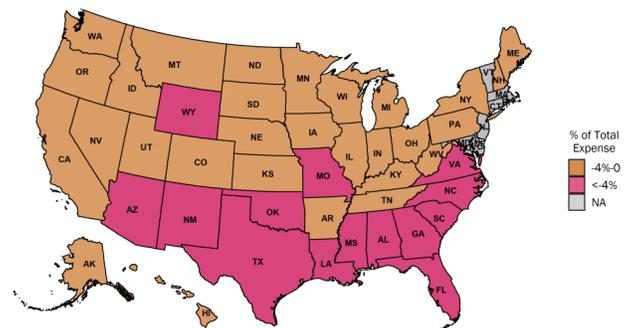
Median for 2016-18 at rural hospitals <\$20M expenses. Bad debt only for private pay.

FIGURE 2-25
Median Margin on Private-Payer Patients
Rural Hospitals \$20-30M Expenses



Median margin in 2016-18 for private-payer patients.

FIGURE 2-27
Median Bad Debt as % of Total Hospital Expenses



Median for 2016-18 at rural hospitals <\$20M expenses. Bad debt only for private pay. NA = state has no rural hospitals <\$20M in total expenses.

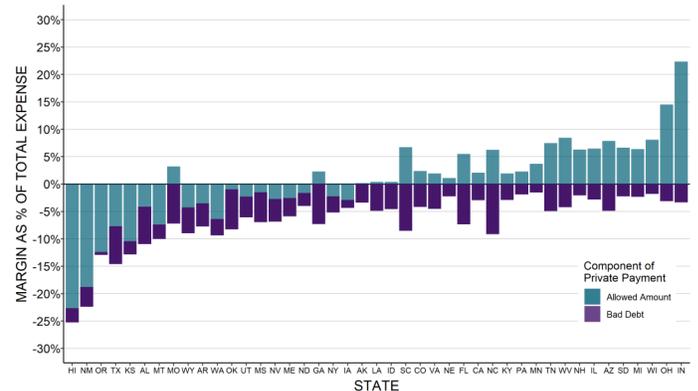
3. Variations in Patient Bad Debt

There are also significant differences across states in the amounts very small rural hospitals lose due to patient bad debt. In some states, this reduces hospital margins by only 1-2%, but for small rural hospitals in many states, the median loss is more than 4% (Figure 2-26).

As shown in Figure 2-27, the highest losses on unpaid patient obligations are in the southern states. Rates of rural poverty are significantly higher in southern states than in other parts of the country, which makes it more likely that individuals living in those states will not have health insurance or be unable to afford cost-sharing amounts in their health insurance plans.

The margins for private-pay patients shown in Figure 2-23 are based on the total amounts the hospital expects to receive from both insurance plans and patients. Patient bad debt increases those losses and reduces the profits, as shown in Figure 2-28.

FIGURE 2-28
Median Contributions to Small Rural Hospital Margins
from Private Payer Allowed Amounts and Bad Debt



Median for 2016-18 at rural hospitals <\$20M expenses. Bad debt only for private pay.

4. Variations in Medicaid Payments

As shown in Figure 2-29, there is also significant variation across states in the margins for Medicaid patients treated at very small rural hospitals. Some state Medicaid programs use cost-based payment for services delivered by Critical Access Hospitals and special payment rates at other hospitals that result in positive margins or small losses for services delivered to Medicaid patients. In contrast, many other states have standard payment schedules for all hospitals that financially disadvantage small rural hospitals where the cost of delivering services is higher.⁸⁷

Figure 2-30 shows that losses on Medicaid patients are highest in states in the upper Midwest and West, whereas the majority of very small rural hospitals in the Southeast report positive margins on services to Medicaid patients.

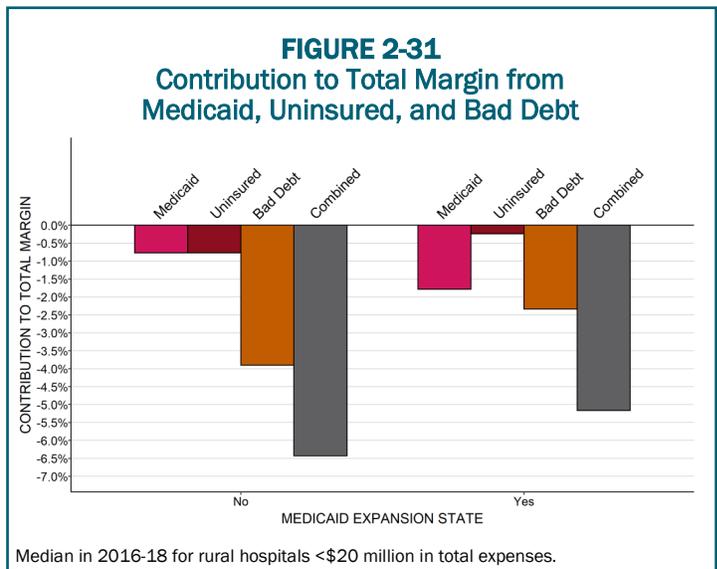
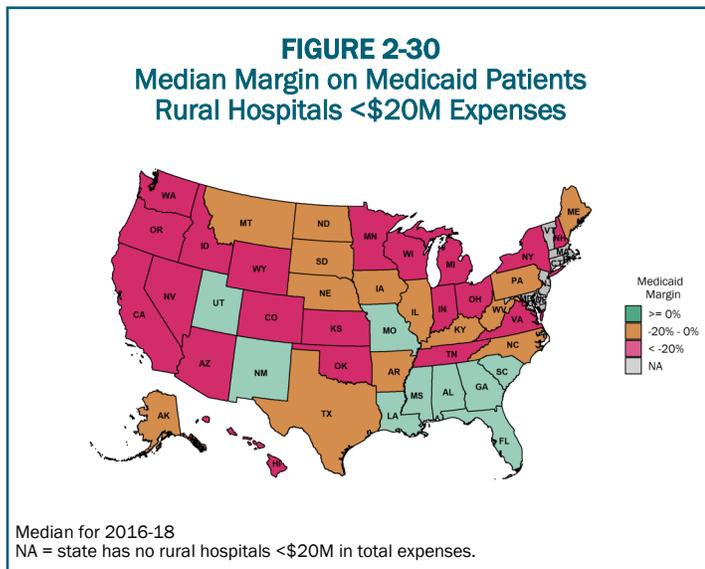
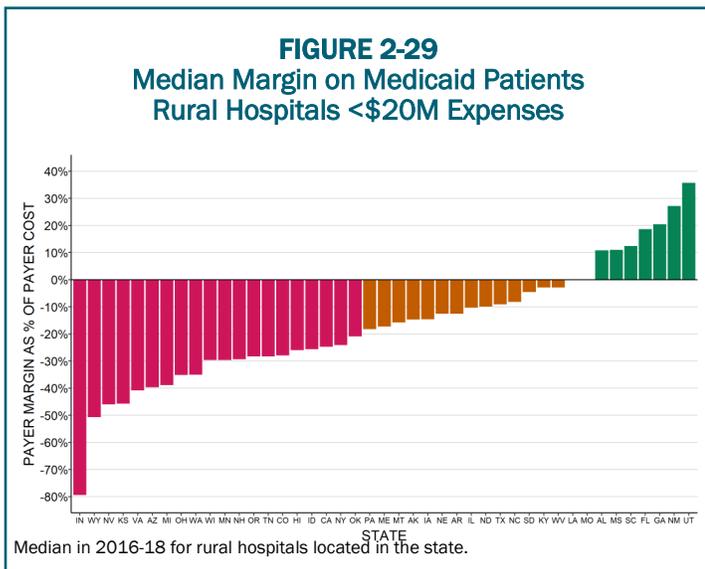
5. The Impact of Medicaid Expansion

Medicaid programs differ from state to state not only in the amounts paid for services, but in terms of eligibility requirements. The tighter the eligibility requirements in the state, the more likely it is that people living in rural areas will be uninsured or have insurance plans with high cost-sharing requirements. Consequently, some of the variation in patient bad debt shown in Figure 2-26 could be due to variations in Medicaid eligibility requirements.

After the Affordable Care Act allowed states to broaden eligibility for Medicaid, some states increased income limits to the maximum amount permitted (i.e., “Expansion States”), while others have not done so. Figure 2-31 shows that in Medicaid expansion states, losses from uninsured charity care cases and bad debt at very small rural hospitals are lower than in non-expansion states. However, losses on services delivered to patients who do have Medicaid are higher in the expansion states because the Medicaid payment rates are lower relative to costs than in the non-expansion states. The net effect is that small rural hospitals in Medicaid expansion states have slightly smaller losses than hospitals in non-expansion states, but the difference is less than what one might expect or hope to see based on the difference in insurance coverage.

Figure 2-32 shows that in Medicaid expansion states, median losses on uninsured charity cases and bad debt decreased following expansion, but median losses on services to Medicaid patients nearly doubled. Many states used hospital assessments to help pay for the higher cost of expanded coverage⁸⁸, and the cost of expansion may have made it less likely for states to increase payments to hospitals. The net effect was a small reduction in the combined losses from all three categories.

Figure 2-33 shows that in non-expansion states, median losses on uninsured charity care patients and patient bad debt were larger than in expansion states prior to expansion. However, median losses on patients who did have Medicaid coverage were smaller and did not increase over the same period of time. The net effect is



that losses on the three categories of patients at hospitals located in the expansion states are lower than at hospitals in the non-expansion states, but most of the difference existed prior to expansion of Medicaid.

6. Variations in Medicare Margins

There is also variation across states in the margins very small rural hospitals receive on services to Medicare patients, but the magnitude of the variation is much smaller than for Medicaid and private-pay patients. In most states, median Medicare margins are between -6% and +6%, in contrast to the double-digit positive and negative margins for other payers.

The variation across states is not because Medicare pays different amounts in different states, but because of differences in the Medicare classifications of rural hospitals in different states. In states that have the lowest population densities, very small hospitals are more likely to meet the criteria for Critical Access Hospitals, and therefore they can be paid by Medicare based on their costs.

7. Variations in Patient Service Margins

In combination, the losses on private pay patients, Medicaid patients, bad debt, and uninsured patients means that the majority of small rural hospitals in almost every state lose money overall delivering services to patients. As shown in Figure 2-34, in more than half the states, the majority of small rural hospitals have losses greater than 5% on delivery of services to patients.

8. Variations in Other Income

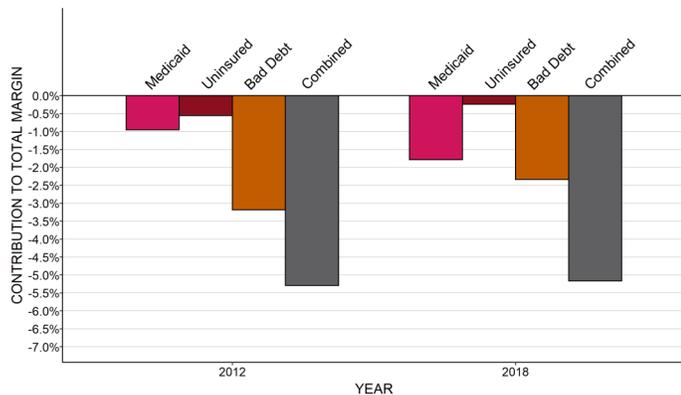
As noted earlier, the only way that rural hospitals continue operating when they lose money on their services to patients is by obtaining other types of revenue. The amounts of these other sources of revenue vary dramatically by state. In almost half of the states, very small rural hospitals support more than 5% of their costs through revenues that are not tied directly to patient services, and in ten states, other income supports 10% or more of costs for most of the very small rural hospitals (Figure 2-35).

In some cases, these other revenues come from special state programs designed to support rural hospitals.⁸⁹ For example, Texas uses a special Medicaid waiver program to provide a large amount of additional funding to hospitals beyond what they receive in Medicaid payments for individual services to patients.⁹⁰

In other cases, small rural hospitals are organized as public hospital districts or are owned by a local government, and the residents of the hospital's service area have decided to use tax revenues to support the hospital. For example, in Washington State, most small rural hospitals are organized as public hospital districts and many of them use revenues from special local tax levies to offset the losses the hospitals incur due to low payments from Medicaid and private insurance plans.⁹¹

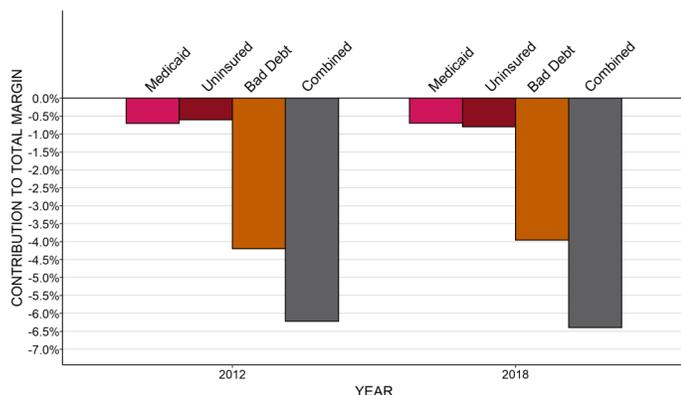
As shown in Figure 2-36, other funds contribute more to margins at small rural hospitals located in the western half of the U.S., particularly in the southwest and West Coast. Higher amounts are necessary there because of the losses on both private-pay and Medicaid patients in those states, as shown earlier in Figures 2-24 and 2-30.

FIGURE 2-32
Medicaid, Uninsured, and Bad Debt Contributions to Margin in States That Expanded Medicaid



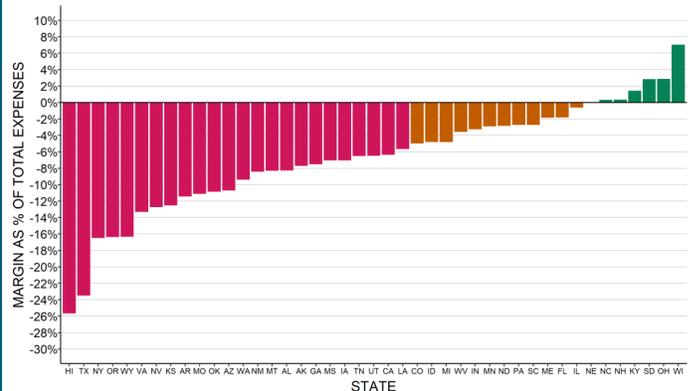
Median for rural hospitals <\$20M. 2012 is pre-expansion, 2018 is post-expansion.

FIGURE 2-33
Medicaid, Uninsured, and Bad Debt Contributions to Margin in States That Did Not Expand Medicaid



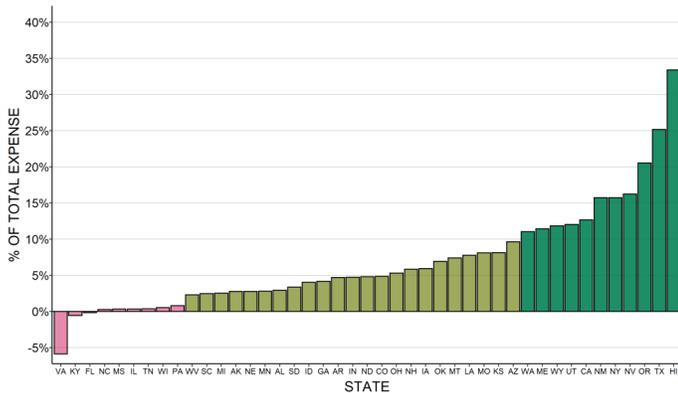
Median for rural hospitals <\$20M. 2012 is pre-expansion, 2018 is post-expansion.

FIGURE 2-34
Median Margin on Patient Services at Rural Hospitals <\$20M Total Expenses



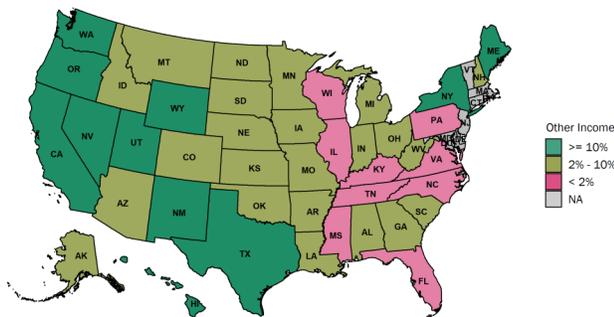
Median margin from all payers for patient service costs, 2016-18

FIGURE 2-35
Other Income as % of Total Expenses
at Rural Hospitals <\$20M Total Expenses



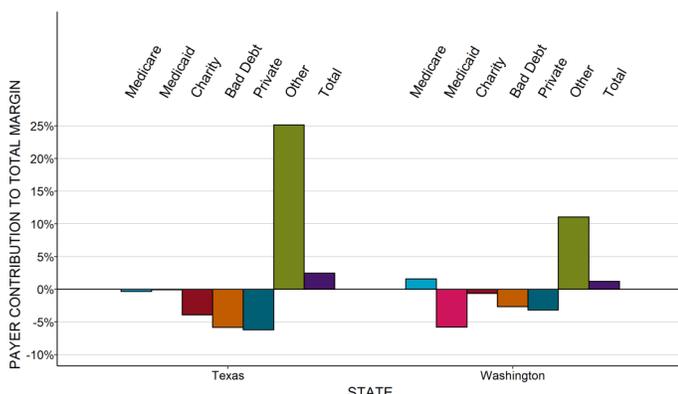
Median for 2016-18. Includes revenues and costs not based on patient services.

FIGURE 2-36
Other Revenues as % of Total Expenses



Median for 2016-18. Includes revenues and costs not based on patient services. NA = state has no rural hospitals <\$20M in total expenses.

FIGURE 2-37
Contributions to Total Margin by Each Payer
at Rural Hospitals <\$20M Total Expenses



Median for 2016-18 for rural hospitals located in each state.

While these other revenue sources are vital in keeping small rural hospitals open, they mask the underlying problems with the payments the hospitals receive for patient services. For example, as shown in Figure 2-37, while the majority of very small rural hospitals in Texas and Washington State have positive overall margins, this is only because of the large amounts of other income they receive. The low private insurance payments the hospitals receive in both states and large amounts of patient bad debt in both states, combined with losses on Medicaid or charity care patients, would make it impossible for the hospitals to continue delivering patient services otherwise.

E. Which Private Payers Contribute Most to Hospital Losses?

Clearly, private payers are the single biggest factor affecting whether small rural hospitals will lose money and how much they will lose. However, there are many different types of payers in this category, including employer-sponsored and individual commercial insurance plans, Medicare Advantage plans, patients who do not have insurance but who do not qualify for charity care, and patients receiving services not covered by their insurance.⁹² It is possible that only a subset of these payers is causing most of the losses, and if so, it is important to understand which payers these are.

Another large contributor to hospital losses is patient bad debt. Some of this represents patients without health insurance who do not qualify for charity care, some represents insured patients who fail to pay all or part of the cost-sharing they owe, and some represents patients receiving services that are not covered by their health insurance. It is important to understand how much of these losses are due to lack of insurance vs. under-insurance.

One cannot determine the relative contributions of different private payers using Medicare cost reports, since hospitals are not required to identify specific payers other than Medicare, Medicaid, and CHIP. Nor can one distinguish between bad debt on uninsured patients vs. insured patients using Medicare cost reports, since hospitals only report on uninsured patients that meet the hospital's charity care standards.

However, a number of states require their hospitals to submit additional information beyond what is contained in Medicare cost reports, and the reports required in California and Tennessee include detailed breakdowns of charges and payments for several major categories of private payers. The reports in Tennessee also distinguish between bad debt for patients who have no insurance vs. those who do. As shown earlier in Figures 2-23 and 2-24, private payer margins in these two states are at opposite ends of the spectrum – most small rural hospitals in California lose money on services to private-pay patients, while the majority of small rural hospitals in Tennessee make profits on private-pay patients. Consequently, the detailed data from the two states can help to illuminate the reasons for the wide variance in private payer margins across the country.

1. Profits and Losses Based on Type of Private Insurance in California

Data from California⁹³ show that margins on services to private-pay patients vary significantly by hospital size, similar to what is seen nationally in the Medicare cost reports. As shown in Figure 2-38, most of the smallest rural hospitals in California lose money on services to private-pay patients, while most of the larger hospitals make significant profits on them. A small majority of hospitals between \$20 million and \$30 million in total expenses made profits on private payers, but nearly half had losses.

The California data allow private payers to be divided into three subgroups – Medicare Advantage, commercial insurance plans, and “other,” which includes self-pay patients who do not qualify for charity care as well as patients whose care is paid for by other types of programs (e.g., workers compensation). In addition, hospitals in California report the amount of bad debt for each category of payer.⁹⁴

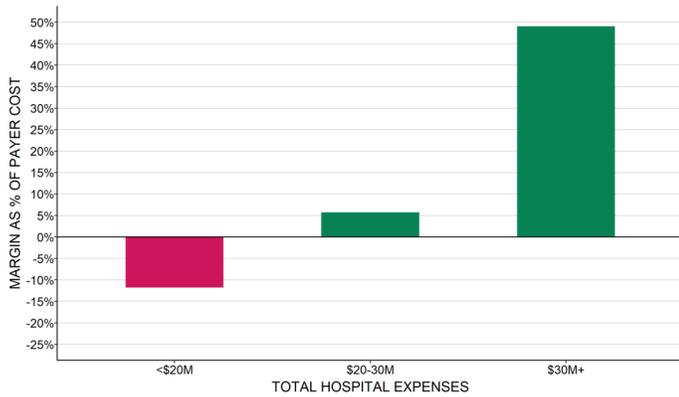
Figure 2-39 shows the percentage margins for each category of payer in small rural hospitals, i.e., the extent to which the amount the payer was obligated to pay the hospital exceeded or fell short of the cost of the services delivered to that payer’s patients. The margins are shown for (1) the smallest rural hospitals (those with less than \$20 million in total expenses) where total private payer margins are generally negative, (2) the slightly larger hospitals (with \$20-30 million in total expenses) where a small majority of hospitals make a profit on private payer patients, and (3) the largest rural hospitals, where most hospitals make profits on private-pay patients.

- The highest margins for the smallest hospitals are for self-pay/other patients. This is not surprising, because self-pay patients do not have the benefit of contractual discounts or fee schedules that the hospital has agreed to in advance with health insurance plans, and the hospital’s charges will be set high enough so they cover the costs of the services after the discounts are given to the health plans. However, these margins are misleading because they are the amounts the patients are *obligated* to pay, not the amounts they *actually* pay. As will be shown below, bad debt from self-pay patients eliminates all of this positive margin.
- The lowest margins are for Medicare Advantage patients. Most of the hospitals lose money on patients insured by Medicare Advantage plans because the plans pay significantly less than the costs of services for small rural hospitals in all size categories.
- Commercial insurance plans pay less than the cost of services at the smallest hospitals, whereas the payments are much more than the cost of services at the bigger hospitals.

Medicare Advantage Plans

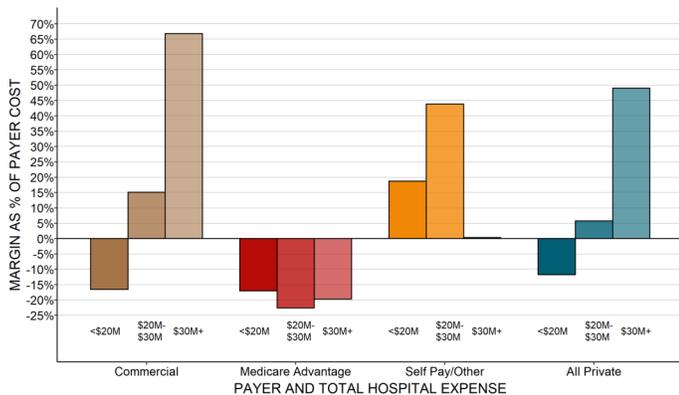
Medicare Advantage plans are not required to pay hospitals the same amounts for services as the hospitals are paid for patient with Original Medicare. The losses on Medicare Advantage patients are not only bigger than the losses on commercial insurance patients at the smallest hospitals, but as shown in Figure 2-40, they are bigger than the losses those hospitals experience on

FIGURE 2-38
Private Payer Margins
California Rural Hospitals



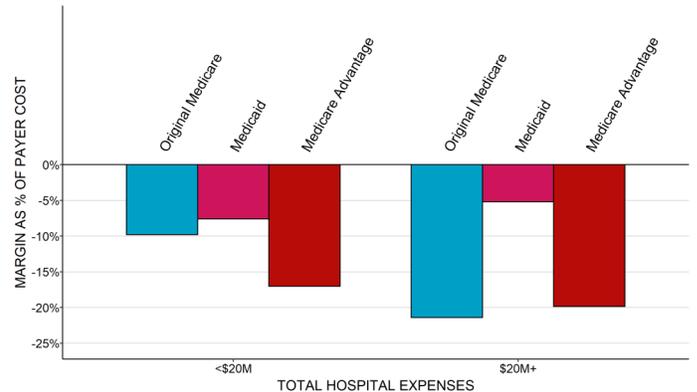
Median for 2015-17. Margins as % of cost assigned to private payer patients.

FIGURE 2-39
Margins for Private Payers Before Bad Debt
California Rural Hospitals



Median for 2015-17 Payer margin as % of cost assigned to that payer’s patients.

FIGURE 2-40
Margins for Medicare, Medicaid, Medicare Advantage
Patients at California Rural Hospitals



Median for 2015-17 Payer margin as % of cost assigned to that payer’s patients.

Original Medicare patients. In fact, in California, small rural hospitals lose more money on services for Medicare Advantage patients than services to patients on Medicaid.

As discussed earlier, the impact of a particular payer on a hospital's overall finances depends not only on the amount paid relative to costs for individual services, but also the proportion of the hospital's total services that are paid for by that payer. Figure 2-41 shows that over 70% of the services delivered to private-payer patients in rural California hospitals were for patients with commercial insurance, so the profits or losses for those patients will have the biggest relative impact on the rural hospitals in California. Less than 20% of the private-pay patients are self-pay patients at the smallest hospitals, although this is a higher percentage than at larger hospitals.

Since Medicare Advantage plans pay less than commercial insurance plans, the smallest rural hospitals were fortunate to be located in counties with relatively low penetration of Medicare Advantage plans, at least in the years shown in the chart. The larger hospitals delivered 10%-20% of their services to Medicare Advantage patients, so they were more significantly affected by the losses on Medicare Advantage patients in these years. (However, these same hospitals made profits on commercially-insured patients that helped them offset the losses.)

Patient Bad Debt

Figure 2-42 shows that nearly half of the patient bad debt at the smallest rural hospitals is associated with patients who *have* insurance, i.e., it represents the patients' failure to pay the cost-sharing they owe. It seems likely that this occurs disproportionately for patients whose health insurance plans require high deductibles, high copayments, and high co-insurance amounts, but this cannot be determined from the data. At larger hospitals, the majority of bad debt is associated with self-pay/other patients.

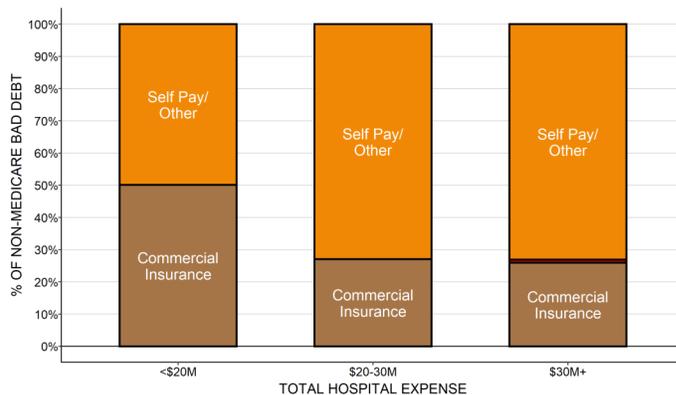
The combined impact of payments relative to costs and patient bad debt is shown in Figure 2-43 for the small-

est hospitals. The amount the hospitals lose on bad debt for self-pay/other patients exceeds the profit the hospital would expect to generate if all patients paid the full amount charged, which results in a net loss for the hospitals on self-pay patients overall. The bad debt on commercially insured patients increases the loss on those patients. Overall, about half the total loss on all private pay patients is due to payment levels below costs, and the other half represents bad debt for both insured and self-pay patients.

Overall Impact of Different Private Payers on Hospital Margins

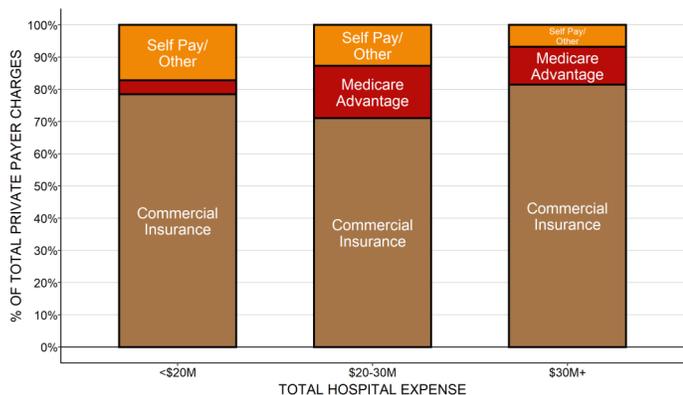
Figure 2-44 shows the contribution that each payer makes to the hospital's *total* margin (i.e., the profit or loss generated on that payer's patients divided by the hospital's total expenses).⁹⁵ This reflects the combined effect of all three factors – payments relative to costs, bad debt, and the proportion of the hospital's services paid for by each category of payer. Because commercially-insured patients represent the majority of private-pay patients at hospitals of all sizes, the overall private-pay contribution to the hospital's overall margin is driven primarily by what

FIGURE 2-42
Sources of Non-Medicare Bad Debt



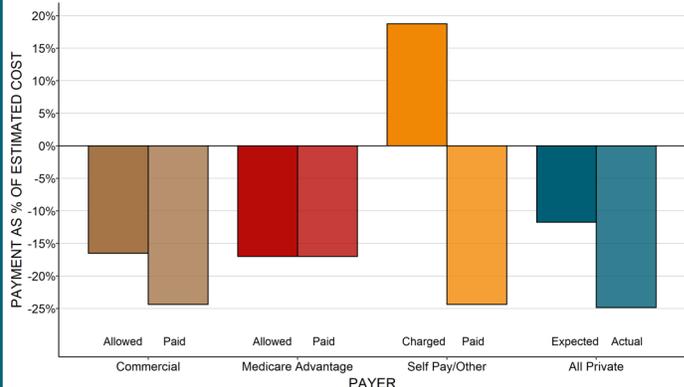
Median amounts for 2015-17

FIGURE 2-41
Types of Private Payers in California Rural Hospitals



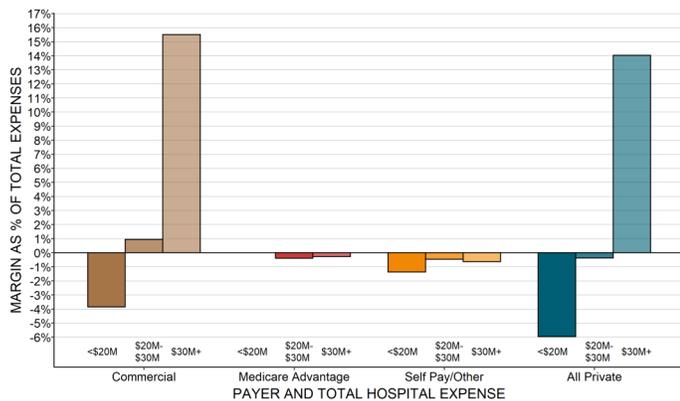
Payer percentage based on median charges for 2015-17

FIGURE 2-43
Margins for Private Payers Before and After Bad Debt California Rural Hospitals <\$20M Total Expenses



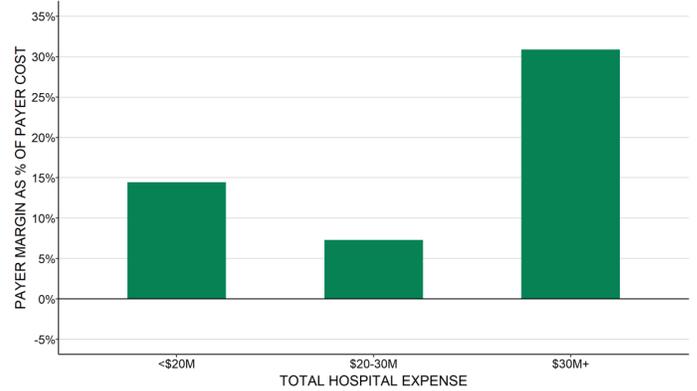
Median amounts for 2015-17

FIGURE 2-44
Private Payer Contributions to Total Margin Net of Bad Debt, California Rural Hospitals



Median amounts for 2015-17

FIGURE 2-45
Private Payer Margins Tennessee Rural Hospitals



Median for 2015-17. Margins as % of cost assigned to private payer patients..

the hospitals receive from commercially-insured patients. At the smallest hospitals, the losses on Medicare Advantage patients and self-pay patients exacerbate the large losses the hospitals experience on commercially-insured patients, whereas at the largest hospitals, the profits on commercially-insured patients are more than enough to offset the losses on Medicare Advantage and self-pay patients.

2. Profits and Losses Based on Type of Private Insurance in Tennessee

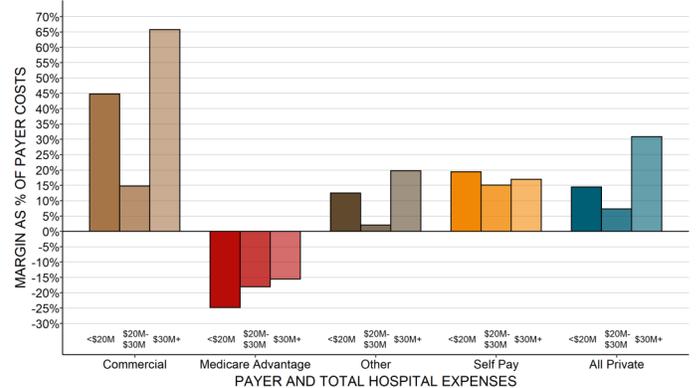
In contrast to California and many other states, private-pay patients have been profitable for most small rural hospitals in Tennessee, as shown in Figure 2-45. Larger rural hospitals make higher margins on private-pay patients than smaller hospitals in Tennessee, the same as most other states.⁹⁶

As in California, the detailed data in Tennessee⁹⁷ allow private payers to be separated into commercial insurance plans and Medicare Advantage plans. In addition, the Tennessee data include separate categories for self-pay patients and several other types of payers. (Since the other payer categories other than self-pay patients represent only a small portion of charges and payments at the hospitals, they will be combined into a single "other" category here.)

Figure 2-46 shows the percentage margins in Tennessee for each category of payer, similar to what is shown in Figure 2-39 for California. As in California, rural hospitals in Tennessee of all sizes lose money on Medicare Advantage patients, but the losses are even larger in Tennessee. Unlike California, the smallest rural hospitals in Tennessee make profits on their commercially insured patients.

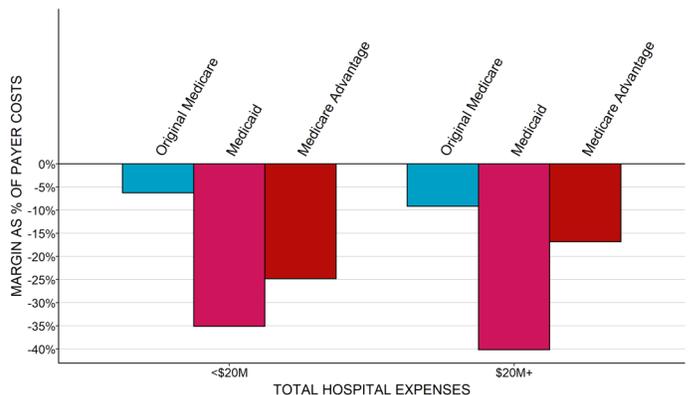
Figure 2-47 compares the losses on Medicare Advantage patients in Tennessee to losses on Original Medicare beneficiaries and Medicaid patients, similar to what is shown in Figure 2-40 for California. The losses on Medicaid patients are larger in Tennessee than in California, but so are the losses on Medicare Advantage Patients. The losses on Medicare Advantage patients

FIGURE 2-46
Margins for Private Payers Before Bad Debt Tennessee Rural Hospitals



Median for 2017-18. Payer margin as % of cost assigned to that payer's patients.

FIGURE 2-47
Margins for Medicare, Medicaid, Medicare Advantage Patients at Tennessee Rural Hospitals



Median for 2017-18. Payer margin as % of cost assigned to that payer's patients.

are larger than the losses on Medicare fee-for-service patients for both smaller and larger rural hospitals.

Hospitals receive payments from many different commercial insurance plans, and it is well known that different plans pay different amounts for the same service. Consequently, one cannot assume that every health insurance company and plan is contributing similarly to profits or losses at hospitals. However, it is generally impossible to get information on what individual health plans pay for services. The Tennessee data provides a small amount of insight into the differences because most hospitals there report their charges and payments separately for patients insured by Blue Cross/Blue Shield (BCBS) plans vs. other commercial insurers. Figure 2-48 shows that most rural hospitals in Tennessee make smaller profits on BCBS patients than on patients insured by other health plans.

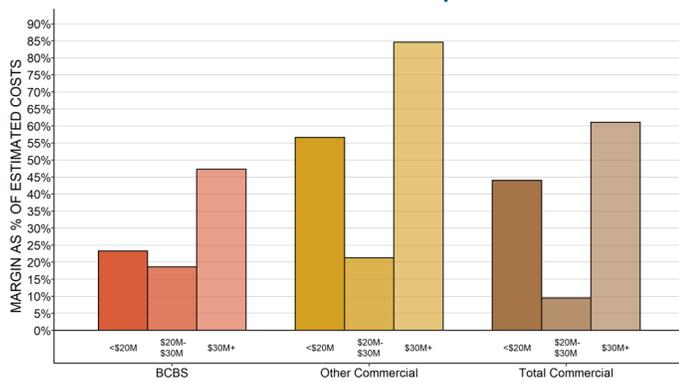
Similar to California, less than 20% of the private-pay category in Tennessee represents self-pay patients. However, Figure 2-49 shows that a much larger share of Tennessee rural hospitals' revenue comes from Medicare Advantage plans than in California, which is prob-

lematic for the hospitals because of the losses on the Medicare Advantage patients.

Figure 2-50 shows that a much smaller portion of patient bad debt is associated with commercially-insured patients in Tennessee than in California. This may reflect less burdensome cost-sharing requirements for patients in the commercial plans in Tennessee, but this cannot be determined from the hospital reports.

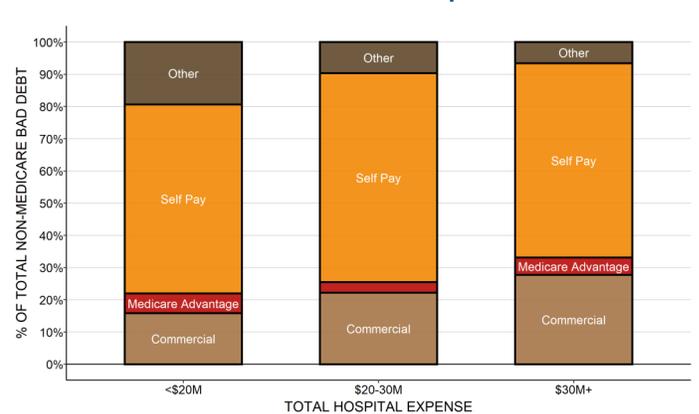
Figure 2-51 shows the overall contribution that each type of payer makes to the total margins of the hospitals in Tennessee, similar to what was shown in Figure 2-44 for California.⁹⁸ Because commercially-insured patients represent the majority of private-pay patients at hospitals of all sizes, the private-pay contribution to the hospital's overall margin is positive at most hospitals because of the profits the hospitals make on those patients. However, because of the large number of Medicare Advantage patients, the losses on those patients offset a significant portion of the profits on commercially-insured patients, and this, combined with losses on self-pay patients, can cause some hospitals to experience net losses on the overall private-pay category.

FIGURE 2-48
Margins for Commercial Insurance Plans
Tennessee Rural Hospitals



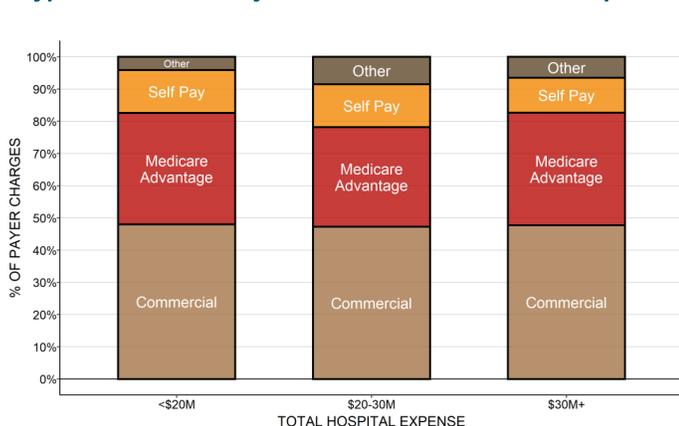
Median for 2017-18. Payer margin as % of cost assigned to that payer's patients.

FIGURE 2-50
Sources of Non-Medicare Bad Debt
Tennessee Rural Hospitals



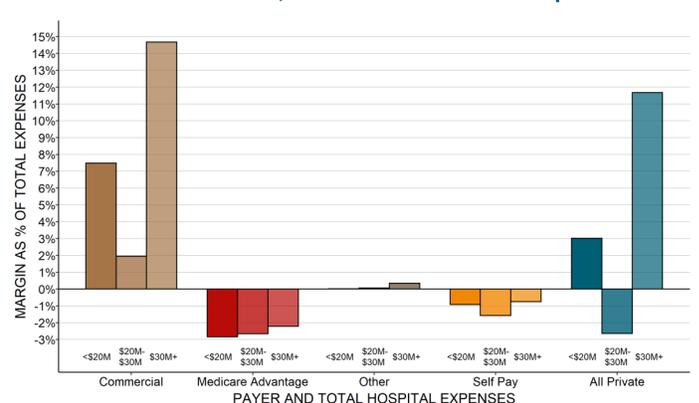
Median amounts for 2017-18.

FIGURE 2-49
Types of Private Payers in Tennessee Rural Hospitals



Payer percentage based on median charges for 2017-18.

FIGURE 2-51
Private Payer Contributions to Total Margin
Net of Bad Debt, Tennessee Rural Hospitals



Median amounts for 2017-18.

F. Causes of Losses on Services to Patients with Private Insurance

There are several potential reasons why the smallest rural hospitals have bigger losses (or smaller profits) on commercially-insured patients than larger hospitals:

1. Commercial insurance plans may be paying small rural hospitals less than the larger hospitals for the same services;
2. Commercial insurance plans could be paying both small and large hospitals the same amounts for services, but because it costs more to deliver services at small rural hospitals, the same amount of payment is less likely to cover costs at those hospitals; and/or
3. Commercial insurance plans may be refusing to pay at all for a higher proportion of services at the smaller hospitals than the larger hospitals.

Similarly, small rural hospitals could have greater losses for Medicare beneficiaries who have Medicare Advantage plans than those with Original Medicare either because the Medicare Advantage plans pay less for the same services than the hospitals receive under Original Medicare, or because they deny claims altogether.

There is not sufficient detail in either Medicare or state hospital cost reports to determine which scenario is occurring. However, some insight can be gained from other studies of these issues.

1. Differences in Payment Amounts from Commercial Insurance Plans

It is usually impossible to find out what private insurance plans pay individual hospitals because of confidentiality restrictions in their contracts. However, as part of an employer-led transparency initiative, the RAND Corporation published data on the amounts commercial insurance plans (not including Medicare Advantage plans) paid for services to individual hospitals in 2015-17.⁹⁹ The data only include a sufficient number of claims to allow analysis for a portion of the services delivered at a subset of hospitals in a subgroup of states¹⁰⁰, so the results may not be representative of payment levels for all services for all hospitals, particularly very small rural hospitals, but the data do provide some insights into how commercial insurance payments differ between small rural hospitals and other hospitals.

As shown in Figure 2-52, the standardized commercial insurance payments¹⁰¹ for *outpatient* services were 10% lower at the smallest rural hospitals than at larger rural hospitals, at least for the payers and hospitals included in the RAND data.

The difference in payments was even larger (18%) for *inpatient* admissions at the smallest rural hospitals, as shown in Figure 2-53.

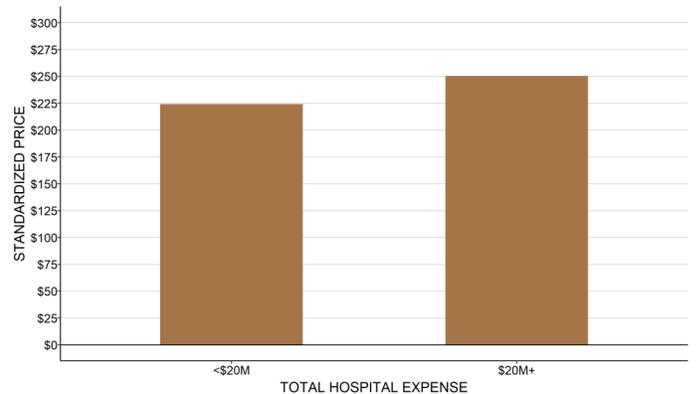
Because it costs more to deliver services at smaller hospitals¹⁰², the lower payments at the smaller hospitals result in even bigger differences in the hospitals' margins than the differences in payment amounts. The RAND report does not include data on the costs of the services that would enable directly calculating the margins for the patients in the dataset. However, the report does estimate the amount that the hospitals would have been

paid by Medicare for the same types of services, and it compares the amounts of the commercial insurance payments and Medicare payment.¹⁰³

Figure 2-54 shows that at the smaller rural hospitals, private payments for inpatient admissions were less than 100% of Medicare payments, whereas at the larger hospitals, the private payer payments for inpatient admissions were a median of 26% more than the amount expected from Medicare for similar types of admissions.

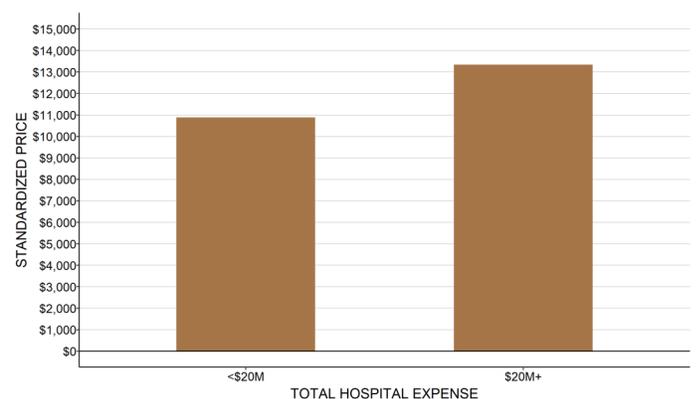
Emergency department visits are the one service used frequently enough at every hospital to allow analysis of the variation of service-specific prices across hospitals and states. Figure 2-55 shows that commercial insurance payments for emergency department visits at the smallest rural hospitals vary more than 4-fold among the states for which data are available.

FIGURE 2-52
Standardized Commercial Insurance Payments for Outpatient Services at Rural Hospitals



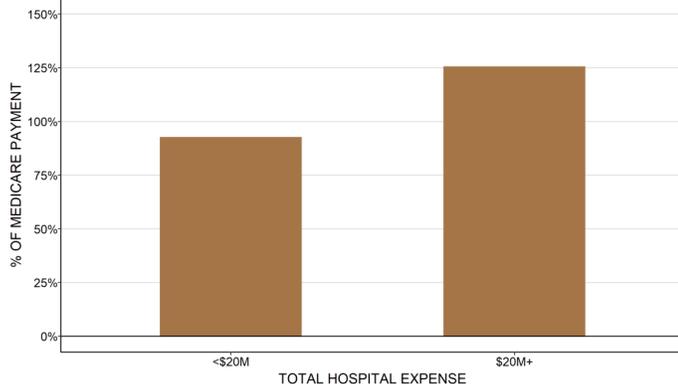
Median for 2015-17 at rural hospitals in RAND data.

FIGURE 2-53
Standardized Commercial Insurance Payments for Inpatient Stays at Rural Hospitals



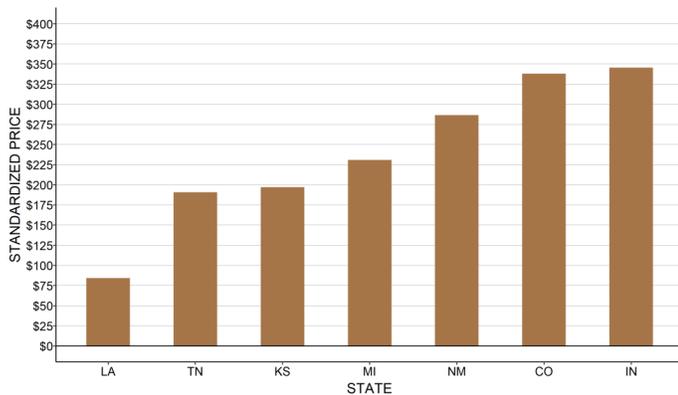
Median for 2015-17 at rural hospitals in RAND data.

FIGURE 2-54
Commercial Insurance Payments Relative to Medicare for Inpatient Stays at Rural Hospitals



Median for 2015-17 at rural hospitals in RAND data.

FIGURE 2-55
Standardized Commercial Insurance Payments for ED Visits at Rural Hospitals



Median for 2015-17 at rural hospitals in RAND data.

2. Denials and Delays in Payments by Commercial Insurance and Medicare Advantage

Most hospitals receive no payment at all for some of the services they deliver to patients with private insurance, even though the services were nominally supposed to be covered by the patient’s insurance plan, because the insurance company denies payment on the claims the hospital submits for the services. A portion of the losses on private insurance experienced by small rural hospitals are likely due to claims denials in addition to payments that are below the costs of individual services.

Multiple studies show that health insurance companies deny payment on a large portion of the claims submitted to them by hospitals, physicians, and other providers:

- A 2017 study by Change Healthcare found that 9% of charges submitted by hospitals in 2016 were initially denied.¹⁰⁴ The study also reported that in cases where the hospital or patient appealed the denial, an average of 63% of the denials were overturned.

- A 2018 study by the Office of Inspector General at the U.S. Department of Health and Human Services found that Medicare Advantage plans denied over 36 million claims in 2016, representing 8% of the 448 million total claims submitted.¹⁰⁵ In addition, the Medicare Advantage plans denied 1 million requests for services that required preauthorization, a denial rate of 4% on such requests. The study found that when denials of preauthorization or payment were appealed, 75% of the denials were overturned.
- A 2019 Kaiser Family Foundation study of individual insurance plans sold on the federal Health Insurance Marketplace (healthcare.gov) established under the Affordable Care Act found that over 41 million claims were denied in 2017, representing 18% of total claims submitted, with similar denial rates in previous years.¹⁰⁶ The rates of claim denials varied significantly across the different health insurance companies analyzed, ranging from less than 1% to more than 40% of claims denied, and 45 of the 130 companies analyzed had denial rates over 20%. Moreover, the denial rates varied significantly across states, with denial rates over 20% in 13 states.¹⁰⁷ The study also reported that the plans on the state-based marketplace in California (Covered California) denied 24% of the claims received.

Since nearly half of the services at the average small rural hospital are delivered to patients who have commercial insurance or a Medicare Advantage plan, denial rates of 8% or more could reduce the hospitals’ total margins by over 3%, in addition to any losses due to low payments for individual services. In fact, the Change Healthcare study estimated that the denied claims they analyzed represented 3.3% of net patient revenue at the hospitals. Hospitals whose patients are insured by plans with higher denial rates would have even higher losses.

However, claims denials do not just cause losses by reducing revenue. The process of resubmitting rejected claims and appealing claims denials requires an investment of time and resources by a hospital, which increases its expenses. The Change Healthcare study found that hospitals spent an average of \$118 per claim on appeals, and the costs are likely higher for the smallest hospitals. The combination of both higher administrative costs to submit and appeal claims and the lower payments relative to the costs of services for claims that are paid likely contributes to higher losses and smaller profits for small rural hospitals.

In addition, health insurance plans will not pay for services delivered by a physician or other clinician unless that clinician is formally credentialed and enrolled as a provider with the health plan’s network. Small rural hospitals and their clinics experience significant turnover in their clinicians, and every time a new clinician is hired, that individual has to be enrolled with the health plan. Although the clinician can deliver services to patients as soon as they are credentialed by the hospital, the hospital or clinic cannot be paid until the clinician is also credentialed and enrolled with the health plan. Many small rural hospitals and small physician practices report delays of 2-4 months or even as long as 6-8 months in enrolling new providers with some payers.¹⁰⁸ A long delay in enrollment translates into a long delay in receiving payments for the

services delivered, and it can even result in no payment at all if enrollment is not completed within the timeframe allowed for submitting a claim for payment or if the health plan simply refuses to pay for the claim.¹⁰⁹

G. Reducing Financial Problems That Cause Closures

1. The Multiple Causes of Rural Hospital Financial Problems

The analyses presented above demonstrate that there is no single reason why most of the small rural hospitals in the country are losing money. Some hospitals lose large amounts on services to patients with private insurance while others do not, and not every hospital loses money on the services it delivers to patients on Medicaid. Some hospitals have many more uninsured and underinsured patients than others do. Some hospitals receive a sufficient amount of revenue from other sources to offset losses on patient services, but others do not.

Moreover, the financial problems facing small rural hospitals are more serious than what is often reported based on more superficial analyses. Many small rural hospitals that have positive total margins are losing significant amounts of money delivering patient services. They only remain in the black because they receive other sources of revenue, such as local tax levies and special state grants, that are large enough to offset the losses on patient services. It is not clear whether these other sources of revenue will be able to continue at the same levels in the future, particularly with the higher levels of unemployment in local communities and reductions in state and local government revenues that have occurred due to the coronavirus pandemic. Moreover, some of the current funding programs are explicitly time-limited, and if they are not extended, many hospitals could experience financial losses that would threaten their continued viability.¹¹⁰

2. No One Payer Can Solve Rural Hospital Financial Problems

Since no one category of payer is responsible for the losses on patient services, changes made by any one payer would only be able to solve a portion of the prob-

lem. Figure 2-56 shows the percentage of small rural hospitals that would have changed from a financial loss to a positive margin on patient services in 2018 if losses for one specific type of payer had been eliminated. Clearly, while the impact differs significantly by payer, changes made for only one category of payer would only help a fraction of hospitals:

- **Medicare.** Even if Medicare had paid all small rural hospitals at least 100% of their costs for Medicare fee-for-service patients, the number of those hospitals losing money on patient services would only have been reduced by 2%.
- **Medicaid.** Although hospitals experience larger losses on individual services delivered to Medicaid patients than Medicare patients, they deliver fewer services to Medicaid patients. As a result, even if Medicaid programs had paid all small rural hospitals at least 100% of their costs for Medicaid patients, the number of hospitals experiencing overall losses would only have decreased by 10%.
- **Charity Care.** If hospitals had received full payments for the services they delivered to uninsured charity care patients, there would only have been a 3% reduction in the number of hospitals with financial losses.
- **Private Payers.** Because of the large losses small rural hospitals experience on private-pay patients and the large proportion of patients who have private insurance, the biggest impact would come from changes in private insurance payments. But even if all private payers had paid small rural hospitals at least 100% of their costs for services, it would only have reduced the number of hospitals experiencing losses by 14%. Moreover, even this impact would only occur if every private payer had paid adequately, including the many different commercial insurance and Medicare Advantage plans.
- **Bad Debt.** The impact of reducing bad debt losses would be similar to the impact of eliminating losses on the payments from private payers. However, as discussed earlier, bad debt represents a combination of (1) patients who do not have insurance and do not meet charity care standards and (2) patients who have insurance but do not pay their cost-sharing obligations, so eliminating losses in this category requires both expanding insurance coverage and reducing the cost-sharing amounts required in private insurance plans. Large hospitals can offset bad debt losses using margins from private-pay patients, but most small rural hospitals cannot do that.

Moreover, because there are significant differences across states in the causes of losses at small rural hospitals, changes made by any one type of payer would benefit small rural hospitals in some states far more than others. For example, the majority of very small rural hospitals in both Alabama and Tennessee had large financial losses in the 2016-18 period. However, as shown in Figure 2-57, even though the states are adjacent to each other, the causes of the losses were completely different. Low payments for private-pay patients (both low allowed amounts and high unpaid patient obligations) were the biggest cause of losses in Alabama, whereas losses on Medicaid and the uninsured were the biggest factor in Tennessee. As a result, changes in Medicaid would bene-

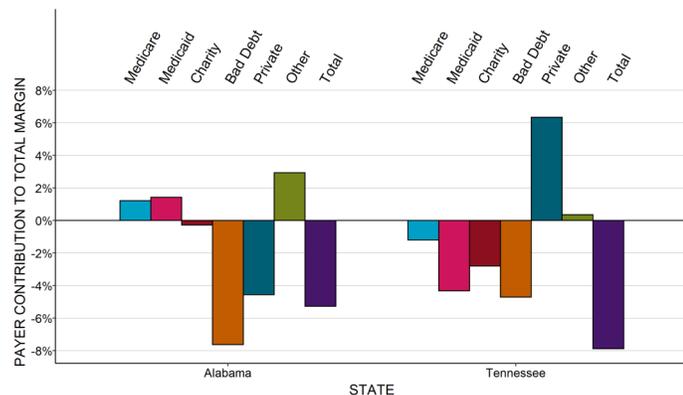
FIGURE 2-56

Reduction in Rural Hospitals With Negative Margins if Payer-Specific Losses Were Eliminated

Payer or Source of Loss	% of Hospitals Moving From Negative to Positive Margin
Private Payers	13.6%
Patient Bad Debt	14.2%
Medicaid	10.8%
Uninsured Charity Care	2.6%
Medicare	2.4%

Assumes each hospital with negative margin from that payer would receive additional revenue to offset that payer-specific loss

FIGURE 2-57
Contributions to Total Margin by Each Payer at Rural Hospitals <\$20M Total Expenses



Median for 2016-18 for rural hospitals located in each state.

fit hospitals in Tennessee far more than those in Alabama, whereas changes in private insurance would likely be essential to solving the financial problems for the hospitals in Alabama.

Making changes in two categories rather than just one would have a bigger impact than the sum of the percentages shown in the table; for example, eliminating losses on both private payer payments and patient bad debt would have pushed 37% of the hospitals with losses into the black. However, because so many hospitals experience losses on the payments they receive from most payers, it is impossible to eliminate losses for the majority of hospitals without making changes in the majority of payer categories.

3. The Impact of Expanding Insurance Coverage

Although every hospital loses some money on services delivered to patients who do not have health insurance, the losses are greater for hospitals in communities where more of the population is uninsured. Although there are many reasons why people do not have insurance, one important factor affecting insurance coverage is the state's eligibility requirements for Medicaid.

Many have advocated for expanding Medicaid eligibility in states that have not done so as a way to help small rural hospitals. However, only a subset of the uninsured patients at rural hospitals in non-expansion states would likely qualify for Medicaid if it were expanded. As shown in Figure 2-32, in states that did expand Medicaid, the losses on uninsured charity care patients at small rural hospitals were reduced by about half, and the losses on patient bad debt were reduced by about a third.

It also costs much more to expand Medicaid in a state than it would cost to pay directly for the losses at rural hospitals on their services to uninsured patients. When a state expands Medicaid, it provides coverage for individuals living in urban areas as well as rural areas, and it provides coverage for many types of healthcare services beyond those delivered by rural hospitals. If the high cost of expansion forces a state Medicaid program to reduce the amount it pays for services or to increase payment amounts each year by less than the amount

that costs increase, losses at rural hospitals may increase, not decrease. Figure 2-32 showed that in expansion states, increases in the losses on services delivered to patients with Medicaid offset much of the benefit of the expanded coverage for small rural hospitals.

Figure 2-56 shows that even if every patient had health insurance coverage, it would eliminate financial losses at only a small percentage of hospitals.¹¹¹ Consequently, while health insurance is desirable for many reasons and expanding coverage should be part of any comprehensive strategy for improving access to healthcare in rural areas, higher payments from existing payers would be more likely to reduce financial problems and prevent closures for the majority of small rural hospitals.

4. The Need for Payers to Pay Rural Hospitals Adequately for Services

The analyses above clearly show that the only way to successfully eliminate financial losses and prevent closures at most rural hospitals is for Medicare, Medicaid, and private insurance plans to pay rural hospitals adequately to deliver the services patients need. For most small rural hospitals, the biggest shortfalls in payments are from private insurance plans, and the second largest shortfalls are in Medicaid, but as noted earlier, the relative contributions of private payers vs. Medicaid varies significantly across states. Although Medicare pays less than the cost of services at most small rural hospitals, the magnitude of the shortfall is smaller than for other payers because so many small rural hospitals are designated as Critical Access Hospitals and qualify for cost-based payment from Medicare. (Critical Access Hospitals also lose money on Medicare patients, but the losses are lower than for other hospitals of similar size.)

Some rural communities could reduce financial losses at their hospital simply by making different choices about their health insurance plans. For example, in communities where Medicare Advantage plans are paying low amounts for services and denying large numbers of claims, the Medicare beneficiaries who have chosen those plans may not be aware that low payments for services from the plans are helping to force the local hospital out of business. In these situations, choosing a different Medicare Advantage plan or choosing "Original Medicare" instead of a Medicare Advantage plan could help the hospital reduce its losses. Similarly, employers in the community may not be aware that the commercial insurance plan they have chosen for their employees pays less than what it costs to deliver the services their employees need, or that the plan is denying or delaying payments for needed services. If the employers chose a different plan that paid adequately for services, it could avoid closure of the community hospital. However, this can only be successful if there is at least one plan available that pays adequately for services.

What is "adequate payment?" Answering that question requires understanding how much it costs to deliver services at a small, rural hospital, which will be addressed in Chapter III. Payers will also want to know how to ensure that, if their payments are increased sufficiently to be adequate, the hospitals will deliver services in the most efficient way possible; this will be addressed in Chapters IV-V.

III. THE COST OF DELIVERING SERVICES IN SMALL RURAL HOSPITALS

KEY POINTS

Most spending at small rural hospitals is for delivery of six essential services:

(1) the Emergency Department, (2) inpatient services, (3) the laboratory, (4) radiology, (5) drugs and medical supplies, and at most hospitals, (6) one or more Rural Health Clinics. It is difficult for a small rural hospital to reduce expenses significantly without affecting the quality of care in these areas.

The cost of an Emergency Department visit is inherently higher at small rural hospitals than at larger hospitals. At least one physician needs to be available around the clock in order to respond to injuries and medical emergencies quickly and effectively, regardless of how many patients actually visit the ED. Since this “standby capacity” cost will not decrease even if fewer patients visit the ED, the average cost per ED visit will be higher in a smaller community.

The cost of inpatient care, laboratory tests, imaging studies, primary care visits, and most other essential services is also inherently higher at small rural hospitals. For almost every type of service the hospital delivers, there is a minimum level of staffing and equipment required to deliver the service. As a result, the average cost per service will be higher in a smaller community where fewer services are needed.

Use of fee-for-service payments increases the likelihood of financial losses at small rural hospitals. Under current fee-for-service payment systems, the hospital receives the same fee for delivering a service regardless of how many times the hospital delivers that service. When fewer services are delivered, fee-for-service revenues decrease, even though the costs at a small rural hospital will not decrease. As a result, a hospital will be financially penalized if it helps the residents of its community stay healthy and they need fewer services.

Eliminating inpatient care would harm both the hospitals and their communities rather than preventing closures. In most cases, the revenues generated by inpatient care at a small rural hospital exceed the direct costs of delivering that care, so the hospital would be worse off financially if it no longer received those revenues. Moreover, the smallest rural hospitals have many patients receiving inpatient rehabilitation and/or long-term nursing care in their licensed beds in addition to individuals receiving acute inpatient care. Closure of the inpatient unit would deprive the residents in the community of all of these services.

A. The Major Categories of Expenses in Small Rural Hospitals

1. Direct Service Costs vs. Overhead Costs

Most hospital expenses fall into two major categories:

- **Direct Service Costs.** These are the costs associated with personnel who provide the services individual patients receive, such as the nurses in the inpatient unit, the physicians and nurses in the emergency department, and the technicians in the laboratory, as well as the costs of the equipment and supplies these personnel use to deliver services to patients.
- **Overhead Costs.** These are the costs associated with personnel who do not provide services directly to or for patients, such as the hospital’s accounting and billing departments, the human resources department, medical records, information systems, and maintenance. This also includes the costs of building and maintaining the hospital’s facilities.

A third and much smaller category consists of the direct costs of non-patient service activities, such as a gift shop, parking lot, or housing for staff.

As shown in Figure 3-1, about 60% of the total expenses of small rural hospitals consists of direct service costs, and about 35% consists of overhead costs. Non-patient service activities (“Other Costs”) represent less than 5% of total expenses at most hospitals.

2. The Largest Categories of Direct Service Costs

As shown in Figure 3-2, a core group of six services constitute the majority of patient service costs at small rural hospitals:

- (1) the Emergency Department,
- (2) inpatient services,
- (3) the laboratory,
- (4) radiology,
- (5) drugs and medical supplies, and
- (6) the Rural Health Clinic (if the hospital operates an RHC).

At the very smallest hospitals, these six core services represent nearly 80% of the hospital’s total direct patient service costs. Larger hospitals are more likely to offer other services, such as surgery and maternity care and to have larger numbers of patients receiving those

services, so a smaller share of total costs at larger hospitals will be associated with the six core services, but the core services still represent two-thirds or more of direct patient service costs.

3. Categories of Overhead Costs

As shown in Figure 3-3, about half of overhead costs are for general administration of the hospital. This encompasses a broad range of activities, including accounting, human resources, billing, information systems, etc. Many small rural hospitals have had to spend large amounts of money to purchase and maintain an Electronic Health Record (EHR) system, and this contributes to the large share of costs in this category.

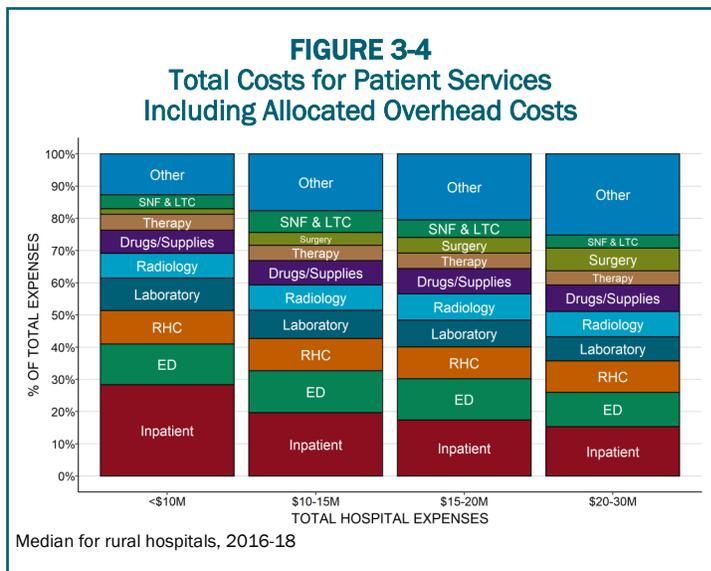
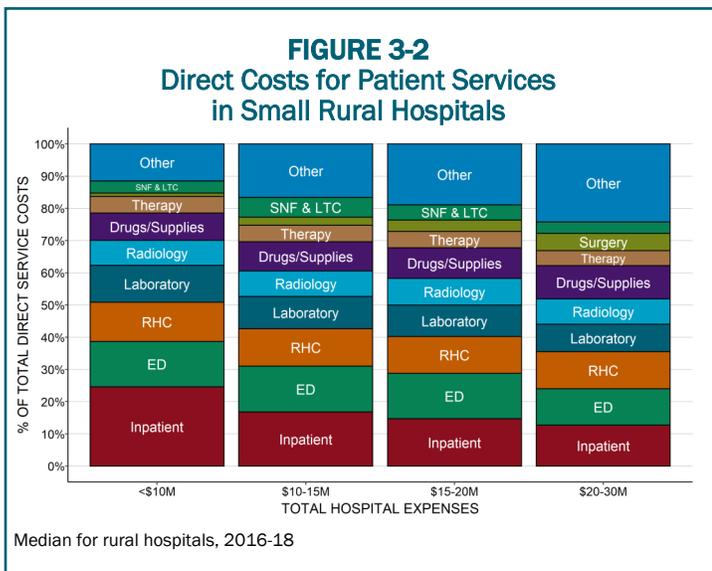
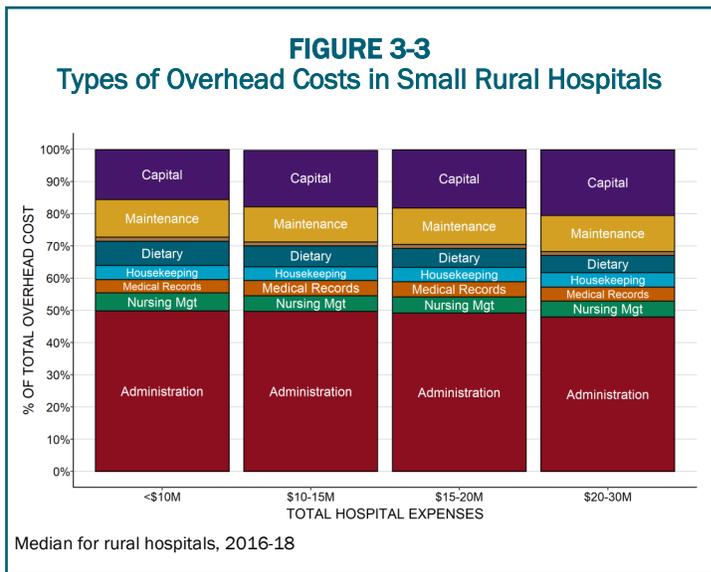
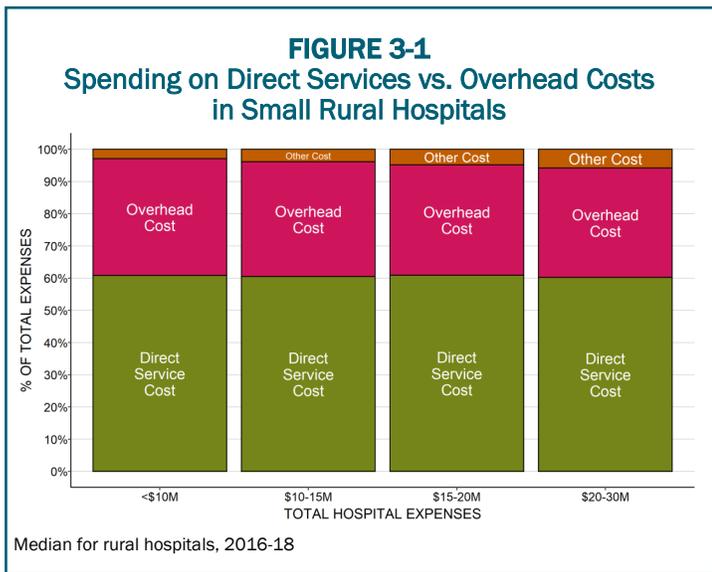
Not surprisingly, the second largest categories of costs are capital and maintenance costs, since it is expensive to build and maintain hospital facilities. On average, this represents nearly 30% of the total overhead costs at small hospitals.

The remaining 20% of overhead costs are associated with a variety of smaller functions, such as nursing management, medical records, housekeeping, dietary, and laundry services.

Since every hospital will need a minimum level of administrative services such as accounting, human resources, billing, etc. regardless of how many patients the hospital treats, one might expect that economies of scale would result in significantly lower administrative costs at the larger hospitals. However, the proportion of total expenses used for administrative costs is only slightly lower at larger hospitals.

4. Service Line Costs After Allocation of Overhead Costs

Hospitals are only paid for the services they provide to patients, so the payments the hospital receives for those services have to be adequate to cover not only the direct costs of the services, but also the overhead costs of the hospital. As a result, in order to set its charges for services, each hospital needs to allocate its overhead costs among the service lines.



Since direct service costs represent about 60% of total hospital expenses, and overhead costs represent 35%, the *total* cost of each service line will, on average, need to be about 60% higher than the *direct* costs. Since some services are more dependent on certain overhead cost centers than others, the percentages of overhead allocated to different service lines differ. For example, the inpatient unit is generally the largest user of the hospital's dietary services, so a higher share of dietary costs is allocated to inpatient services.

5. The Impact of Changes in the Number of Service Lines on Costs of Services

If a hospital is able to add an additional service line with little or no increase in administrative and overhead costs, the cost of all of the existing service lines will decrease. This is because the hospital's overhead costs are allocated across all of the hospital's service lines, and so, all else being equal, the more service lines there are, the smaller the amount of overhead that will need to be allocated to each individual service line. As a result, the cost of a service line may differ at two hospitals not because of differences in the number of patients receiving the services, or differences in the staffing levels or wages paid to the staff, but because of how many other types of services each hospital offers.

An important corollary is that if a hospital eliminates a particular service line:

- the hospital's total expenses will decrease by less than the total cost of the service line, because only a portion of the total cost allocated to the service line represents the direct costs of delivering that service; the rest represents a portion of the hospital's general overhead expenses. While it may be possible for the hospital to make some reductions in one or more central administration cost centers when a service line is eliminated if the service line was a heavy user of those cost centers, in general, most of the hospital's overhead costs will remain unchanged.
- The cost of every other service at the hospital will increase, because most of the overhead costs that had previously been allocated to the terminated service line now have to be recovered from the remaining service lines.

6. The Key Role of the Core Services on the Financial Viability of Small Rural Hospital

Figure 3-4 shows that after allocation of overhead costs, the six core service categories still represent 60-75% of the total expenses at most small hospitals. Because these services represent such a large proportion of the hospital's total expenses, it will be difficult for a small hospital to be profitable if it does not receive payments for each of these core services that are adequate to cover the costs of those service lines and if it cannot reduce the costs of the services to match the payments it is able to receive.

The following sections examine the factors affecting the costs of each of these core services in greater detail.

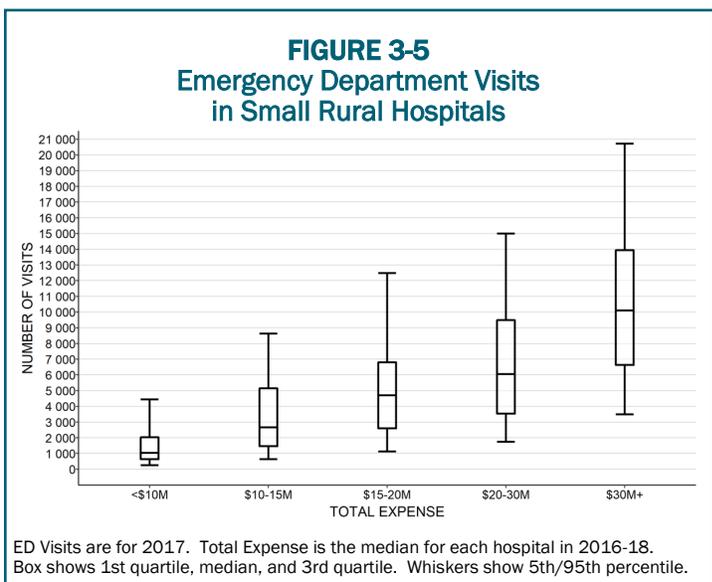
B. The Cost of Delivering Rural Emergency Department Services

The single most essential service that rural hospitals provide is a 24/7 Emergency Department. Although emergency departments at small rural hospitals do not have the capability to treat severe trauma cases and emergencies that require highly-specialized services, neither do many urban hospital EDs. The primary roles all EDs perform are to quickly and accurately diagnose health problems, provide any necessary treatment to the patients, and transfer the small set of patients who need specialized care to a trauma center, stroke center, etc. Residents of rural communities who do not have access to an Emergency Department may be more likely to die or experience complications that could have been prevented.

This section will examine the costs involved in operating Emergency Departments at small, rural hospitals. The focus in this section will be on the basic ED visit itself, not on any additional services a patient may receive during the visit that are delivered by other hospital departments, such as a laboratory test or an imaging study. The costs of delivering those other services will be examined in later sections of this chapter.

1. The Number of ED Visits at Small Rural Hospitals

It is reasonable to expect that the cost of an Emergency Department will depend on how many visits the ED has. Rural hospitals that have a small number of inpatient admissions seem less small when one counts ED visits. Rural hospitals with fewer than 15 acute inpatients per day had an average of 7,000 ED visits in 2017, i.e., one visit every 60-90 minutes.¹¹² However, there is also considerable variation in the volume of ED visits among these hospitals; 25% of small rural hospitals had more than 10,000 ED visits in 2017, while 9% had less than 1,000. As shown in Figure 3-5, most of the smaller rural hospitals (those with less than \$30 million in total annual expenses) have fewer than 10,000 visits per year, and



most hospitals with less than \$10 million in annual expenses have fewer than 2,000 ED visits per year.

The large variation in the number of visits is due to a variety of factors, including the size of the community the hospital serves, the age and health status of the residents in the community, the number of businesses and workers in the community, the number of tourists who visit the community, and the community's proximity to an interstate highway. Importantly, the number of ED visits will also depend on the availability of primary care in the community. For example, a hospital with no Rural Health Clinic will likely have more ED visits than a hospital that has an RHC because, without easy access to a primary care practice, more residents of the community will need to use the ED for non-emergency care.

2. The Cost of Operating an ED With 10,000 Visits Per Year

Each hospital's cost report includes information on the total cost of operating its emergency department, but it is impossible to determine why some EDs are more expensive than others, even with the same number of visits, because there is very little information on the individual components of that cost. In particular, personnel costs would be expected to be the single largest component of the cost of an ED, but there is no information available on the number of physicians, nurses, or other staff who work in the ED, the number of hours they work, or the wage rates they are paid.¹¹³ However, since the ED needs to deliver high-quality care to patients who come with a wide range of problems at unpredictable times, one can estimate the level of staffing that a hospital would likely need in order to provide that care and how the staffing would change based on the volume of ED visits the ED receives.

Physician Staffing

An Emergency Department that has 10,000 visits per year will see an average of one new patient every hour. Although not every patient who comes to the ED will need to see a physician, the ED will need to have a physician available in case they do, so there will have to be at least one physician on duty at all times.

The volume of visits will generally be higher at certain times of the day, days of the week, and months of the year. For example, hospitals in communities with a large number of seasonal businesses, such as those in agriculture and tourism, will have higher volumes of ED visits during some months than others. However, since productivity standards for Emergency Departments generally assume that an ED physician can manage 2-3 visits per hour, it will generally not be necessary for an ED with 10,000 visits per year to have any more than one physician on duty at a time except during exceptional circumstances.¹¹⁴

However, since the ED is a 24/7 operation, the hospital will have to employ or contract with at least 4 full-time equivalent (FTE) physicians in order to have one physician in the ED at all times.¹¹⁵ (The exact number of physicians will depend on the number of shifts each physician is willing and able to work each week, the amount of time the physicians need to spend in continuing edu-

cation, vacation days, etc. Some rural hospitals have to hire or contract with multiple physicians, each of whom come to the community for a short period of time, in order to have one "full-time equivalent physician.")¹¹⁶

A hypothetical hospital that employs 4 FTE physicians to staff its ED will need to spend about \$1.2 million to do so if it pays the physicians a salary of \$120/hour with benefits equivalent to 20% of the salary. However, the actual cost of employing emergency physicians can vary significantly from community to community and from year to year depending on a hospital's ability to attract and retain physicians. If a physician retires or resigns, a hospital will often need to hire a temporary physician to fill in while a permanent replacement is found, and the hourly cost of the temporary physician will generally be significantly higher than the cost of a permanent employee. Many rural hospitals contract with national ED staffing companies in order to eliminate the burden of maintaining a full staffing complement and to make the cost of staffing the ED more predictable¹¹⁷, but this can increase the overall cost of the ED because the staffing company has to be paid more than the physicians themselves receive.

Nursing Staff

In addition to a physician, the ED will also need at least one Registered Nurse (RN) around the clock to help in triaging, treating, and discharging patients. Since a nurse will generally need to spend more time with each patient than the physician does, it is possible that one nurse will be insufficient if multiple patients come to the ED at the same time or if the patients have more serious conditions. Small rural hospitals will typically deal with multiple visits or more serious cases by having a nurse from the inpatient unit come to the ED to provide assistance. (The need for this backup coverage will affect the nurse staffing levels the hospital will need in the inpatient unit, as discussed in a later section.) If the higher volumes occur at predictable times, the hospital may need to have two nurses on those shifts.

In order to have at least one nurse in the ED at all times, a hospital will have to employ as many as 5 FTE RNs.¹¹⁸ If the hypothetical hospital pays RNs \$38/hour and provides benefits equal to 20% of salary, the total cost for the year will be more than \$400,000. Here again, though, the cost of employing nursing staff will vary across communities and over time based on the ability of individual hospitals to attract and retain nurses and how much it costs them to fill vacancies temporarily while permanent replacements are being recruited.

Other Staff

The hospital will likely also need at least one non-clinical staff member to check patients in, help family members, etc. so that the physician and nurses can focus on providing clinical services to the patients. In order to have such a staff member in the ED at all times, the hospital will need to employ 4-5 FTEs. Assuming a \$16/hour wage and 20% benefits, this will cost the hypothetical hospital an additional \$170,000 per year.

Other Direct Costs

Almost all of the direct costs of operating an Emergency Department are associated with the physicians, nurses, and other staff. The costs of any medications used and other supplies that are billed to a patient separately are ordinarily assigned to a separate hospital cost center (these costs will be discussed separately in a later section), so non-personnel direct costs for the ED itself will generally be relatively small.

Indirect Costs

Finally, the operation of the ED also depends on the hospital providing space and utilities, maintenance for equipment, housekeeping, billing for patient visits, payroll and benefits for staff, medical records, etc. Consequently, a portion of the hospital's costs for those activi-

ties must be allocated to the ED to properly represent the total cost of operating the ED. Typically, these indirect costs increase the total cost of an ED by about 50% beyond the personnel and other direct costs discussed above.¹¹⁹

Total Cost

As shown in Figure 3-6, these five components together imply that it will likely cost the hypothetical hospital nearly \$3 million to deliver services to 10,000 ED patients during the year.

3. The Cost of Operating an ED with More or Fewer Visits Per Year

How does the cost differ for an ED with more or fewer visits?

- For a hospital ED with 7,500 visits per year (i.e., 25% fewer than the 10,000 visits discussed above), there will still be almost one visit every hour, so this ED will also need one physician, one nurse, and a third staff member on duty round the clock. Other direct costs will be slightly lower with fewer patients and the indirect costs assigned to the ED may also be lower. As shown in Figure 3-7, using the same assumptions about wage and benefit rates as for the hypothetical hospital discussed above, the total cost of the ED will be 96%-97% of the cost of the 10,000 visit ED, even though there are 25% fewer visits.
- Even if a hospital ED has only 5,000 visits per year, it will generally need to have a physician and nurse on duty around the clock, since it would have more than one visit every two hours on average. It is possible that the ED might be able to avoid using a third, non-clinical staff member during certain times of the day or week when the volume of visits is low, particularly if there is someone working in a different department at the hospital who can perform the same functions when needed, but this would only reduce the personnel costs by a relatively small amount. As shown in Figure 3-7, the total cost of an ED this size would like-

		ED VISITS	
		10,000	
Cost Component	Unit Cost	FTEs	Cost
Physicians	\$120/hour	4.0	\$994,000
RNs	\$38/hour	5.0	\$397,000
Other Staff	\$16/hour	4.2	\$140,000
Total Wages			\$1,531,000
Benefits	20% of Wages		\$306,000
Other Direct			\$65,000
Total Direct			\$1,902,000
Indirect Cost	50% of Direct		\$950,000
Total Cost			\$2,852,000

Cost Component	ED VISITS									
	5,000		7,500		10,000		12,500		15,000	
	FTEs	Cost								
Physicians	4.0	\$994,000	4.0	\$994,000	4.0	\$994,000	4.0	\$994,000	6.0	\$1,498,000
RNs	5.0	\$397,000	5.0	\$397,000	5.0	\$397,000	7.5	\$593,000	7.5	\$593,000
Other Staff	2.0	\$66,000	4.2	\$140,000	4.2	\$140,000	4.2	\$140,000	4.2	\$140,000
Total Wages		\$1,457,000		\$1,531,000		\$1,531,000		\$1,727,000		\$2,230,000
Benefits		\$291,000		\$306,000		\$306,000		\$345,000		\$446,000
Other Direct		\$50,000		\$60,000		\$65,000		\$70,000		\$75,000
Total Direct		\$1,798,000		\$1,897,000		\$1,902,000		\$2,142,000		\$2,751,000
Indirect Cost		\$899,000		\$948,000		\$950,000		\$1,071,000		\$1,178,000
Total Cost		\$2,697,000		\$2,845,000		\$2,852,000		\$3,213,000		\$3,929,000

ly still be more than 90% as much as the cost of the 7,500-visit ED, even though there are 33% fewer visits.

- If the ED has 12,500 visits per year (25% more than the 10,000 visits at the hypothetical hospital discussed earlier), it will have an average of 1.5 visits per hour, which can also generally be managed with a single physician on duty. However, because of the greater potential for delays during peak times, a hospital may choose to have an additional nurse on some shifts, which will increase the total number of nurses needed to staff the ED overall. As a result, direct costs and indirect costs may be 13% higher than at the ED with 10,000 visits.
- If the ED has 15,000 visits per year (50% more than the 10,000 visit ED), it will have an average of nearly 2 visits every hour. Because ED visits do not occur at a constant rate throughout the day and week, it is likely that the ED will have more than 3 visits per hour during its busiest times, which is more than a single physician can safely handle. Consequently, the hospital will likely need to hire additional physicians in order to have two physicians on duty during the high-volume shifts, in addition to a larger number of nurses. As shown in Figure 3-7, this would increase the cost of operating the ED by 45% over the cost at the 10,000 visit level, although this increase is still smaller than the 50% increase in visits.

4. The Cost of Operating an ED with Even Fewer Visits

Many small rural hospitals have fewer than 5,000 visits per year. If the number of visits is less than about 10 per day (i.e., less than one visit every 2-3 hours), the hospital may be able to staff the ED differently, at least during some shifts. However, its ability to do so will depend on what other services the hospital offers, the availability of other physicians in the community and their willingness to help staff the ED, and the availability of remote support services from larger hospitals:

- If the hospital operates a Rural Health Clinic in or next to the facility where the ED is located, the physicians, nurse practitioners, or physician assistants who work in the clinic could leave the clinic and go to the ED to see a patient who comes to the ED during normal clinic hours.¹²⁰
- At a hospital with an RHC, the RHC physicians/clinicians could also provide on-call coverage during night or weekend shifts when visit volumes are lower. If there are other primary care physicians in the community, they may also be willing to provide on-call coverage for the ED.
- A very low-volume ED could potentially use emergency-trained nurses to staff the ED if the hospital can arrange for telemedicine support from emergency physicians at a larger hospital.¹²¹
- If the nursing staff in the hospital's inpatient unit is large enough (e.g., because the hospital has a large number of swing-bed patients), if the inpatient unit is close enough to the ED, and if the volume of ED visits

FIGURE 3-8
Cost of Hypothetical Emergency Departments with On-Call Staff

		ED VISITS			ED VISITS		
		1,000			2,500		
Cost Component	Unit Cost	FTEs	Hours	Cost	FTEs	Hours	Cost
Clinician Time							
Physician Visits	\$130/hour		330	\$43,000		938	\$122,000
NP/PA Visits	\$60/hour		170	\$10,000		313	\$19,000
On-Call	\$60/hour		8,260	\$496,000	4.0	7,510	\$450,000
RN Time							
Dedicated ED RN		0.0		\$0	2.0		\$158,000
Shared w/Inpatient			1,000	\$38,000		1,389	\$53,000
Other Staff	\$16/hour	0.0		\$0	2.0		\$67,000
Total Wages				\$587,000			\$869,000
Benefits	20% of Wages			\$117,000			\$174,000
Other Direct				\$10,000			\$25,000
Total Direct				\$714,000			\$1,068,000
Indirect Cost	50% of Direct			\$357,000			\$533,000
Total Cost				\$1,071,000			\$1,601,000

is low enough, the hospital could rely on the inpatient unit nurses to staff the ED when a patient arrives, either during some shifts or all shifts, rather than having a nurse assigned exclusively to the ED.

Figure 3-8 shows what the cost might be to operate a hypothetical ED that has 1,000 visits per year. This represents an average of fewer than 3 visits per day or less than one visit every 8 hours. The hospital where this ED is located is assumed to also operate a Rural Health Clinic staffed by both a physician and a Nurse Practitioner (NP), and the physician and the NP take responsibility for seeing patients who come to the ED during clinic hours. In addition, the Rural Health Clinic clinicians and other physicians in the community are assumed to be willing to contract with the hospital to provide on-call support, i.e., they would agree to come to the ED quickly if and when a patient arrives. The example also assumes that there would be no dedicated nurses in the ED, and that one of the nurses from the hospital's inpatient unit would go to the ED when a patient arrives. The total cost of this arrangement is just over \$1 million. This is still about 40% of the cost of the ED with 10,000 visits, even though there are only one-tenth as many visits.

A hospital with 2,500 visits per year (about 6 visits per day) might still be able to rely on physicians at the Rural Health Clinic and in the community to diagnose and treat patients. However, it would be more problematic to rely solely on nurses from the inpatient unit to staff the ED, particularly during busier times, so it might need to employ additional nurses for this purpose. As shown in Figure 3-8, the total cost might be about \$1.6 million.

5. Variation in Costs for EDs of Similar Size

The cost estimates for the hypothetical EDs described above are based on multiple assumptions about the availability and cost of staff in the ED and other costs in the hospital, some or all of which may not be realistic for hospitals in every community. As a result, the actual costs in individual hospitals will vary significantly from community to community; moreover, costs can change

from year to year for reasons beyond the control of the hospital. For example:

- A small hospital may have difficulty finding primary care physicians who are willing to provide on-call coverage for the ED, in which case the hospital would have to hire dedicated physicians for the ED.
- A hospital located in a more remote area may have greater difficulty attracting and retaining physicians to staff the ED, and may need to pay physicians more to work there.
- If a physician resigns or retires, the hospital will often need to engage a *locum tenens* physician until a replacement is found, and it will generally need to pay a much higher hourly rate for the temporary physician, for their travel costs, etc.
- A hospital with large seasonal differences in the numbers of ED visits may need to have higher staffing levels during a portion of the year that cannot be offset by smaller staffing levels during the remainder of the year.¹²²
- A hospital that does not have easy access to a part-time nursing workforce may need to employ a larger complement of nurses in order to ensure it has adequate coverage for illnesses, vacations, training, etc.
- A hospital located in an area where health insurance is more expensive will incur higher benefit costs for its employees.
- A hospital that offers a limited array of services will need to assign a larger portion of its administrative costs to the ED than a hospital with a larger and more diverse set of services. For example, if the hospital operates a Rural Health Clinic, a portion of its general administrative costs will be allocated to the RHC in addition to the ED.

In some cases, favorable and unfavorable differences in different aspects of cost may offset each other, but it is more likely that hospitals experiencing higher costs in one component of costs will also have higher costs in other areas. Figure 3-9 shows an example of how the

FIGURE 3-9
Impact of Variations in Unit Costs on Total Emergency Dept. Cost

Cost Component	HOSPITAL A			HOSPITAL B			DIFFERENCE
	5,000 ED Visits			5,000 ED Visits			
	Unit Cost	FTEs	Cost	Unit Cost	FTEs	Cost	
Physicians	\$115/hour	4.0	\$953,000	\$125/hour	4.5	\$1,170,000	+23%
RNs	\$37/hour	5.0	\$386,000	\$39/hour	5.0	\$407,000	+5%
Other Staff	\$15/hour	2.0	\$62,000	\$17/hour	2.0	\$71,000	+13%
Total Wages			\$1,401,000			\$1,648,000	+18%
Benefits	18% of Wages		\$252,000	22% of Wages		\$362,000	+44%
Other Direct			\$40,000			\$60,000	+50%
Total Direct			\$1,693,000			\$2,070,000	+22%
Indirect Cost	48% of Direct		\$813,000	52% of Direct		\$1,077,000	+32%
Total Cost			\$2,506,000			\$3,147,000	+26%

total cost of two EDs with similar numbers of ED visits can differ dramatically due to the combined effects of multiple small differences in staffing levels, wage rates, benefit rates, and overhead allocations. Hospital A and Hospital B have the same number of ED visits and they each have one physician, one nurse, and one other staff member on duty at any given time. However, Hospital B needs slightly more physicians and nurses in order to achieve this level of staffing, it has to pay the employees more than Hospital A, and it has fewer service lines overall, so it has to allocate a higher share of administrative costs to the ED. The combined result is that Hospital B's overall cost for the ED is 26% higher than the cost at Hospital A.

Because the unit costs can vary for many reasons beyond the control of a small rural hospital, the staffing and compensation levels for the hypothetical hospital EDs shown in Figures 3-7 and 3-8 do not represent what any individual hospital ED should cost or what the differences in costs between EDs of different sizes should be. However, the cost models for the hypothetical hospitals do provide useful insights into what it can cost to operate small rural hospital EDs and the potential magnitude of differences based on size.

Figure 3-10 shows that the amounts calculated above for the hypothetical EDs are very similar to the median actual costs of Emergency Departments at small rural hospitals, after adjusting the estimates downward to reflect inflation between 2016-18 and 2020.¹²³ It also shows that there is significant variation in the actual amounts that small rural hospitals spend to operate Emergency Departments with similar numbers of visits, much of which is likely due to the kinds of factors described above.

6. Differences in the Cost of an ED Visit at Different Hospitals

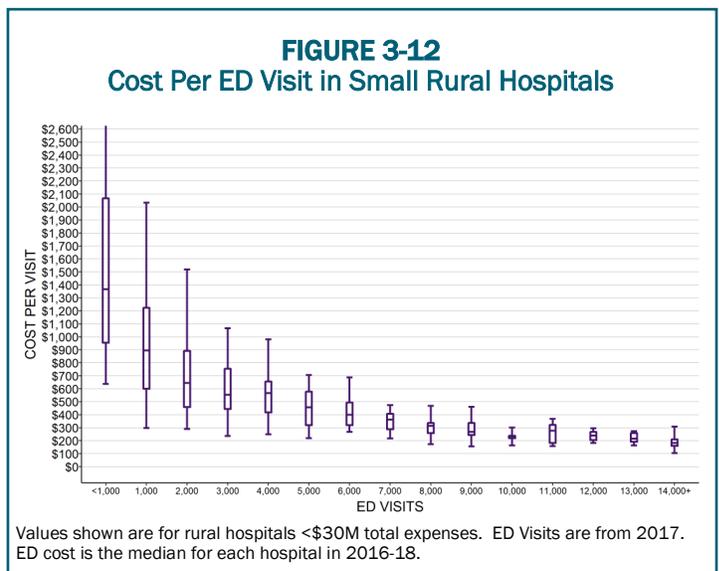
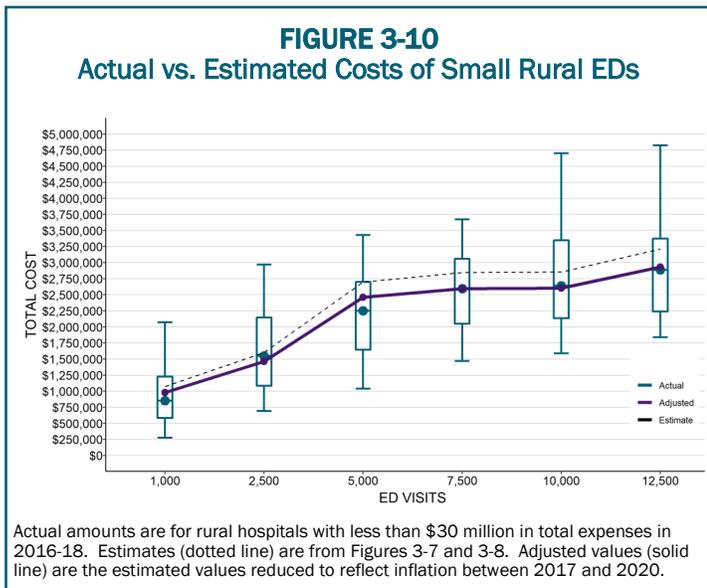
The total cost of operating an ED is generally not directly proportional to the number ED visits because the same level of staffing is needed for a wide range in the number of visits. This means that the average cost per visit

in the ED will be significantly lower at a hospital with more ED visits. As shown in Figure 3-11, while the estimated total cost of operating the hypothetical ED with 12,500 visits was 13% more than the cost of an ED with 7,500 visits, the cost per visit at the 12,500-visit ED is 32% lower because there are 67% more visits. The average cost per visit at the hypothetical ED with 1,000 visits is over \$1,000, more than 4 times the average cost per visit at the hypothetical ED with 12,500 visits, because the total cost of the ED is only 1/3 as much even though there are only 10% as many visits.

However, once the number of visits reaches a certain level, the cost per visit begins to stabilize because more of the total cost represents the "semi-variable" cost of additional physicians and nurses needed to handle additional visits, rather than the fixed cost of the minimum capacity to handle even a small number of visits. For example, as shown in Figure 3-11, even though the total cost of the ED with 15,000 visits is 45% higher than the cost of the ED with 10,000 visits, the cost per visit is only slightly less.

Figure 3-12 shows that the actual cost per visit at rural hospitals follows this pattern. The median cost per ED visit at hospitals with small number of visits is double,

Annual ED Visits	Estimated Annual Cost	Cost Per ED Visit
1,000	\$1,071,000	\$1,071
2,500	\$1,601,000	\$640
5,000	\$2,697,000	\$539
7,500	\$2,845,000	\$379
10,000	\$2,852,000	\$285
12,500	\$3,213,000	\$257
15,000	\$3,929,000	\$262



triple, or even more than quadruple the median cost per visit at hospitals with larger number of visits.

Figure 3-12 also shows there is much greater variation in the cost per visit among the smallest hospitals, which likely reflects the variety of challenges in staffing such EDs in different communities.¹²⁴

The cost models of the hypothetical EDs in Figures 3-7 and 3-8 make it clear that the primary reason smaller hospitals have higher costs per visit than larger hospitals is not because the smaller hospitals are “inefficient” in delivering services, but because they have to incur a minimum level of fixed costs in order to operate an ED regardless of how many visits the ED actually receives. As a result, any effort to evaluate the relative efficiencies of hospitals based solely on differences in their average cost per ED visit will lead to erroneous conclusions.

7. Impact of Changes in Volume on the Cost Per Visit

Because the cost of operating an ED is not directly proportional to the number of visits, the average cost per visit at a hospital ED will vary from month to month and year to year based on the number of people who happen to visit the ED during that particular period of time.

For example, Figure 3-13 shows a hypothetical hospital with 5,000 ED visits; the total estimated cost of operating the ED is \$2.7 million, using the same assumptions about staffing and unit costs shown earlier in Figure 3-7. If the hospital has exactly 5,000 visits, its average cost per visit will be \$540.

If the hospital happens to get only 4,500 visits during the year instead of 5,000, it will not be possible to reduce the staffing in the ED, so the cost of operating the ED will not change. However, dividing the same cost by 10% fewer visits causes the average cost per visit to increase by \$59, a more than 11% increase.

Similarly, if the hospital ED happens to receive 5,500 visits during the year instead of 5,000, no additional physicians, nurses, and other staff will be needed, so the cost of operating the ED will not change. But with 10% more visits, the average cost per visit will decrease by \$50, a reduction of more than 9%.

As a result, the average cost per visit at any hospital will vary from year to year, not because the hospital has become more or less efficient in delivering services, but simply due to the inherently random nature of the number of ED visits.

8. The Problems Caused by Visit-Based Fees

Although the cost of operating a hospital ED is not directly proportional to the number of ED visits, the hospital’s revenue usually is. Most of the revenue hospitals use to cover ED costs comes from a fee paid each time a patient visits the ED. As a result, when the number of visits increases, revenue increases proportionally, and when the number of visits decreases, so does revenue.¹²⁵ (Separate fees are paid for the other services the patients receive, such as lab tests or x-rays, and those will be discussed in a later section in conjunction with the costs of those services.)

This approach to payment causes two serious problems for small rural hospital EDs:

Fees for ED visits that are adequate for larger hospitals will cause losses at small rural hospitals.

Figure 3-12 shows that for EDs with 7,000 visits, the median cost per visit was \$400, with much higher costs per visit at smaller EDs. But as shown in Chapter II, the median payments by private health plans for ED visits at small rural hospitals ranged from under \$200 to \$350 in the states examined. If the payment per visit is \$200 - \$350 when the cost per visit is \$500 - \$700 or more, the hospital will be unable to cover more than half of the cost of operating the Emergency Department.

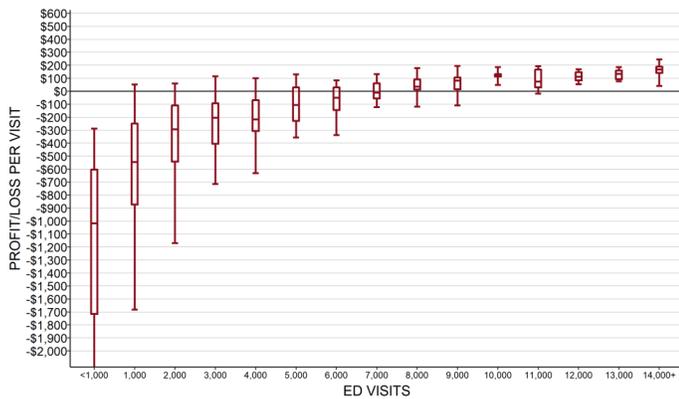
FIGURE 3-13
Changes in Cost Per Visit When Number of Visits Changes

	ED VISITS		FEWER VISITS		MORE VISITS	
	5,000		4,500	-10%	5,500	+10%
Cost Component	FTEs	Cost	Cost	Change	FTEs	Change
Physicians	4.0	\$994,000	\$994,000	0%	\$994,000	0%
RNs	5.0	\$397,000	\$397,000	0%	\$397,000	0%
Other Staff	2.0	\$66,000	\$66,000	0%	\$66,000	0%
Total Wages		\$1,457,000	\$1,457,000	0%	\$1,457,000	0%
Benefits		\$291,000	\$291,000	0%	\$291,000	0%
Other Direct		\$50,000	\$50,000	0%	\$50,000	0%
Total Direct		\$1,798,000	\$1,798,000	0%	\$1,798,000	0%
Indirect Cost		\$899,000	\$899,000	0%	\$899,000	0%
Total Cost		\$2,697,000	\$2,697,000	0%	\$2,697,000	0%
COST PER VISIT		\$539	\$599	+11%	\$490	-9%

Figure 3-14 shows that if every hospital in Figure 3-12 was paid \$350 per ED visit¹²⁶, the hospitals with 8,000 or more visits would have made a profit on every visit, whereas almost every hospital with less than 4,000 visits would have lost money on every visit. Most of the hospitals with the largest numbers of visits could have covered their costs or made a small profit even with a payment of \$250 per visit, but a payment that low would have increased the size of the losses at the smallest hospitals and caused additional small hospitals to have losses.

Some small hospitals will have larger losses than others, even if they receive the same payment per visit and have the same number of visits, if they have to pay more to attract and retain an adequate number of

FIGURE 3-14
Profit/Loss Per Visit With \$350 ED Visit Fee



Values shown are the ED cost per visits amounts from Figure 3-12 subtracted from \$350.

physicians and nurses in the community where they are located. In the example shown in Figure 3-9, even though Hospital A and Hospital B have the same number of ED visits and the same level of staffing in the ED on any given day, Hospital B would lose far more than Hospital A if they were both paid the same amount for a visit.

An unexpected illness or resignation of physicians or nurses will generally require the hospital to hire temporary physicians or nurses. This is far more likely at a small rural hospital because the smaller staff provides less capacity to cover temporary vacancies and because it takes longer to fill vacancies. Moreover, the higher cost of a temporary employee combined with the cost required to recruit a new employee will cause a larger percentage increase in personnel costs at a hospital that has a small number of employees to begin with. As a result, a visit fee that appeared to be adequate at the beginning of the year may no longer cover costs, and the hospital would experience losses by the end of the year.

The adequacy of any visit fee amount depends on how many patients actually have emergencies.

The problem with ED visit fees is not just the amount of payment, but the method of payment. Because revenues change in direct proportion to the number of visits when visits increase or decrease but costs barely change at all, even small changes in the number of ED visits can result in larger or smaller losses or profits.

Figure 3-15 shows that for the hypothetical hospital shown previously in Figure 3-13, if the ED receives 5,000 visits, a payment of \$540 per visit would be just enough to cover the costs of the ED. However, if the fee is set at that level and the hospital only receives 4,500 visits (10% fewer than expected), the reduction in revenue would result in a 10% loss. Conversely, if the hospital happened to experience a 10% increase in the number of ED visits, it would receive a windfall profit of 10%.

It is impossible to predict exactly how many ED visits any hospital will have, so even if the visit fee appears adequate at the beginning of the year, it may well turn out to be inadequate by the time the year ends.

9. Tradeoffs Between Quality, Affordability, and the Financial Viability of Services

The problems with current payments mean that many small rural hospitals face problematic choices between delivering the highest-quality care at an affordable cost and avoiding financial losses. For example:

Financial Penalties for Using Full-Time Emergency Physicians vs. Part-Time Providers

A patient experiencing an emergency will receive much faster care if there is a physician present in the ED at all times than if a physician has to be called in to the ED from home. Moreover, an emergency physician will have more training and experience in handling a wide range of emergencies than most primary care physicians. Consequently, it is preferable for the hospital to have emergency physicians on duty around the clock than to rely on on-call coverage from primary care providers.

However, the cost will likely be much higher to employ full-time emergency physicians than to rely on on-call providers, and it will often be more difficult and expensive to attract and retain full-time emergency physicians to work in an ED where they will only spend a fraction of their time actually treating patients. The increase in the median cost per visit between 3,000 and 4,000 visits that can be seen in Figure 3-12 is probably at least partially due to the fact that some hospitals with 3,000 visits have the ability to use part-time providers who are not emergency physicians to staff their ED, whereas hospitals with more visits will need to use full-time physicians, and it is much more expensive to do the latter than the former.

Because of the higher cost, a hospital will have to charge more in order to employ full-time emergency physicians instead of using only part-time providers, and this will cause higher financial burdens on patients and increase the hospital's bad debt. If patients' health insurance plans refuse to pay the higher charges, the hospital will lose money.

FIGURE 3-15
Impact on Margin When Number of Visits Changes

	BASELINE	FEWER VISITS		MORE VISITS	
			Change		Change
Number of Visits	5,000	4,500	-10%	5,500	+10%
Payment Per Visit	\$540	\$540	0%	\$540	0%
Revenues	\$2,700,000	\$2,430,000	-10%	\$2,970,000	+10%
Expenses	\$2,697,000	\$2,697,000	0%	\$2,697,000	0%
Margin	\$3,000 0%	(\$267,000) -10%		\$273,000 +10%	

Financial Penalties for Improving Care Management and Preventive Care

Many patients come to an ED for treatment of a problem that could have been prevented through better management of a chronic disease or better preventive care. For example, patients with asthma or COPD may experience exacerbations and breathing problems if they fail to take the appropriate medications, and individuals are more likely to get sick if they are not properly vaccinated for influenza or pneumonia.

However, the hospital is paid when the patient comes to the ED and it is not paid if the patient has no problems, so the hospital is penalized financially if the residents of the community are healthier. If primary care practices in the community or the hospital's own Rural Health Clinic provide better care management and preventive care for their patients, the hospital ED could lose revenues as a result.

Financial Penalties for Charging Affordable Prices

As shown in Figure 3-16, the median charge for an ED visit is generally between \$600 - \$900 at both smaller and larger rural hospitals. Based on the cost per visit data in Figure 3-12, if the hospitals were actually paid that amount, it would be more than adequate to cover the costs of an ED visit at all but the very smallest hospitals. However, that charge would be unnecessarily high at hospitals with larger numbers of visits.

However, Figure 3-16 also shows that the charges for ED visits vary dramatically among hospitals. Most health insurance plans demand that hospitals, physicians, and other healthcare providers provide large discounts on their standard prices in order to contract with the health plan. In order to give a discount, a hospital has to *charge* far more for a service than the *cost* of delivering the service so that the actual amount of payment the hospital *receives* for the service is sufficient to cover the cost. Typical commercial contract discounts are 50%, 67%, 75% or an even higher percentage of the charge, so the hospital has to set the charge at 2, 3, 4, or more times what the service actually costs.

However, these high charges make the hospital's services unaffordable for patients who do not have insurance, and this can discourage patients from getting care that they need. If patients receive services but cannot afford to pay what the hospital charges, the hospital will have large amounts of patient bad debt and the patients could face bankruptcy.

If the hospital charges lower amounts for its services that patients could afford to pay, the discounts demanded by health insurance companies could result in "allowed amounts" that are lower than hospital's cost of delivering services. Since there are far more patients with insurance than without, there is a strong financial incentive for the hospital to set charges as high as possible. Since the cost per visit is higher at the smaller hospitals, the charges have to be even higher there, making care even less affordable for patients without insurance.

C. The Cost of Inpatient Care in Small Rural Hospitals

An emergency department alone is not enough to qualify a facility as a "hospital;" the facility must also offer inpatient care.¹²⁷ This section will examine the costs involved in delivering inpatient care in small, rural hospitals. The focus here will be solely on the general nursing care and "bed and board" services a patient receives during an inpatient stay, not laboratory tests, imaging studies, therapy, surgery, or other services that may be delivered by other hospital departments during their stay. The costs of delivering those other services will be examined in the next section of this chapter.

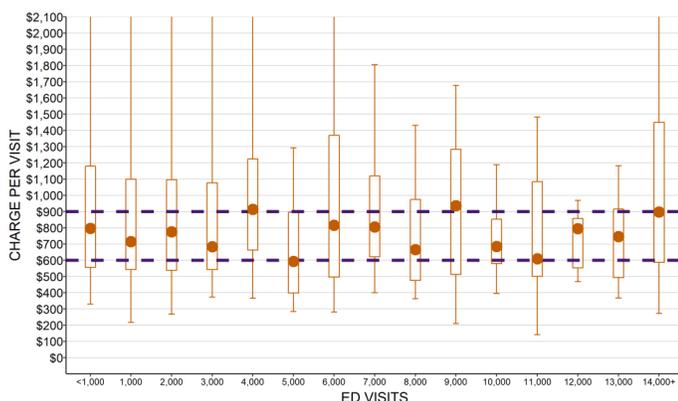
As with the ED, hospital cost reports include information on the total cost of operating the inpatient unit, but it is impossible to determine why some units are more expensive than others because there is very little information on the individual components of that cost. It is possible to estimate the level of staffing that a hospital would likely need to provide high-quality inpatient care, but this will depend not only on the number of patients who receive inpatient care, but how sick they are and what kinds of services they will need.

1. The Different Types of Inpatient Care at Small Rural Hospitals

Acute Inpatients

The focus of this report is on small rural hospitals, i.e., hospitals with an average daily acute inpatient census of less than 15 patients, with a particular focus on the hospitals which had total annual expenses less than \$20-\$30 million (during 2016-18), since they have been experiencing the greatest financial challenges. Virtually every rural hospital with less than \$30 million in total expenses in 2018 had less than 15 acute inpatients per day, but most had many fewer than that. 96% had fewer than 10 acute inpatients per day, and the majority (58%) had fewer than 3 acute inpatients per day on average.

FIGURE 3-16
Estimated Charge Per ED Visit
at Small Rural Hospitals



Amounts shown are estimated using median charges for 2016-18 and ED visits in 2017 for rural hospitals with less than \$30 million in total expenses.

Three patients may seem like a very small number, but in order to have an average of 3 acute patients in the hospital each day, a hospital will generally have to admit over 400 patients during the course of a year. A hospital that has an average of 10 patients receiving acute inpatient care every day will have more than 1,000 admissions per year.

Moreover, annual averages can mask enormous variations from month to month and day to day. Although there are no national data available on the daily numbers of admissions to hospitals, individual small rural hospitals report that the monthly acute inpatient census can vary from 50% to 200% of the annual average. For example, a hospital with an annual average daily acute census of 2 may have an average of 4 patients in the hospital each day during some months, and an average of only 1 patient per day in other months.

Swing Bed Patients

However, small rural hospitals do not use their inpatient beds solely for patients with an acute illness. At almost all small rural hospitals, some or all of the inpatient beds are classified as “swing beds.” A swing bed can be used either for an acute patient (i.e., a patient who is sick enough to require admission to a hospital for treatment or observation), or for a non-acute patient who needs daily skilled nursing care. Swing beds allow rural hospitals to provide two types of services:

- **Post-Acute Rehabilitation Services.** Many patients cannot return home immediately after discharge from a hospital and need a period of rehabilitation that may last several days or several weeks. Some of the patients receiving post-acute care in rural hospital swing beds are the same individuals who just completed an inpatient stay at the same hospital, but many are patients who received surgery or medical treatment at a hospital in a larger community and then return to the rural hospital to receive rehabilitation care closer to home.
- **Long-Term Nursing Care.** Three-fourths of small rural hospitals also have long-term nursing patients in their swing beds. These are patients who have medical

conditions or physical limitations that require a level of nursing care and personal care that they cannot receive at home.

In larger communities, these types of services are generally provided by Skilled Nursing Facilities (SNFs), but many rural communities are too small to support a separate SNF, particularly in states with low Medicaid payments for long-term nursing care, and the only way residents of the community can receive these services locally is if the hospital provides them through swing beds.

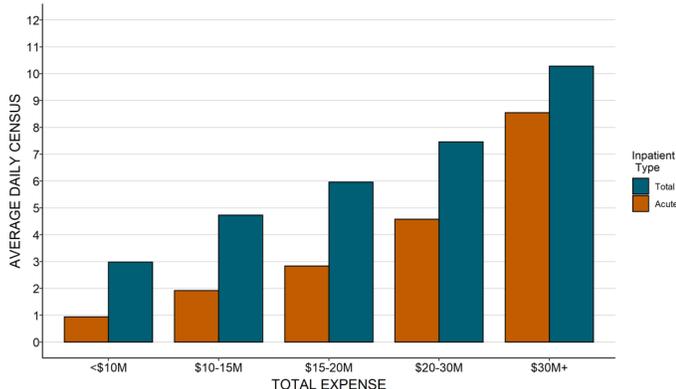
A Rural Hospital's Total Inpatient Census is Larger Than Its Acute Census

Because a rural hospital's inpatient unit(s) have both acute patients and swing bed patients, the *total* inpatient census in the hospital will generally be larger than its acute census, and often significantly larger. As shown in Figure 3-17, the total number of inpatients in the smallest hospitals is 2-3 times as large as what the acute census would suggest.

Most rural hospitals use swing beds primarily for post-acute rehabilitation services, and they have at most one or two long-term nursing patients on any given day. Rural hospitals are not restricted to providing rehabilitation services to patients from the local community, so some hospitals with very small numbers of acute patients will have patients from a broader geographic area in their swing beds. Figure 3-17 shows that the majority of hospitals with an average of less than 1 acute inpatient per day have a much higher total census due to patients in swing beds who are receiving short-term rehabilitation.

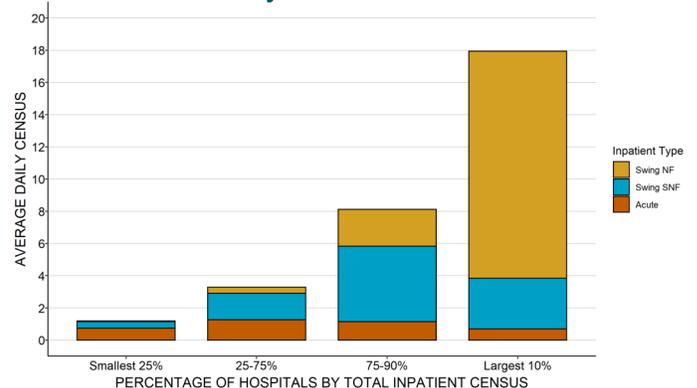
In a subset of hospitals, primarily those located in small isolated communities, the majority of patients in the hospital's inpatient beds are long-term nursing care patients. 5% of the smallest rural hospitals have an average of 8 long-term nursing care patients in their inpatient swing bed unit, and 2% have more than 15. In fact, some of the rural hospitals with the smallest number of *acute* inpatients have more *total* patients in their inpatient unit on any given day than many larger hospitals do because of the large number of nursing care patients in their swing beds. As shown in Figure 3-18, among hospi-

FIGURE 3-17
Average Daily Acute and Total Inpatient Census in Small Rural Hospitals



Average daily census and total expense is the median for 2016-18. Acute includes both acute inpatient and observation stays. Total includes acute and swing bed patients.

FIGURE 3-18
Types of Inpatients in Rural Hospitals with Very Small Acute Census



Numbers shown are only for rural hospitals with an average of less than one acute inpatient or observation patient per day in 2016-18.

tals with less than 1 acute patient per day on average, the largest 10% of the hospitals have more than 15 patients in total, and the majority of those patients are receiving long-term nursing care.

2. The Cost of Delivering Inpatient Care in Small Rural Hospitals

Most patients who are admitted to small rural hospitals are there for treatment of a common acute medical condition (e.g., pneumonia or cellulitis) or an exacerbation of a chronic disease (such as COPD or heart failure), not for treatment of complex conditions or invasive procedures. (Even if a small rural hospital delivers babies or performs orthopedic procedures, maternity care and surgical cases will generally represent a small fraction of the total acute inpatients.) The patients who are admitted may be too sick to safely return home immediately after they are diagnosed and treated in the emergency department, or they may need a type of treatment that they cannot receive at home, such as intravenous fluids or antibiotics. It is a significant advantage for a patient to be able to receive that kind of care in their own community rather than having to be transported to a hospital in a distant community, but this is only feasible if the hospital can financially sustain an inpatient.

The Cost for Inpatient Care for a Small Number of Acute Patients

The very smallest hospitals (those with total annual expenses under \$10 million) have a median total daily census of 3 in their inpatient unit; the majority of these patients will generally be acute inpatients, with the rest receiving SNF-level rehabilitative care or possibly long-term care in swing beds.

In order to staff such a unit safely, the hospital will likely want to have two nurses on duty during each 12-hour shift. This might seem like a very high nurse:patient ratio to those familiar with staffing patterns for medical inpatient units, where the staffing ratios would be more like 1 nurse for every 5-7 patients. However, there are several reasons why the staffing ratio has to be higher in a small rural hospital:

- **Variability in Patient Census.** The fact that the average census is 3 does not mean that the census is 3 every day. The daily census can vary significantly because of the inherently random nature of when patients get sick and need to be admitted to the hospital, so on any given day, the number of patients receiving inpatient care could be twice as high or more. One analysis estimated that a hospital with an average daily census of 5 or less would need to staff for twice as many patients in order to have even a 95% assurance of adequate staffing during peak times.¹²⁸
- **Variability in Nursing Time Per Patient.** Even if there are only two acute patients on the unit during the day, both patients could need hands-on nursing care at the exact same time, making it unsafe to have only one nurse available. Similarly, if a nurse on duty were to be injured or become ill, it would be unsafe if there were no backup nurse available. In a larger hospital, a nurse from another inpatient unit could be called on

to help in such a situation, but in a small rural hospital, there is no “other unit.” In fact, because the nurses on the inpatient unit may be the only nurses in the hospital, they may be called on to help with peak demand in the ED or if someone experiences a medical problem while visiting another outpatient department, and so two nurses will be needed in order to provide that capacity.

- **Multiple Nursing Tasks Per Patient.** In contrast to a larger hospital, there is no separate set of nurses responsible for admitting or discharging patients; the nurses on the inpatient unit will need to perform these tasks as well as direct patient care. Because the average length of stay is only 2-3 days and some patients will only be in the hospital for a day, there will likely be 1-2 admissions or discharges every day¹²⁹, and it would be impossible for a single nurse to do this as well as provide constant supervision of the patients who have been admitted.

In order to have two nurses on duty at all times during the day, every day of the year, the hospital will have to employ more than two nurses in total. As discussed in the previous section with respect to the Emergency Department, in order to have a nurse present around the clock, a hospital will have to employ 4-5 nurses in total. So, on an inpatient unit, in order to have two nurses for each of the two 12-hour shifts each day, the hospital will need to employ as many as 10 nurses in total. Because of the cost and difficulty of attracting and retaining Registered Nurses (RNs), many hospitals will likely use a combination of an RN and a Licensed Practical Nurse (LPN) on some or all shifts.¹³⁰

If the hospital pays \$38/hour for RNs, \$26/hour for LPNs, and provides benefits equivalent to 20% of wages, it would need to spend over \$800,000 on nursing staff for an inpatient unit with this many patients.

In addition to the nurses, a hospital will also be likely to employ additional staff to directly support the inpatient unit, such as:

- A Nursing Assistant on each shift, who could carry out a variety of patient care duties to enable the nurses to focus on tasks requiring nursing skills.
- A Unit Secretary/Coordinator, at least on the day shift, to handle calls, visitors, paperwork, and other tasks.

Most of the direct costs of the inpatient unit will be associated with the nurses and other staff. As with the Emergency Department, the costs of any medications and other supplies that are billed separately will ordinarily assigned to a separate hospital cost center (these costs will be discussed separately in the next section), so non-personnel costs for the inpatient unit will generally be a small proportion of the total direct cost.

However, the inpatient unit will depend on the hospital providing space and utilities, maintenance, housekeeping, dietary services, laundry, billing for patient visits, payroll and benefits for staff, medical records, etc., and a portion of the hospital's costs for those activities must be allocated to the inpatient unit to properly represent the total cost of inpatient care. Typically, the indirect costs will increase the total cost of an inpatient unit by

100% beyond the personnel and other direct costs discussed above.¹³¹

Figure 3-19 shows that the total cost could be expected to be about \$2.4 million for an inpatient unit with this level of staffing at a hypothetical hospital.

The Cost of Inpatient Care for a Smaller Number of Acute Patients

A hospital will still likely want a similar level of nurses even if the average daily census is lower than 3. Even if the hospital has only 1 or 2 patients per day on average instead of 3, the random nature of admissions and the seasonality in admission rates means that it will still have 2, 3, or even more patients on some days and it needs to be prepared for that. Moreover, many hospitals with small numbers of admissions also have small emergency departments that rely on the nurses on the inpatient unit to help with ED visits as well as provide care on the inpatient unit, so it would be unsafe to have only one nurse available. A hospital would be less likely to have a nursing assistant or other staff if the total census was very low, but very few hospitals have a total daily census below 2.

The Cost of Inpatient Care for a Larger Number of Acute Patients

Because the nursing staffing levels described above are designed to handle variations in the number of patients, there will be no need to change the staffing levels if the average daily census is slightly higher than 3. If a hospital has a significantly larger number of patients every

day, it will need to have additional nurses and potentially other staff on the unit, but the number of staff will not be directly proportional to the number of patients. For example:

- If the average daily census is closer to 6 than to 3, the hospital will likely want 3 nurses on duty on some or all shifts instead of 2 nurses, particularly if a high proportion of the patients are acute admissions rather than patients receiving rehabilitation or long-term care in swing beds.
- If the average daily census is closer to 9 and most of the patients are receiving acute care, the hospital will likely want another nurse on the day shift because of the higher workload during the day than at night.
- If there are an average of 14 patients on the unit, most of whom are acute patients, the inpatient unit begins to look more like an inpatient unit at a larger hospital, except that the staffing will still need to be higher than at a larger hospital because there are no other units at the small hospital to provide backup support and no other nurses to perform admission and discharge tasks, so the hospital may have 4 nurses on every shift.

Figure 3-20 shows estimated costs for hypothetical hospitals with these levels of staffing, wages, and benefits for the different levels of inpatient census.

Actual vs. Estimated Costs

The estimates shown for the hypothetical hospitals in Figure 3-20 do *not* represent what any individual hospital inpatient unit *should* cost or what the differences in costs between inpatient units of different sizes *should* be. For example:

- the exact number and types of nurses the hospital employs, and the amounts it pays those nurses, will depend heavily on the hospital's ability to attract and retain nurses in the community. Hospitals in isolated areas are less likely to have a pool of nurses in the community who are able and willing to work part-time, so a hospital in these areas may need to employ more nurses on a full-time basis in order to ensure that it will have adequate coverage for all shifts.
- a hospital in a more isolated area may also need to pay more to hire nurses than a hospital in an area that is closer to an urban center.
- if a nurse retires or resigns, the hospital will likely have to hire a "traveling" nurse to temporarily fill the vacancy, and this will increase the hospital's personnel costs in the year in which the vacancy occurs.
- if outpatient surgical procedures are performed at a small hospital, there will likely not be enough procedures to support a separate nursing staff for that, and so the nurses on the inpatient unit will spend a portion of their time assisting with the procedures and the patients' recovery. The portion of the inpatient nurses' time that is assigned to the surgical center will reduce the cost of the inpatient unit, but the hospital may also need a higher number of nurses on the days when surgical procedures are performed than if the nurses were only caring for inpatients.

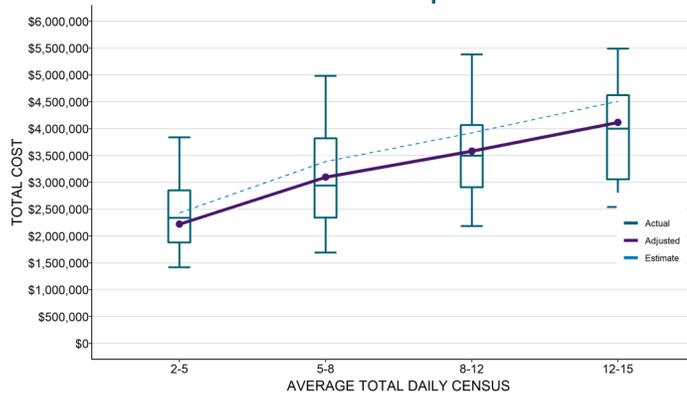
FIGURE 3-19
Cost of Inpatient Unit at a Hypothetical Small Rural Hospital

Cost Component	Unit Cost	AVG. INPATIENTS PER DAY		
		Per Shift	FTEs	Cost
		2.0	Acute	
		1.0	Swing SNF	
		0.0	Swing NF	
		3.0	Total	
RNs	\$38/hour	1.0	5.0	\$395,000
LPNs	\$26/hour	1.0	5.0	\$271,000
Nursing Assistant	\$15/hour	1.0	5.0	\$156,000
Other Staff	\$16/hour	0.5	2.5	\$83,000
Total Wages				\$905,000
Benefits	20% of Wages			\$181,000
Other Direct				\$130,000
Total Direct				\$1,216,000
Indirect Cost	100% of Direct			\$1,216,000
Total Cost				\$2,432,000

FIGURE 3-20
Cost of Hypothetical Inpatient Units With Different Numbers of Patients

Cost Component	AVG. INPATIENTS PER DAY							
	2.0	Acute	4.0	Acute	7.0	Acute	10.0	Acute
	1.0	Swing SNF	2.0	Swing SNF	2.0	Swing SNF	4.0	Swing SNF
	0.0	Swing NF						
	3.0	Total	6.0	Total	9.0	Total	14.0	Total
FTEs	Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost	
RNs	5.0	\$395,000	10.0	\$790,000	10.0	\$790,000	12.0	\$948,000
LPNs	5.0	\$271,000	5.0	\$271,000	7.5	\$406,000	7.5	\$406,000
Nursing Assistant	5.0	\$156,000	5.0	\$156,000	5.0	\$156,000	7.5	\$234,000
Other Staff	2.5	\$83,000	2.5	\$83,000	5.0	\$166,000	5.0	\$166,000
Total Wages		\$905,000		\$1,300,000		\$1,518,000		\$1,754,000
Benefits		\$181,000		\$260,000		\$304,000		\$351,000
Other Direct		\$130,000		\$135,000		\$140,000		\$150,000
Total Direct		\$1,216,000		\$1,695,000		\$1,962,000		\$2,255,000
Indirect Cost		\$1,216,000		\$1,695,000		\$1,962,000		\$2,255,000
Total Cost		\$2,432,000		\$3,390,000		\$3,924,000		\$4,510,000

FIGURE 3-21
Actual vs. Estimated Costs of Inpatient Units at Small Rural Hospitals



Actual amounts are for rural hospitals with less than \$30 million in total expenses in 2016-18. Estimates (dotted line) are from Figure 3-20. Adjusted values (solid line) are the estimated values reduced to reflect inflation between 2017 and 2020.

Nonetheless, the cost models provide useful insights into what it *can* cost to operate inpatient units at small rural hospitals and the potential magnitude of differences based on size. As shown in Figure 3-21, the estimated costs described earlier are similar to the median costs for rural hospitals, but there is also considerable variation for individual hospitals.¹³²

The Cost of Inpatient Care with Large Numbers of Swing Bed Patients

As discussed earlier, some small rural hospitals have a small number of patients receiving acute care but a large number of long-term nursing care patients in swing beds. These hospitals may have the same total number of patients in inpatient beds each day as other hospitals, but the average acuity level of the patients will be lower, so the number and types of staff needed will likely be somewhat different. For example, although the hospital will still need to have at least 2 nurses, including one RN, to handle the work associated with the acute patients, they may have more LPNs and more nursing assistants for the patients in swing beds than if those patients were acute patients. Figure 3-22 shows what the costs might look like with hypothetical levels of staffing and wages for different numbers of patients.

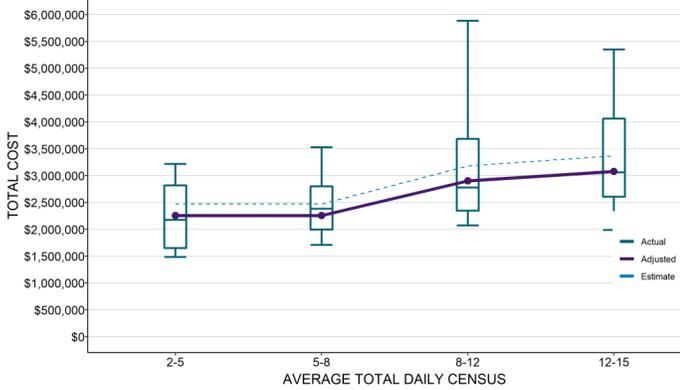
Here again, the exact number and types of nurses and other staff that a hospital employs, and the amounts that it pays those employees, will depend heavily on the ability of the hospital to attract and retain nurses and other staff in the community. As shown in Figure 3-23, the costs at the hypothetical hospitals above are similar to the median costs at hospitals with those numbers and types of patients, but there is considerable variation among individual hospitals.

This shows that another reason for variation in inpatient costs across different hospitals is the difference in the types of patients at those hospitals. Even if two hospitals have the same average number of *acute* inpatients, the cost of the inpatient unit will be higher if it also has a large number of patients in swing beds. Conversely, if

FIGURE 3-22
Cost of Hypothetical Inpatient Units With Different Types of Patients

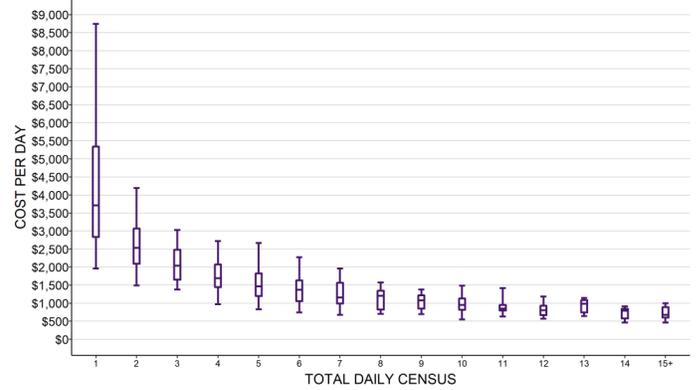
Cost Component	AVG. INPATIENTS PER DAY							
	0.5	Acute	0.5	Acute	1.5	Acute	2.0	Acute
	1.0	Swing SNF	1.5	Swing SNF	1.5	Swing SNF	2.0	Swing SNF
	1.5	Swing NF	4.0	Swing NF	6.0	Swing NF	10.0	Swing NF
	3.0	Total	6.0	Total	9.0	Total	14.0	Total
FTEs	Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost	
RNs	5.0	\$395,000	5.0	\$395,000	5.0	\$395,000	5.0	\$395,000
LPNs	5.0	\$271,000	5.0	\$271,000	7.5	\$406,000	7.5	\$406,000
Nursing Assistant	5.0	\$156,000	5.0	\$156,000	7.5	\$234,000	10.0	\$312,000
Other Staff	0.0	\$0	0.0	\$0	2.5	\$83,000	2.5	\$83,000
Total Wages		\$822,000		\$822,000		\$1,118,000		\$1,196,000
Benefits		\$164,000		\$164,000		\$224,000		\$239,000
Other Direct		\$250,000		\$250,000		\$250,000		\$250,000
Total Direct		\$1,236,000		\$1,236,000		\$1,592,000		\$1,685,000
Indirect Cost		\$1,236,000		\$1,236,000		\$1,592,000		\$1,685,000
Total Cost		\$2,472,000		\$2,472,000		\$3,184,000		\$3,370,000

FIGURE 3-23
Actual vs. Estimated Costs of Inpatient Units at Small Rural Hospitals With Many Swing Bed Patients



Actual amounts are for rural hospitals with less than \$30 million in total expenses in 2016-18. Estimates (dotted line) are from Figure 3-22. Adjusted values (solid line) are the estimated values reduced to reflect inflation between 2017 and 2020.

FIGURE 3-25
Cost Per Inpatient Day at Small Rural Hospitals



Values are the medians in 2016-18 for rural hospitals <\$30M total expenses where swing NF patients represented less than 5% of all inpatient days.

FIGURE 3-24
Differences in Cost Per Inpatient Day

	Number of Inpatients Per Day			
	2.0	4.0	7.0	10.0
Acute	2.0	4.0	7.0	10.0
Swing SNF	1.0	2.0	2.0	4.0
Swing NF	0.0	0.0	0.0	0.0
Total	3.0	6.0	9.0	14.0
Total Cost	\$2,432,000	\$3,390,000	\$3,924,000	\$4,510,000
Cost Per Day	\$2,221	\$1,548	\$1,195	\$883

two hospitals have the same number of total inpatients, the cost of one inpatient unit will be higher if a higher proportion of the patients are acute admissions.

3. Differences in the Average Cost Per Patient Between Different Hospitals

Although the total cost of operating an inpatient unit will generally be higher for inpatient units with more patients, the analysis above shows that the differences in costs will not be proportional to the differences in the number of patients. The estimated cost in Figure 3-20 for a hospital with an average daily census of 6 is only 39% higher than the estimated cost for a hospital with an average census of 3, even though there are twice as many patients on an average day. On the other hand, the total cost may not differ at all for hospitals that have only small differences in the number of patients; in the example in Figure 3-20, the same staffing would likely be appropriate whether the average daily census is 2.5, 3.0, or 3.5, and so the cost could be the same even though the number of patients differs by as much as 33%.

This means that the average cost per patient day will be significantly lower at hospitals with higher numbers of patients. As shown in Figure 3-24, the average cost per patient day at the hypothetical hospital with an average daily census of 3 is \$2,221, while the average cost per patient day for the hypothetical hospital with an ADC of 6 is \$1,548, i.e., 30% less. At the high end of the range, the cost per day at the hospital with an average of 14 patients per day is \$883, which is less than half the cost at the hospital with an average of 3 patients.

Figure 3-25 shows that the actual cost per day at rural hospitals follows this pattern. The median cost per day at hospitals with small numbers of inpatients is double, triple, or even quadruple the median cost per day at hospitals with larger numbers of patients.

The fact that some hospitals have higher costs per day than hospitals with a smaller census does not necessarily represent inefficiency; in some cases, it is simply due to variations from community to community in the ability to attract and retain nurses and other staff.

The average cost per patient at a hospital will depend on not only the average cost per patient day, but also the average length of stay for the patients. The average length of stay for acute inpatients at small rural hospitals is about 3 days, so the total cost of an inpatient stay will generally be hundreds or thousands of dollars higher at hospitals with fewer patients.¹³³

4. The Problems Caused by Per Diem and Per Case Payments

Although the cost of operating an inpatient unit is not directly proportional to the number of patients, the hospital's revenue usually is. Hospitals are generally paid for inpatient care either through a per-diem fee (i.e., a payment for each day that a patient spends in the hospital) or a single case rate (a payment for the entire hospital stay regardless of how long the patient is in the hospital). As a result, when the number of patients admitted to the hospital increases, the hospital's revenue

increases proportionally, and when the number of admissions decreases, so does revenue.¹³⁴

This approach to payment causes the same kinds of problems for the inpatient services delivered by small rural hospitals that fees for ED visits cause for the emergency department:

Payments for hospitalizations that are adequate for larger hospitals will cause losses at small rural hospitals.

Figure 3-25 shows that for inpatient units with a total daily census above 9, the median cost per day was under \$1000, so a per diem payment of \$1,000 would be sufficient to cover the cost of the nursing care for those patients. However, a \$1,000 per diem payment would cause significant losses at hospitals with fewer patients. Those hospitals that have to pay more to attract and retain an adequate number of nurses and other staff will also have greater losses if they are paid the same amount per patient as other hospitals of similar size.

Even if the per-diem or case rate amounts appear adequate to cover the costs of inpatient services when the year begins, if unexpected vacancies occur in the nursing staff that require the hospital to hire temporary nurses, the cost of the inpatient unit will increase and the payments may no longer be adequate.

The adequacy of any payment amount depends on how many patients are actually admitted.

As with visit-based fees in the emergency department, the problem with per diem and per admission payments for inpatient care is not just the amount of payment, but the method of payment. Because revenues change in direct proportion to the number of admissions when admissions increase or decrease, but costs barely change at all, even small changes in the number of patients admitted can result in larger or smaller losses or profits.

Figure 3-26 shows that for the hypothetical hospital with an average total census of 6.0 that was shown previously in Figure 3-20, an average per diem payment of \$1,600 would be large enough to cover the costs of the inpatient unit and make a small profit. However, if it

	Number of Inpatients Per Day		
Acute	3.6	4.0	4.4
Swing SNF	2.0	2.0	2.0
Swing NF	0.0	0.0	0.0
Total	5.6	6.0	6.4
Total Cost	\$3,390,000	\$3,390,000	\$3,390,000
Cost Per Day	\$1,659	\$1,548	\$1,451

turns out that the hospital has 10% fewer acute patients than expected, resulting in an average total census of only 5.6, the total cost of the inpatient unit would still be the same, but the cost per day would increase by 7%. As a result, a \$1,600 per diem would result in a more than 4% loss. Conversely, if the hospital happened to experience a 10% increase in the number of acute admissions, the same average per diem would create a windfall profit of 10%.

It is impossible to predict exactly how many patients will be admitted to a hospital over the course of a year, so even if the payment appears adequate at the beginning of the year, it may well turn out to be inadequate by the time the year ends.

Hospitals face tradeoffs between quality, affordability, and the financial viability of services

Payments for inpatient care create the same kinds of problematic tradeoffs between quality, affordability, and financial viability for hospitals that were described in the previous section with respect to the emergency department:

- Patients on an inpatient unit can receive more individualized attention if there are more nurses and other staff working on the unit, but it will cost more to have more staff, and the hospital may not be able to charge or be paid enough to cover the higher cost.
- Better chronic care management and preventive care can not only reduce ED visits, they can also reduce the number of patients who need to be admitted to the hospital. However, the hospital is paid if the patient is admitted and it is not paid for inpatient care if the patient does not need to be admitted, so the hospital is penalized financially if the residents of the community are healthier.
- In order to receive payments for hospital admissions from private insurance plans that are sufficient to cover the costs of the inpatient unit, the hospital will have to set its charges several times higher than the cost, which will make hospital care less affordable for people without insurance.

5. Differences in Costs and Payments for Acute Admissions vs. Swing Bed Patients

The problems associated with mismatches between payments and costs for inpatient services are magnified in small rural hospitals because of the use of swing beds. In general, patients admitted for acute care will require more nursing time than patients in swing beds, so it would be inappropriate for the hospital to charge or be paid the same per diem or per patient amount for an acute patient as is paid for a swing bed patient. Similarly, many swing bed patients receiving post-acute care will have more intensive nursing care needs than long-term care patients, so payments for the post-acute care patients should, in principle, reflect that difference.

If the payments for rehabilitation or long-term care patients in swing beds are below the cost of delivering care to them, that will exacerbate the losses caused by low payment for acute patients. Medicare and most com-

mercial insurance plans do not pay at all for long-term nursing care, and Medicaid payments for long-term care are generally less than what it costs to deliver that care either in a hospital or a separate nursing facility, so losses for a rural hospital can be particularly high if the hospital happens to have fewer acute or rehabilitation patients and more long-term nursing patients in swing beds during a particular period of time.

D. The Cost of Ancillary Services in Small Rural Hospitals

1. The Number and Types of Ancillary Services in Small Rural Hospitals

Many of the patients who come to a rural hospital's Emergency Department will need a laboratory test or an imaging study to assist in diagnosis of their condition. Patients who are admitted to the hospital will typically need laboratory testing and potentially imaging studies to monitor their condition during their stay. Patients who receive rehabilitation in a swing bed will need therapy services (physical therapy, occupational therapy, speech therapy) in addition to nursing care.

These "ancillary" services are not delivered by nurses but by laboratory technicians, radiology technicians, and therapists who have specialized training, and they require the use of specialized laboratory, radiology, and therapy equipment and supplies. As a result, the grand total of the costs associated with a patient's emergency department visit or an inpatient stay is higher than the costs associated with the ED and inpatient unit described in the previous sections.

However, the majority of patients who receive these ancillary services are not patients in the hospital ED or inpatient unit; they are patients in the community who need a lab test, imaging study, or therapy in conjunction with ambulatory care they are receiving from a primary care physician or specialist. As discussed in Chapter I, the availability of these services is an important way that rural hospitals help the residents of their community stay healthy.

Since different patients receive different numbers and types of ancillary services, a charge for each service must be billed to a patient and their health insurance plan. Medications given to patients and medical supplies used during an inpatient stay or emergency department visit are also treated as ancillary services and they are billed separately to patients and health plans. Many small rural hospitals deliver one or more ancillary services beyond laboratory, radiology, therapy, drugs, and medical supplies, such as surgery or maternity care, but as discussed in the initial section of this chapter, these other services represent a relatively small part of the total costs for most small rural hospitals. (Indeed, many hospitals that are larger in terms of total expenses are larger not only because they serve larger communities, but because they offer a broader array of ancillary services.)

Although hospitals report their total charges for each category of ancillary services on their cost reports, they do not report exactly how many and what types of lab

tests, imaging studies, therapy services, drugs, etc. they provided, and there are no other good sources of data on this. This is partly because there is no easy way to measure the volume of ancillary services in a comparable way across hospitals. For example, there are hundreds of different laboratory tests, some of which are very simple while others are much more complex (e.g., a “comprehensive metabolic panel” is generally ordered and billed as one test, but it is actually a collection of several separate tests), so knowing that one hospital delivered “more laboratory tests” than another hospital is not very helpful. Due to variation in the amounts hospitals charge for individual tests, imaging studies, and other services, differences between hospitals in the total charges they bill for a group of services do not give any reliable indication as to the difference in the volume or types of services delivered at the hospitals. Although there is a system of “relative value units” (RVUs) assigned to different services that Medicare and other payers use for setting payment amounts, the difference in costs is not necessarily proportional to the difference in RVUs at a small hospital, so even if one knew that one hospital delivered more RVUs than another, that would still not allow clear conclusions to be drawn about whether its costs should be higher.

2. The Cost of Laboratory Services in Small Rural Hospitals

Because each type of ancillary service is delivered by different types of staff with different types of equipment and supplies, the costs associated with each type of service are tracked in separate cost centers. In most hospitals, the laboratory is the largest ancillary service in terms of total cost, partly because of the large number of residents in any community who will need a lab test for some purpose during the course of a year.

There are three primary components of the cost of operating a hospital laboratory: (1) laboratory technicians, (2) laboratory equipment, and (3) the materials and chemicals used for individual tests. The hospital cost reports do not provide information on these separate components, but it is possible to estimate what the costs would be in laboratories of different sizes.

Laboratory Technicians

Even the smallest hospital will need at least one full-time laboratory technician (lab tech) with the training needed to perform the minimum set of tests needed for immediate diagnosis and treatment of patients, such as urine tests, blood tests, and pregnancy tests.¹³⁵ Although a single lab tech working a 40 hour week might have the capacity to process all of the tests at a very small hospital¹³⁶, there could be problematic delays when multiple tests are needed quickly at the same time. The lab tech would also have to be on call to come to the hospital at night or on weekends if a patient comes to the ED and needs a test that can't be performed by the ED staff, or if an inpatient experiences a problem during the night that requires a test to diagnose. Moreover, employing a single laboratory technician provides no coverage for illnesses, vacations, etc. and places all of the on-call burden on one individual. As result, except for the very smallest communities, a

rural hospital will likely want to have at least two full-time laboratory technicians.¹³⁷

The higher the volume of testing, the more lab techs the hospital will need in order to provide timely processing of tests. However, in contrast to the inpatient unit, where each increment in the nursing staffing level requires 4-5 additional FTE employees, staffing in the laboratory can be increased in increments of a single FTE. The more ED visits the hospital has, particularly at night, the more important it will be to have round-the-clock staffing in the laboratory rather than expecting the daytime lab techs to be on call. However, since the majority of tests will not be for emergency visits, most of the testing work can be scheduled to occur during the daylight shift on weekdays, which enables more efficiency and flexibility in staffing.¹³⁸

Equipment and Supplies

Every hospital will need the minimum level of laboratory equipment required to perform the most commonly used tests; this will require not only purchasing or leasing the equipment, but also ongoing costs for maintenance and calibration of the equipment. The more tests that are performed, the more equipment that will be needed, but since a single piece of laboratory testing equipment can be used across multiple shifts and not every test uses the same testing device, the increment of testing volume that triggers the need for additional equipment may be larger than the increments that trigger an increase in laboratory technicians. On the other hand, with a higher total volume of testing, the hospital will also be more likely to have requests for less common tests that can only be performed if the hospital has additional types of equipment, and meeting that demand will increase the cost of equipment acquisition and maintenance at a hospital with higher volumes of testing.

The laboratory will also need an inventory of the supplies and chemicals required to perform the tests on the equipment. The more tests that are performed, the higher spending will be on non-reusable supplies and chemicals.

Indirect Costs

The operation of the laboratory depends on the hospital providing space and utilities, maintenance for equipment, housekeeping, billing for tests performed, payroll and benefits for staff, and medical records. Consequently, a portion of the hospital's costs for those activities must be allocated to the laboratory to properly represent the total cost of operating the laboratory. Typically, these indirect costs increase the total cost of a laboratory at a small hospital by 40-45% beyond the direct cost associated with personnel, equipment, and supplies.

Total Cost of Small Hospital Laboratories

Figure 3-27 shows what the total cost of hypothetical hospital laboratories of different sizes could be, using assumptions about the number of lab techs, the wage rates they are paid, and the cost of equipment and supplies.

FIGURE 3-27
Cost of Laboratories at Hypothetical Small Rural Hospitals

		POPULATION		POPULATION		POPULATION	
		1,500		5,000		7,000	
Cost Component	Unit Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost
Laboratory Tech	\$28/hour	2.0	\$117,000	4.0	\$232,000	5.0	\$291,000
On-Call Time			\$33,000		\$0		\$0
Total Wages			\$150,000		\$232,000		\$291,000
Benefits	20% of Wages		\$30,000		\$46,000		\$58,000
Equip./Supplies			\$187,000		\$290,000		\$364,000
Total Direct			\$367,000		\$568,000		\$713,000
Indirect Cost	45% of Direct		\$165,000		\$256,000		\$321,000
Total Cost			\$532,000		\$824,000		\$1,034,000

		POPULATION		POPULATION		POPULATION	
		9,000		15,000		20,000	
Cost Component	Unit Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost
Laboratory Tech	\$28/hour	6.0	\$349,000	7.0	\$408,000	8.0	\$466,000
Benefits	20% of Wages		\$70,000		\$82,000		\$93,000
Equip./Supplies			\$437,000		\$510,000		\$583,000
Total Direct			\$856,000		\$1,000,000		\$1,142,000
Indirect Cost	45% of Direct		\$385,000		\$449,000		\$513,000
Total Cost			\$1,241,000		\$1,449,000		\$1,655,000

As with the hypothetical estimates for emergency departments and inpatient units described in previous sections, these cost estimates for hypothetical laboratories are not intended to represent what the cost of a laboratory at any individual hospital *should* be, or exactly how large the differences in costs between laboratories of different sizes should be. The ability of a small rural hospital to hire laboratory technicians and the wage rate and benefits it will need to pay to do so will vary from community to community; hospitals will have to spend more when they need to replace older equipment, and hospitals in communities where the population is older or less healthy will need to perform more and different kinds of tests.

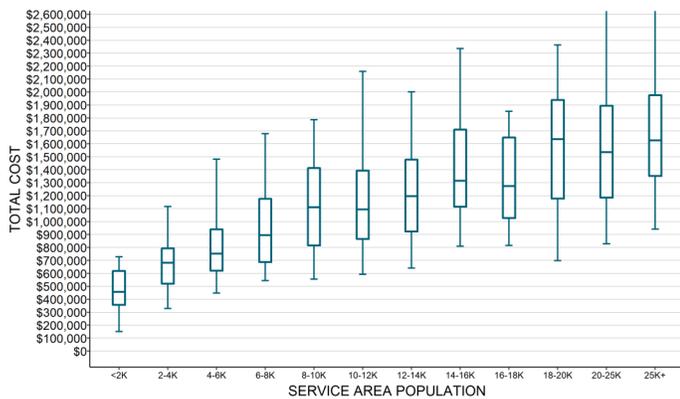
Figure 3-28 shows *actual* laboratory costs for small rural hospitals. Since there are no data on the actual number of tests performed in different hospitals, the cost estimates are grouped by the estimated population of their service area.¹³⁹ Most laboratory testing will be done to support general healthcare services for residents of the community, not for ED visits or patients admitted to the hospital. As a result, it is reasonable to expect that the volume of laboratory testing in a hospital will be more closely correlated with the size of the community than the inpatient or ED volume.

Although Figure 3-28 shows there is considerable variation in actual costs at each population level, the medians of the actual costs are very similar to the hypothetical costs for similar-size communities shown in Figure 3-27. This can be seen more clearly in Figure 3-29, which compares the actual costs for a subset of the service area population categories with the hypothetical estimates for various levels of staffing that would likely be used by many hospitals in communities of those sizes.¹⁴⁰

The Impact of Testing Volume on the Cost Per Laboratory Test

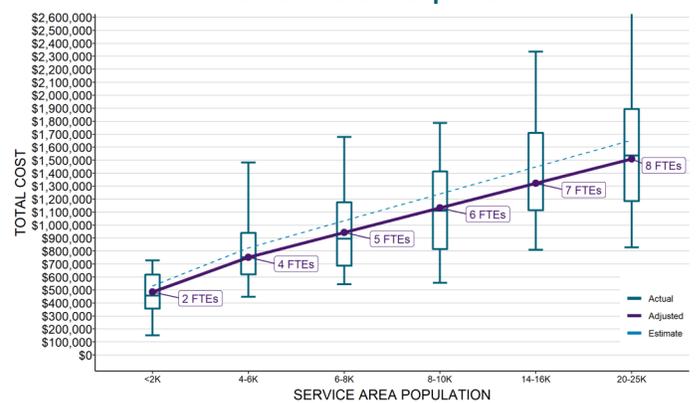
Most of the cost of operating the laboratory is associated with the cost of the employees and the laboratory equipment. As a result, at any given level of staffing, the total cost of operating the laboratory will be essentially the same regardless of the exact number of tests the laboratory performs. This means that the cost per test will be lower if more tests are performed within the range of volume that the employees and equipment can handle. However, if the volume of tests at a hospital increases to the point where the hospital needs to add an additional lab tech and equipment, the cost per test will increase.

FIGURE 3-28
Laboratory Costs in Small Rural Hospitals



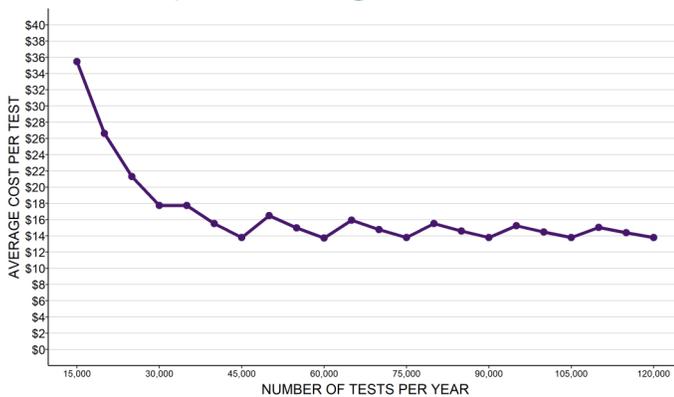
Total cost of laboratory at rural hospitals with less than \$30 million in total expenses. Amounts shown are the median for each hospital in 2016-18.

FIGURE 3-29
Actual vs. Estimated Costs of Laboratories at Small Rural Hospitals



Actual amounts are for rural hospitals <\$30 million total expenses in 2016-18. Estimates (dotted line) are from Figure 3-27. Adjusted values (solid line) are the estimated values reduced to reflect inflation between 2017 and 2020.

FIGURE 3-30
How Changes in Laboratory Testing Volume Impact the Average Cost Per Test



Values shown are based on the estimated laboratory costs at hypothetical hospitals and an estimate of the number of tests that laboratory technicians can perform.

To illustrate this, assume hypothetically that a laboratory technician can perform a maximum of 8 tests per hour. That means that two technicians, each working 2,000 hours during the year (i.e., a 40-hour week for 50 weeks), could perform as many as 32,000 tests during the year. Assuming the total cost of the laboratory with two technicians is what is estimated in Figure 3-27, if the lab actually performed 30,000 tests during the year, the average cost per test would be \$17.74. However, if the lab only had orders for 25,000 tests, the lab would still need the same number of lab technicians and the total cost would be essentially the same, but the average cost per test would now be \$21.29. If the hospital only had 15,000 test orders, it would still likely have the same staffing and costs for the reasons described earlier, but the average cost per test would now be \$35.48, double the average cost for 30,000 tests, because there would only be half as many tests performed.

If the laboratory had more than 32,000 tests, it would need to hire an additional technician and possibly addi-

tional equipment, and this would increase the cost per test by a small amount, but if there were 40,000 or 45,000 tests, the average cost per test would be lower.

As shown in Figure 3-30, the average cost per test will likely vary within a relatively narrow range once the volume of tests exceeds a minimum level. However, the cost per test will be much higher for laboratories in smaller communities that do not have as many patients who need tests.

3. The Cost of Radiology Services in Small Rural Hospitals

Radiology services are similar to laboratory services in that the cost to the hospital is driven primarily by the number of radiology technicians and the cost of the imaging equipment. Although a physician will need to interpret each image generated by the technicians and equipment, this will generally be done by a radiology practice that bills health insurance plans directly for its services, rather than the hospital itself employing radiologists.

Radiology services are also similar to laboratory services in that the majority of imaging studies will be for community residents, not for patients in the ED or inpatient unit. The total volume of imaging studies at a hospital will generally be much lower than the volume of laboratory tests¹⁴¹, so small hospitals will be likely to have fewer radiology technicians than laboratory technicians. On the other hand, much of the testing equipment in the radiology department is large and expensive; although the smallest hospitals may only be able to offer x-rays, most hospitals will want to offer CT scans, sonograms, and potentially MRIs. In addition, because of the greater space needed to house the equipment, the shielding required due to radiation, and the high electrical power usage, the indirect costs assigned to radiology services will generally be higher than for a laboratory.

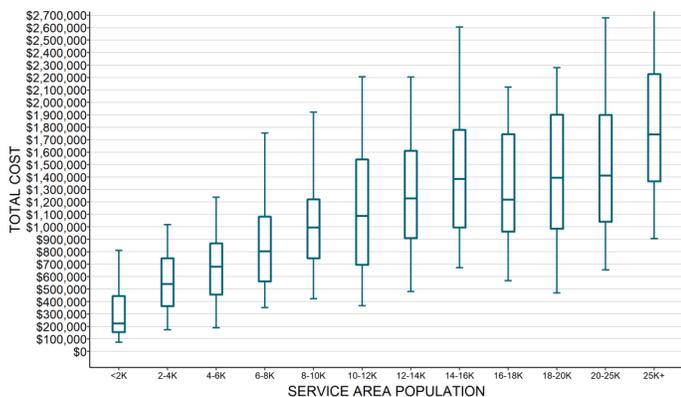
Figure 3-31 shows what the total cost of hypothetical hospital radiology departments of different sizes could be, using assumptions about the number of radiology technicians, the wage rates they are paid, and the cost

FIGURE 3-31
Cost of Radiology Departments at Hypothetical Small Rural Hospitals

		POPULATION		POPULATION		POPULATION	
		1,500		5,000		7,000	
Cost Component	Unit Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost
Radiology Tech	\$28/hour	1.0	\$58,000	3.0	\$175,000	4.0	\$233,000
On-Call Time			\$10,000		\$0		\$0
Total Wages			\$68,000		\$175,000		\$233,000
Benefits	20% of Wages		\$14,000		\$35,000		\$47,000
Equip./Supplies			\$81,000		\$227,000		\$279,000
Total Direct			\$163,000		\$437,000		\$559,000
Indirect Cost	55% of Direct		\$89,000		\$240,000		\$308,000
Total Cost			\$252,000		\$677,000		\$867,000

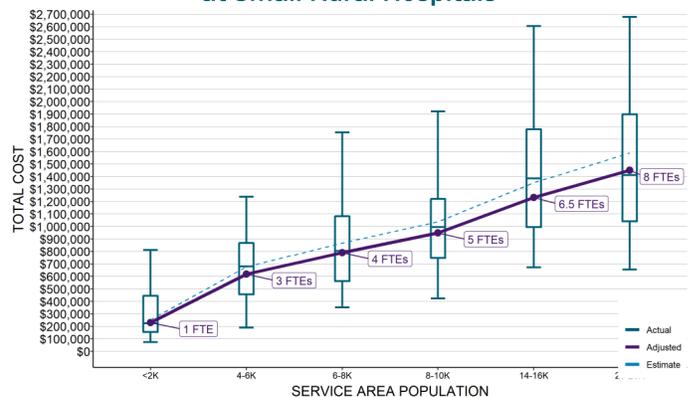
		POPULATION		POPULATION		POPULATION	
		9,000		15,000		20,000	
Cost Component	Unit Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost
Radiology Tech	\$28/hour	5.0	\$291,000	6.5	\$379,000	8.0	\$466,000
Benefits	20% of Wages		\$58,000		\$76,000		\$93,000
Equip./Supplies			\$321,000		\$416,000		\$466,000
Total Direct			\$670,000		\$871,000		\$1,025,000
Indirect Cost	55% of Direct		\$368,000		\$479,000		\$564,000
Total Cost			\$1,038,000		\$1,350,000		\$1,589,000

FIGURE 3-32
Radiology Costs in Small Rural Hospitals



Total cost of radiology services at rural hospitals with less than \$30 million in total expenses. Amounts shown are the median for each hospital in 2016-18.

FIGURE 3-33
Actual vs. Estimated Costs of Radiology Department at Small Rural Hospitals



Actual amounts are for rural hospitals <\$30 million total expenses in 2016-18. Estimates (dotted line) are from Figure 3-31. Adjusted values (solid line) are the estimated values reduced to reflect inflation between 2017 and 2020.

of equipment and supplies. Once again, these are not intended to represent what the cost of radiology services at any individual hospital *should* be, or exactly how large the differences in costs between laboratories of different sizes should be, since the cost of hiring radiology techs and purchasing/leasing/maintaining equipment will vary from community to community.

Figure 3-32 shows the actual costs of radiology services for small rural hospitals in the U.S., and Figure 3-33 shows that the estimated costs in Figure 3-31 at various levels of staffing are consistent with the costs for actual hospitals.¹⁴²

The cost per imaging study will be much higher in a very small hospital that only performs a small number of such studies, since the numerator (the staffing and equipment costs) will be the same, but the denominator (the number of studies) will be lower. At any given level of staffing and equipment, the more tests that are performed, the lower the average cost per test, and the higher the profit for any given amount of payment for the service.

4. Drugs and Medical Devices and Supplies

As part of the care patients receive during ED visits and inpatient admissions, physicians and nurses administer medications and use a variety of medical devices and supplies, and the hospital charges patients and their health insurance plans separately for these drugs, devices, and supplies.

Primarily Variable vs. Fixed Costs

The cost of the drugs and supplies to the hospital is primarily driven by the amount the hospital has to pay a manufacturer or wholesaler for each drug or supply item. The hospital may employ staff to purchase and manage the inventory of pharmaceuticals and supplies, and it may need to purchase and maintain equipment needed to store the drugs and supplies safely, but the cost of the employees and equipment is generally very small relative to what is spent to acquire the drugs and supplies.

This is very different from laboratory tests and radiology studies, which the hospital “manufactures” itself using its own staff and equipment. Once a hospital selects a particular level of staffing and equipment, most of the cost of the laboratory or radiology department is a “fixed cost,” i.e., it doesn’t change if more or fewer tests and imaging studies are performed during a particular period of time. In contrast, the cost of drugs and supplies is almost entirely a “variable cost,” i.e., it will change in direct proportion to how many patients the hospital treats and what types of drugs and supplies the patients receive.

Causes of Differences in Costs Between Hospitals

Because there are many different types of drugs, devices, and supplies, and some individual drugs and other items are far more expensive than others, the cost to the hospital will depend heavily on exactly what conditions patients are treated for and what treatments are used. At hospitals with a small number of patients, a single patient who needs an expensive medication can cause a big increase in the hospital’s total costs for drugs, devices, and supplies from one year to the next.

In addition, two different hospitals can pay different amounts for the same drugs and supply items depending on the discounts and rebates they receive from manufacturers. Since many discounts and rebates are tied to the volume of drugs and products used, smaller hospitals are likely to receive smaller discounts than larger hospitals, and so their costs may be higher even if they treat similar patients in similar ways.

The 340B Program

Most small rural hospitals participate in the federal “340B” program. This program enables hospitals that have large numbers of low-income patients to purchase drugs from the manufacturers at very large discounts. Although the program is intended to assist low-income patients, hospitals are not required to use the drugs they purchase solely for such patients.

The Hospital’s Margins for Drugs Will Depend on How It Is Paid

Since a small hospital has little control over the cost of the drugs and medical supplies needed for care of its patients, impact of the drugs/devices/supplies on the hospital’s margin will depend on whether the hospital can charge or be paid more than what it cost the hospital to acquire the drugs and supplies. For hospitals other than Critical Access Hospitals, Medicare “bundles” payment for drugs and supplies used during inpatient stays and many outpatient procedures together with the payment for the nursing care and other services, or it pays pre-defined fees for the drugs. Either approach can result in larger losses for small rural hospitals if their cost for acquiring the drugs or devices is higher than other hospitals. If a private insurance plan pays the hospital a percentage of charges for drugs as well as other services, the hospital may be forced to charge multiple times the acquisition cost in order to receive payments that cover the cost.

Hospitals that participate in the 340B program are not required to charge Medicare or health plans less for drugs even though the hospital can purchase them at a discount. As a result, the 340B program has enabled hospitals to generate higher profits on drugs administered to patients than they would otherwise be able to receive.

5. The Cost of Other Ancillary Services

In addition to laboratory tests, imaging studies, drugs, and medical supplies, most hospitals provide one or more other ancillary services, such as physical and occupational therapy or surgery. The same kind of analysis shown above can be done to determine the costs for these other ancillary services. The results will have both similarities and differences depending on the following key factors.

- **Fixed, Semi-Variable, and Variable Costs.** As discussed in the previous section, most of the hospital's cost for drugs and medical supplies is a *variable* cost, i.e., the cost will vary in proportion to the number of patients being treated. In contrast, most of the cost of laboratory and radiology services is *fixed*, at least in the short run, based on whatever decision has been made about the number of staff and equipment. It is actually more accurate to describe the costs as "semi-variable," because the hospital will need to add more staff and more equipment if the volume of testing/imaging increases sufficiently, and it can reduce staff and equipment if volume decreases sufficiently, but these changes only occur with large changes in volume and they cannot be made instantaneously.
- **Number of Patients Needing the Service.** Most ancillary service costs are semi-variable rather than either variable or completely fixed, which means that the total cost will depend on how large of a community the hospital is trying to serve. However, differences in cost will not be directly proportional to differences in the number of patients, so the average cost for individual services will be higher when there are fewer patients, as shown earlier for laboratory and radiology services as well as for the ED and inpatient unit.
- **Urgency of the Service.** Laboratory testing has to be done quickly on a round-the-clock basis because it is an essential service for patients in the Emergency Department and the inpatient unit. As a result, staff and equipment need to be available on site on a 24/7 basis. In contrast, non-urgent outpatient services could be offered only on certain days and certain times, which can facilitate the ability of multiple hospitals to offer the service through use of a shared contractor. For example, physical and occupational therapy (PT/OT) are optional services for a small hospital since they are not used for emergency patients and they are only essential for inpatients if the hospital is offering rehabilitative services in swing beds. This enables many hospitals to contract with external therapy providers who deliver outpatient PT/OT services at the hospital on specific days and times. A small rural hospital can't provide trauma services because it is unlikely to have round-the-clock access to a surgeon, but it can offer elective surgeries on specific days if there is a surgeon who is willing and able to travel to the hospital to do surgeries on those days.
- **Minimum Staffing and Equipment.** The minimum cost to provide an ancillary service in a small community will depend on the minimum number of staff and pieces of equipment that are needed to deliver the service at all. For example, the hospital has to have a lab technician and basic laboratory equipment and

supplies if it is going to perform even a single lab test, so the hospital cannot spend any less than the cost of that lab technician and equipment. If a physical therapist or surgeon needs a minimum number of cases to justify coming to the hospital to deliver their services, then the hospital will only be able to offer those services if at least that many patients in the community need those services.

- **Maximum Capacity of Staff and Equipment.** The greater the capacity of individual staff and equipment, the wider the range in the number of patients that can be served with the same staffing and equipment. However, this means that the *cost per service* will differ significantly between hospitals with service volumes at the low end of the available capacity compared to hospitals with volumes near the maximum capacity.
- **Unit Costs of Staff, Equipment, Drugs, and Supplies.** Finally, the same number and type of staff, equipment, drugs, etc. will cost different amounts at different hospitals depending on how much those hospitals have to pay to attract and retain staff and what kinds of discounts the hospital can receive on equipment and supplies from manufacturers and suppliers.

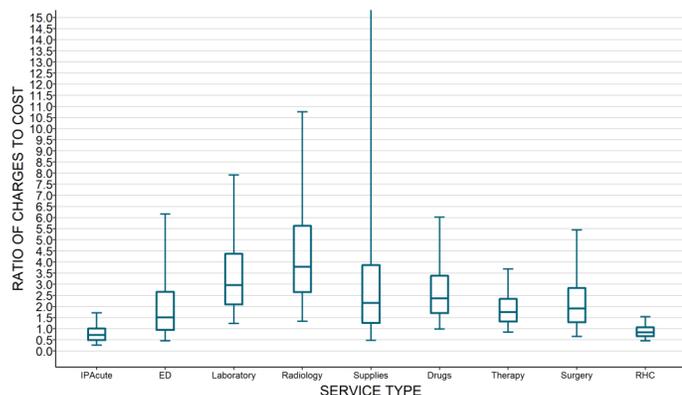
6. The Profitability of Ancillary Services

Hospitals are paid for ancillary services through fees for each individual service delivered, similar to the way they are paid for ED visits and inpatient stays. However, in contrast to the losses they typically incur for the ED and inpatient unit, most small rural hospitals view ancillary services as profitable. A study of ten small rural hospitals in Washington State found that the hospitals lost money on every service except for ancillary services, and the profits on ancillary services offset a portion of the losses they experienced on the emergency department, inpatient unit, clinic, and other services.¹⁴³ As shown in Chapter II, hospitals that offer surgery have smaller overall losses or higher profits than those that do not offer surgery.

There are several reasons for the profitability difference:

- **Low minimum cost to deliver the service.** The minimum cost of operating an ancillary service is much less than the minimum cost of operating an ED or inpatient unit; for example, the cost of hiring two laboratory technicians and buying or leasing the associated laboratory equipment is much less than the cost of employing ED physicians and nurses. As a result, the average cost per service is much lower.
- **Ability to set charges much higher than costs.** The profitability of a service line is based on whether the payment for each service is higher than the average cost of the service. As discussed in the section on ED visits, many insurance plans pay hospitals "discounted charges," so the profitability of a service line will depend on how high the hospital sets its charges for the services. Because the average cost of most ancillary services is relatively low, it is easier for the hospital to set charges at a higher multiple of costs. As shown in Figure 3-34, most small rural hospitals charge much more for ancillary services relative

FIGURE 3-34
Differences in Markup of Charges Over Cost
by Service Line in Small Rural Hospitals



Service line charges divided by costs (inverse of the cost-to-charge ratio) in rural hospitals with less than \$30 million in total expenses. Values are medians for 2016-18.

to the cost of those services than they do for ED visits and acute inpatient care.

- **High volume of services.** A small amount of profit for each service can translate into a large aggregate profit for the service line if there are a large number of services delivered. For example, small hospital laboratories will deliver thousands or tens of thousands of tests each year, so each dollar of profit on one laboratory service translates into thousands or tens of thousands of dollars in overall profit for the hospital.

7. The Problems Caused by Ancillary Service Fees

However, as discussed in earlier sections, the problem with fee-for-service payment is not just the amount of payment, but the method. The fact that laboratory and radiology services are profitable for many small hospitals does not eliminate the problematic incentives created by fee-for-service payments:

- **Hospitals are rewarded financially for ordering and delivering unnecessary ancillary services.** At each level of staffing and equipment, the profitability of an ancillary service line will be higher if more services are delivered. This creates a financial incentive to order more tests and imaging studies as part of an ED visit or hospital admission.
- **Hospitals are penalized financially when patients stay healthier.** If better chronic care management and preventive care results in fewer patients coming to the ED or requiring a hospital admission, not only will revenues for ED visits and hospital admissions decrease, fewer ancillary services will be needed and ancillary service revenues will also decrease.
- **Patients have to pay more in order for the hospital to avoid losses.** If a hospital charges more in order to generate profits on ancillary services, a portion of those charges will be paid partly or fully by patients. Patients without insurance will have to pay the full charge for a lab test, x-ray, or therapy service, and patients with high-deductible health plans will have to pay the discounted charge for the service. This can

discourage patients from receiving tests and services that they need to diagnose and manage their health problems.

E. The Cost of Delivering Rural Health Clinic and Primary Care Services

The same factors that make it difficult to financially sustain a hospital in a rural community make it difficult for a primary care physician to establish and maintain a practice in the community. There is widespread recognition that the typical amounts paid by health plans for primary care services are not sufficient to cover the costs of operating small primary care practices. In a small, rural community, those payments will fall even farther below the costs of operating a primary care practice because there are fewer patients who need primary care services. This has contributed to the shortage of primary care practices in many rural communities.

One of the steps taken by Congress to try and address this problem was to require that Medicare and Medicaid pay differently for primary care services when they are delivered through a primary care practice designated as a Rural Health Clinic (RHC). Moreover, Medicare payments for a Rural Health Clinic can be significantly higher if the RHC is part of a hospital with less than 50 beds than if it is a “freestanding” clinic. As a result, the majority of small rural hospitals operate a Rural Health Clinic. Most (55%) operate a single RHC, but 23% operate two RHCs, 13% operate three, and 9% operate four or more in order to make the clinics more accessible to residents living in different parts of the hospital’s service area.

While these Rural Health Clinics provide a very valuable service in the communities served by the hospitals, as shown in Chapter II, they generally create or exacerbate financial problems for the hospitals because of the low payments from private health insurance plans. Although Medicare payments for RHCs are “cost-based,” the payments are still less than the cost of services at RHCs (this is discussed in more detail in the next chapter), and Medicaid payments are not required to be based on current costs.¹⁴⁴

Understanding the reasons for these losses and how to address them requires an understanding of what it costs to deliver primary care in a rural community and what it costs to operate a Rural Health Clinic.

1. The Volume of Services at Rural Health Clinics

The vast majority of revenue for any primary care practice comes from the fees paid for patient visits. In a typical primary care practice, Medicare and most other payers pay more for a visit with a new patient than for a follow-up visit with an established patient, and the payment is higher for a visit that is longer or involves multiple health problems. If a nurse practitioner or physician assistant sees the patient instead of a physician, the payment is lower. Clinicians can also bill separately for additional services they deliver beyond the basic visit; for example, if the doctor sutures a wound or removes a suspicious mole during the visit, they will be paid extra for those procedures.

Although private insurance companies typically pay RHCs in the same way they pay other primary care practices, Medicare and Medicaid pay Rural Health Clinics almost exclusively through a visit-based payment, with the same amount (the “All Inclusive Rate”) paid for each visit. The payment is the same regardless of whether the patient is new or has been seen previously, regardless of the length or complexity of the visit, and regardless of whether any procedures are performed during the visit. As a result, the principal measure of volume at a Rural Health Clinic is the number of patient visits.

As shown in Figure 3-35, RHCs at the very smallest hospitals (those with less than \$10 million in total expenses) generally have between 2,500 and 10,000 RHC visits each year, but most larger hospitals have more than 10,000 visits, and some have 20,000 or more.

The volume of RHC visits varies significantly from hospital to hospital for several reasons:

- **The population of the community.** The more people who live in the community, the more people there are who need primary care.
- **The age and health status of the population.** Older individuals and people with chronic diseases will need to visit an RHC or primary care practice more often than younger and healthier patients.
- **The availability of other primary care options.** The more people there are in the community who need primary care, the more feasible it will be for physicians to sustain a private primary care practice in the community, which will reduce the number of residents who need or want to use a hospital’s RHC.
- **The accessibility of the clinic.** Many small rural hospitals serve a very large geographic area, and even though the hospital is much closer than any alternative hospital or clinic, some residents of the area still have to travel a long distance to reach the hospital. Some hospitals operate one or more clinics at a separate location in order to make clinic services more accessible to people who live in different parts of the service area.

- **The cost to the patient.** Although Medicare will pay more for a visit to an RHC than to other primary care providers, patients may also have to pay higher cost-sharing, which could discourage them from using the clinic.

2. The Cost of Operating a Rural Health Clinic

There are five primary components that make up the cost of operating a Rural Health Clinic at a rural hospital: (1) primary care clinicians (physicians, nurse practitioners, or physician assistants), (2) other clinicians (e.g., clinical psychologists), (3) nurses, (4) other staff, and (5) overhead costs for facilities, equipment, maintenance, and billing. Medicare cost reports provide much more detailed information on the components of costs at Rural Health Clinics than for most other hospital services, which makes it easier to quantify how staffing and costs vary based on the volume of clinic visits and the amounts the RHC has to pay for staff and supplies.

Primary Care Clinicians

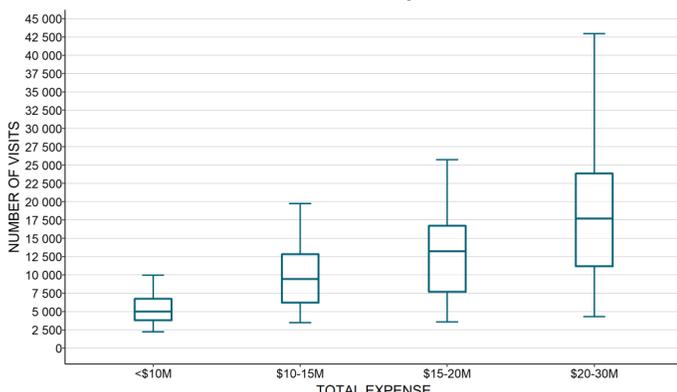
Every Rural Health Clinic will need at least one primary care clinician who can see and treat patients. The RHC does not need to be open for patient visits at night or on weekends, and it does not even need to be open every weekday, so the hospital has greater flexibility in staffing the RHC than it does in staffing the Emergency Department, inpatient unit, or laboratory.

In a very small community, a part-time clinician might be sufficient to handle the total number of visits the RHC expects to receive. However, the hospital may still need to hire a full-time clinician if it cannot find anyone who is available to work in the clinic on a part-time basis or if the cost of using such an individual would be higher than the cost of a full-time employee.¹⁴⁵ A hospital that operates two RHCs may be able to hire one clinician to staff each clinic on a part-time basis, but that still requires hiring at least one full-time clinician.

If the RHC needs only one clinician, that clinician will have to be a nurse practitioner or physician assistant, not a physician, because Medicare regulations require that every RHC have at least one nurse practitioner or physician assistant on staff, that at least one nurse practitioner or physician assistant be an employee of the clinic, not a contractor, and that a nurse practitioner or physician assistant be available to provide patient care services at least 50% of the time the RHC is open for patient visits, even if there is a physician present during the same period of time.

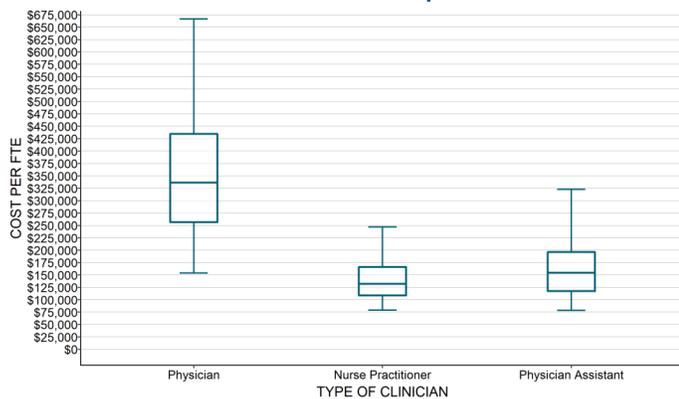
However, even if a part-time or full-time nurse practitioner or physician assistant would be sufficient to see all of the patients who visit the clinic, the RHC will still need to employ or contract with a physician on at least a part-time basis because Medicare regulations also require that every Rural Health Clinic have at least one physician on staff (in addition to a nurse practitioner or physician assistant) to supervise care delivery. The regulations allow for the physician to work under contract or be employed, which enables an RHC to contract with a physician located in a different geographic area to provide supervision remotely using telecommunications.

FIGURE 3-35
Number of Rural Health Clinic Visits in Small Rural Hospitals



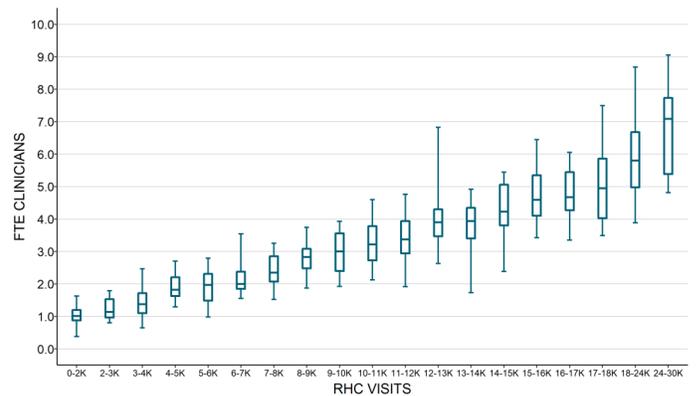
Total number of visits at rural hospitals with rural health clinics. Amounts shown are the median number of visits for each hospital in 2016-18.

FIGURE 3-36
Cost of Rural Health Clinic Clinicians
in Small Rural Hospitals



Total cost of clinicians divided by number of FTEs, for clinics with more than 0.5 FTEs of that type of clinician, at rural hospitals <\$30 million total expenses. Median 2016-18.

FIGURE 3-37
Number of Clinicians and Clinic Visits,
Rural Health Clinics at Small Rural Hospitals



Total number of FTE (full time equivalent) physicians, nurse practitioners, and physician assistants at RHCs operated by rural hospitals <\$30M total expenses. Median 2016-18.

The more patient visits the RHC expects to receive, the more primary care clinicians it will need in the clinic. Here again, unless the RHC is able to find clinicians able to work in the clinic on a part-time basis at a reasonable cost, it will need to add clinicians in one-FTE increments. Most RHCs with multiple clinicians have a mix of physicians and NPs/PAs, and the mix differs from hospital to hospital, for three reasons:

- It is generally harder to recruit and retain physicians than NPs/PAs in rural areas;
- As shown in Figure 3-36, it costs an RHC two to three times as much or more to employ a physician as an NP or PA.
- In order to receive full payment from Medicare for RHC visits, the RHC clinicians must meet a productivity standard established by the Centers for Medicare and Medicaid Services (CMS), and the standard is higher for physicians than for NPs and PAs. Each physician FTE is expected to have at least 4,200 patients visits per year, whereas each NP/PA FTE is only expected to have 2,100 patients visits per year. If a clinic wants to employ two clinicians, at least one will need to be an NP/PA to meet the Medicare regulatory requirements described earlier. If the clinic hires a full-time physician in addition to the NP/PA, it would have to have at least 6,300 visits to meet the productivity standard, but if it hires an additional NP/PA, it would only need to have 4,200 visits. As a result, a clinic that only expects to have 5,000 visits will be financially penalized for hiring a physician whereas a clinic with 7,000 visits will not. Similarly, if a clinic has 11,000 visits, it could meet the productivity standard by employing 1 physician and 2-3 FTE nurse practitioners, or 2 physicians and 1 FTE nurse practitioner, but if it employs more than 2 FTE physicians, it would likely experience a financial penalty from Medicare.

Figure 3-37 shows that hospital-based RHCs have approximately one additional FTE clinician for every additional 4,000 visits. In the majority of larger clinics, 40-

50% of the clinicians are physicians and the remainder are a combination of NPs and PAs.

Other Clinicians

Medicare and Medicaid will also pay for visits with clinical psychologists and clinical social workers if the Rural Health Clinic employs or contracts with one or more of these clinicians to work at the RHC. However, generally only RHCs in larger communities will have psychologists or social workers because there are not enough patients in smaller communities to justify hiring them.

Nurses

The majority of RHCs employ one or more nurses to complement the services provided by the physicians and NPs/PAs working in the clinic. The clinic generally cannot be paid for a visit unless the patient sees one of the clinicians for a medically necessary reason, but the clinicians can see a larger number of patients if a nurse can provide a portion of the services to patients, including things such as answering phone calls with questions, requests for medication refills, etc.

A common arrangement is to have one FTE nurse for each FTE clinician, although clinics in smaller communities may have fewer nurses or no nurses at all, both because there are fewer patients to support the cost of a nurse and because it is difficult to attract and retain nurses to work in a small clinic in a rural area.

RHCs are permitted to have nurses provide home care visits to patients, but only if there is no licensed home health agency serving the community. Since most communities are included in the official service area of a home health agency, most RHCs do not provide this service, even if the home health agency does not have adequate capacity to meet the need.

Medicare and a growing number of payers are paying RHCs (and other primary care providers) for care management services to patients, and these services are most often delivered by nurses. In some cases, the

FIGURE 3-38
Cost of Rural Health Clinics at Hypothetical Rural Hospitals

		RHC Visits		RHC Visits		RHC Visits		RHC Visits	
		2,500		6,500		10,500		15,500	
Cost Component	Unit Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost	FTEs	Cost
Physicians	\$165/hour	0.1	\$34,000	1.0	\$343,000	1.5	\$515,000	2.0	\$686,000
NPs and PAs	\$70/hour	1.0	\$146,000	1.0	\$146,000	1.5	\$218,000	3.0	\$437,000
RNs	\$32/hour	1.0	\$67,000	2.0	\$133,000	3.0	\$200,000	5.0	\$333,000
Other Staff	\$17/hour	1.0	\$35,000	1.0	\$35,000	2.0	\$71,000	4.0	\$141,000
Total Wages			\$282,000		\$657,000		\$1,003,000		\$1,597,000
Benefits	20% of Wages		\$56,000		\$132,000		\$201,000		\$320,000
Other Direct			\$25,000		\$50,000		\$100,000		\$150,000
Total Direct			\$363,000		\$839,000		\$1,304,000		\$2,067,000
Indirect Cost	70% of Direct		\$254,000		\$587,000		\$913,000		\$1,447,000
Total Cost			\$617,000		\$1,426,000		\$2,217,000		\$3,514,000

RHC's existing nurses may have already been providing these case management services or they may be able to provide them in addition to their other duties, but in other cases, the RHC may need to hire one or more additional nurses in order to provide care management.

Other Staff

Most RHCs will also employ one or more medical assistants or other types of staff to support patient care in the clinic.

Other Costs

The clinic will also require space, equipment, utilities, maintenance, supplies, etc. If the clinic is not located in the same facility as the hospital, it may have to pay some or all of these costs directly, whereas if it is part of the hospital, it will generally be allocated a share of the hospital's overall facility costs. The clinic will also need to rely on the hospital's central human resources, medical records, billing, and other services, and so a portion of the hospital's costs for those services will be allocated to the clinic.

Total Cost

Figure 3-38 shows what the total cost could be at hypothetical Rural Health Clinics with different numbers of visits, using assumptions about the number of clinicians, nurses, wage rates, benefit levels, and indirect costs that are based on the levels typically seen in small Rural Health Clinics. These estimates are not intended to represent what the cost of any individual Rural Health Clinic *should* be nor are they intended to indicate what the differences in costs should be for RHCs with different numbers of visits. As discussed above, RHCs in different communities will have different numbers and types of clinicians and they will need to pay different amounts to their clinicians based on the RHC's ability to recruit and retain clinicians in the community.

Figure 3-39 shows that the hypothetical estimates in Figure 3-38 are similar to the actual median costs in 2016-18 for RHCs with those numbers of visits.¹⁴⁶ However, there is significant variation in the costs of RHCs. Part of the variation is due to differences in the types of clinicians used, but much of it is due to variation in the amounts paid per clinician, as shown in Figure 3-36.

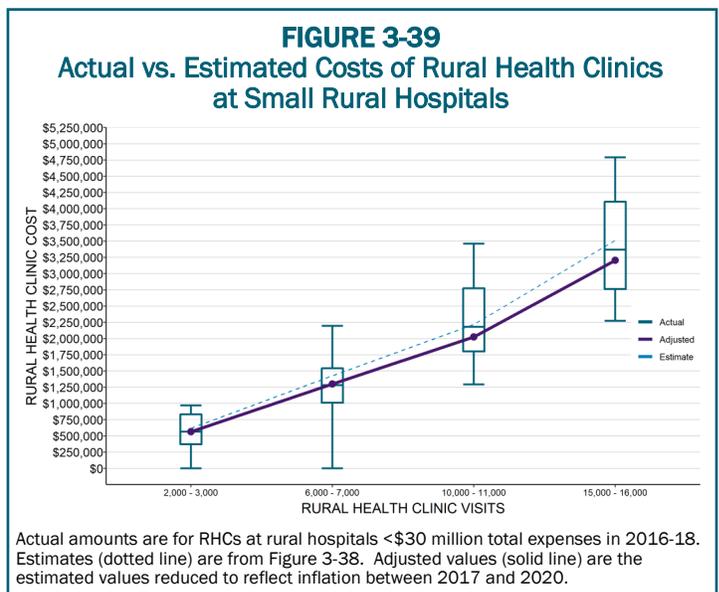
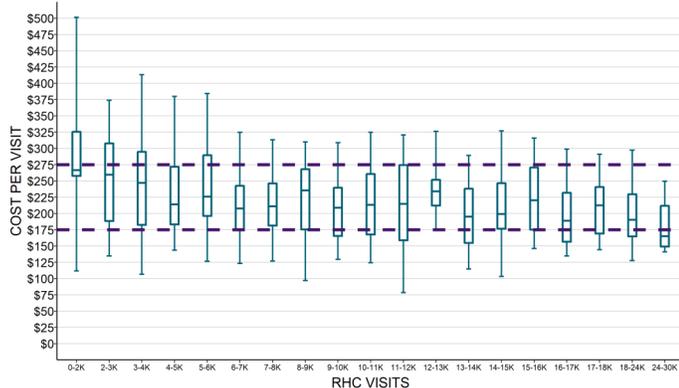


FIGURE 3-40
Cost Per Visit at Rural Health Clinics
Operated by Small Rural Hospitals



Total RHC cost divided by total RHC visits in 2016-18 at rural hospitals with less than \$30 million in total expenses.

3. The Average Cost Per Visit in Rural Health Clinics

Since Rural Health Clinics are typically paid a fee for each visit to the clinic, the adequacy of the fee will depend on the average cost per visit in the clinic. In the hypothetical examples shown in Figure 3-38, the average cost per visit ranges from \$211 to \$247. The differences are primarily due to the differences in the numbers of physicians vs. non-physician clinicians. Although physicians see a larger number of patients on average than NPs and PAs, the higher number of visits is generally not enough to offset the higher wages for physician shown in Figure 3-36. As a result, all else being equal, an RHC with a higher ratio of physicians to NPs/PAs will tend to have a higher cost per visit.

Figure 3-40 shows that the actual average cost per visit in most RHCs in 2016-18 was generally between \$175 and \$275. There is significant variation because of the significant variations in staffing and wage rates.

As with other services at small rural hospitals, the average cost per visit is generally higher at hospitals with the smallest number of clinic visits. However, because of the large degree of variation in the cost per visit, some hospitals with small numbers of visits have a lower average cost per visit than many hospitals with larger numbers of visits.

4. Impact of Changes in Volume on the Cost Per Visit

At an individual Rural Health Clinic, the average cost per visit can change significantly over the course of a year depending on how the number of visits changes. The number of visits the clinic receives will vary from year to year and month to month based on the weather, the health

of the population, the level of unemployment in the community, when patients have reached the deductibles in their insurance plans, etc. However, since the clinic staffing cannot be adjusted in small increments, the cost of the clinic will typically change very little when the number of visits changes by small amounts. This means that the cost per visit will increase when the number of visits decreases, and the cost per visit will decrease when the number of visits increases.

For example, Figure 3-41 shows the hypothetical RHC with 2 clinicians that was previously shown in Figure 3-38. If patients make the 6,500 visits the clinic expected to receive, the average cost per visit will be \$219. However, if the clinic receives 10% fewer visits, it still needs 2 clinicians to handle that volume of patients, so its costs will stay the same, and the cost per visit will increase by 11% to \$244. If 10% more patients come to the RHC than expected, the existing physician and nurse practitioner will likely be able to handle that increase in volume, so no change in staffing will be needed, and the average cost per visit will decrease by 9% to \$199.

5. The Problems Caused by Visit-Based Fees

The standard fees for visits to primary care practices that are paid by Medicare, Medicaid, and commercial health plans are far below the average costs per visit shown in Figure 3-40. Although Medicare pays RHCs operated by small rural hospitals based on their actual cost per visit, not based on the standard Medicare physician fee schedule, private health plans typically pay standard fees for primary care visits regardless of whether they are delivered by a Rural Health Clinic or a small physician practice. Payments from private insurance plans are typically based on the relative values in the Medicare fee schedule

FIGURE 3-41
Cost of Rural Health Clinics at Hypothetical Rural Hospitals

	RHC Visits		RHC Visits		RHC Visits	
	<i>Baseline</i>		-10%		+10%	
	6,500		5,850		7,150	
Cost Component	FTEs	Cost	FTEs	Cost	FTEs	Cost
Physicians	1.0	\$343,000	1.0	\$343,000	1.0	\$343,000
NPs and PAs	1.0	\$146,000	1.0	\$146,000	1.0	\$146,000
RNs	2.0	\$133,000	2.0	\$133,000	2.0	\$133,000
Other Staff	1.0	\$35,000	1.0	\$35,000	1.0	\$35,000
Total Wages		\$657,000		\$657,000		\$657,000
Benefits		\$132,000		\$132,000		\$132,000
Other Direct		\$50,000		\$50,000		\$50,000
Total Direct		\$839,000		\$839,000		\$839,000
Indirect Cost		\$587,000		\$587,000		\$587,000
Total Cost		\$1,426,000		\$1,426,000		\$1,426,000
Cost Per Visit		\$219		\$244 +11%		\$199 -9%

but may be higher or lower than the Medicare amounts. Medicare payments for Level 3 and Level 4 Evaluation & Management Office Visit for established patients, which are the most common types of visits in primary care practices, were \$74 and \$109 in 2018. This means that a private payer would have to pay 2-3 times the Medicare standard fees in order to cover the average cost per visit at most RHCs in that year.¹⁴⁷

In addition, as discussed in earlier sections, the problem with fee-for-service payment is not just the *amount* of payment, but the *method*. In the case of Rural Health Clinics, tying payments almost exclusively to the number of face-to-face visits with clinicians is problematic in a rural area where it can be difficult or even dangerous for a patient to travel to the clinic. If the clinicians working at the RHC can provide the help a patient through a phone call or an email, thereby avoiding the need for the patient to actually come to the clinic, the clinic is financially penalized because it is not paid unless the patient comes to the clinic. In the example shown in Figure 3-41, if the clinic were to be paid an average of \$219 per visit, it would be able to cover its costs, but if it helped 10% of the patients without the need for a visit, it would lose 10% of its revenue and no longer be able to cover its costs.

F. The Impact of Eliminating Inpatient Care

It is often assumed that small rural hospitals would be financially better off if they did not have to provide inpatient care. This has led to proposals to increase Medicare payments for outpatient services at rural hospitals if they close their inpatient units. For example, legislation has been introduced in Congress to allow rural hospitals to convert to “Rural Emergency Medical Centers,”¹⁴⁸ and the Medicare Payment Advisory Commission (MedPAC) has recommended that rural hospitals be given additional subsidies if they stop providing inpatient services.¹⁴⁹

Eliminating Inpatient Care Would Harm Hospitals Financially

However, eliminating inpatient care would actually make most small rural hospitals worse off financially. There are three reasons for this:

- Even though inpatient care is the most expensive service the hospital delivers on a per-patient basis, it is also the service the hospital delivers least frequently. As a result, the cost of operating an inpatient unit is a small part of the hospital’s overall expenses. As shown in Figure 3-2 earlier, the inpatient unit represents only 13-25% of the direct patient service costs at small rural hospitals, and since direct expenses are only 60% of the hospital’s total cost, the direct cost of the inpatient unit represents only about 8-15% of the hospital’s *total* expenses.
- The payments the hospital receives for inpatient care cover not only the direct cost of the inpatient unit, but a portion of the hospital’s administrative costs and other overhead. As shown in Figure 3-4, both the direct and indirect costs assigned to inpatient units

represent 15-30% of the total expenses at small rural hospitals. While some of the hospital’s overhead costs would decrease if there were no longer an inpatient unit (particularly functions such as laundry and dietary services), most of the administrative costs will not change (for example, the hospital will still need accounting staff, billing staff, and maintenance staff for its outpatient units). If there is no longer an inpatient unit, the administrative costs that had been allocated to it will have to be *reallocated* to the *outpatient* services the hospital delivers, and the hospital will have to try and recover those costs through higher charges for the outpatient services. Even if Medicare would increase its payments for outpatient services at a hospital that stops delivering inpatient services, it is unlikely that private health plans would, so the hospital will likely lose more money on outpatient services than it does with the inpatient unit in operation.

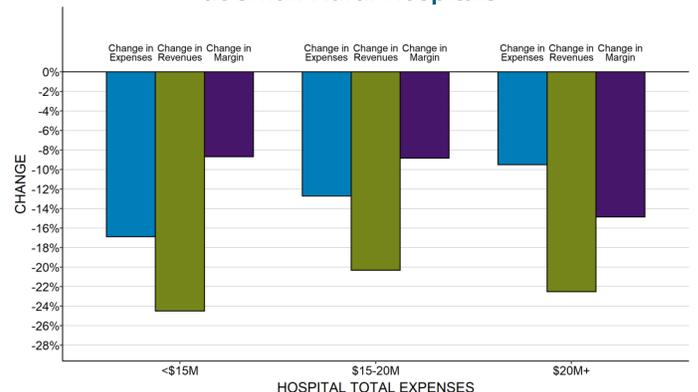
- When a patient is admitted to the hospital, the hospital is not only paid for the nursing care on the inpatient unit, but also for any ancillary services the patient receives during their stay in the hospital, such as lab tests, imaging studies, etc. Those payments help to cover the fixed costs of the ancillary services, so if the hospital no longer has inpatients, it will no longer receive those payments, and it will incur even higher losses on the ancillary services.

Figure 3-42 shows that even at the smallest rural hospitals, the hospital would lose far more in revenue by closing the inpatient unit than it would save from terminating the nursing staff that provided inpatient care and eliminating other related costs.¹⁵⁰ As a result, most hospitals would see their financial margins decrease, rather than improve. Even significant increases in payments from Medicare for outpatient services would not be enough to offset these losses.

Eliminating Inpatient Care Could Harm Rural Residents

In addition to the negative impact on the hospitals’ finances, closing the inpatient units at most small rural hospitals would also have a negative impact on the rural

FIGURE 3-42
Financial Impact of Eliminating Inpatient Services at Small Rural Hospitals



Amounts shown are medians for 2016-18 based on estimated reduction in costs and revenues for inpatient care at rural hospitals.

communities they serve, particularly for Medicare beneficiaries. Most of the inpatient admissions at small rural hospitals are senior citizens, and they are admitted for common acute medical conditions, such as cellulitis, pneumonia, and urinary tract infections, and for exacerbations of chronic diseases such as COPD, diabetes, and heart failure. Although better primary care will help to reduce the frequency of these admissions, there will always be some patients who have a problem that requires a short inpatient stay before they can be sent home safely, particularly if they live alone. When a senior citizen or other community resident needs to be admitted to a hospital for a few days to address one of these conditions and there are no serious complications, it will be better for the patient to be admitted to the local hospital than to be transferred to a hospital in another city. At the local hospital, their regular physician can care for them and their family and friends can more easily visit and support them, and it is likely they will receive good care at the local hospital as well as at a large, busy urban hospital.

Moreover, as discussed earlier, most small rural hospitals do not just provide acute care in their inpatient units; they also provide inpatient rehabilitation and/or long-term care services in the swing beds. Closure of the inpatient unit would result in the loss of these services for the community. Since many small rural communities do not have any Skilled Nursing Facilities separate from the hospital, this means the residents of the community would have to go to facilities in other communities for rehabilitation or long-term care, again separating them from their community physicians and families.

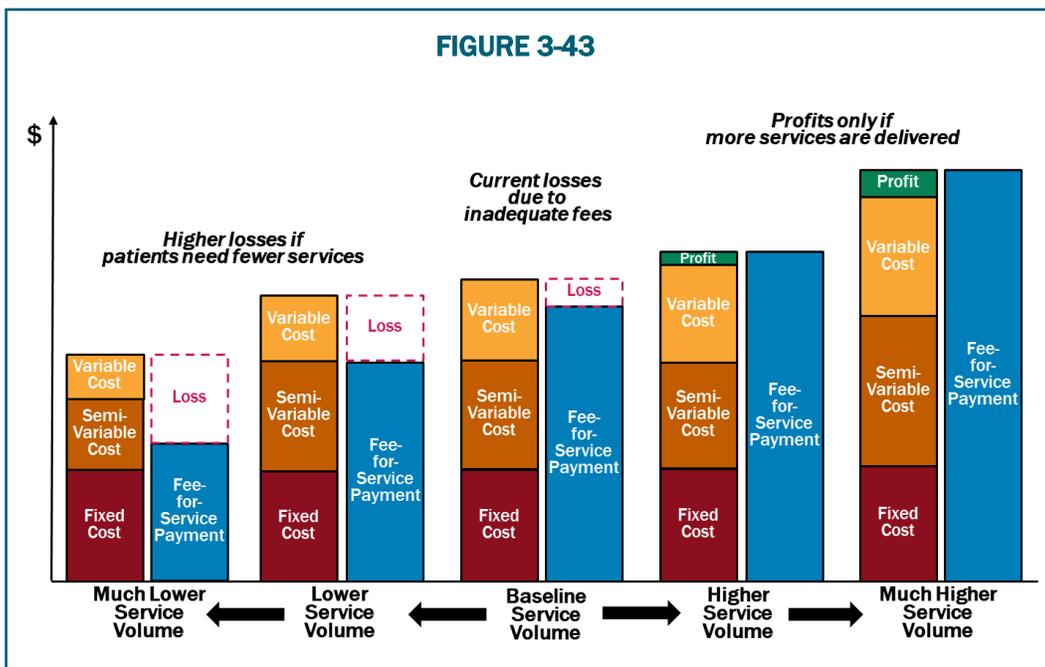
G. Why Fee-for-Service Payment Will Never Sustain Rural Hospitals

The analyses above make it clear that for every essential service that a hospital delivers, it will cost more to deliver that service to the residents of a small rural community than it would cost to deliver the same service in larger communities. Consequently, the average payments per service or per patient at a small rural hospital will have to be higher than the amounts a larger hospital would need to receive for the same service lines.

This does not necessarily mean that payments to small rural hospitals should be higher than what larger hospitals *currently do receive* for those services, particularly from private health plans. The data in Chapter II showed that many private health plans are paying small rural hospitals *less* than large hospitals for the same services, and that the majority of large hospitals receive payments from private health plans that are much higher than the costs of delivering services and in many cases higher than is necessary to offset losses from other payers.

While increasing the fees paid for services at small rural hospitals could reduce or eliminate financial losses in the *short run*, fee for service payment will never be an effective solution in the *long run* because of a fundamental mismatch between the way fee-for-service pays for services and the way small hospitals incur costs for delivering services. Most of the hospital's costs in virtually every service line are either fixed or semi-variable, so as shown in Figure 3-43, when patients need fewer services, revenues will decrease more than the cost of delivering the services will decrease, causing greater losses for the hospital. Conversely, if the volume of services increases, revenues will increase more than costs, creating profits for the hospital. This creates an undesirable incentive to deliver unnecessary services to patients. Even if fees were increased sufficiently to cover current costs, any reduction in the volume of services could push the hospital back into the red, so the hospital will want find ways to deliver more services in order to create a financial cushion against losses.

Consequently, a better *method* of paying hospitals is needed in addition to simply increasing the amounts of payments. Chapters IV-VI examine three different approaches have been used or proposed for paying rural hospitals – cost-based payment, global budgets, and shared savings – to determine how well they solve the problems of fee-for-service payment.



IV. THE STRENGTHS AND WEAKNESSES OF COST-BASED PAYMENT

KEY POINTS

Most small rural hospitals receive “cost-based payment” for services to Original Medicare beneficiaries. Most of the smallest rural hospitals are designated as “Critical Access Hospitals,” which enables them to receive payments for patients with Original Medicare based on the actual cost of the hospital’s services instead of receiving standard Medicare fees. (Medicare Advantage plans are not required to pay Critical Access Hospitals using cost-based payments or standard Medicare fees.) Rural Health Clinics operated by small rural hospitals are also eligible for cost-based payment from Medicare.

Payments under Medicare’s cost-based payment system are less than the actual costs of delivering services. Not all services are eligible for cost-based payment, and not all of the costs of services are included when payments are calculated. In addition, although Critical Access Hospitals were originally paid 101% of their eligible costs and Rural Health Clinics were paid 100% of their eligible costs, federal sequestration rules have reduced payments to only 99% and 98% of eligible costs since 2013.

Medicare beneficiaries have to pay more for services at Critical Access Hospitals than at other hospitals of similar size. Medicare’s cost-based payments to a Critical Access Hospital (CAH) will generally be higher than Medicare fee-for-service payments, which is financially beneficial to the hospital. However, Medicare rules require that the cost-sharing amounts paid by beneficiaries increase even more than the increase in Medicare payments, which makes services less affordable for patients.

Critical Access Hospital status does not and cannot prevent rural hospitals from closing. One-third of the rural hospital closures over the past decade have been Critical Access Hospitals. Although Critical Access Hospitals generally lose less money on Medicare patients than they would under standard Medicare fee-for-service payments, Critical Access Hospital status does nothing to prevent losses on patients with other kinds of insurance or on uninsured patients.

A. Cost-Based Payment as an Alternative to Fees for Services

1. The History of Cost-Based Payment for Rural Hospitals in Medicare

The financial problems small rural hospitals experience when they are paid the same amounts as larger hospitals are not new; they have existed for more than three decades. The primary approach used to date to address the problems has been to pay small, isolated hospitals using “cost-based payment” rather than standard fees for each service.

When the Medicare program was first created in 1965, it paid all hospitals based on their “reasonable costs” of delivering services, and most private insurance plans paid the same way. This enabled small rural hospitals to receive higher payments to cover higher costs. However, because of the rapid growth in hospital spending that occurred under this system, Congress created the Inpatient Prospective Payment System (IPPS) in 1983 in an effort to control the cost of inpatient care.¹⁵¹ Under IPPS, hospitals began receiving predetermined fees (case rates) for inpatient admissions based on the health conditions treated and the procedures performed, rather than the costs that were actually incurred.¹⁵²

Although the IPPS was generally viewed as successful in controlling Medicare spending on hospitals without

harming patients, there were serious concern about the negative impact the IPPS system was having on small rural hospitals. By the fourth year of the IPPS, most rural hospitals were losing money on their Medicare patients, while most urban hospitals were making profits on them.¹⁵³ From 1985-1988, 140 rural hospitals had closed, most of which had less than 50 beds.¹⁵⁴ A study by the U.S. General Accounting Office found that one-third of the smallest rural hospitals that closed lost more money on Medicare patients than on other patients.¹⁵⁵

To address this problem, Congress created the Medicare Rural Hospital Flexibility Program¹⁵⁶ in 1997. States were permitted to designate rural hospitals as “Critical Access Hospitals” if they met certain criteria, and Medicare was required to pay Critical Access Hospitals (CAHs) for both their inpatient and outpatient services based on the reasonable cost of providing those services.

2. The Impact of Cost-Based Payment on Critical Access Hospitals

Today, the majority of rural hospitals are designated as Critical Access Hospitals, and over 80% of the smallest rural hospitals (those with less than \$30 million in total expenses) are Critical Access Hospitals. Although Critical Access Hospitals generally lose less money on services to their Medicare patients than other rural hospitals because of cost-based payment, most are not profitable on patient services overall. Figure 4-1 shows that Critical Access Hospitals do only slightly better financially than other small rural hospitals in terms of their overall mar-

gins on patient services. Two-thirds of Critical Access Hospitals lose money on patient services overall, compared to 71% of non-Critical Access Hospitals.

Moreover, Critical Access Hospital status has not prevented rural hospitals from closing. One-third of the rural hospital closures over the past decade have been Critical Access Hospitals, with higher percentages in some years, as shown in Figure 4-2.

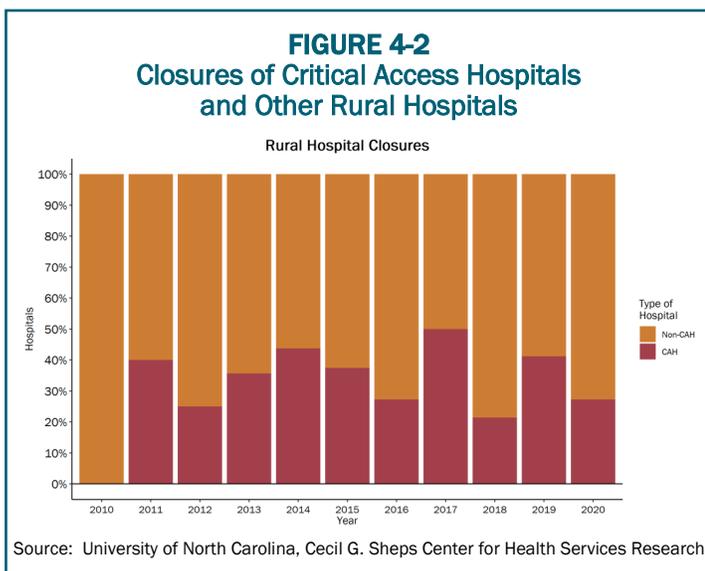
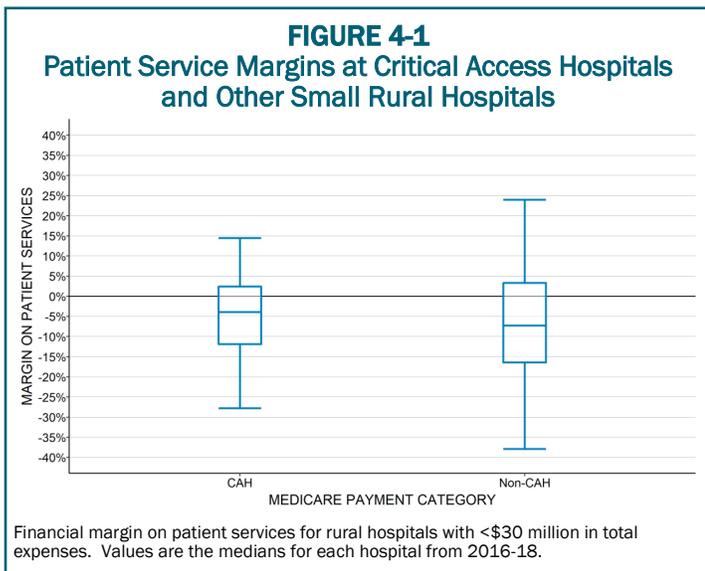
An obvious question is whether the failure of Critical Access Hospital status to prevent financial problems and closures is because of problems with the cost-based payment methodology used or because other payers do not use it.

B. How Cost-Based Payment for Rural Hospitals Works

1. Why Cost-Based Payments Do Not Cover All Costs

People who do not understand the complexities of Medicare's cost-based payment system often inappropriately describe it as "cost-plus" payment, assuming that Medicare simply reimburses a rural hospital for any costs it incurs. However, the reality is very different. The amount of cost-based payment that a hospital receives under this system will almost always fall short of the hospital's total costs because of four components of the payment methodology:

1. **Not all services and costs are eligible for cost-based payment.** Not every service the hospital delivers is eligible for cost-based payment. For example, if the hospital operates an ambulance service, the hospital receives standard Medicare fees for that service, not a cost-based payment. Moreover, even if a service is eligible for cost-based payment, not every aspect of cost is eligible. For example, the time an ED physician spends in the ED waiting for patients to arrive is considered an eligible cost, but the time the physician spends with ED patients is not. (The hospital receives a standard Medicare fee for each physician visit to pay for the time spent with patients, and this may or may not be more than the portion of the physician's compensation that is allocated to patient visits.)
2. **Only the portion of the total eligible cost that is attributable to Medicare patients is eligible for cost-based payment.** Within each service line that is eligible for cost-based payment, Medicare determines the proportion of the eligible costs that is attributable to Medicare patients. Different formulas are used to determine this fraction for different types of services, but the basic concept is that if Medicare beneficiaries received x% of the services delivered in a service line, then Medicare pays for x% of the eligible costs of the service line. Medicare does not pay for any of the costs associated with other patients, regardless of whether they are uninsured or whether the payments from their health plans are less than the cost of services.¹⁵⁷
3. **Medicare's payment is reduced by the patient's cost-sharing amount.** In the Medicare program, every beneficiary has to meet a deductible before Medicare will pay for a service, and beneficiaries are also required to pay co-insurance on all outpatient services. The total amount of cost-based payment the hospital is eligible to receive is reduced by the required amount of cost-sharing in order to determine the amount Medicare pays. The hospital must then get the balance from the patient. Because the cost of services at small rural hospitals is higher than what Medicare typically pays for services, the cost-sharing amount for the beneficiaries is also higher. Although many Medicare beneficiaries have supplemental insurance plans that pay for their required cost-sharing, most do not. If the patient cannot pay the cost-sharing, Medicare will pay 65% of the cost of the patient's bad debt, but not the full amount.



4. **Sequestration reduces the Medicare payment.** The federal statute that created the cost-based payment system specifies that the total Medicare payment (including the patient cost-sharing amount) will be 101% of the eligible cost. However, under sequestration rules, all Medicare payments are reduced by 2%, so in actuality, the hospital will only receive about 99% of its eligible costs.¹⁵⁸

2. Specific Issues with Cost-Based Payments for Outpatient and Ancillary Services

For ED visits and for ancillary services such as lab tests and imaging studies (including ancillary services delivered to patients during an inpatient stay), the fraction of the eligible cost in the service line that is attributable to Medicare patients is determined based on the percentage of the hospital's total *charges* for the services that were billed to Medicare beneficiaries. For example, if 50% of the hospital's total charges for lab tests were billed to Medicare beneficiaries, then Medicare pays for 50% of the eligible costs of the laboratory.

For outpatient services such as ED visits and ancillary services, a Medicare beneficiary is generally responsible for paying co-insurance equal to 20% of the fee that Medicare pays for an outpatient service, and then Medicare pays the remainder (i.e., 80%) to the hospital. At a rural hospital that is designated as a Critical Access Hospital, beneficiaries are also required to pay co-insurance for these services, but the co-insurance amount is calculated differently. Medicare beneficiaries are responsible for paying 20% of the amount the Critical Access Hospital *charges* for each service they receive, not 20% of the amount that Medicare pays. This co-insurance amount is deducted from the cost-based amount calculated in the second step, and Medicare is then responsible for paying the balance to the hospital. Since hospitals ordinarily will charge significantly more for an outpatient service than what it costs to deliver the service (since the hospital will be required to "discount" the charge by private insurance plans), this means that Medicare beneficiaries will pay more than 20% of the cost of the service, and Medicare will pay less than 80%.

3. Specific Issues with Cost-Based Payment for Inpatient Services

There are two differences in the way the cost-based payment for nursing care on an inpatient unit is determined:

- **The estimated cost of long-term nursing care in swing beds is excluded.** Since acute care and inpatient rehabilitation are services covered by Medicare but long-term nursing care is not, the cost of providing long-term nursing care in swing beds has to be excluded from the total cost of the inpatient unit before calculating Medicare's share of the cost. However, it is impossible to precisely determine a small hospital's cost of delivering long-term nursing care in swing beds because the long-term nursing care patients are generally on the same inpatient unit at the same time as patients who are receiving acute care or inpatient rehabilitation, and all of the patients are receiving care from the same nurses and nursing assistants.

To address this, Medicare *estimates* the cost of the long-term nursing care using the per diem amount that the state Medicaid program *pays* for long-term nursing care. For example, if the state Medicaid program pays \$180 per day for long-term care in a nursing facility, and if the hospital provided 1,000 days of long-term care in its swing beds during the year, then CMS will subtract \$180,000 from the total cost of the inpatient unit in order to determine the cost of inpatient acute and rehabilitative care.

- **Medicare's share of costs is based on days of service rather than charges.** Medicare's share of the estimated inpatient acute and rehabilitative cost is based on the number of *days* of inpatient care Medicare beneficiaries receive rather than the hospital's *charges* for those days. The estimated cost of inpatient acute and rehabilitative care that was determined in the previous step is divided by the total number of days of inpatient acute and rehabilitative care provided on the inpatient unit to estimate the cost per day for inpatient acute and rehabilitative care. That estimated cost per day is then multiplied by the number of days of inpatient acute and rehabilitative care received by Medicare beneficiaries to determine the Medicare share of the cost. Even if the Medicare beneficiaries are receiving higher-intensity care than other patients, unless the hospital has a separate Intensive Care Unit, the hospital will receive the same payment from Medicare for every day of patient care. There is also no distinction made between how many patients received acute care vs. rehabilitative care in swing beds.

Using the Medicaid payment rate to estimate the cost of long-term nursing care in swing beds rather than the amount the hospital charges for that care means that the Medicare program is paying for a portion of the cost of long-term nursing care in Critical Access Hospitals if the Medicaid payment rate is below the actual average cost of providing long-term nursing care. The subsidy is larger in states that have lower Medicaid payment rates. This may be the only way that residents of a small rural community can have access to long-term care services in the community, since it may be impossible for either the hospital or any other entity to operate a Skilled Nursing Facility with the standard amounts paid by Medicare for rehabilitation services and the standard payments from Medicaid for long-term services. However, this Medicare subsidy is only available if there is at least one Medicare beneficiary receiving acute inpatient care in the hospital. If the hospital were to no longer offer inpatient acute care, the community would likely also lose the ability to support long-term care services.

4. Specific Issues with Cost-Based Payment for Clinic and Rural Health Clinic Services

If a Critical Access Hospital operates a clinic that is not designated as a Rural Health Clinic, even if the clinic is providing primary care services, Medicare will not provide cost-based payment for the physicians, nurse practitioners, or physician assistants who work in the clinic, it will only provide cost-based payment for other costs such as nurses or equipment. The cost of the compen-

sation paid to clinicians has to be supported through standard Medicare fees.

However, if the clinic is designated as a Rural Health Clinic, the hospital can receive cost-based payment for the clinicians as well as other costs.¹⁵⁹ In fact, any rural hospital with less than 50 beds can receive cost-based payment for Rural Health Clinics.¹⁶⁰

The process for determining the Medicare payment for a Rural Health Clinic is similar to what is used for other services at Critical Access Hospitals, but there are several important differences:

- As noted above, the salaries paid to physicians and other clinicians are considered eligible costs at an RHC, including all of the time they spend with patients.
- At an RHC, the portion of costs attributable to Medicare beneficiaries is based on the percentage of total clinic *visits* they make, rather than on the percentage of total clinic *charges*, i.e., if Medicare beneficiaries make 50% of the visits to the clinic, then Medicare will generally pay 50% of the cost of operating the clinic, regardless of whether the Medicare patients spent more time in the clinic during their visits or received more services during their visits than other patients.
- Medicare reduces the share of the RHC's cost that it supports if the clinicians fail to meet the Medicare productivity standards described in Chapter III. The formula for determining the Medicare share of cost for RHC visits has three steps:
 - ◆ the total actual number of visits at the RHC is compared to the total number of visits there would have been if each FTE physician had 4,200 visits and each FTE nurse practitioner or physician assistant had 2,100 visits. If the actual number of visits is lower than the minimum number required by the productivity standards, the minimum number of visits is used for calculating costs rather than the actual number of visits. For example, if the RHC had 1 FTE physician and 1 FTE NP who saw a total 5,000 patients during the year, that would be below the productivity standard of 6,300 visits (4,200 visits per FTE physician + 2,100 visits per FTE NP), so the clinic would be treated as though it had 6,300 visits rather than 5,000.
 - ◆ the total eligible cost at the RHC is divided by the total number of visits determined in the previous step in order to calculate an adjusted cost per visit. In the example above, the adjusted cost per visit would be lower than the actual average cost per visit because the total cost is divided by 6,300 visits rather than the actual number of 5,000.
 - ◆ the adjusted cost per visit calculated in the previous step is multiplied by the actual number of visits made by Medicare beneficiaries to determine the total amount of cost that Medicare supports.
- At an RHC, the full "allowed amount" from Medicare is based on 100% of the eligible cost, not 101% as with other services at a Critical Access Hospital.
- The Medicare beneficiary is responsible for paying co-insurance equal to 20% of the clinic's charge for the

visit, but unlike Critical Access Hospital services, the beneficiary's actual co-insurance payment is not deducted from the Medicare payment. Instead, Medicare pays 80% of what it has determined as the Medicare share of cost, regardless of whether the patient co-insurance payments are higher or lower than 20% of that amount.

- The actual Medicare payment is then reduced by 2% because of sequestration, so the Medicare share of the payment is less than 80% of the actual costs.

C. Examples of How Cost-Based Payment Affects Hospital Margins

The implications of the many complex details in Medicare's cost-based payment methodology can be seen more clearly by examining how cost-based payment would support the services in the hypothetical hospitals described in the previous chapter.

1. Cost-Based Payment for Emergency Department Services

Figure 4-3 shows the revenues and costs for an Emergency Department at a hypothetical Critical Access Hospital that has 5,000 total visits per year. It is staffed identically to the example that was shown in Figures 3-7 and 3-13 in Chapter III, so it has a total cost of \$2.7 million and an average cost per visit of \$539. In addition, at this hypothetical ED, it is assumed that:

- 50% of the patients are Medicare beneficiaries (who are in the "Original Medicare" program, not a Medicare Advantage plan), 5% are uninsured, and the remainder have an insurance plan (Medicaid, Medicare Advantage, or commercial insurance) that pays fees for services.
- For each visit to the ED, the hospital charges the patient a total of \$850 (\$750 for the hospital services and \$100 for the physician's time), which is 50% more than the average cost of a visit.
- Insurance plans other than Medicare are assumed to only pay an average of \$400 for a visit (\$240 for the facility fee and \$160 for the physician), i.e., less than 50% of the amount the hospital charges. The hospital has to accept this as payment in full if it accepts the patients' insurance.
- The amounts that Medicare pays the hospital are:
 - ◆ a \$178 physician fee for each visit.¹⁶¹
 - ◆ a cost-based payment for the hospital's average cost per visit, which includes the cost of employing the physicians, except for the time the ED physicians actually spend with patients. In this hypothetical ED, it is assumed that the ED physicians spend an average of 30 minutes with each patient.
- Uninsured patients are unable to pay anything for a visit.

The result is a loss of nearly \$180,000 for the hospital. Even though the ED is receiving cost-based payment from Medicare, the fees paid by other payers are below the average cost per visit, and so total revenues fall 7%

FIGURE 4-3					
Revenue and Costs for the ED at a Hypothetical Critical Access Hospital					
	ED Visits	Visit Charges	% of Total	Fee Per Visit	\$
Facility Payments					
Medicare (Cost-Based)	2,500	\$1,875,000	50%		\$1,174,000
Other Payers (Fee-Based)	2,250	\$1,688,000	45%	\$240	\$540,000
Uninsured	250	\$187,000	5%		\$0
Subtotal	5,000	\$3,750,000	100%		\$1,714,000
Physician Payments					
Medicare (Fee-Based)	2,500			\$178	\$445,000
Other Payers (Fee-Based)	2,250			\$160	\$360,000
Uninsured	250				\$0
Subtotal	5,000				\$805,000
Total Revenue					\$2,519,000
Cost					
Facility Cost					\$2,357,000
Physician Visit Time Cost					\$340,000
Total Cost					\$2,697,000
Profit/Loss (Margin)					(\$178,000) -7%

FIGURE 4-4					
Revenue and Costs for an Critical Access Hospital ED With More Visits					
	ED Visits	Visit Charges	% of Total	Fee Per Visit	\$
Facility Payments					
Medicare (Cost-Based)	6,250	\$2,500,000	50%		\$1,179,000
Other Payers (Fee-Based)	5,625	\$2,250,000	45%	\$120	\$675,000
Uninsured	625	\$250,000	5%		\$0
Subtotal	12,500	\$5,000,000	100%		\$1,854,000
Physician Payments					
Medicare (Fee-Based)	6,250			\$178	\$1,113,000
Other Payers (Fee-Based)	5,625			\$60	\$338,000
Uninsured	625				\$0
Subtotal	12,500				\$1,451,000
Total Revenue					\$3,305,000
Cost					
Facility Cost					\$2,362,000
Physician Visit Time Cost					\$851,000
Total Cost					\$3,213,000
Profit/Loss (Margin)					\$92,000 +3%

short of the amount needed to pay for the total cost of the ED.

It is virtually impossible for the hospital to eliminate this loss by trying to reduce the cost in the ED. The ED has the bare minimum staffing to manage patients that arrive every 2 hours on average, so it cannot reduce staff without negatively affecting the quality of care. Even if the hospital was able to reassign a portion of the overhead costs to other departments, the payment from Medicare would decrease when the total cost is reduced, and the hospital would still lose money on the operation of the ED.

Figure 4-4 shows an ED with many more visits – 12,500 per year instead of 5,000. The cost of operating this ED will be somewhat higher; it is assumed to be staffed the same as the example of an ED with 12,500 visits shown in Figure 3-7, so it has a total cost of \$3.2 million. Because of the much larger number of visits, its average cost per visit is only \$257 – less than half as much as the smaller ED. As a result, the hospital might only charge \$500 per visit (\$400 for the hospital services and \$100 for the physician services). Even if the hospital is only paid \$180 by insurance plans other than Medicare, less than half as much as in the previous example, Figure 4-4 shows that the hospital will have a small positive margin on the ED.

Cost-based payment from Medicare does not prevent the smaller ED from having losses, and the profitability of the larger ED is primarily due to the higher volume of visits, not because of cost-based payments.¹⁶²

2. Cost-Based Payment for Inpatient Care

Figure 4-5 shows the revenues and costs for an inpatient unit at a hypothetical Critical Access Hospital. The hospital has an average daily census of 9 patients, consisting of an average of 1.5 acute patients per day, 1.5 inpatient rehabilitation patients in swing beds each day, and 6 patients per day receiving long-term nursing care in a swing bed. It is staffed identically to the example that was shown in Figure 3-22 in Chapter III, so it has a total cost of \$3.2 million. In addition, it is assumed that:

- 50% of the patients receiving acute care or inpatient rehabilitation are Medicare beneficiaries (who are in the “Original Medicare” program, not a Medicare Advantage plan). The remainder have health insurance plans (Medicaid, Medicare Advantage, or commercial insurance) that pay an average of \$3,000 per day for acute care and \$800 per day for inpatient rehabilitation.
- 50% of the patients receiving long-term nursing care in swing beds are Medicaid patients, and the Medicaid program pays \$180 per day for this care. The remainder are private-pay patients and the hospital charges them \$300 per day.

As shown in the figure, the result is a loss of over \$230,000 for the hospital. Even though Medicare is paying over \$2,500 per day for both acute and inpatient rehabilitation, which is more than double the average cost per day on the inpatient unit, most of the patients are not Medicare patients, and the revenues from the

other payers fall far short of the amount needed to cover the cost of the inpatient unit.

It is virtually impossible for the hospital to eliminate this loss by reducing costs in the inpatient unit. The unit has the bare minimum staffing to safely provide care for an average of 9 patients per day, so it cannot reduce staff. Even if the hospital reduced its overhead costs or reassigned a portion of the overhead cost to other departments, the hospital could still lose money on the operation of the inpatient unit and/or lose money hospital-wide.¹⁶³

It might appear that the loss is primarily due to the low payments from Medicaid for the long-term nursing patients on swing beds. However, the hospital has a lower average cost per day than it otherwise would because of the large number of patients receiving long-term nursing care, and under the formula used to determine the Medicare share of costs, the hospital gets higher Medicare payments because of those patients.

Figure 4-6 shows what would happen if the hospital had no long-term nursing patients at all and solely provided care for the acute and inpatient rehabilitation patients. Even though the hospital’s average daily census would drop by 2/3 without the nursing patients, the hospital’s staffing would not decrease proportionally, since the hospital still has to have two nurses on the unit at all times. (The staffing level in Figure 4-5 is the same as what was shown in Figure 3-20 in Chapter III for a hospital with an average daily census of 3.) The net result is still a large loss for the hospital.

3. Cost-Based Payment for a Rural Health Clinic

Figure 4-7 shows the revenues and costs for a hypothetical Rural Health Clinic that has 9,000 total visits per year. It is staffed identically to the example that was shown for a 10,500-visit clinic in Figure 3-38 in Chapter III, so it has a total cost of \$2.2 million. In addition, at this hypothetical RHC, it is assumed that:

- 50% of the visits are made by Medicare beneficiaries (who are in the “Original Medicare” program, not a Medicare Advantage plan), 5% of the patients are uninsured, and the remainder have an insurance plan that pays fees for services.
- For each visit to the clinic, the hospital charges an average of \$250, just slightly more than the average cost of a visit.
- Insurance plans other than Medicare pay an average of \$100 for a visit, and uninsured patients are unable to pay anything for a visit.

The result is a loss of almost \$700,000 for the hospital. The fees paid by payers other than Medicare, while they are similar to the amounts typically paid for primary care visits, are far below the hospital’s cost per visit. Medicare pays less than the average cost per visit because 9,000 visits is below the minimum that Medicare’s productivity standard requires for full cost-based payment. Altogether, revenues fall 33% short of the amount needed to cover the clinic’s costs.

FIGURE 4-5				
Revenue and Costs for the Inpatient Unit at a Hypothetical CAH				
	Avg. Census	# of Days	Payment Per Day	\$
Acute Patient Revenue				
Medicare (Cost-Based)		274	\$2,521	\$690,000
Other Payers (Fee-Based)		274	\$3,000	\$821,000
Subtotal	1.5	548		\$1,511,000
Swing SNF Patient Revenue				
Medicare (Cost-Based)		274	\$2,521	\$690,000
Other Payers (Fee-Based)	1.5	274	\$800	\$219,000
Subtotal		548		\$909,000
Swing Nursing Patient Revenue				
Medicaid (Fee-Based)		1,095	\$180	\$197,000
Private Pay (Fee-Based)		1,095	\$300	\$329,000
Subtotal	6.0	2,190		\$526,000
Total Revenue	9.0	3,285		\$2,946,000
Total Cost				\$3,184,000
Profit/Loss (Margin)				\$238,000 -7%

FIGURE 4-6				
Inpatient Revenue and Costs with Only Acute and Rehabilitation Patients				
	Avg. Census	# of Days	Payment Per Day	\$
Acute Patient Revenue				
Medicare (Cost-Based)		274	\$2,198	\$602,000
Other Payers (Fee-Based)		274	\$3,000	\$821,000
Subtotal	1.5	548		\$1,423,000
Swing SNF Patient Revenue				
Medicare (Cost-Based)		274	\$2,198	\$602,000
Other Payers (Fee-Based)	1.5	274	\$800	\$219,000
Subtotal		548		\$821,000
Swing Nursing Patient Revenue				
Medicaid (Fee-Based)		0	\$180	\$0
Private Pay (Fee-Based)		0	\$300	\$0
Subtotal	0.0	0		\$0
Total Revenue	3.0	1,096		\$2,244,000
Total Cost				\$2,432,000
Profit/Loss (Margin)				\$188,000 -8%

FIGURE 4-7 Revenue and Costs for the Rural Health Clinic at a Hypothetical Rural Hospital					
	RHC Visits	Visit Charges	% of Total	Fee Per Visit	\$
Revenue					
Medicare (Cost-Based)	4,500	\$1,125,000	50%		
Medicare (80% Adj. Cost):				\$188	\$845,000
Patient (20% of Charge):				\$54	\$243,000
Total Medicare:				\$238	\$1,088,000
Other Payers (Fee-Based)	4,500	\$1,215,000	50%	\$100	\$450,000
Total Revenue	9,000	\$2,250,000	100%		\$1,538,000
Total Cost					\$2,217,000
Profit/Loss (Margin)					(\$680,000) -31%
COST PER VISIT			Visits	Per Visit	
Actual Cost Per Visit			9,000	\$246	
Adjusted Cost Per Visit			Minimum Visits:	9,450	\$235

Even if the clinic used fewer physicians and more nurse practitioners, which would reduce the cost of the clinic and avoid the Medicare productivity penalty, the clinic would still lose money. The only way for the clinic to be profitable is for other payers to pay more for visits to the clinic than the amounts typically paid for primary care visits.

D. The Many Problems with Cost-Based Payment

1. Cost-Based Payment from Medicare Does Not Solve Hospitals' Financial Problems

The previous section makes it clear that cost-based payment from Medicare does not and cannot eliminate the financial losses that small rural hospitals experience. As discussed in Chapter II, although Medicare patients represent a large portion of the patients at rural hospitals, the majority of the patients are insured by payers that do not pay hospitals based on their actual costs:

- Medicare Advantage plans are not required to pay Critical Access Hospitals or Rural Health Clinics based on their costs. In fact, Chapter II showed that Medicare Advantage plans pay small rural hospitals significantly less than the costs of services in two states where data are available.
- Commercial insurance plans typically pay for hospital services based on a standard fee schedule or a percentage of the hospital's charges, not based on the hospital's actual costs. As shown in Chapter II, commercial insurance plans generally pay the same

amount or less for hospital services at small hospitals as they pay larger hospitals, even though the costs at the smaller hospitals are higher, and the health plans pay small hospitals less than Medicare pays.

- Commercial insurance plans typically pay for visits with primary care clinicians based on standard fees, regardless of whether the visits are made to an RHC or a physician practice. Chapter II showed that hospitals with Rural Health Clinics lose more on privately insured patients than those without an RHC.
- Some state Medicaid programs pay Critical Access Hospitals based on their costs, but most do not.¹⁶⁴
- State Medicaid programs are not required to pay Rural Health Clinics based on their *current* costs; Medicaid payments are based on an amount calculated based on the costs at the RHC in the *past* with an adjustment for inflation. The inflation-based increases are often inadequate to cover the actual increases in the costs of employing clinicians and other staff. Although Medicaid payments are supposed to be "rebased" periodically to better reflect actual costs, this is often not done because of the higher payments that would be required.

Although Critical Access Hospitals generally receive a higher amount from Medicare under cost-based payment than they would have under standard Medicare payment systems, the hospital still receives less than the actual cost of care because, under sequestration rules, the Medicare payment is no more than 99% of the actual costs. However, even if the hospital received 101% of its costs, a 1% margin would not be sufficient to offset the losses a typical hospital experiences on

uninsured patients, much less on low payments from insured patients.

2. Cost-Based Payment Penalizes Hospitals for Keeping Patients Healthy

As discussed in Chapter III, the problem with fee-for-service payment is not just that the amounts paid are generally lower than the costs of services at small hospitals, but the payment system rewards hospitals for delivering unnecessary services and it penalizes hospitals for efforts to keep patients healthy and to make services more affordable for patients. Cost-based payment from Medicare does not eliminate these problems.

As shown in Chapter III, when the hospital is paid for ED services with visit-based fees, the hospital will lose money if fewer patients need to visit the ED, and the hospital will benefit financially if more patients have emergencies or use the ED as source of care. The same problem exists under cost-based payment. Because the Medicare payment is based on the proportion of ED charges billed to Medicare patients, if fewer Medicare patients come to the ED, Medicare's payment will decrease. Figure 4-8 shows what happens to the ED in Figure 4-4 if 10% fewer Medicare patients make visits. The cost-based payment from Medicare decreases, so the ED

now experiences a loss. Conversely, if Medicare beneficiaries made more visits to the ED, Medicare's share of the ED cost would increase, and the profit in the ED would increase. If visits by all types of patients decreased proportionally, Medicare's share of costs would remain the same, and its payments for the ED would remain the same. However, the fee-for-service payments from other insurers would decrease because there were fewer visits, so the hospital would still lose money.

As a result, cost-based payment from Medicare creates the same perverse incentives as fee-for-service payment. For example, if the hospital created more effective care management and preventive care services for patients that reduced the number of ED visits, the hospital would be penalized through greater financial losses in the ED. The same thing would happen if the hospital reduced the number of Medicare beneficiaries needing inpatient care, lab tests, or other services.

FIGURE 4-8
Revenue and Costs for a CAH ED With a Reduction in Medicare Visits

	BASELINE			CHANGE IN VISITS			Change
	ED Visits	% of Total	\$	ED Visits	% of Total	\$	
Facility Payments							
Medicare (Cost-Based)	6,250	50%	\$1,179,000	5,625	47%	\$1,116,000	-5%
Other Payers (Fee-Based)	5,625	45%	\$675,000	5,625	47%	\$675,000	0%
Uninsured	625	5%	\$0	625	5%	\$0	
Subtotal	12,500	100%	\$1,854,000	11,875	100%	\$1,791,000	-3%
Physician Payments							
Medicare (Fee-Based)	6,250		\$1,113,000	6,250		\$1,002,000	-10%
Other Payers (Fee-Based)	5,625		\$338,000	5,625		\$338,000	0%
Uninsured	625		\$0	625		\$0	
Subtotal	12,500		\$1,451,000	12,500		\$1,340,000	-8%
Total Revenue			\$3,305,000			\$3,131,000	-5%
Cost							
Facility Cost			\$2,362,000			\$2,404,000	+2%
Physician Visit Time Cost			\$851,000			\$809,000	-5%
Total Cost			\$3,213,000			\$3,213,000	0%
Profit/Loss (Margin)			\$92,000 +3%			(\$62,026) -2%	

3. Medicare Beneficiaries Pay More for Outpatient Services Under Cost-Based Payment

A Critical Access Hospital is paid more than other hospitals for delivering a service if the cost of the service is higher than the standard Medicare payment. Since Medicare beneficiaries are required to pay 20% co-insurance on outpatient services, this means the beneficiary will also pay more for services at Critical Access Hospitals than at other hospitals.

Moreover, the percentage difference in payment is typically greater for the beneficiary than for the Medicare program, because the beneficiary is required to pay 20% of the hospital's *charge* for the service, not 20% of the cost of the service. A hospital cannot possibly break even on a service line if it does not charge more than the cost of services, since it has to make enough profit to cover bad debt and uninsured patients, and it generally has to set charges much higher than costs in order to give discounts to private insurance plans. To the extent that the charge is higher than the cost, the co-insurance for the Medicare beneficiary is also higher.

For example, in the hypothetical ED shown in Figure 4-3, the hospital's charge for the facility component of the visit is \$750, which is about 60% more than the average \$471 cost per visit. Medicare beneficiaries are required to pay 20% of that charge, or \$150, not 20% of the \$471 cost, which would be \$94. Since the combined payment from both the beneficiary and Medicare is limited to the hospital's cost, the beneficiary is actually contributing almost one-third of the total Medicare payment, rather than just 20%.

The discounts demanded by most insurance plans require that hospitals set charges well above the actual cost of most services. These plans usually pay less than 50% of charges, so unless the hospital's charge for a service is at least twice the cost of delivering the service, it will lose money. As shown in Chapter III, the charges for laboratory and radiology services at small hospitals are typically several times the average cost of the service. If the hospital's charge for a service is 2 times the cost, a Medicare beneficiary who pays 20% of that charge is actually paying 40% of the cost of the service ($200\% \times 20\% = 40\%$), and if the charge is 3 times the cost, the Medicare beneficiary is paying 60% of the cost. An analysis by the HHS Office of Inspector General in 2014 found that Medicare beneficiaries pay nearly half of the costs of outpatient services at Critical Access Hospitals.¹⁶⁵

Medicare beneficiaries living in rural areas do not have higher incomes than beneficiaries living in urban areas, and they generally have lower incomes, so the higher co-insurance amounts create more of a financial burden for them. If they are unable to pay the full co-insurance amount, the hospital will have a higher loss from bad debt. Unlike private insurance plans, Medicare reimburses hospitals for 65% of bad debt on Medicare patients, but it does not cover the full amount, so more bad debt due to higher co-insurance payments will mean larger losses for hospitals.

4. Cost-Based Payment Creates a Much More Complex Payment System for Small Hospitals

Fee-for-service payment is often criticized for its complexity, but cost-based payment is even more complex:

- The hospital still has to submit a claim for each individual service delivered to Medicare beneficiaries. However, estimating the amount of payment it will receive for the claims requires determining the eligible costs of each service line, apportioning those costs to Medicare based on how many patients with other types of insurance received the service, determining patient cost-sharing based on the charge instead of the payment, and many other steps.
- The initial payment the hospital receives is based on the *estimated* costs of services in the current year. Medicare then reconciles the initial payments against the actual costs to determine the final payment. This can result in the hospital having to repay Medicare if the estimated costs were higher than the actual costs.
- In states that use Medicaid Managed Care Organizations (MCOs), the MCOs are only required to pay RHCs the standard fees they pay primary care practices, so the state has to make separate "wrap-around" payments to the RHC to make up the difference between those fees and the amounts the Medicaid agency is required to pay. This requires the hospital to submit two separate bills for each clinic visit – one to the MCO and one to the state Medicaid agency.

This greater complexity might be acceptable if cost-based payment produced better results for rural hospitals and their patients than fee-for-service, but as discussed above, rural hospitals can still lose large amounts of money on core services even with cost-based payments from Medicare. Moreover, if the hospital has to hire more staff or pay more to consultants in order to successfully manage this complexity, it will increase administrative costs at the hospital and increase its financial losses.

5. Does Cost-Based Payment Increase the Cost of Care?

The obvious concern about cost-based payment is that it will encourage inefficiency and result in higher-cost care, which is why Medicare changed from a cost-based payment system to the IPPS in 1983. However, the cost-based payments from Medicare for Critical Access Hospitals do not reward the hospitals for being inefficient, for several reasons:

- If a hospital were to increase the amount it spends on a service line unnecessarily, e.g., by hiring unnecessary staff, or paying wages higher than necessary to fill positions, it would be worse off financially because only Medicare would pay more, and the higher payment from Medicare would not cover the increase in costs. For example, if Medicare beneficiaries receive half of the services at the hospital, and if the hospital's total cost increases by 10%, then the cost-based payment from Medicare would increase by 10%, but that higher revenue would cover at most 50% of the

higher cost. Since other payers do not pay based on costs, the hospital's revenue from other payers would not change, and profits would decrease or losses would increase by the amount of the increase in costs that is not assigned to Medicare patients.

- If the hospital increased its charges in an effort to cover more of the increased costs, Medicare beneficiaries would have to pay higher co-insurance payments (since their co-insurance is 20% of the hospital's charge), which could increase the hospital's bad debt and discourage beneficiaries from seeking services from the hospital. That could result in less Medicare revenue than expected, increasing losses.
- Under sequestration rules, Medicare only pays 99% of costs, so if costs increase, the hospital also loses more on Medicare patients.

While the cost-based payments from Medicare do not encourage inefficiency, neither do they encourage efficiency. If a hospital reduces its cost in a service line, Medicare payments will decrease proportionally. The reduction in cost will improve the hospital's margin for non-Medicare patients, but not for Medicare patients.

E. Cost-Based Payment Doesn't Solve Rural Hospital Problems

For most very small rural hospitals, cost-based payment from Medicare will result in lower operating losses than standard Medicare payments because the cost per service at those hospitals is higher than standard Medicare payment amounts. As shown in Chapter II, small rural hospitals that are not designated as Critical Access Hospitals have significantly higher losses on their Medicare patients than those which receive cost-based payments.

However, as shown in Figure 4-1, most Critical Access Hospitals still lose money on patient services overall. Cost-based payment from Medicare can reduce losses at a hospital but it cannot eliminate them because there are no profits on the Medicare patients that can offset

losses on other patients. As shown in Figure 4-9, no matter whether the hospital delivers more services or fewer services, the hospital still loses money.

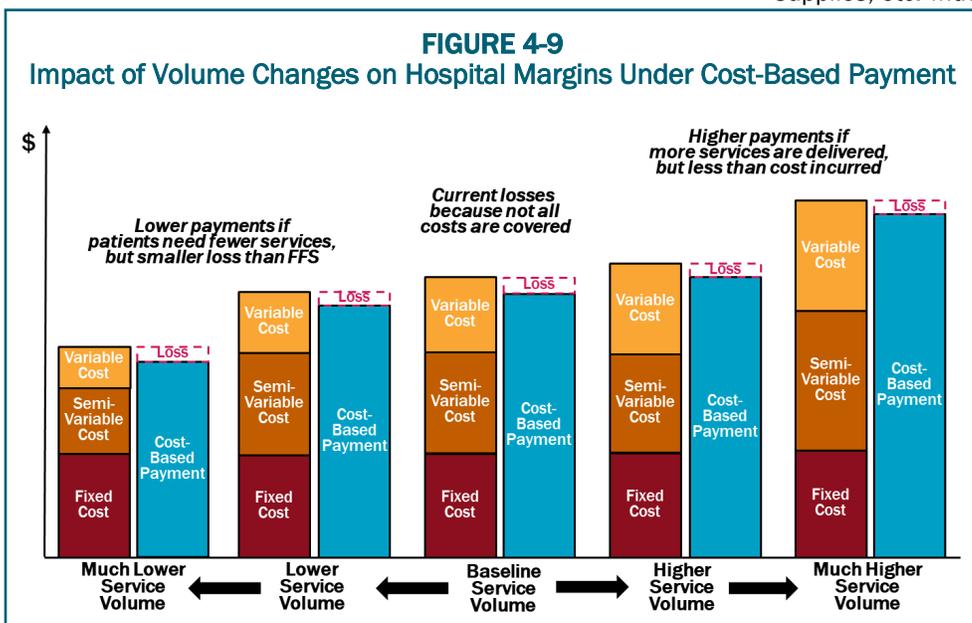
Even if federal sequestration reductions were eliminated for Critical Access Hospitals, a 1% profit margin on services to Medicare patients would not be enough to offset the significant losses most small rural hospitals experience on uninsured patients, Medicaid patients, and patients with Medicare Advantage or commercial insurance plans. Proposals to expand the number of hospitals that qualify for Critical Access Hospital status would likely only prevent closures of hospitals that have unusually high percentages of Medicare patients or that have high payments from private insurance plans.

As shown in Chapter II, the biggest cause of financial problems at most small rural hospitals is low payments from private payers. If private health plans that currently pay less than the cost of services at Critical Access Hospitals began paying amounts equal to 101% of the cost of care for patients insured by those plans, losses would be reduced significantly for those hospitals, and some would become profitable overall. Moreover, cost-based payment for all patients would reduce or eliminate the problematic incentives created by fee-for-service payment discussed earlier. For example, if a hospital created a care management program for individuals with chronic diseases that reduced the frequency with which those patients made ED visits or were admitted to the hospital, the hospital would no longer lose money simply because fewer patients needed services.

Although cost-based payment from private payers in addition to Medicare would have many benefits for small rural hospitals compared to current payment systems, it has a fatal flaw. As noted earlier, the reason that cost-based payment from Medicare does not result in significant inefficiency at hospitals is because other payers do not pay based on costs. If every payer paid a hospital at least 100% of its share of the hospital's costs, there would no longer be any incentive for efficiency. A hospital could hire unnecessary employees, pay employees higher-than-necessary salaries, purchase unnecessary equipment and supplies, etc. with no concern about losing money because the cost-based payments would increase sufficiently to pay for those higher costs. If some payers paid 101% or more of costs, then the hospital could actually make higher profits by spending more money, which would result in higher spending by both patients and insurance plans with no corresponding improvement in the quality of care.

Although small rural hospitals need a different payment system from private payers, it cannot be the cost-based payment system used by Medicare. Moreover, because of the problems with the Medicare system, small rural hospitals also need a better payment system from Medicare. Alternatives are needed that provide the benefits of cost-based payment without the problems.

Although small rural hospitals need a different payment system from private payers, it cannot be the cost-based payment system used by Medicare. Moreover, because of the problems with the Medicare system, small rural hospitals also need a better payment system from Medicare. Alternatives are needed that provide the benefits of cost-based payment without the problems.



V. THE STRENGTHS AND WEAKNESSES OF GLOBAL BUDGETS

KEY POINTS

The primary goal of most global hospital budget programs has been to reduce hospital spending, not to prevent closure of small hospitals. Although “global hospital budgets” have been proposed as a way of helping small rural hospitals, most global budget programs were created in order to limit or reduce payments to hospitals, not to address shortfalls in payment or prevent closure of small rural hospitals. Although Maryland’s global budget program has been cited as an example of how rural hospitals can benefit from this approach, the smallest rural hospital in Maryland closed in 2020 despite operating under the global budget system. Under the Pennsylvania Rural Health Model, hospitals receive global budgets that are based on the amount of *revenues* they received in the *past*, and there is no assurance the budgets will cover the *current* cost of delivering essential services. Under the CMS CHART Model, hospitals receive *less* revenue than they have received in the past, even if past revenues were insufficient to cover the costs of services.

Hospital global budget programs are far more complex than they seem. In Maryland, a state agency regulates the fees each hospital is paid for each individual services, and it uses complex formulas to establish an annual budget for each hospital. The hospital has to adjust its service fees during the year in order to stay within the budget, unless the state approves a modification to the budget. In Maryland, all payers are required to pay the hospital the fees approved by the state, including Medicare and Medicaid.

Some rural hospitals could benefit from a global budget program in the short run, but most would likely be harmed financially. Hospitals in communities that are experiencing significant population losses or that deliver unnecessary services could benefit from a global budget program, at least in the short run, because revenues would no longer decrease when the volume of services decreases. However, hospitals that experience higher costs or higher volumes of services due to circumstances beyond their control would likely be harmed, since their revenues would no longer increase to help cover the additional costs.

Access to care for patients could be harmed by a global budget. Under a global budget, a hospital receives the same amount of revenue regardless of how many services it delivers. This can result in delays in patients receiving the services they need. For example, Maryland has the longest emergency department wait times of any state in the country.

Other countries have moved away from using global budget systems. Global hospital budgets have been used for many decades outside of the U.S. However, because of concerns about long waiting times for services, many countries have modified or replaced global budgets with “activity-based” payment systems, similar to some of the fee-for-service payment systems used in the U.S.

Over the past several years, there has been growing discussion about using “global budgets” as a way of reducing financial problems for rural hospitals and preventing closures. Under a global budget, a hospital’s revenue is no longer based on the number of services that it delivers, so the hospital will not lose revenue if it delivers fewer services because of either a decline in population in the local community or improved health of the residents.

Although various forms of global budgets for hospitals have been used in a number of other countries for decades, they have been used only rarely in the United States. However, the State of Maryland now requires the use of global budgets for all hospitals in the state, and the CMS Center for Medicare and Medicaid Innovation (CMMI) has funded a demonstration project in Pennsylvania under which several hospitals are receiving a portion of their payments based on a global budget model. Interest in global budgets increased in 2020 because many hospitals experienced significant reductions in revenue due to the lower volume of elective healthcare services during the coronavirus pandemic, and some or all of those revenue losses could have

been prevented if the hospitals had been paid through a global budget. In August 2020, CMMI announced the “Community Health Access and Rural Transformation (CHART) Model;” the CHART “Community Transformation Track” includes a component in which hospitals in up to 15 regions can receive payments under global hospital budget model.

In contrast to fee-for-service payments and the cost-based payments described in the previous chapter, there is no standard way of defining a global budget or paying a hospital based on one. The impact of a global budget on a small rural hospital will depend heavily on the details of how the budget is designed, and also on the size and characteristics of the community the hospital serves. The approach being used in Maryland is very different from the approaches being used in Pennsylvania and in the CHART Model, and all three of those are different from the payment models used for hospitals in other countries. Importantly, the primary goal of the global budget programs both in the U.S. and other countries has been to limit or reduce the amount of spending on hospitals, not to reduce financial losses and prevent closures of small, rural hospitals.

A. Global Budgets in Maryland

1. How Global Budgets Work in Maryland

Since 2014, no hospital in Maryland has been permitted to receive more revenue for inpatient and outpatient services during a year than the amount of “Approved Regulated Revenue” the state has approved in advance. This revenue amount is determined through the state’s Global Budget Revenue program and is commonly referred to as the hospital’s “global budget.”

The global budget is, in fact, a *budget*, not a *payment*. A hospital is still paid a fee for each individual service it delivers, and that fee is paid by the individual health insurance plan that insures the patient who received the service. The way the hospital stays within the budget is by changing the fees that it charges for services. If the hospital’s revenue exceeds its budget, it must cut the fees that it charges for individual services. If the hospital’s revenue falls short of its budget, it is permitted to increase its fees to make up the difference.

Maryland can ensure that a hospital receives no more and no less than the global budget amount because the state has a power no other state has – it regulates the fees that hospitals charge for inpatient and outpatient services and every payer is required to pay the hospital those fees. This includes payments for services delivered to Medicare beneficiaries, because Maryland is the only state in the country that has been given authority by Congress to determine the amounts that the Medicare program will pay for hospital services in the state.

As a result, if a hospital has to charge more for services in order to get the full amount of revenue specified in the global budget, all health insurance plans, Medicaid, and Medicare must pay the higher fees. Conversely, if the hospital needs to cut its fees in order to stay within the budget, the state can require that it do so. A hospital is permitted to increase or decrease its fees by up to 5% during the year in order to stay within the budget, and it can increase or decrease fees by as much as 10% if it receives approval from the state to do so. If the hospital’s actual revenue during the year ends up being higher or lower than the approved budget, then the hospital’s fees have to be increased or decreased during the following year to make up the difference.¹⁶⁶

In contrast to other states, where there are typically large differences in the amounts paid for the same service by Medicare, Medicaid, and different health insurance plans, in Maryland, all payers pay essentially the same amount for each individual service.¹⁶⁷ Moreover, the amounts payers pay are set at levels the state views as sufficient to cover the hospital’s cost of caring for uninsured patients.

Both fees for individual services and the global budget amounts are determined by the Maryland Health Services Cost Review Commission (HSCRC), an independent state commission led by 7 gubernatorially-appointed commissioners. The Commission was created in 1971 and it has been setting hospital rates for both Medicare and private payers since 1977. The Commission sets rates for 47 acute general hospitals, 3 specialty hospitals, and 3 psychiatric hospitals. It has over 40 staff,

and its budget is funded through an assessment on hospitals rather than through general state tax revenues.¹⁶⁸

The HSCRC only regulates the prices of inpatient and outpatient hospital services. It does not control the amounts that physicians and other providers are paid for the services they deliver, nor does it regulate other services that hospitals offer. The formal name for the global budget is “Approved Regulated Revenue” because only the revenue for the services whose prices are regulated by HSCRC is included.

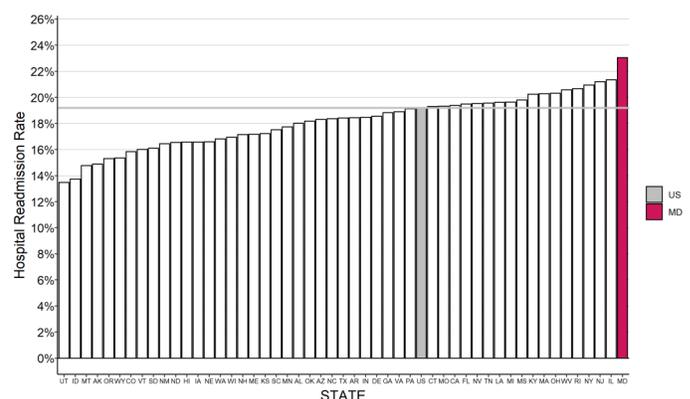
2. The History and Goals of the Maryland Global Budget System

Maryland’s global budget system was not created to solve financial challenges facing small or rural hospitals in the state. The state’s rate regulation system already allowed it to ensure that a hospital received enough revenue to cover its costs, since the state could authorize rate increases that all payers would have to pay.

The problem Maryland was trying to address was over-utilization of hospital services. As shown in Figure 5-1, Maryland had the highest rate of hospital readmissions for Medicare beneficiaries in the country in 2010, and it also had one of the highest rates of hospital admissions. The global budgets were explicitly intended to serve as a “revenue constraint and quality improvement system” to “provide hospitals with strong financial incentives to manage their resources efficiently and effectively in order to slow the rate of increase in health care costs and improve health care delivery processes and outcomes.”¹⁶⁹

When hospitals are paid based on how many hospital admissions they have, they are financially penalized if they reduce avoidable hospital admissions and readmissions. Maryland’s rate regulation authority gave it the ability to eliminate that penalty by allowing a hospital to charge more for services when utilization decreased. However, doing this threatened to violate the terms of the federal waiver that allowed the state to set Medicare payment amounts. The waiver was conditional on payments per admission for Medicare beneficiaries in Mary-

FIGURE 5-1
Medicare Hospital Readmission Rates by State, 2010



Source: Medicare Geographic Variation Public Use File. US = National average.

land increasing at a slower rate than the amounts Medicare paid in the rest of the country. Even if *total Medicare spending* on hospital admissions in Maryland decreased because the number of hospital admissions decreased by more than the payment per admission increased, the state's waiver was based solely on how much the *Medicare payment per admission* increased.

To avoid this, Maryland entered into a revised agreement with CMS in 2014 that held the state accountable for controlling Medicare spending on hospital services *per beneficiary* rather than the amount spent *per admission*. Under what was known as the Maryland All-Payer Model, in return for continued ability to set hospital payment rates for Medicare, Maryland agreed to do the following things over a 5-year period:

- Limit annual all-payer per capita inpatient and outpatient hospital cost growth to the previous 10-year growth in gross state product (3.58%).
- Generate \$330 million in “savings” to Medicare based on the difference in the Medicare per-beneficiary total hospital cost growth rate between Maryland and that of the nation overall.¹⁷⁰
- Reduce the 30-day readmission rate to the unadjusted national Medicare average.
- Reduce the rate of potentially preventable complications by nearly 30 percent.
- Limit the annual growth rate in per-beneficiary total cost of care (TCOC) for Maryland Medicare beneficiaries to no greater than one percentage point above the annual national Medicare growth rate in that year.
- Limit the annual growth rate in per-beneficiary TCOC for Maryland Medicare beneficiaries to no greater than the national growth rate in at least 1 of any 2 consecutive years.
- Submit an annual report demonstrating performance on various population health measures.

3. How Global Budgets in Maryland Are Set

The process of setting global budgets for each hospital in Maryland is very complex. In order to encourage reductions in hospitalization and to satisfy the terms of the new Medicare waiver, a multi-step process is used to determine the global budget for each hospital. Each year, the HSCRC determines a new budget for a hospital using the following factors:¹⁷¹

- the amount of the hospital's global budget in the previous year;
- inflation in costs of drugs, supplies, and wages;
- the hospital's performance in improving quality, reducing readmissions, reducing hospital-acquired conditions, and reducing other types of potentially avoidable utilization;
- changes in the amount of uncompensated care at the hospital;
- changes in insurance coverage in the state that affect utilization of services;

- changes in the size and composition of the population served by the hospital;
- unanticipated events that significantly increase utilization of hospital services (e.g., a natural disaster or epidemic);
- changes in the hospital's market share among Maryland residents (but only for services that are not deemed to represent “potentially avoidable utilization”);
- changes in the number of out-of-state residents using a hospital's services;
- the hospital's efficiency in delivering services relative to other hospitals;
- shifts in the delivery of services to unregulated settings (e.g., ambulatory surgery centers or physician practice offices);
- transfers of patients from one hospital to another;
- amounts the hospital is required to pay the state under various tax/assessment programs;
- the variance between actual and approved revenue in the prior year;
- the extent to which the state has generated the total amount of statewide savings in Medicare spending promised as part of the state's agreement with CMS;
- the growth in total hospital spending in Maryland relative to the state economy; and
- changes requested by the hospital to support new service lines, capital needs, etc.

Not only is the overall process complex, the calculations for many of the individual steps make it even more complex. For example, the budget is adjusted for changes in the population of the hospital's service area using a Demographic Adjustment Factor determined through the following steps:

1. A Virtual Patient Service Area (VPSA) is defined for each hospital based on the communities where the hospital's patients live. In more rural areas, the VPSA is defined in terms of counties, whereas in the rest of the state, it is defined in terms of zip codes.
2. Each hospital is assigned a portion of the population of the VPSA as follows:
 - ◆ For each hospital, the number of Equivalent Case Mix Adjusted Discharges (ECMADs) is calculated for six separate age cohorts (0-14, 15-54, 55-64, 65-74, 75-84, and 85+) in each county or zip code in the VPSA. The ECMAD includes both inpatient and outpatient services; outpatient visits are converted to equivalent inpatient discharges using the ratio of average inpatient charges per discharge to the average outpatient charge per visit. The case mix adjustments are determined for inpatient charges using the 3M APR-DRG grouper and for outpatient charges using the 3M EAPG (Enhanced Ambulatory Outpatient Groups) grouper.¹⁷²
 - ◆ In each VPSA, estimates are made of the number of residents in each of the six separate age cohorts for the base year and the current year.

- ◆ The hospital is assigned a proportion of the base year population in each age cohort and county/zip code based on the number of ECMADs the hospital delivered to residents of that county/zip code in that age cohort relative to the total ECMADs delivered by all hospitals to residents of that county/zip code in that age cohort. For example, if there are 1,000 individuals ages 55-64 living in zip code X, if there were 20 Equivalent Case Mix Adjusted Discharges of 55-64 year-old residents of zip code X at all hospitals in the base year, and if Hospital A delivered 10 of those discharges, then Hospital A would be assigned 50% (10/20) of the 1,000 55-64 residents in zip code X.
 - ◆ The hospital's assigned population in each age cohort and each county/zip code in the VPSA are summed to determine the hospital's total base year service population.
3. The age-adjusted population growth rate for the hospital's service population is determined as follows:
- ◆ A relative cost weight is determined for each age cohort by taking the total statewide hospital charges per capita for patients in each age cohort and dividing by the total statewide hospital charges per capita for all ages. For example, if the average total charge per patient for patients age 55-64 is 1.5 times the overall average charge per patient, then the age 55-64 cohort is assigned a weight of 1.5.
 - ◆ In each age cohort in each county/zip code, the percentage growth in the number of residents between the base year and the projection year is estimated.
 - ◆ The population growth rate in each age cohort and county/zip code is multiplied by the relative cost weight for that age cohort and county/zip code. For example, if the number of 55-64-year-olds living in a particular zip code is estimated to have increased by 10% and the cost weight for 55-64-year-olds is 1.5, then the adjusted growth rate for that age cohort is 15%.
 - ◆ The adjusted growth rate in each age cohort and county/zip code is multiplied by the hospital's assigned population in that age cohort and county/zip code, and the products are summed over all age cohorts and counties/zip codes in the VPSA and divided by the hospital's total base year service population to determine the hospital's age-adjusted projected population-related growth.
4. A Demographic Adjustment Factor for the hospital is determined from the age-adjusted population growth rate for the hospital's service area as follows:
- ◆ The percentage of the hospital's revenue that is determined to have resulted from Potentially Avoidable Utilization (PAU) is calculated. PAU is determined by using computer programs to examine each of the hospital's discharges and outpatient services and categorize them as either PAU or not. This includes:¹⁷³
 - ◆ 30-day, all-cause, all-hospital inpatient readmissions, excluding planned readmissions;
 - ◆ Prevention quality indicator overall composite measure (PQI #90) as defined by the Agency for

Healthcare Research and Quality (AHRQ) except for PQI 02 (Perforated Appendix) and PQI 09 (low birth weight);

- ◆ 65 potentially preventable conditions (PPCs) determined by 3M software; and
- ◆ Outpatient rehospitalizations in the emergency room or observation occurring between 1 to 30 days of an inpatient admission.
- ◆ The hospital's age-adjusted population growth rate is reduced by the PAU percentage. For example, if the hospital's age-adjusted population growth rate is 5% and if 20% of the hospital's revenue was determined to be potentially avoidable, the growth rate would be reduced to 4%.
- ◆ An "efficiency adjustment" may then be applied to this rate if the PAU/age-adjusted growth rates for all hospitals would result in total statewide hospital spending that exceeds the overall target population increase allowance. For example, if the total statewide increase in hospital spending would be 2% but the target growth rate is 1%, then a 50% efficiency adjustment would be applied to every hospital's PAU/age-adjusted rate to determine its final Demographic Adjustment Factor.

Since many patients will have a choice of two or more hospitals for some or all of the services they need, adjustments have to be made to hospital budgets if patients begin using different hospitals for their services. A complex methodology is used to distinguish an increase in a hospital's market share from an increase in the number of services the hospital delivers to the same patients; the key steps are:

1. The number of inpatient and outpatient services that each hospital delivers to patients living in a specific zip code or county is determined. The number of admissions is calculated separately for each of 47 service lines (defined by groups of APR-DRGs), and the number of outpatient services is calculated separately for 11 different service lines.
2. Any inpatient or outpatient services that are determined to represent Potentially Avoidable Utilization are excluded from the totals. This is designed to avoid giving a hospital credit for treating a patient who may not have needed the service and to avoid penalizing a hospital for not treating such a patient. In addition, a series of highly-specialized services such as organ transplants are excluded.
3. The growth in volumes at hospitals with utilization increases is compared to the decline in volumes at hospitals with utilization decreases. The lesser of the total volume gains and losses is determined, and each hospital then receives its relative proportion of that total.

4. The Impact of Maryland's System on Small Rural Hospitals

Maryland has no Critical Access Hospitals, and it had only one rural hospital that was as small as the hospitals discussed in earlier sections of this report – the Edward W. McCreehy Memorial Hospital, located in the town of Crisfield on Maryland's Lower Eastern Shore. In 2018, McCreehy Hospital had total operating expenses of \$17.8 million and an average daily acute census of 1.9 patients. It was the only hospital in Somerset County, Maryland and served a population of about 7,000. As shown in Figure 5-2, the next closest hospital is the Peninsula Regional Health System in Salisbury, which is a 50-minute drive from Crisfield.

Despite participating in the global budget program, McCreehy Hospital lost money every year from 2014 to 2018. As shown in Figure 5-3, losses were about -4% from 2015-2017, and then increased to more than -5% in 2018, and the hospital's current net assets (current assets minus current liabilities) decreased every year as a result.

Because of the losses, McCreehy was forced to close as a free-standing hospital in 2020. Peninsula Regional Health System, which operates Peninsula Regional Medical Center (the largest hospital on the Eastern Shore with 266 beds) and Nanticoke Memorial Hospital (a 139-bed hospital in Seaford, Delaware), acquired the hospital's facilities and it has stated that it plans to continue operating the emergency department and primary care clinic and providing laboratory/imaging services at the same site until it builds a new outpatient facility several miles away. Inpatient and surgical services will no longer be delivered in Crisfield.

A 2017 case study¹⁷⁴ describing McCreehy Hospital stated that the HSCRC rate setting process was a

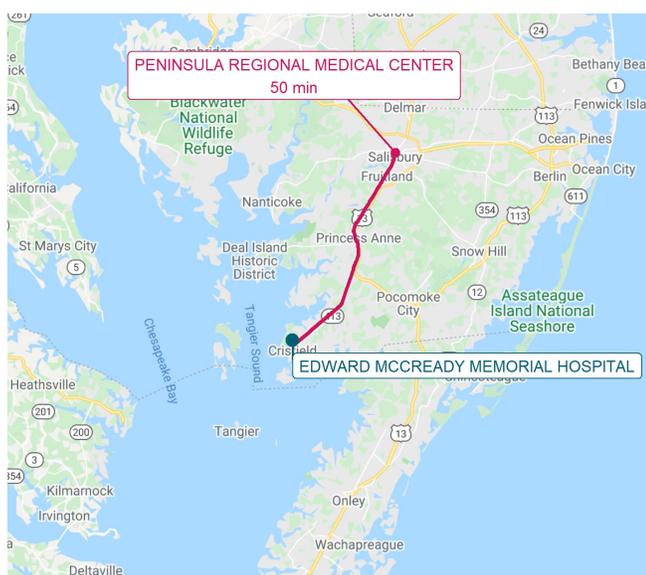
“complicated and lengthy negotiation” that was “rarely finalized by the start of the fiscal year when it takes effect” and required hiring a consultant for “guidance in completing the complex rate-setting worksheet.” The case study noted that because of the impact of utilization variability on the hospital's margins, the hospital staff had to continuously review revenues in order to make adjustments in fees to stay within the global budget, and because of the hospital's small size, it was difficult to make fee changes that would offset changes in utilization. In a year when the hospital experienced significant and unexpected growth in the volume of surgeries, the state reportedly worked with the hospital to increase the global budget. Moreover, changes in fees made during the year in order to stay within the global budget meant that patients could pay different amounts for the same test during the same year. The case study also reported that McCreehy Hospital was able to open an urgent care center in a town 14 miles away because revenue from services delivered there would not be included under the global budget.¹⁷⁵

5. The Impact of Maryland's System on Larger Rural Hospitals

Almost all of the hospitals in Maryland are in urban areas. Only six of the hospitals that have participated in the global budget program were located in a rural community, and the smallest of those (McCreehy Hospital) closed in 2020. The five rural hospitals that are still open are large in size relative to rural hospitals in other parts of the country; all of them have more than \$30 million in total annual expenses, and one spends over \$200 million per year. However, despite participating in the global budget program, the majority of the hospitals had operating losses in 2018.

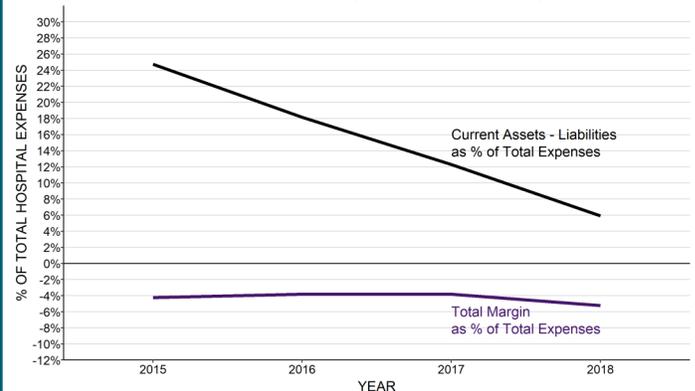
Several studies¹⁷⁶ have examined the impact of the Maryland global budget system on “rural hospitals,” but five of the eight hospitals examined in these studies are actually large hospitals that are not federally-designated as rural hospitals, while three of the six Maryland hospitals that are located in a rural area were not included in the analyses.¹⁷⁷ The eight hospitals in these studies are

FIGURE 5-2
Edward W. McCreehy Hospital, Maryland



Map shows the Lower Eastern Shore of Maryland. The red line shows the most direct driving route from McCreehy Hospital to the next-closest hospital and the estimated travel time.

FIGURE 5-3
Total Margin and Net Current Assets
Prior to Closure
Edward W. McCreehy Hospital, Maryland



McCreehy Hospital closed in 2020.

those where HSCRC implemented its initial version of the global budget methodology (the Total Patient Revenue system, or “TPR”) in 2010. The TPR hospitals are described as “rural” by HSCRC because each is the only hospital located in its community; HSCRC began implementation of global budgets at these hospitals because there was less need to make adjustments for changes in hospital market share than in areas that have multiple hospitals. Two of the other rural hospitals in the state (including the smallest hospital, McCready Hospital) began participating in a global payment arrangement with HSCRC before 2010, and the studies excluded those two from the analyses because of that.

The TPR hospitals are much larger and deliver far more inpatient care than most rural hospitals in other states. The median acute census of the TPR hospitals was 57 in 2018, whereas the median number of acute patients in rural hospitals nationally was 7. The median total expense of the TPR hospitals was \$170 million in 2018, more than five times the median of \$33 million for rural hospitals nationally.

As shown in Figure 5-4, expenses in all of the core service lines are much higher at the Maryland “rural” hospitals than they are at most rural hospitals in other states. The difference is particularly large for inpatient care, which is consistent with the fact that Maryland has had much higher rates of hospital utilization than other states. However, this difference means that the Maryland hospitals had much bigger opportunities to reduce inpatient admissions and spending than rural hospitals in other states would have, and the financial losses at the hospitals from such reductions would be much greater in Maryland than in other states in the absence of the global budget system.

Since the primary goal of creating the global budgets was to encourage reductions in unnecessary hospital admissions and outpatient services, the primary focus of all of the studies has been determining whether the number of services delivered at the hospitals increased or decreased. Three of the studies¹⁷⁸ found there was no reduction in hospital admissions or readmissions at the TPR hospitals compared to similar hospitals that were not participating in the global payment arrange-

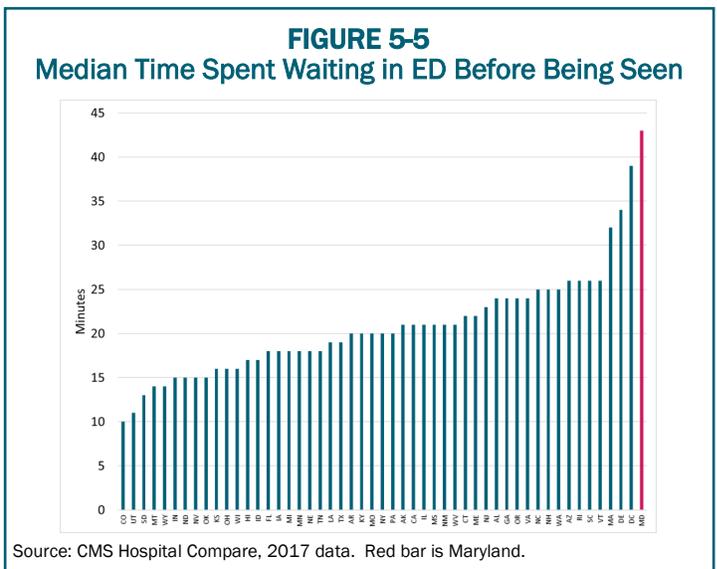
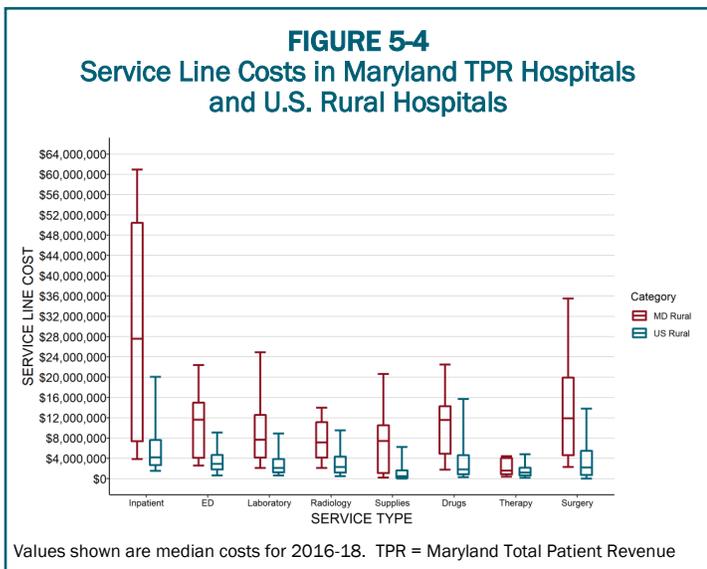
ment, but a fourth study found that inpatient admissions decreased.¹⁷⁹ Three of the studies found large reductions in outpatient services such as clinic visits and surgeries, but no significant change in Emergency Department visits.¹⁸⁰ However, all of these studies only examined changes during the first few years after the global budgets and none examined changes in utilization or spending after 2013.

In 2014, the global budget program was expanded to include all hospitals in Maryland. CMS conducted an evaluation of the impacts of the overall program that examined changes in utilization and spending through 2018.¹⁸¹ This study found that there had been reductions in spending on hospital care and overall healthcare services for Medicare beneficiaries, but not for commercial insurance patients. While the study found there were reductions in inpatient admissions for Medicare, Medicaid, and commercial insurance patients, the reductions were only statistically significant for Medicare patients. The study authors reported that they did not find any consistent differences in the impacts for rural vs. urban residents, but they defined “rural” as living in non-metropolitan areas, which included urban areas as well as rural areas.

6. The Impact of Maryland’s System on Patient Access to Services

One of the principal concerns about a global budget system is whether it will be more difficult for a patient to obtain services. If a hospital’s revenue is no longer tied to the number of services it delivers, then it no longer experiences any financial penalty if patients are denied services or if they have to wait to receive them, and it no longer has the ability to generate the additional revenue needed to pay for expanded service capacity.

Many countries that have used global budgets for hospitals have national systems for monitoring the amount of time that patients have to wait to receive services, but the U.S. has no such system because there have not been concerns about delays in service under fee-for-service or cost-based payment systems.



As part of its Hospital Compare program, CMS does collect information on the amount of time patients spend waiting to be seen in Emergency Departments and the amount of time patients who need to be admitted wait in the ED for a hospital bed. As shown in Figure 5-5, patients in Maryland waited longer to be seen in the ED than in any other state in 2017. In addition, patients in Maryland who needed to be admitted had a median wait of over 6 hours for a hospital bed, the second highest of any state.¹⁸²

The evaluation of the Maryland model conducted by CMS did not look at the issue of wait times for services. The study found that patients reported their experience in Maryland hospitals was worse than patients reported for comparison hospitals on nearly every experience measure examined, but the experience measures in Maryland did not worsen under the global budgets. The study did find that Medicare beneficiaries were more likely to obtain services from physician's offices than from hospital outpatient departments after the global budgets were put in place.¹⁸³

B. The Pennsylvania Rural Health Model

1. The History and Goals of the Pennsylvania Rural Health Model

The Pennsylvania Rural Health Model is a demonstration project that was created in 2017 by the CMS Center for Medicare and Medicaid Innovation (CMMI) specifically for rural hospitals in Pennsylvania. It is designed to test whether paying rural hospitals a fixed, predetermined amount for all hospital-based inpatient and outpatient services (i.e., a "global budget") will enable the hospitals "to invest in quality and preventive care, and to tailor their services to better meet the needs of their local communities."¹⁸⁴

The Pennsylvania Rural Health Model is not designed to increase payments to rural hospitals in order to eliminate or prevent financial losses; in fact, it is required to *reduce* the total amount that Medicare spends on hospital services for Medicare beneficiaries who live in the communities served by rural hospitals. This includes both the Medicare payments to the rural hospitals under the global budget and payments to any other hospitals that provide services to the residents of the rural hospital's service area, regardless of where those other hospitals are located. Pennsylvania is expected to achieve a cumulative total of \$35 million in Medicare savings on hospital services for residents of the rural hospitals' service areas by the end of the project. "Savings" are calculated by comparing what Medicare actually spent on hospital services to a projection of what would have been spent if spending had increased at the rate that Medicare hospital spending increased in rural areas nationally. In addition, the project is monitored to determine whether Medicare spending on all services, not just hospital services, has increased more than in other states.

In order to receive the global budget payments, hospitals are required to prepare a "Rural Hospital Transfor-

mation Plan," which must be approved by both the state and CMMI. CMMI is providing \$25 million in grant funding to the state to create a Rural Health Redesign Center Authority to oversee the program, but there is no funding for the individual hospitals. No information has been released about what would be contained in these Transformation Plans or how they would be expected to resolve financial problems at hospitals that have been experiencing losses.

The Pennsylvania Rural Health Model (PRHM) is not a permanent program. Hospitals will only receive global budget payments for a period of either four or six years. During the fourth year of the program, CMS will assess the performance of the program during the first three years, and it will then decide whether to continue the program for a fifth and sixth year. If the program is continued for six years, changes in Medicare payment will end after the 6-year period unless an evaluation shows that spending has been reduced and CMS agrees the program should be continued.

The hospital global budgets were originally supposed to begin in January 2018, but due to difficulties in recruiting hospitals to participate, the first hospitals did not begin participating until 2019. The Pennsylvania Rural Health Redesign Center Authority was supposed to be established by January 2018, but the Pennsylvania General Assembly did not enact the enabling legislation until November 2019.

2. How Global Budgets Work in Pennsylvania

The global budgets used in the Pennsylvania Rural Health Model work very differently from those in Maryland:

- **Budgets are Payer-Specific, not truly "Global."** In Maryland, hospitals have a single global budget for their inpatient and outpatient revenue from *all* payers, and each payer's share of the budget may differ from year to year depending on how many of that payer's members received services during the year and what kinds of service they received. In Pennsylvania, a hospital has a separate budget amount for each payer, and there is no requirement that those budgets change in proportion to the relative numbers and types of services received by each payer's insured patients.
- **Hospitals Receive Periodic Budget Payments, Rather Than Fees for Services.** In Maryland, hospitals continue to get paid fees for individual services; the global budget is a mechanism for forcing the fee amounts to increase or decrease so that total revenue stays within the global budget amount. In Pennsylvania, Medicare and participating payers no longer pay fees to a participating hospital for individual services delivered; instead, they pay the hospital a predetermined amount regardless of the number of services the hospital delivers to patients insured by that payer.
- **Pennsylvania Has No Authority to Ensure Budgets Are Adequate to Support Costs of Services for Insured and Uninsured Patients.** In Maryland, the HSCRC has the power to regulate the amounts that every payer, including Medicare, pays each hospital for its services, and it can use that power to ensure that a hospital's total revenue is adequate to support the costs

of services, including the costs of serving uninsured patients, and that each hospital receives revenues equal to its global budget. Although the new Pennsylvania Rural Health Redesign Center Authority is supposed to determine what the global budgets for hospitals should be, it cannot force Medicare or any health insurance plan to pay hospitals based on those budgets.

- **Not All Pennsylvania Hospitals Are Eligible to Participate.** In contrast to Maryland, where all hospitals are required to participate in the global budget system, participation in the Pennsylvania Rural Health Model is limited to hospitals in counties designated as “rural” by the Center for Rural Pennsylvania.
- **Participation by Hospitals in Pennsylvania is Voluntary.** Whereas all hospitals in Maryland are required to be paid under a global budget, participation in the Pennsylvania Rural Health Model is voluntary, and continued operation of the program is contingent on a minimum number of hospitals agreeing to participate. The agreement between CMMI and Pennsylvania required that a minimum of 6 hospitals participate in the program during the first year and that a minimum of 18 hospitals participate during the second year. However, only 5 hospitals agreed to participate in the first year and only 13 hospitals signed up for the second year (2020), even though a total of 67 hospitals were eligible to participate (two of the eligible hospitals closed since the program was first created).
- **Participation by Payers in Pennsylvania is Voluntary.** In Maryland, all payers are required to participate in the global budget structure, but payer participation in the Pennsylvania Rural Health Model is voluntary. Not all commercial plans in the state are participating, including several large national payers. The agreement between CMMI and Pennsylvania required that at least 90% of hospitals’ revenues come from payers who are participating in the program, but no information has been released as to whether that has happened.
- **Patient Cost-Sharing is Not Controlled in Pennsylvania.** Maryland regulates the amounts paid by *all* payers, which includes the prices charged to individual patients who do not have insurance; moreover, by regulating the prices charged to insurance companies, Maryland also indirectly controls the cost-sharing amounts paid by insured patients. However, in Pennsylvania, the amounts that Medicare and other payers pay the hospital under the global budget represent only the *insurer’s* share of the payment for services. The hospital still bills for individual services, and patients are still required to pay their share of those bills –patients without insurance are responsible for 100% of the hospital’s charge, and patients with insurance are responsible for the cost-sharing required under their insurance plan.

Because of these differences, the impacts of the Pennsylvania Rural Health Model on hospitals, patients, and payers will likely be very different from the impacts seen under the Maryland system. For example:

- In Pennsylvania, a hospital’s total revenue will still increase or decrease based on changes in the volume

of services delivered to patients whose insurance plans are not participating in the model. If a hospital delivers fewer services to these patients, the hospitals will experience financial losses.

- In Pennsylvania, a participating payer could unilaterally reduce the size of its global budget at a hospital regardless of whether patients are receiving fewer services, and it could refuse to increase the size of the budget even if the hospital’s costs have increased for reasons beyond its control. A payer whose membership decreases in the community served by a hospital could decide to reduce the budget amount it contributed, while a payer that had an increase in membership could refuse to increase its contribution. These kinds of changes could lead to financial losses at participating hospitals.
- In Pennsylvania, a hospital could still increase its total revenue by increasing the amounts it charges patients for services, since there is no global budget for the revenues the hospital receives directly from patients. Pennsylvania does not regulate the prices hospitals charge, and an insurance plan participating in the global budget program would no longer have any reason to negotiate the amounts paid for individual services because the insurance company is paying the same amount in total regardless of what the hospital charges for individual services. Consequently, patients could pay significantly more for services than they did prior to use of the global budget regardless of whether the volume of services decreases.
- In Pennsylvania, if patients begin going to non-participating hospitals to receive services instead of participating hospitals, the hospitals delivering the services will receive more revenue, since those hospitals would be paid through standard fees for services.¹⁸⁵ Since the Pennsylvania Rural Health Model is required to limit the growth in *total* Medicare hospital spending, an increase in the number of services delivered by non-participating hospitals would mean that the global budgets at the participating hospitals would have to be reduced, potentially causing financial losses for the hospitals.¹⁸⁶

In addition to the above differences, the Pennsylvania Rural Health Redesign Center Authority is being funded entirely with federal funds under a grant from CMMI, whereas the HSCRC in Maryland is funded through an assessment on the hospitals in the state. Although the Pennsylvania General Assembly enacted legislation creating the Pennsylvania Rural Health Redesign Center Authority, it did not appropriate any state funds to support it nor did it provide any other mechanism for it to generate funding. Consequently, there is no assurance that it will continue operating after the federal grant funds run out.

3. How Global Budgets in Pennsylvania Are Set

In the first year that a hospital participates in the Pennsylvania Rural Health Model, its global budget payment from Medicare is determined using a simple formula. The global budget is supposed to be equal to the greater of: 1) the hospital’s Medicare revenue from the most

recent fiscal year for which complete claims data are available or 2) the average of the revenue in the three prior years. Although there is a presumption that a similar methodology will be used by other payers, there is no requirement that they do so.

Even if a hospital has been losing money with current fee-for-service or cost-based payment amounts, there is no explicit provision for increasing the initial global budget amounts to ensure they are individually or collectively adequate to cover the cost of delivering services. The presumption is that the flexibility provided by the global budget will enable the hospital to modify its services in some fashion to reduce its costs without harming the quality of care for patients.

Most payment model demonstrations developed by the CMS Center for Medicare and Medicaid Innovation have set the initial payment amounts for participants at a level below the amount they would otherwise have expected to receive in order to produce savings for the Medicare program. Presentations by CMMI about the global budget concept being used in Pennsylvania have indicated that some kind of “discount” will be applied to the global budget payments, either initially or after several years, in order to reduce spending for payers, so depending on the amounts and timing of these reductions, they could potentially create financial losses for hospitals that have not had losses to date and they could increase current losses rather than reduce them.

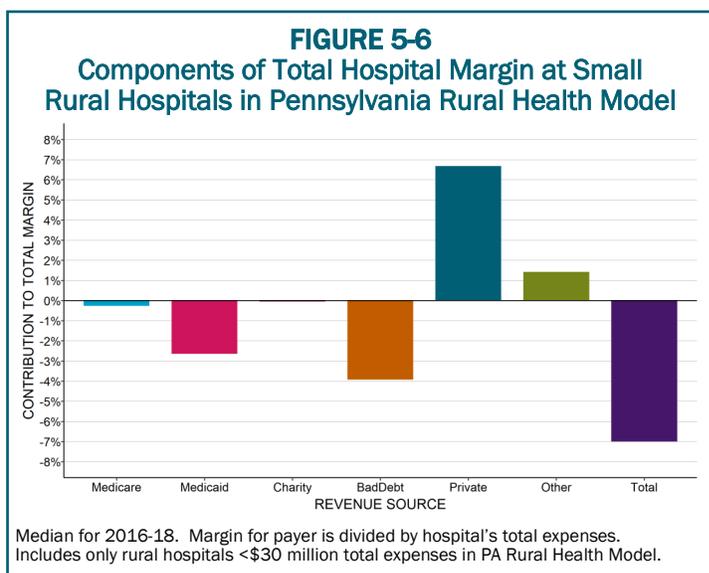
In subsequent years, the hospital’s global budget amount for Medicare is to be determined by adjusting the prior year’s budget for inflation, demographic shifts, service line changes, shifts in patient volume between hospitals, the hospital’s performance on quality measures and population health outcome measures, expected reductions in potentially avoidable admissions, and other factors. However, no details on how these adjustments will be made have been publicly released, so it is unclear whether and how it will differ from the Maryland methodology described in the previous section.

There is a provision in the Pennsylvania Rural Health Model for increasing a hospital’s global budget amount from Medicare in later years if (1) there has been a reduction in Medicare’s total spending for patients living in the hospital’s service area and (2) the overall program has been successful in achieving at least two of three population health goals: a) increasing access to primary and specialty care, b) reducing rural health disparities through improved chronic disease management and preventive screenings, and c) decreasing deaths from substance use disorder and improving access to treatment for opioid abuse. However, there is no explicit mechanism for increasing the global budget amount to provide the participating hospitals with additional resources to achieve those goals. Here again, there is an implicit presumption that the flexibility provided by the global budgets will enable participating hospitals to reallocate their resources in a way that will result in better outcomes.

4. Hospital Participation in the Pennsylvania Rural Health Model

To date, most of the hospitals that have agreed to participate in the Pennsylvania Rural Health Model are not small, rural hospitals. Because the program defines “rural” differently than other federal programs, one-third (4) of the 13 participating hospitals are not classified as rural hospitals under standard CMS or HRSA definitions, and some rural hospitals were not eligible to participate. Of the 9 participating hospitals that are located in rural areas, the majority (5) had total expenses of more than \$30 million in 2018, and two had total expenses of \$100 million or more. Only 4 hospitals are the kinds of small rural hospitals that are having the most serious problems nationally.

The four small rural hospitals that are participating in the program had been losing money when they agreed to join, but as shown in Figure 5-6, the primary causes of the losses differ from those experienced by small rural hospitals in other parts of the country. The losses for the four small rural hospitals in the Pennsylvania Rural Health Model are primarily coming from low Medicaid payments and patient bad debt (which likely represents either uninsured or underinsured patients). Unlike most small rural hospitals across the country (and unlike other small rural hospitals in Pennsylvania), the small rural hospitals that are participating in the Pennsylvania program have not been losing money on their private pay patients. Since the Pennsylvania program is not designed to increase Medicaid payments and since private payers appear to already have been paying more than the cost of services, it is not clear whether and how the global budget payments in the program will help the hospitals reduce their financial losses.



C. The CMS CHART Model

In August 2020, the CMS Center for Medicare and Medicaid Innovation (CMMI) announced the “Community Health Access and Rural Transformation (CHART) Model.”¹⁸⁷ The “Community Transformation Track” of the CHART Model includes a component in which rural hospitals can be paid by Medicare, Medicaid, and potentially other payers through a global hospital budget approach.¹⁸⁸

The CHART Community Transformation Track has some similarities to the Pennsylvania Rural Health Model, but it also differs in significant ways.¹⁸⁹

- **Only Hospitals in 15 Rural Communities Will Be Eligible to Participate.** Hospitals will only be eligible to participate if they are located in (or provide services to) one of 15 rural “Communities” across the country that are selected by CMMI based on an application submitted by the state Medicaid agency or another eligible “Lead Organization.” A Community consists of one or more counties or census tracts, all of which are classified as rural by the Federal Office of Rural Health Policy. (Counties and census tracts do not need to be contiguous.)
- **Most Small Rural Hospitals Will Not Be Able to Participate Individually.** A rural county or group of counties can only qualify as a rural Community if a minimum of 10,000 Medicare FFS beneficiaries (i.e., individuals insured by Original Medicare) live in those counties. Less than 10% of small rural hospitals (i.e., those with less than 15 acute patients per day) are located in a county that has 10,000 or more residents on Original Medicare, and only 5% of very small rural hospitals (i.e., those with less than \$20 million in total expenses) are located in a county with 10,000 or more residents on Original Medicare. In most cases, multiple counties would have to be included in the rural Community and all or most of the hospitals in those counties would need to participate in order for any of the small rural hospitals to participate.
- **Participating Hospitals Must Agree to Make Changes in Services.** Even if a hospital is located in an area large enough to qualify as a rural Community and that area is selected by CMS for the CHART Model, the hospital can only participate if it agrees to change its services in accordance with a “Transformation Plan” developed by the Lead Organization. The Transformation Plan, which has to be approved in advance by CMMI, must include requirements for expanded use of telehealth and methods of addressing population health disparities.
- **Participating Hospitals Will Receive a Fixed Amount of Revenue Instead of Current Payments for Services.** A participating hospital will receive a lump sum “Capitated Payment Amount” (CPA) instead of fees (or instead of cost-based payment for Critical Access Hospitals) for inpatient and outpatient services. Although the amount is calculated for a full year, the hospital will receive payments during the course of the year, similar to the Pennsylvania Rural Health Model.
- **Payments Will Only Change for a Subset of Hospital Services.** The Capitated Payment Amount applies only to inpatient hospital services, outpatient hospital services, and swing bed services at Critical Access Hospitals. There is no change in payments for physician services and other professional services, Rural Health Clinic services, swing bed services at non-Critical Access Hospitals, home health services, hospice services, ambulance services, or inpatient rehabilitation services outside of swing beds.
- **Private Payers Are Not Required to Participate.** Unlike the Pennsylvania Rural Health Model, there is no requirement that private health plans participate in the program. Although the state Medicaid program is required to participate, no more than 75% of Medicaid payments to the hospitals have to be provided through a capitated payment arrangement.
- **Payments Will Be Reduced Below Inflation-Adjusted Revenues.** The methodology for calculating the Capitated Payment Amount requires that the hospital’s payment be reduced below the amount of revenue the hospital would have based on inflationary adjustments to previous years’ revenues. The payment provided by Medicare would be reduced by a 0.5% “discount” during the first year, by 1.0% in the second year, and by between 1.0% and 4.0% in subsequent years compared to what the hospital would have expected to have received if prior revenues had increased by the amounts that would otherwise have been expected. The reduction in payment is explicitly included “in order for payers to realize savings.” CMS states that “it is expected that Participant Hospitals can achieve savings, despite the presence of a discount, through reductions in avoidable utilization.”
- **Reductions in Payments Will Be Much Larger for Smaller Rural Hospitals and Smaller Rural Communities.** The size of the reduction in the hospital’s payment will be based on the total amount of Medicare revenue included under the Capitated Payment Arrangement. The reduction in payment to the hospital is *larger* if the total amount of Medicare revenue involved is *smaller*. By the sixth year of the program, the Capitated Payment Amount will be reduced by 4% if the hospitals in the community receive less than \$15 million in Medicare payments for the services covered by the Capitated Payment Amounts. (85% of small rural hospitals (i.e., rural hospitals with less than 15 acute patients per day) receive less than \$15 million per year in Medicare payments and all rural hospitals with less than \$30 million in total expenses receive far less than that amount.) The discount is at least 3% if Medicare payments are less than \$45 million per year; virtually all small rural hospitals receive less than this amount, so they would all be subject to a reduction of 3-4% in their payments. In a community where more than \$300 million in Medicare revenues are included, the reduction in payment is only 1%. CMS states that the higher discounts are intended to provide “an incentive for Communities to recruit more hospitals to participate” and to increase “the likelihood that the [program] will yield savings that meet or exceed the amount of the cooperative funding.”

- **Payments Will Be Reduced if the Community Population Decreases.** The Capitated Payment Amount will be reduced if the number of Original Medicare beneficiaries living in the rural Community decreases, even if the overall population of the community is decreasing.
- **Payment Changes May Only Last for Six Years.** This is a demonstration project implemented by CMMI, and it is scheduled to end after six years. The enabling legislation for CMMI prohibits it from continuing demonstration projects unless they are expected to reduce Medicare spending or to improve quality without increasing spending, so it would not be known until well into the program's initial years of operation whether the payment changes would continue beyond six years.
- **Lead Organizations Could Provide Some Grant Funding to Hospitals.** A Lead Organization will be eligible to receive a grant of up to \$2 million during the first year of the program, and an additional grant of up to \$500,000 each year afterward for up to six years if their participation has been deemed "satisfactory" and if there has been an increase each year in the number of hospitals participating or the amount of revenue included in the capitated payments. The Lead Organization is permitted to share these grant funds with participating hospitals to support care delivery redesign or the Lead Organization can agree to accept a smaller amount of funds in return for a lower discount factor for the participating hospitals.
- **The CHART Payments Are Not a True Global Budget.** Although paying Capitated Payment Amounts instead of standard fees is similar to the approach used in the Pennsylvania Rural Health Model, the CHART Model represents less of a true "global budget" model than the Pennsylvania model, and far less than in Maryland. In the CHART model, unless private health plans agree to participate, it is likely that less than 50% of the hospital's revenues would be replaced by the Capitated Payment Amounts, since they would only replace payments for a subset of services to Original Medicare beneficiaries and a portion of Medicaid payments.

D. Will a Global Budget Help a Small Rural Hospital?

The Maryland and Pennsylvania programs provide little, if any, useful information about whether global budgets would help or hurt small rural hospitals in other states:

- The only small rural hospital in Maryland closed while it was participating in the global budget program, but that may or may not be indicative of what would happen to other small rural hospitals if a similar program were created in their states.
- There are only four small rural hospitals participating in the Pennsylvania program, and as discussed in the previous section, these hospitals differ in significant ways from small rural hospitals in other states. Not only is the Pennsylvania program very different from the Maryland model, it has not been operating long enough to draw any conclusions about its impacts, and the impacts that occur during 2020 will not be indicative of what would happen in non-pandemic years.

1. Factors Affecting the Impact of a Global Budget on a Rural Hospital

The impact of a global budget on a rural hospital will depend on at least six factors:

1. whether the hospital has been profitable, and which payers and services have contributed profits and losses;
2. the extent to which the hospital can and should reduce, expand, or modify the types of services it is delivering;
3. the year-to-year variability in the community's need for services;
4. the year-to-year variability in the hospital's ability to attract and retain staff and the amounts it has to pay for staff, equipment, and supplies;
5. whether the hospital's global budget for the year will be adequate to cover the minimum costs the hospital will have to incur to deliver services, and whether and how the budget can be modified to respond to changes in community needs, the amounts the hospital has to pay for personnel, equipment, drugs, etc.; and
6. how the hospital will be paid for the services it delivers, and how the budget affects those payments.

Since hospitals differ significantly on the first two factors, a global budget program could benefit some hospitals while harming others. Because the third and fourth factors change from year to year, a hospital could benefit from the global budget in some years, but be harmed in other years. And because there is no one standard approach for determining the amounts of global budgets and for ensuring hospitals receive the amount specified in the budget, a hospital that benefits under one approach to global budgets could be harmed under another.

2. Impacts of a Global Budget Under Different Scenarios

The only way to fully understand whether and when a small rural hospital would do better or worse under a global budget than fee-for-service or cost-based payment is to compare what its profits or losses would be under different scenarios about the volume of services and the cost of delivering those services.

a. The Impact of a Global Budget on Emergency Department Services

Figure 5-7 shows a hypothetical Emergency Department at a Critical Access Hospital under four different scenarios. In the Status Quo scenario, the ED has 12,500 visits, and the staffing and other costs for the ED are the same as those used in the example in Figure 4-4. Also, as in Figure 4-4, it will be assumed that payers other than Medicare (i.e., Medicaid, Medicare Advantage, commercial insurance plans, and self-insured patients) pay an average of \$180 per ED visit (\$120 for the hospital and \$60 for the physician), which is enough to generate a small (3%) profit for the ED. Assuming that current payments are high enough to cover the costs of the ED

enables the relative impacts of the global budget in different scenarios to be seen more easily.

Three scenarios are used to show the impact on the hospital when the number of visits changes:

- In Scenario A, the number of visits decrease by 10%, so fee-based revenues decrease. The cost-based payment from Medicare increases slightly because, with fewer visits, the physicians spend a smaller proportion of their time seeing patients, which means that a larger share of the physicians' compensation will be treated as a hospital cost (which is eligible for cost-based payment) rather than a professional service (which is supposed to be paid for using Medicare physician fees). However, this increase in the cost-based payment does not offset the reduction in fee-based revenues, and the hospital now has a 2% loss in the service line.
- In Scenario B, the number of visits increases by 10%, the cost-based payment decreases slightly, fee-based revenues increase, and the net result is an 8% profit for the hospital.
- In Scenario C, the number of visits increases significantly, and it is assumed that the volume of visits dur-

FIGURE 5-7
ED Margins Under Cost-Based Payment With Changes in Visits

	STATUS QUO		SCENARIO A Fewer Visits		SCENARIO B More Visits		SCENARIO C More Visits + Cost	
	ED Visits	\$	ED Visits	\$	ED Visits	\$	ED Visits	\$
Facility Payments								
Medicare (Cost-Based)	6,250	\$1,179,000	5,625	\$1,220,000	6,875	\$1,138,000	7,500	\$1,459,000
Other (Fee-Based)	5,625	\$675,000	5,063	\$607,000	6,188	\$742,000	6,750	\$810,000
Uninsured	625	\$0	563	\$0	688	\$0	750	\$0
Subtotal	12,500	\$1,854,000	11,250	\$1,827,000	13,750	\$1,880,000	15,000	\$2,269,000
Physician Payments								
Medicare (Fee-Based)	6,250	\$1,113,000	5,625	\$1,002,000	6,875	\$1,225,000	7,500	\$1,336,000
Other (Fee-Based)	5,625	\$338,000	5,063	\$304,000	6,188	\$371,000	6,750	\$405,000
Uninsured	625	\$0	563	\$0	688	\$0	750	\$0
Subtotal	12,500	\$1,451,000	11,250	\$1,306,000	13,750	\$1,596,000	15,000	\$1,741,000
Total Revenue		\$3,305,000		\$3,133,000		\$3,476,000		\$4,009,000
Cost								
Facility Cost		\$2,362,000		\$2,447,000		\$2,277,000		\$2,908,000
Physician Visit Time		\$851,000		\$766,000		\$936,000		\$1,021,000
Total Cost		\$3,213,000		\$3,213,000		\$3,213,000		\$3,929,000
Profit/Loss (Margin)		\$92,000 +2.9%		(\$80,000) -2.5%		\$263,000 +8.2%		\$72,823 +1.9%
Cost Per Visit		\$257		\$286		\$234		\$262

ing certain times is sufficiently high that the hospital needs to hire 2 additional FTE physicians in order to have two physicians on the high-volume shifts instead of one. Since the cost of operating the ED increases (the amount shown in Figure 5-7 is the same as the cost shown in Figure 3-7 for an ED with 15,000 visits), the cost-based payment from Medicare increases to covers Medicare's share of this. Since the number of visits increases, the hospital receives more fee-based revenue. The net result is that the hospital ED remains profitable. (The profitability will vary depending on exactly how much the total number of visits increases.)

Figure 5-8 shows the same ED if the hospital receives a global budget for hospital services from Medicare and also from one-half of the non-Medicare payers. It is assumed here that the global budget amount allocated to the ED for each payer is the same as what the hospital would have received from that payer under the cost-based and fee-based payments shown in Figure 5-7. Although the global budget is "global" and the hospital does not need to allocate the same proportion of revenue to the ED as it did before, allocating more (or less)

of the global budget to the ED would simply increase (or reduce) losses elsewhere.

It is assumed that participation by payers in the global budget program is voluntary, and that half of the non-Medicare payers continue to pay fees for each visit. Moreover, since hospital global budgets only constrain or replace revenues for hospital services, not physician services, the hospital continues to receive fees from all payers for the time the physicians spend with patients.¹⁹⁰

Under this payment arrangement:

- In the status quo scenario, the hospital makes a small profit on the ED that is identical to what it received under current payment systems because the costs and revenues are the same.
- In Scenario A, fewer visits are made to the hospital ED. The revenue for hospital services from Medicare does not change because it is coming from the global budget. In contrast, the hospital would have received more revenue under cost-based payment (because a larger share of the physician compensation would be

FIGURE 5-8
ED Margins Under Global Payment With Changes in Visits

	STATUS QUO		SCENARIO A Fewer Visits		SCENARIO B More Visits		SCENARIO C More Visits + Cost	
	ED Visits	\$	ED Visits	\$	ED Visits	\$	ED Visits	\$
Facility Payments								
Medicare (Global)	6,250	\$1,179,000	5,625	\$1,179,000	6,875	\$1,179,000	7,500	\$1,179,000
Other Payers (Global)	2,813	\$338,000	2,531	\$338,000	3,094	\$338,000	3,375	\$338,000
Other (Fee-Based)	2,813	\$337,000	2,531	\$303,000	3,094	\$371,000	3,375	\$405,000
Uninsured	625	\$0	563	\$0	688	\$0	750	\$0
Subtotal	12,500	\$1,854,000	11,250	\$1,820,000	13,750	\$1,888,000	15,000	\$1,921,000
Physician Payments								
Medicare (Fee-Based)	6,250	\$1,113,000	5,625	\$1,002,000	6,875	\$1,225,000	7,500	\$1,336,000
Other (Fee-Based)	5,625	\$338,000	5,063	\$304,000	6,188	\$371,000	6,750	\$405,000
Uninsured	625	\$0	563	\$0	688	\$0	750	\$0
Subtotal	12,500	\$1,451,000	11,250	\$1,306,000	13,750	\$1,596,000	15,000	\$1,741,000
Total Revenue		\$3,305,000		\$3,126,000		\$3,484,000		\$3,662,000
Cost								
Facility Cost		\$2,362,000		\$2,447,000		\$2,277,000		\$2,908,000
Physician Visit Time		\$851,000		\$766,000		\$936,000		\$1,021,000
Total Cost		\$3,213,000		\$3,213,000		\$3,213,000		\$3,929,000
Profit/Loss (Margin)		\$92,000 +2.9%		(\$87,000) -2.7%		\$271,000 +8.4%		(\$267,000) -6.8%
Cost Per Visit		\$257		\$286		\$234		\$262

eligible for cost-based payment). The revenue for hospital services from the subset of other payers that are participating in the global budget also stays the same, whereas that revenue would have decreased under fee-based payment. The global budget does nothing to stop the loss of fee-based revenues from the payers that are not participating in the global budget program, and it does nothing to stop the loss of fee-based revenues from Medicare and other payers for physician services since those services are not part of the global budget. The net effect is that the hospital experiences a larger reduction in revenue under the global budget than under the current payment system. Since the total cost of the ED is the same, this means a bigger financial loss for the hospital.

- In Scenario B, where visits increase, the opposite effect occurs. The hospital receives more revenue, but a smaller increase than it would have under the current system, so its profit increases by a smaller amount.
- In Scenario C, the hospital incurs higher costs because it is employing additional physicians, but whereas the Medicare payment for hospital services would have increased under cost-based payment to cover a portion of the higher cost, the Medicare payment stays unchanged under the global budget. The hospital has significantly more visits, but since half of the non-Medicare payers are paying based on a fixed global budget, revenues increase less than they would under the current payment system. The net result is that the hospital experiences a significant loss.

Although it is possible that the hospital would receive a higher global budget if the increase in ED visits was due to growth in the local population, it is also possible that the hospital would receive a lower global budget if the population decreased but the number of ED visits increased due to more health problems among the remaining residents or reduced access to primary care services in the community.

The side-by-side comparison of margins under the two payment systems in Figure 5-9 shows that under most of the different scenarios, the hospital is worse off financially under the global budget model than under the current payment system, and no better off under any of them. The impacts would only be slightly different if the hospital were receiving all of its revenue for hospital services through a global budget, since less than 20% of

the hospital component of revenues is coming from fees. If the hospital had a global payment for both hospital services and professional services, it would be even worse off under all of the scenarios, since the professional services component is more profitable for the hospital than the hospital services component.

Obviously, the impacts depend on the scenario, and it is certainly possible to construct scenarios in which the hospital would be better off under global payment than under current payment systems. However, it is equally possible to construct scenarios in which there would even more negative impacts than what is shown in Figure 5-9.

As noted above, the status quo scenario was constructed assuming that the hospital's current payments would be high enough to cover the cost of operating the ED, so that if the hospital received the same amount of revenue under a global budget, it would also be able to cover the cost. Most small rural hospitals do *not* receive payments that are higher than their costs, so their actual margins under all of these scenarios would be much lower than those shown in Figure 5-9. However, the relative differences between the scenarios and the differences between a global budget and cost-based payment in each scenario would still be similar to those shown in the figure. For example, if the hospital had a loss of 5% under the current payment system, then it would also have a 5% loss under the global budget, it would lose more than 3% under Scenario A, its profit would be less than 8% under Scenario B, and it would lose even more than 5% under Scenario C. The hospital would still lose more under Scenarios A and C under a global budget than it would under the current system.

b. The Impact of a Global Budget on Inpatient Care

Figure 5-10 shows a hypothetical inpatient unit at a Critical Access Hospital under four different scenarios. For simplicity, it is assumed that the hospital only has acute inpatients (i.e. no swing beds), that half of the patients are Medicare beneficiaries, and all of the others have health insurance. In the Status Quo scenario, the unit has an average daily census of 3.0, and the staffing and other costs are the same as what was used in Figure 4-6 for an inpatient unit with an ADC of 3.

Under current payment systems, the hospital would receive a cost-based payment for the Medicare beneficiaries, and it would be paid fees for each admission or inpatient day by other payers. For purposes of this example,

	STATUS QUO	SCENARIO A Fewer Visits	SCENARIO B More Visits	SCENARIO C More Visits + Higher Cost
ED Visits:	12,500	11,250	13,750	15,000
Profit/Loss on ED:				
Cost-Based + FFS	+2.9%	-2.5%	+8.2%	+1.9%
Global Budget	+2.9%	-2.7%	+8.4%	-6.8%

FIGURE 5-10
Inpatient Margins Under Cost-Based Payment With Changes in Admissions

	STATUS QUO Acute Census: 3.0		SCENARIO A Fewer Admissions Acute Census: 2.5		SCENARIO B More Admissions Acute Census: 6.0		SCENARIO C Higher Cost Acute Census: 3.0	
	Days	\$	Days	\$	Days	\$	Days	\$
Revenues								
Medicare (Cost-Based)	548	\$1,203,000	456	\$1,203,000	1,095	\$1,441,000	548	\$1,263,000
Other Payers (Per Diem)	548	\$1,314,000	456	\$1,095,000	1,095	\$2,628,000	548	\$1,314,000
Total Revenue		\$2,517,000		\$2,298,000		\$4,069,000		\$2,577,000
Total Cost		\$2,432,000		\$2,432,000		\$2,911,000		\$2,552,000
Profit/Loss (Margin)		\$86,000 3.5%		(\$134,000) -5.5%		\$1,158,000 +39.8%		\$25,000 +1.0%
Cost Per Day		\$2,221		\$2,665		\$1,329		\$2,330
Other Payer Per Diem Fee		\$2,400		\$2,400		\$2,400		\$2,400

FIGURE 5-11
Inpatient Margins Under Global Budget With Changes in Admissions

	STATUS QUO Acute Census: 3.0		SCENARIO A Fewer Admissions Acute Census: 2.5		SCENARIO B More Admissions Acute Census: 6.0		SCENARIO C Higher Cost Acute Census: 3.0	
	Days	\$	Days	\$	Days	\$	Days	\$
Revenues								
Medicare (Global)	548	\$1,203,000	456	\$1,203,000	1,095	\$1,203,000	548	\$1,203,000
Other Payers (Global)	274	\$657,000	228	\$657,000	548	\$657,000	274	\$657,000
Other Payers (Per Diem)	274	\$657,000	228	\$548,000	548	\$1,314,000	274	\$657,000
Total Revenue		\$2,517,000		\$2,408,000		\$3,174,000		\$2,517,000
Total Cost		\$2,432,000		\$2,432,000		\$2,911,000		\$2,552,000
Profit/Loss (Margin)		\$86,000 3.5%		(\$24,000) -1.0%		\$263,000 +9.1%		(\$34,000) -1.3%
Cost Per Day		\$2,221		\$2,665		\$1,329		\$2,330
Other Payer Per Diem Fee		\$2,400		\$2,400		\$2,400		\$2,400

it is assumed that payers other than Medicare pay an average of \$2,400 per day for inpatient care, which is enough to generate a small (3.5%) profit for the inpatient unit. (The payment amounts here are assumed to be higher than in the examples in the previous chapters in order to better show the relative impact of using a global budget to pay for services.)

Three scenarios are used to show the impact of changes in acute admissions:

- In Scenario A, the average daily acute census decreases to 2.5, with the reduction equally split between patients on Medicare and other types of insurance. The Medicare cost-based payment does not change because the cost of the unit does not change and Medicare beneficiaries still represent 50% of patients. However, revenues from the other payers decrease because there are fewer patients, so the hospital now experiences a loss.
- In Scenario B, the average daily census doubles, and it is assumed the hospital needs to double the number of nurses on the unit.¹⁹¹ Because the costs have increased, Medicare pays a higher amount, and because there are more non-Medicare patients, fee-for-service revenues increase, and the hospital's profit on the unit increases significantly. The hospital could even reduce the amount it charges for inpatient care significantly and still make a profit on the unit.
- In Scenario C, the average daily census stays the same, but the cost of operating the unit increases, perhaps because one of the nurses became ill and the hospital had to hire a temporary nurse to fill the position at a higher cost. Although the Medicare payment increases because of the higher cost, that only covers 50% of the increase (since only half of the patients are Medicare beneficiaries), and the hospital now has a small loss on the unit.

Figure 5-11 shows what would happen under the same scenarios if the hospital was receiving a global payment instead of cost-based payment from Medicare and a global payment instead of per diem payments from half of the other payers.

- The global payments are assumed to be identical to what the hospital would have received under current payment systems, so the cost, revenue, and margin in the Status Quo scenario is the same.
- In Scenario A, the global payments stay the same when the inpatient census decreases, and the hospi-

tal's revenues only decrease for the payers who are not using a global budget. As a result, the hospital loses money, but the loss is smaller than under the current payment system.

- In Scenario B, the cost of operating the inpatient unit increases but the Medicare payment stays the same because it is no longer tied to the actual cost of the unit. The number of patients on the unit increases, but revenues only increase for the subset of payers that are not using a global budget. However, because the average cost per day decreases but payment per admission remains the same, the increase in revenues for the remaining fee-for-service patients exceeds the increase in the cost of services, and the hospital makes a higher profit on the unit, but much less than it would have made under the current payment system, and it would not be able to reduce the fees it charges for patient care.
- In Scenario C, the cost of caring for the same number of patients increases, but none of the hospitals' revenues are based on actual cost, so the hospital loses money and the loss is larger than it would have been under the current payment system.

The side-by-side comparison in Figure 5-12 shows that under two of the three scenarios, the hospital is worse off financially under the global budget model than under the current payment system. Under Scenario A, although the hospital is better off than it would have been under the current payment system, it still experiences a loss from reducing hospital admissions or readmissions. Scenario C shows that the stable, predictable revenue provided by the global budget is not an advantage for a hospital that experiences unexpectedly higher costs.

If the hospital were receiving all of its revenue for hospital services through a global budget, there would be no loss under Scenario A, but the loss would be greater under Scenario B since there would be no increase in revenue at all to offset the higher costs required to care for additional patients.

Here again, the impacts depend on the scenario. Under different scenarios, the hospital would be better off under a global budget in some scenarios and worse off in others. The impacts also depend on the hospital, since changes in patient volume affect costs differently at different hospitals, and different hospitals face differing degrees of variability in their costs from year to year.

FIGURE 5-12 Inpatient Margins Under Cost-Based Payment vs. Global Budget				
	STATUS QUO	SCENARIO A Fewer Admissions	SCENARIO B More Admissions	SCENARIO C Higher Cost
Acute Census	3.0	2.5	6.0	3.0
Profit/Loss on Inpatient Unit:				
Cost-Based + FFS	+3.5%	-5.5%	+39.8%	+1.0%
Global Budget	+3.5%	-1.0%	+9.1%	-1.3%

c. *The Impact of a Global Budget on Ancillary Services*

The impact of a global budget on a hospital's ability to deliver ancillary services such as laboratory tests, radiology studies, drugs, and medical supplies depends heavily on the proportion of fixed, semi-variable, and variable costs in each service line. In the ED and inpatient examples above, almost all of the costs are fixed costs or semi-variable costs, so the cost of the service line does not change with small changes in volume. In those cases, the biggest problem with the global budget arises when the volume of services increases by a large enough amount that the hospital has to increase its staffing, because the hospital's cost increases but revenue under the global budget stays the same. (Even if there is an increase in the global budget the next year based on inflation, that would only cover higher costs due to inflation-based increases in wages, not the higher cost due to a higher staffing level.)

In many other service lines, however, the hospital's cost can change by large amounts even with small changes in volume because a higher proportion of the costs are variable costs. For example, if the number of patients admitted to the hospital increases or decreases during the year, the hospital's spending on medical supplies will generally increase or decrease proportionately, even if the staffing on the inpatient unit remains the same. Since the global budget does not change, the hospital will profit when the number of patients decreases and it will experience losses when the number of patients increases.

The biggest problems arise where (1) the cost of the service depends not only on how many patients receive a service, but on the specific type of service they need, and (2) where the cost to the hospital of the materials used to deliver the service can change significantly during the course of the year. For example, the amount that a hospital spends on drugs depends on how many patients it treats, what types of drugs are used for the treatments, and the price the hospital has to pay to acquire the drugs. Under both cost-based payment and fee-for-service payment, the hospital will receive more revenue when it uses more drugs or more expensive drugs, and under cost-based payment, it will also receive more revenue if the price of drugs increases suddenly during the year. Conversely, the hospital will receive less revenue if it uses fewer drugs or less expensive drugs. However, under a global budget, the hospital receives the same revenue during the year regardless of how much it ends up having to spend on drugs, so it could experience large losses if the prices of drugs increase or if patients need particularly expensive drugs.

d. *The Impact of a Global Budget on Patients' Access to Quality Care*

Because the hospital's total expenses will increase by some amount when more patients receive services, but its revenue would remain the same under a global budget, the hospital is financially penalized when more patients need services, and it is financially rewarded if it helps fewer patients. Similarly, it is penalized when patients receive tests or treatments that involve more ex-

pensive supplies or drugs, and rewarded when it avoids using new and more expensive treatments.

Although this creates a desirable incentive for the hospital to avoid delivering *unnecessary* services and unnecessarily expensive services, it creates a very undesirable financial incentive to limit or withhold access to *necessary* services and to avoid using more expensive treatments that achieve better outcomes for patients. While some services are "high value" because they achieve better outcomes at a lower cost, others deliver high value because the better outcomes justify the higher cost. The incentives created by the global budget reward the hospital for delivering more of the first group but penalize it for delivering more of the second.

e. *The Impact of a Global Budget on Affordability of Care for Patients*

A global budget does not guarantee that the cost of individual services or the total spending on patients' care will be lower. The Maryland global budget model has been touted as having "reduced" the cost of hospital care, but this only means that the *growth* in spending in Maryland was lower than the growth in other states. Spending on hospital services *did not actually decrease*, and spending per patient (both on hospital services and all healthcare services) remained *higher* in Maryland than in other states.¹⁹² It is much easier to have below-average increases in spending when baseline levels of spending are already above average.

Moreover, Medicare pays far more for individual services in Maryland than it does in other states. The evaluation conducted by CMS found that the payments for outpatient services were 58-66% higher in Maryland than they would have been under standard Medicare payments and 33-44% higher for inpatient admissions.¹⁹³ Since Medicare beneficiaries are responsible for 20% of the amount Medicare pays for outpatient services, the higher prices for outpatient services means Medicare beneficiaries in Maryland pay more for those services than Medicare beneficiaries in other states.

Private insurance plans and uninsured patients pay less for hospital services in Maryland than in other states, but this is not because either prices or revenues are constrained; it is due to the fact that Medicare, Medicaid, and Medicare Advantage plans are required to pay 94% of the amounts that commercial insurance plans pay (i.e., a difference of 6%). The evaluation of the Maryland model conducted by CMS found that payments for commercial insurance payments for inpatient admissions were 11-15% lower in Maryland than in a comparison group. However, the evaluators reported that these lower payments did not fully offset the 33-44% higher payments from Medicare for inpatient admissions; i.e., overall prices for inpatient care were higher in Maryland. (The study did not examine private insurance payments for outpatient services.)

In addition, the Maryland global budget model assures that a hospital receives no less than the full budget amount by allowing the hospital to increase the fees it charges for individual services. This means that if the hospital delivers fewer services, patients will pay more for any services they receive until their deductible is met

and they will pay more for any services where cost-sharing is proportional to the fee or charge for the service. Medicare and health insurance plans will collectively pay no more than they would have otherwise because their total payments are constrained by the global budget, but individual patients could pay significantly more than they would have otherwise because of the higher prices for individual services.

The amounts paid by patients could increase even more under the version of global budgets used in the Pennsylvania Rural Health Model, because the global budgets in Pennsylvania constrain the portion of revenue that comes from the insurance plan but not the amount that comes from the patient, and because there is no constraint on the amount that comes from self-insured patients. As a result, a hospital could still increase its revenue by increasing charges for services, and all of that increase would come from patients.

3. Ability of Global Budget Revenues to Sustain Rural Hospital Operations

The scenarios discussed above examine the impacts of changes in service volumes and costs that occur during the course of a year under a global budget that has already been established for that year. However, all of the scenarios assumed that (1) the amount of payment the hospital would receive under current payment systems was adequate to cover the cost of the services in the “status quo scenario,” and (2) the hospital would receive the same amount under the global budget as it would have received under current payment systems in the status quo scenario.

The first assumption was used in an effort clearly show the impacts of the global budget payment *method* on the hospital’s finances under different scenarios, but the *amount* of the budget is also critical. As shown in Chapter II, the payments most small rural hospitals are receiving from most payers are *not* adequate to cover their costs, so a global budget based on the amount of revenue they receive under current payment systems would not prevent them from closing.

In the Maryland and Pennsylvania systems and in global budgets used in other countries, the hospital’s global budget for the year is not determined based on what the hospital would have received under fee-for-service or cost-based payment systems for a particular volume and mix of services. The global budget for the year is based primarily on what the global budget was for the prior year. Although formulas are used to make adjustments for inflation, changes in the population of the community, and other factors, there is no assurance that these formulas will result in a budget that is adequate to cover the hospital’s costs of delivering high-quality services to patients. In the CMS CHART Model, the increase in the discount factor every year would make it less likely that payments would be adequate to cover costs.

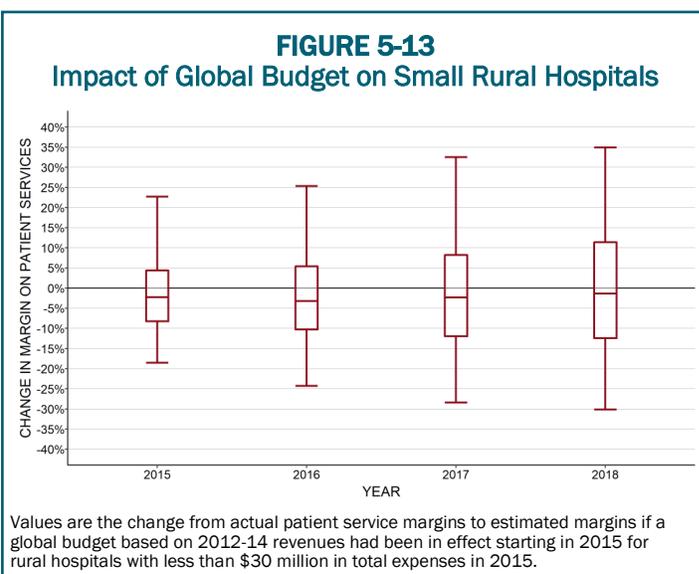
There is also the potential that the global budget formulas will result in some hospitals receiving more revenues than they would have received under current payment systems, and potentially even more revenues than they need to cover the cost of services. The possibility of this

has been one of the attractions of the global budget concept for some hospitals. Hospitals that have experienced declining revenues because there are fewer people living in their community, because the residents are healthier, or because the residents are more reluctant to receive elective services would have more stable revenues under the global budget than under fee-for-service or cost-based payment. Under a global budget, hospitals that have the ability to eliminate services could reduce their costs without experiencing a loss in revenues, thereby reducing or eliminating financial losses.

The extent to which an individual hospital will benefit or suffer over time will vary, depending on the adequacy of the hospital’s revenues when it first began receiving a global budget, the way that its services and costs change over time, and the formula used to adjust the global budgets over time.

Figure 5-13 shows the change in the patient service margin that all of the small rural hospitals in the U.S. would have experienced in 2015-2018 if they had begun receiving all of their patient service revenues based on a global budget beginning in 2015. The initial budget in 2015 is based on the formula used in the Pennsylvania Rural Health Model, i.e., the hospital receives the same amount in 2015 as the hospital’s revenue in 2014 or the average of its 2012-2014 revenues, whichever is greater. The budget in each subsequent year is then increased by the rate of growth in the GDP that year (which ranged between 3% and 5% in the 2016-18 period).

As shown in Figure 5-13, some hospitals would experience very large increases in their margins each year, while others would experience very large reductions. Overall, the majority of hospitals would have lower margins in each year than they would have had under their existing payment systems. Although some individual hospitals would do worse in some years and better in other years, the negative impacts would outweigh the positive changes, and the cumulative change would be negative for the majority of hospitals. If the budgets were to increase by amounts smaller than the GDP



growth, more hospitals would experience even greater losses.

These projections are based on a very simplistic methodology – increasing the prior year’s budget by an inflation factor. As noted earlier, the budgets in Maryland are also adjusted each year using a complex methodology intended to capture changes in the size, demographic characteristics, and healthcare utilization of the community, and to create incentives for reducing avoidable utilization. The Pennsylvania system is supposed to make similar types of adjustments. These adjustments could reduce some of the projected losses shown in Figure 5-13, but they could also increase them.

Figure 5-14 shows an estimate of the impact of the CMS CHART model on very small rural hospitals if it had been in place during this period of time, if all of the hospital’s payers had been participating.¹⁹⁴ Here again, some hospitals could have much higher margins, and some could have much larger losses, but the majority would likely have lower margins than they would under current payment systems.

It is important to emphasize that these are *retrospective* analyses, based on how the hospitals’ costs and revenues actually changed. For many hospitals, it is unlikely that they could have predicted their costs and revenues multiple years into the future with sufficient accuracy to determine prior to participation in a global budget model whether they would be better off or worse off financially. Moreover, these analyses are based on one specific period in time. Because small hospitals can experience significant year-to-year variations in revenues, the amount of revenues they receive under these global budget models could vary significantly depending on which base year is used to calculate the initial budget amount.

4. The Difficulty of Expanding Services Under a Global Budget

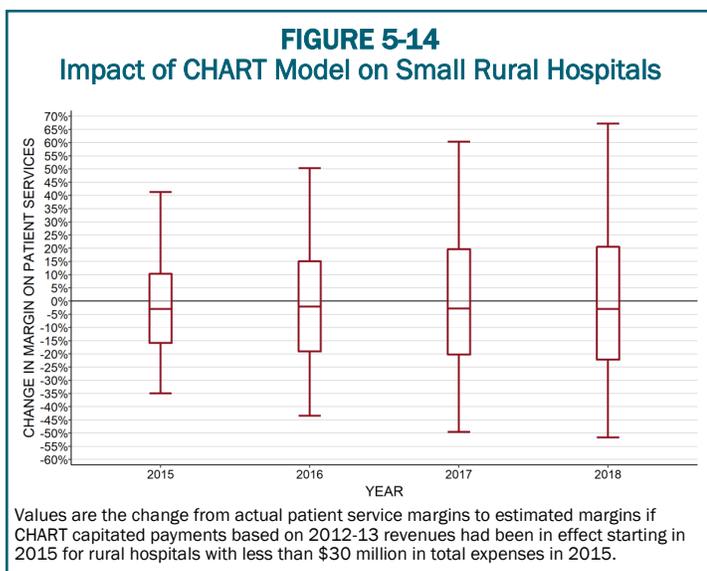
Although the stability of revenues under the global budget can be an advantage if a hospital wants to scale back or eliminate a service line, it is a disadvantage if the hospital wants to expand the services it delivers to the residents and businesses in its community. The initial revenue under the global budget is based on the set of services that the hospital was delivering when the global budget program began, and the global budget in each subsequent year is based primarily on the revenue the hospital received the prior year.

As a result, under a global budget, if a rural hospital wants to deliver a new type of service, it would have to seek and receive permission for an increase in its global budget. While this could discourage delivering unnecessary or duplicative services, it could also delay or prevent delivering necessary services. Many small rural hospitals would like to deliver behavioral health services, care management services, and other types of beneficial services to the residents of their communities, but they have been unable to do so because of losses they are experiencing on other services. They may still be unable to deliver these services under a global budget.

In contrast, under a cost-based payment system, a hospital would automatically receive higher payments for the new hospital service based on the cost of delivering that service. Under a fee-for-service system, the hospital would also automatically receive additional revenues from the fees paid for the new services, although the feasibility of delivering the service would depend on the amount that the hospital could charge and the volume of services it would deliver.

Under the Maryland global budget system, if a hospital wants to add a service line, it needs approval from the state Health Services Cost Review Commission to increase its global budget; if the Commission approves the increase, it can also authorize the hospital to charge fees for its services that will generate the higher level of revenue. In contrast, under the Pennsylvania system, each individual payer would need to agree to increase the global budget amount that it pays, and there is no assurance that any increases they did agree to would collectively provide sufficient revenue to cover the cost of delivering the new service. Although the Pennsylvania Rural Health Redesign Center Authority could recommend changes in all of the payers’ global budget amounts that would be sufficient, it cannot require them to make those changes.

A frequently-cited advantage of global budgets is the flexibility they give a hospital to pay for the costs of a new service by reducing avoidable services in existing service lines. However, the hospital’s ability to do this depends on whether it can, in fact, reduce the cost of a service line when the volume of services decreases. At small rural hospitals, the level of staffing in each service line is often already at or near the bare minimum needed to deliver any services at all, and so there is no way to reduce the cost even if fewer services are delivered.



Moreover, the hospital's ability to reduce readmissions and other avoidable services usually depends on whether the hospital can deliver alternative types of services to the patients. For example, providing care management services to patients with chronic diseases can reduce avoidable hospital admissions and readmissions. However, a hospital would have to deliver the improved care management services *first* in order to reduce admissions. If the hospital is currently losing money and the global budget provides no additional funds beyond the revenues received in the past, the hospital would not have any additional resources to invest in expanded care management services until *after* hospital admissions had been reduced.

For example, as shown in Figure 5-14:

- even if a small hospital had a 20% readmission rate, cutting the readmission rate in half would only reduce the total number of patients by 8%, and that would not be enough to justify staffing changes in a small

hospital. If the hospital had started with an average daily census of 6 patients, a 50% reduction in readmissions would only have reduced the census to 5.5 patients, and the same number of nurses and other staff would be needed on the inpatient unit. Even if the hospital were able to eliminate readmissions entirely, it would likely still need the same level of staffing.

- However, if the hospital had hired a nurse care manager to improve discharge planning and follow-up after discharge in order to reduce readmissions, that would increase the hospital's costs, with no increase in revenue to pay for it.
- Moreover, to the extent that the hospital was receiving fee-for-service payments for any of the readmitted patients from payers not participating in the global budget system, reducing readmissions for these patients would reduce the hospital's revenues.

The net result is that improving care for patients makes the hospital worse off financially, even under a global budget.¹⁹⁵

FIGURE 5-14						
Inpatient Margins Under Global Budget with Program to Reduce Readmissions						
	Baseline		Reduced Readmissions		No Readmissions	
Readmission Rate	20%		10%		0%	
Inpatient Census						
Initial Admissions	5.0		5.0		5.0	
Readmissions	1.0		0.5		0.0	
Total Acute Admissions	6.0		5.5		5.0	
	Days	\$	Days	\$	Days	\$
Revenues						
Medicare (Global)	1,095	\$1,673,000	1,004	\$1,673,000	913	\$1,673,000
Other Payers (Global)	548	\$876,000	502	\$876,000	456	\$876,000
Other Payers (Per Diem)	548	\$876,000	502	\$803,000	456	\$730,000
Total Revenue	2,190	\$3,435,000	2,008	\$3,352,000	1,825	\$3,279,000
Costs						
Baseline Cost	\$3,380,000		\$3,380,000		\$3,380,000	
New Care Manager	\$0		\$95,000		\$95,000	
Total Cost	\$3,380,000		\$3,475,000		\$3,475,000	
Profit/Loss (Margin)	\$45,000 +1%		(\$123,000) -4%		(\$196,000) -6%	
Cost Per Day	\$1,543		\$1,731		\$1,904	
Other Payer Per Diem Fee	\$1,600		\$1,600		\$1,600	

5. Winners and Losers Under a Global Budget

What is clear from the above analysis is that a global budget system will be better than the current payment system for some hospitals but worse for others. Although the exact impacts will depend on both the specific characteristics of the hospital and the structure of the global payment system, a few general observations can be made about which hospitals will be “winners” and which will be “losers” under a global budget system.

Winners:

- **Hospitals that are currently profitable and have no difficulties attracting and retaining staff at competitive wages.** Under a global budget, these hospitals could receive a predictable revenue stream that increases with inflation and it could maintain its margin by holding wage increases for its personnel to similar or lower amounts.
- **Hospitals in communities that are experiencing significant population losses.** Under a global budget, these hospitals would no longer experience reductions in revenue due to the declining number of residents in the community.

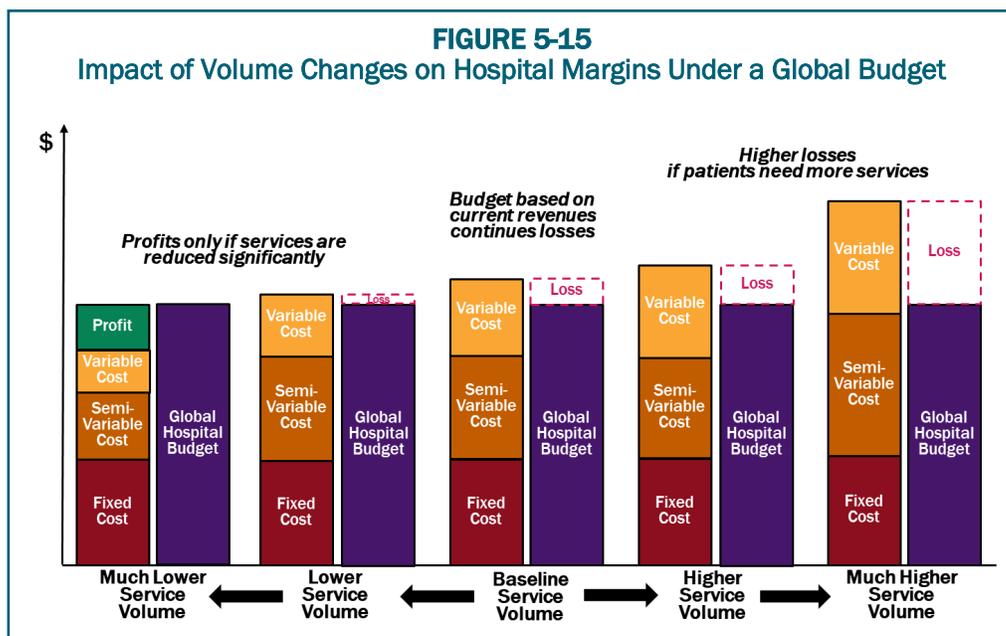
Short-Term Winners:

- **Hospitals with formerly profitable service lines that are no longer financially viable and that are not viewed as essential for the community.** Under a global budget, these hospitals could eliminate the service line and its associated cost while retaining the revenues it had been receiving for the services for at least some period of time. However, Medicare and other payers will likely want to reduce payments to a hospital if it is delivering fewer services, so this benefit may only last for a short time.

Losers:

- **Communities with hospitals where current revenues are lower than the cost of delivering patient services.** Under a global budget, revenues would be similar to previous years, so these hospitals would likely continue to receive inadequate revenues.
- **Communities whose populations have increasing health needs that will result in the need for more services.** Under a global budget, the hospitals in these communities would have no additional revenues to support hiring additional staff to provide additional services unless the global budget formula identifies the changes in the community’s health needs and adjusts for them adequately.
- **Communities that have difficulties recruiting physicians, nurse practitioners, physician assistants, nurses, and/or other staff.** Although the global budget could protect the hospital from loss of revenue during periods when it does not have staff available to deliver services, most hospitals will hire temporary employees until vacancies are filled, and there will be no additional revenue under the global budget to cover the higher cost of the temporary workers. Similarly, if the hospital has to pay more to attract employees, this may increase its expenses more than any annual adjustment in the global budget.
- **Communities that want to establish new service lines to reduce the need for residents to travel long distances for care.** As discussed earlier, under a global budget, the hospital would have to get approval from a regulatory agency and/or multiple payers in order to do this.

Since it is impossible to predict exactly what will happen in a small rural community in the future, it is also impossible to say whether and for how long an individual hospital would be a “winner” or “loser.” A global budget model that would help a hospital next year may harm it the following year. In Maryland, the HSCRC receives many requests from hospitals each year to adjust the global budgets determined by the agency’s formulas because of circumstances that are not captured by those formulas.



E. The Shift Away from Hospital Global Budgets in Other Countries

Global hospital budgets have been used for far longer periods of time in other countries than anywhere in the U.S.¹⁹⁶ This is partly because hospitals in other countries were traditionally more likely to be government-run than in the United States, and partly because it was easier for countries with single-payer health insurance systems to create and enforce a truly “global” budget for a private hospital since all of the payments for the hospital’s services were coming from a single government agency.

However, other countries’ greater experience with global budgets has also given them a better understanding of their limitations. Although global budgets have generally been viewed as effective in controlling hospital costs, many hospitals have placed limits on admissions or services in order to stay within their budgets, and this has resulted in waiting lists for patients to receive services. Moreover, there is an incentive for hospitals to use the lengths of their waiting lists as justification for receiving higher budgets.¹⁹⁷

In order to encourage greater efficiency and reduce wait times for services at hospitals, a number of countries that had used global budget systems have modified or replaced them with “activity-based” systems that tie all or part of the hospital’s revenues to the volume and complexity of services delivered.¹⁹⁸ An “activity-based” payment is really just a different name for “fee for service” payment; in fact, many of the systems in the other countries use case rate payments similar to the DRG-

based payments in the Inpatient Prospective Payment System created by Medicare in 1983.

Evaluations of these changes have found both positive and negative impacts.¹⁹⁹ Long waiting times for services continue to be a priority concern for most countries even under the modified versions of global budget systems.²⁰⁰ Many countries have had to provide higher funding levels to increase capacity in order to reduce or avoid increases in waiting times, but a recent study found that waiting times for elective services had begun increasing again in 2019 before the coronavirus pandemic began.²⁰¹

Clearly, simply using a global budget to pay hospitals does not achieve better results than using a fee-for-service or cost-based payment system if the payments are not adequate to support the cost of delivering high-quality care to patients.

Example: Hospital Payments in Canada

For several decades, the large provinces in Canada funded hospitals using global budgets.²⁰² This was viewed as a major improvement over the previous system in which hospital budgets were reviewed and approved on a line item-by-line item basis.²⁰³ The total amount of funding for hospital services and the allocations of that funding among hospitals was determined at the beginning of each year, and the proportions allocated to each hospital typically changed little from year to year.²⁰⁴

However, serious concerns developed about overcrowding of hospitals and long wait times under this system.²⁰⁵ In 2010, the same year that the state of Maryland began implementing its global budget system in the U.S., Canadian provinces began developing ways to reduce the reliance on global budgets and to make greater use of “activity-based funding” for hospitals.²⁰⁶

For example, in 2011, the Ontario Ministry of Health and Long Term Care began a multi-year implementation of a new “patient-based” payment system for hospitals. Under this system, two new funding components partially replaced global budgets: the “Health Based Allocation Method” (HBAM) and “Quality-Based Procedures” (QBP).²⁰⁷ Under the Quality-Based Procedures component, hospitals began receiving a portion of their funding based on the number of patients they treat for select procedures, using standard prices for each procedure that are established by the government. The initial procedures were hip replacement, knee replacement, dialysis, and cataract surgery.

Hospital revenues in Ontario and other provinces are still based primarily on a global budget methodology, and the changes that have been made have not been sufficient to address concerns about inadequate hospital capacity and waiting times. A 2017 survey of 11 countries found that Canada had the highest percentages of patients waiting two months or more for specialist appointments and elective surgery, 4-5 times as many as in the United States.²⁰⁸ A 2019 study of what is described as “hallway healthcare” in Ontario found that on any given day, at least 1,000 people are being treated in Ontario hospital hallways rather than in hospital rooms because of inadequate hospital capacity.²⁰⁹ At the beginning of 2020, the hospitals in Ontario requested an increase of nearly \$1 billion in funding in order to address capacity issues.²¹⁰

VI. THE PROBLEMS WITH ACOs, SHARED SAVINGS, AND GLOBAL PAYMENTS

KEY POINTS

Most small rural hospitals are unlikely to benefit from forming an Accountable Care Organization (ACO) or participating in shared savings programs. Under the Medicare Shared Savings Program, the only way a hospital can receive more money is by reducing Medicare spending by a sufficient amount, and the majority of the ACOs in the program have been unable to do that. It is particularly difficult for small rural ACOs to receive shared savings bonuses because they have to achieve a bigger percentage reduction in spending to qualify for a bonus than larger ACOs, and the rates of service utilization are generally lower in small rural communities so there are fewer opportunities to generate savings.

Many small rural hospitals could be harmed financially by participation in shared savings programs. If a hospital hires additional staff or consultants to help it succeed in the shared savings program, it will increase its costs with no guarantee of receiving any additional payments to offset the higher expenses. If the hospital reduces the number of services it delivers to patients, it will create savings for payers but it will also reduce its own revenues by more than any shared savings bonus it would receive.

Small rural hospitals could be particularly harmed if they accept “downside risk.” In the future, ACOs will be required to pay penalties if *total* healthcare spending for their patients increases. Small rural hospitals do not deliver and cannot control many of the most expensive services their residents may need, and a requirement that the rural hospital pay penalties when rural residents need expensive services at urban hospitals would worsen the rural hospitals’ financial problems. There are also serious problems with the methodologies used for risk adjustment and setting of spending targets that could particularly harm small ACOs in rural areas.

Residents of rural communities could be harmed by the incentives in shared savings and downside risk programs. The primary goal of these incentive programs is to reduce spending for payers, not to improve the quality of care for patients. Bonuses and penalties based on changes in payer spending create a financial incentive for ACO participants to withhold services that patients need, to discourage patients from receiving high-cost services, and to avoid providing care to patients who have serious health problems. The limited number of quality measures in shared savings programs cannot prevent this from occurring.

A. The Promise and Problems of ACOs

Many small rural hospitals have been told that their best and perhaps only path to sustainability is to form or join an “Accountable Care Organization” (ACO), because of the potential to receive higher payments for delivering high-quality, efficient care than they can receive under standard fee-for-service or cost-based payment systems.

The Affordable Care Act defined an ACO as a group of providers that work together to manage and coordinate care for their patients and that are willing to be accountable for the quality, cost, and overall care of those patients.²¹¹ It might seem that a small rural hospital that operates one or more Rural Health Clinics would be ideally suited to serve as an ACO, since it delivers primary care and the most commonly-used outpatient services to the residents of its community, as well as inpatient and post-acute care for common medical conditions and chronic diseases. Moreover, if participation in the ACO could result in higher payments for the rural hospital, it could improve the hospital’s financial status, helping it to continue delivering existing services to the community and potentially even to improve and expand those services.

The problem is that the “shared savings” and “two-sided risk” payment systems used by Medicare and other payers to pay ACOs can actually make a small rural hospital

worse off financially than it would be under current payment systems. Although it is *possible* that a small rural hospital could improve its financial margin by forming or joining an ACO that is paid in these ways, it is more *likely* that the hospital will receive no financial benefit at all or even be penalized financially for being part of the ACO. Moreover, because current ACO programs have failed to generate significant savings for payers, the payment methodologies are being changed in ways that will make it even more difficult for rural hospitals to benefit in the future and more likely that they will be financially harmed.

B. How “Shared Savings” Actually Works

A shared savings program sounds simple and attractive. Physicians and hospitals are told that if they form an ACO and if they are able to deliver high-quality health care to patients while reducing the amount that the patients’ health insurance plans spend on their care, they will receive a bonus payment based on a share of the savings that the payer has received. The devil is in the details, however, particularly in the way determinations are made about which patients the ACO is accountable for, when savings have occurred, and how much of the savings should be shared.

The Medicare Shared Savings Program uses the following methodology to make those determinations:²¹²

- CMS determines what subset of the Original Medicare beneficiaries in the community are “assigned” to the ACO. This is based on whether a beneficiary has received most of their primary care services at the hospital’s clinic or from primary care practices in the community who have agreed to be part of the ACO. A beneficiary can also be assigned to the ACO if they explicitly notify CMS that the clinic or affiliated practice is responsible for coordinating their overall care. An ACO is only eligible to participate in the Medicare Shared Savings Program if it has one or more affiliated primary care clinics/practices and if there will be at least 5,000 Medicare beneficiaries assigned to those clinics/practices.
- When the rural hospital or any other provider delivers a service to a Medicare beneficiary who has been assigned to the ACO, CMS pays the exact same amount for that service as it does currently. There are no payments for services that the hospital or clinic provide if they cannot currently be paid for them.
- At the end of each year, CMS calculates the total amount it has paid for all healthcare services to the assigned beneficiaries during the year. CMS compares that actual amount of spending to a “benchmark” amount that represents what CMS projects it would have spent during the year if the ACO had not existed. The benchmark is calculated by taking the average total per-patient spending on the ACO’s patients in previous years, risk-adjusting that amount, and then inflating that based on the amount that risk-adjusted per-beneficiary spending increased in other parts of the country during the previous year. Medicare spending on the beneficiaries assigned to the ACO does not have to actually *decrease* in order for the ACO to be credited with “savings;” spending on the assigned beneficiaries merely has to *increase less* than what CMS projects would have happened in the absence of the ACO.
- If (and only if) the actual spending on the ACO’s patients is lower than this benchmark amount by more than the “Minimum Savings Rate” (MSR) established by CMS, the ACO is *potentially* eligible to receive a bonus payment. The Minimum Savings Rate that must be achieved is higher for smaller ACOs because of the concern that small ACOs could appear to have savings that are simply due to random variations in spending from year to year. CMS requires that for an ACO with 5,000 beneficiaries, actual spending must be at least 3.9% below the projected benchmark in order to qualify for a bonus, whereas an ACO with 60,000 beneficiaries only needs to have spending that is 2.0% lower.
- Assuming this minimum savings level is achieved, the *maximum* bonus that the ACO can receive is equal to a percentage of the difference between the benchmark and the actual spending. The percentage is either 40%, 50%, or 75% depending on the specific “Track” in the Medicare Shared Savings Program in which the ACO is participating.

- The *actual* bonus (the “earned performance payment”) is determined by reducing the maximum bonus amount based on the ACO’s “quality score.” The quality score is determined by calculating the performance of the hospital, clinic, and other providers who are part of the ACO on 23 quality measures and comparing their performance to national percentiles. If the quality score is too low, there will be no bonus at all.
- If the ACO does qualify for a quality-adjusted bonus, the amount is reduced by 2% to meet Congressional sequestration requirements. If the amount of savings is so large that it exceeds a maximum percentage of the benchmark expenditures established by CMS, the bonus is capped at the maximum.

In order to receive a higher percentage of any savings, a subset of ACOs have agreed to accept “two-sided risk,” which means that in addition to receiving bonuses when savings occur, they are required to pay penalties if actual spending exceeds the benchmark spending level by more than a “Minimum Loss Rate.” When this occurs, the penalty is based on a percentage of the difference between the actual and benchmark spending, up to a maximum amount. Under revisions to the program announced in 2019, all ACOs will ultimately have to accept two-sided risk.²¹³

Other payers use variations on this same approach, but private health plans generally do not make the details of their shared savings methodologies publicly available, so it is difficult to determine whether it is easier or harder for physicians and hospitals to receive shared savings bonuses from them.

C. Why Shared Savings Programs Don’t Fix the Problems With Current Payment Systems

Under a Shared Savings program, a hospital receives bonuses and pays penalties based on how *spending* changes for *payers*, regardless of whether and how much *costs* change for the hospital and whether the hospital’s revenues are *adequate* to support those costs. Since the majority of costs are fixed for small hospitals, and the majority of costs are fixed in the short run for all hospitals, small changes in the number of services delivered will generally change the hospitals’ revenues more than its costs. Tying the hospital’s payments solely to whether payers spend more or less does not ensure that the revenues will match the hospital’s costs.

For example, Figure 6-1 shows an Emergency Department at a hypothetical hospital that has 12,500 visits in the base year and has operating costs similar to what is shown in the previous examples in Figures 4-4 and 5-8. For simplicity, it is assumed that all payers are paying a \$278 fee for each ED visit, which is sufficient to produce a 3% margin for the ED.

It is assumed that all of the payers are participating in a shared savings payment model in which the hospital receives a bonus equal to 50% of the savings if spend-

ing by the payer is reduced, but the hospital has to pay a penalty of 50% for any increase in spending.²¹⁴

The three scenarios shown are the same as those shown in previous chapters. In order to illustrate the impacts of the shared savings model, it is assumed here that only ED visits change, and all other types of spending remain the same.

- In Scenario A, the number of ED visits decreases by 10%. The hospital's ED revenue also decreases by 10% because revenue is tied to fees for each visit, and that does not change under the Shared Savings model. The decrease in the hospital's revenue represents savings for the payers, so the hospital receives a bonus payment equal to 50% of the savings. The bonus is only half of what the hospital lost in fee revenue, however, so the hospital now incurs a loss on the ED.
- In Scenario B, the number of ED visits increases by 10%. The hospital's fee revenue increases by 10%, but since this represents an increase in spending for payers, the hospital has to pay a penalty equal to 50% of this increase. Despite paying the penalty, the hospital still receives more revenue than it would have otherwise, and since there is no change in the cost of operating the ED, the hospital makes a higher profit.
- In Scenario C, the number of ED visits increases sufficiently that the hospital has to hire more ED physicians (the increase in cost is the same as what was shown in Figure 5-8.) The additional revenue the hospital receives from the visit fees would be sufficient to cover the higher cost, but because the increase in fee revenues represents an increase in spending for the

payers, the hospital has to pay a penalty of 50% of that increase. Because of the penalty, the hospital's net revenue does not increase sufficiently to cover the higher costs, and the hospital incurs a loss on the ED.

The result is that the hospital is still penalized for reducing ED visits despite receiving shared savings bonuses. If it is required to accept downside risk, it can also be penalized when it experiences an increase in ED visits for reasons beyond its control and it needs the revenue from those additional visits to support increases in capacity that are needed to deliver the care patients need.

If there is a reduction in services delivered by other hospitals or physicians, rather than in the services delivered by the hospital, the hospital could receive a shared savings bonus without any corresponding decrease in its own revenues. However, if there is an *increase* in services delivered by other hospitals and physicians, the hospital could have to pay a penalty without any increase in its own revenues.

The fundamental flaws in the shared savings approach became particularly apparent during the 2020 coronavirus pandemic:

- Hospitalization rates increased because of the large number of patients infected with the virus, but the increases differed dramatically from community to community depending on the rate of infection and the susceptibility of the population to infection. The Shared Savings Program's risk-adjustment methodology does not adjust for changes or differences in the rate at which patients experience acute conditions, so ACOs in communities with high infection rates could

FIGURE 6-1
ED Margins Under Shared Savings With Changes in Visits

	STATUS QUO		SCENARIO A Fewer Visits		SCENARIO B More Visits		SCENARIO C More Visits + Cost	
	ED Visits	\$	ED Visits	\$	ED Visits	\$	ED Visits	\$
Revenues								
Fees (\$278/visit)	11,875	\$3,304,000	10,688	\$2,974,000	13,063	\$3,634,000	14,250	\$3,964,000
Shared Savings				\$165,000		\$0		\$0
Downside Risk				\$0		(\$165,000)		(\$330,000)
Uninsured	625	\$0	562	\$0	687	\$0	750	\$0
Total Revenue	12,500	\$3,304,000	11,250	\$3,139,000	13,750	\$3,469,000	15,000	\$3,634,000
Total Cost		\$3,213,000		\$3,213,000		\$3,213,000		\$3,929,000
Profit/Loss (Margin)		\$91,000 +2.8%		(\$74,000) -2.3%		\$256,000 +8.0%		(\$295,000) -7.5%
Payer Savings				\$330,000		(\$330,000)		(\$660,000)

be penalized because spending on inpatient care increased by a higher amount.

- Many patients who were not infected by the virus delayed or avoided receiving other healthcare services, including services that they may have needed to prevent more serious conditions and avoid the need for more expensive treatments. Under the Shared Savings Program methodology, this reduction could be treated as “savings” in 2020, but if patients have simply deferred the services until 2021, or if they end up needing even more services because they avoided preventive care, then spending will increase in 2021, reducing or eliminating the potential for a shared savings bonus and potentially subjecting ACOs to penalties. Although every community will have experienced these problems to some degree, bonuses and penalties in the Shared Savings Program are based on the *relative* changes in spending between communities, so different ACOs will likely be affected differently by this.
- Suspending the Shared Savings program during the pandemic in order to avoid unfair penalties for ACOs would also prevent ACOs from obtaining shared savings bonuses that they needed to offset the cost of care management or other services they had implemented using their own resources.

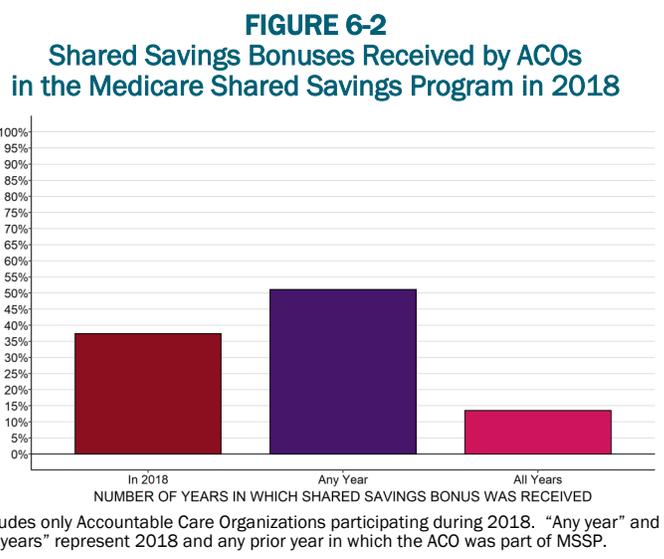
D. Why Shared Savings Programs Are Particularly Problematic for Small Rural Hospitals

Both the general approach and the details of the methodology used by Medicare make the shared savings model particularly problematic for small rural hospitals:

- **The smallest rural hospitals are too small to participate.** A hospital, clinic, or other group of providers is only eligible to participate in the Medicare Shared Savings Program if they will have at least 5,000 assigned Medicare beneficiaries. The majority of counties in the country have less than 5,000 Medicare fee-for-service beneficiaries²¹⁵, which means that even if every one of the beneficiaries living in the county was assigned to the ACO, the ACO would not be large enough to participate.²¹⁶ 80% of the smallest rural hospitals (those with less than \$30 million in total expenses) are located in counties with fewer than 5,000 Medicare beneficiaries. In general, the only way for a small rural hospital to participate in an ACO is if a large hospital is also participating or if multiple small rural hospitals and clinics join together to create an ACO that spans a large enough geographic area to ensure that at least 5,000 Medicare fee-for-service beneficiaries will be assigned.
- **There is no additional revenue for the hospital unless the payer determines there have been savings, and there is no permanent change in payment.** The shared savings program is just a pay-for-performance system added on top of the standard payment systems. A hospital still receives the same fee for each individual service it delivers; in the Medicare program, a Critical Access Hospital or Rural Health Clinic still receives the same cost-based payment as it would

otherwise. If the hospital does receive a shared savings bonus, it is only for one year, and there is no guarantee that the hospital will qualify again the following year. The Medicare Shared Savings Program does nothing to increase payments for existing services to ensure the payments are adequate to cover the cost of delivering those services.

- **Most ACOs have not been able to qualify for shared savings payments, and fewer have qualified in multiple years.** As shown in Figure 6-2, only 37% of ACOs participating in the Medicare Shared Savings Program received a shared savings bonus in 2018. Only half of them had achieved a shared savings bonuses in any year they had participated (the average length of participation was 3.4 years) and only 14% had received a shared savings bonus in every year that they participated.²¹⁷
- **It is particularly difficult for small rural ACOs to receive a shared savings payment.** There are a number of aspects of the Medicare Shared Savings Program and the methodology it uses to calculate spending and bonuses that can make it much more difficult for an ACO formed by a small rural hospital to qualify for a shared savings bonus, including:
 - ◆ **Rates of service utilization are already below average in many counties where small rural hospitals are located.** In 2018, Medicare beneficiaries living in counties served by small rural hospitals had fewer inpatient days, hospital readmissions, ED visits, laboratory tests, and imaging studies than those living in counties served by larger rural or urban hospitals.²¹⁸ It is harder for a rural hospital ACO to reduce spending when rates of service utilization are already below average compared to other communities. The Shared Savings Program gives no credit to an ACO for having kept spending low in the past; it only gets credit for reducing spending in the future.
 - ◆ **Risk-adjustment can make spending in rural counties appear higher than it really is.** The CMS methodology risk-adjusts spending amounts in order avoid penalizing an ACO for higher spending because its patients are sicker. However, the risk-



adjustment methodology CMS uses fails to accurately measure the true differences in patients' health because it uses Hierarchical Condition Category (HCC) scores. HCC scores are only based on past chronic conditions, not acute conditions or new chronic conditions, so there is no adjustment for patients who have injuries, who develop pneumonia or other acute conditions, or who are newly diagnosed with diabetes, cancer, or other serious chronic conditions. Moreover, the risk scores are based only on diagnosis codes that have been recorded on claims forms submitted when services are delivered. Since Critical Access Hospitals are not paid using diagnosis-based DRGs and because Rural Health Clinics receive a single payment for each visit rather than separate fees for individual services, the diagnosis codes recorded in claims files for patients in rural areas are generally not as complete or accurate as those submitted by larger hospitals and primary care practices.²¹⁹ This can make the rural patients appear less sick than patients in other communities, which in turn makes risk-adjusted spending appear higher, increasing the potential for penalties.

- ◆ **Reducing avoidable services at Critical Access Hospitals does not necessarily create savings for Medicare or shared savings bonuses for the hospital.** At most hospitals, a reduction in emergency department visits or hospital readmissions would result in lower spending for Medicare (as well as less revenue for the hospital). However, at small hospitals, a reduction in the number of services delivered may not enable the hospital to eliminate any costs, and because Critical Access Hospitals receive cost-based payment, the hospital may receive the same revenue from Medicare as it did before, making it more difficult to achieve a minimum level of savings.
- ◆ **Increasing patient utilization of primary care services in rural areas can increase spending more than in urban areas.** Medicare pays much more for a visit to a Rural Health Clinic operated by a small hospital than it does for visits to primary care practices in urban areas, so if the rural ACO encourages residents to obtain primary care, Medicare spending would likely increase more than it would at ACOs in other areas.
- ◆ **Home care services are less likely to be available in rural areas.** One of the primary ways that ACOs have achieved savings is by reducing the use of inpatient rehabilitation services for patients who have been hospitalized. Many patients who currently go to a Skilled Nursing Facility (SNF) following discharge from an acute inpatient stay could instead go home with appropriate home health care and other home supports, and this can not only reduce spending but improve outcomes for many patients. However, home health care is more difficult and expensive to provide in rural areas, so rural ACOs do not have the same home care options available to them that larger ACOs do.
- ◆ **The rural hospital and clinic have little or no control over the services they do not deliver directly.** Expensive, frequently-used treatments such as chemotherapy and percutaneous coronary interventions

(i.e., stents and angioplasties) represent a large share of total healthcare spending, and so the decisions made about whether to use those treatments on individual patients will have a significant impact on how much spending increases or decreases. Most small rural hospitals and clinics do not deliver these treatments nor do they employ the specialists who order them, so the rural hospital will have limited, if any, ability to control those aspects of spending.

- ◆ **A small number of patients with serious health problems can eliminate any savings.** In a large ACO, a small number of patients who need unusually expensive services or an unusually large number of services will only affect total spending by a small amount. In a small ACO, however, even a few patients who need expensive services can eliminate the chance of reaching the minimum level of savings needed to qualify for a shared savings bonus. For example, the rate of new lung cancer diagnoses is about 300 per 100,000 Medicare beneficiaries, which means that in an ACO with 5,000 assigned beneficiaries, there might be an average of 15 new lung cancer cases per year. However, the actual number will likely vary significantly from year to year in a small community. Since treatment for lung cancer can cost as much as \$100,000 per patient, if there were 10 new cases in the community in one year and 20 cases the next year, spending would increase by \$1 million (10 additional cases x \$100,000 per case). That increase would likely cause the total spending attributed to the ACO to increase by 2%.²²⁰ Since the ACO has to reduce the growth in spending by 3.9%, the increased spending on cancer treatment would mean that spending on other services has to be reduced by an average of 6%. This could eliminate the chance of the ACO receiving a shared savings bonus, even though the increase in spending on cancer treatment could not and should not have been prevented by the ACO.
- **Receiving a shared savings bonus does not necessarily mean the hospital has received more revenue in total.** If the rural hospital ACO is able to reduce spending by reducing ED visits, unnecessary hospital admissions, readmissions, inpatient rehabilitation, and other avoidable services, many of those services would have been delivered by the rural hospital itself. In a Shared Savings Program, there is no change in the way the hospital is paid for individual services, so if the hospital delivers fewer fee-based services, it will receive less revenue. That reduction in revenue will count as "savings" for Medicare or other payers, and if the reduction exceeds the Minimum Savings Rate, the hospital may receive a shared savings payment equal to a fraction of the savings. However, by definition, the shared savings payment will be less than the amount the hospital would have been paid for its services, so the net effect will be a reduction in the hospital's total revenue, as shown in Figure 6-1. This is particularly true for small rural hospitals with swing beds. When large hospitals reduce the use of Skilled Nursing Facilities, the SNFs experience the reduction in revenue, not the hospitals. But in a small rural hospital, the inpatient rehabilitation often occurs in

the hospital swing bed, not a separate SNF facility, so if inpatient rehabilitation decreases, the hospital would lose all or part the revenue.²²¹

- **A shared savings bonus may not offset the higher costs required to manage the ACO.** The rural hospital could receive an increase in revenue if there is a sufficient reduction in the number or types of services local residents receive at other hospitals or physician practices that are not part of the ACO. In general, however, in order achieve that, the hospital that is managing the ACO will need to obtain analytic information on all of the services the assigned beneficiaries are receiving (not just the hospital’s own services), and it will likely need to invest in care management staff and other services in order to try and reduce use of specialty services, readmission rates, ED visits, and other avoidable services. There is no direct funding available through the Shared Savings Program to support the additional costs of doing these things, nor is there any guarantee that if a shared savings bonus is earned, it would be sufficient to cover the additional costs. Consequently, the hospital would have to draw on its own reserves to pay the upfront costs and if it does not qualify for a bonus greater than that investment, its financial situation would be worse.

It is certainly *possible* for an ACO formed by one or more small rural hospitals to receive shared savings payments that will actually improve their financial margins. However, all of the many factors above make that *unlikely*, particularly in any consistent way that the hospital could rely on.

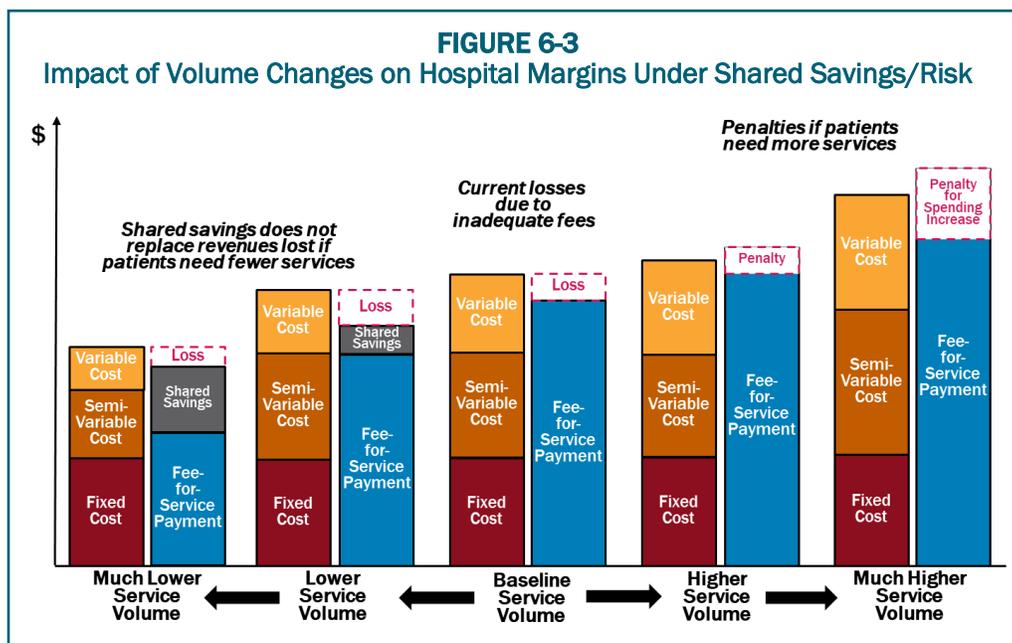
Some organizations are encouraging multiple rural hospitals, even hospitals located in different states, band together to form ACOs that have a large enough number of beneficiaries to qualify for the lowest Minimum Savings Rate and to reduce the chances of having to pay penalties if the ACO is required to accept two-sided risk. However, the bonuses or penalties for each rural hospital would then be dependent on how well all of the other rural hospitals control spending in their communities

while maintaining or improving quality. This also creates the potential for a “free-rider” problem – any individual hospital participating in such a large ACO could decide to do nothing at all to reduce spending or improve quality, while still sharing in any benefits produced by the other hospitals.

E. How Shared Savings Programs Can Harm Patients

Although the primary goal of an *Accountable Care Organization* should be to improve healthcare and health outcomes for patients, the primary goal of a *shared savings program* is to save money for Medicare or other payers:

- There are no changes in payments for individual services that would enable the providers in the ACO to deliver new high-value services that would benefit patients.
- There is no bonus for an ACO if it successfully improves the quality of care for patients more than other providers, no matter how large the improvement is. The ACO only receives a bonus if it reduces spending compared to other providers by a large amount.
- There is no penalty for an ACO that reduces the quality of care; the only penalty occurs if total spending increases.
- If an ACO reduces spending sufficiently to qualify for a shared-savings bonus, the bonus will be reduced if its providers deliver lower-quality care than other providers; this is the only “penalty” for poor quality care, and it only exists if the ACO has also reduced spending sufficiently. There is no comparable reward for deliver better quality care; even if the ACO qualifies for a shared savings bonus, the bonus will not be increased regardless of whether the ACO delivers better quality care than others do; the bonus can only be reduced.



Many of the ACOs in the Medicare Shared Savings Program have made a variety of changes in service delivery that have improved care for patients in very desirable ways. However, the ACOs made these changes because the hospitals and physicians who formed the ACO were large enough and had access to enough resources to make investments in better care, not because the Shared Savings Program enabled them to do so. Many hospitals that have formed ACOs have reported that they have actually reduced their financial margins as a result of these changes because the shared savings payments they have received, if any, were less than the costs they incurred to deliver improved services. Small rural hospitals are unlikely to have the ability to do this.

Because of the single-minded focus on achieving savings, a shared savings program creates problematic financial incentives that have the potential to harm rural hospitals, physicians, and other providers that are part of an ACO paid through shared savings:

- **a financial incentive to withhold services or discourage patients from receiving high cost services.** Delivering fewer services to patients will reduce spending, and that reduction in spending is counted as savings whether the patients needed the services or not. As a result, while the shared savings program creates a financial incentive to avoid ordering or delivering unnecessary services, it also creates a financial incentive to avoid ordering and delivering services that patients need. The quality measures in the program do not prevent this because there are no measures applicable to many types of patients and many aspects of care. For example, cancer, rheumatoid arthritis, and other conditions are expensive to treat properly, but there are no measures of whether patients in the ACO who have these conditions are receiving appropriate care. If there is a choice of two drugs to treat a health condition, one of which has a lower cost but is more likely to cause undesirable side effects for patients, an ACO is more likely to qualify for a bonus if its physicians prescribe the lower-cost drug, and no quality measure would be affected if patient side effects increase as a result. In fact, none of the data that are available about ACOs enables patients to determine whether ACOs are achieving savings by reducing unnecessary services versus reducing necessary care.
- **a financial incentive to avoid providing primary care to patients who have serious health problems.** A resident of the community with serious health problems who had not been receiving primary care would likely benefit from receiving primary care services from the hospital's clinic or a primary care practice that is part of the ACO. However, once the individual begins coming to the clinic or PCP, the patient would be assigned to the ACO, and all of the healthcare spending associated with the services that patient is receiving from any providers would be counted toward the ACO's spending level. Because of the flaws in the risk adjustment methodology used in the shared savings program, the more patients with serious health problems who are assigned to the ACO, the less likely the ACO will be to qualify for a shared savings bonus and the more likely it will be subject to a penalty under a shared risk agreement.
- **a financial incentive to identify patients' health problems but not to treat them.** Because spending will appear lower if the ACO's patients have higher risk scores, an ACO is more likely to qualify for a shared savings bonus if its patients have more diagnosis codes appearing in claims data. ACOs can potentially receive a greater financial return by investing in efforts to improve diagnosis coding than by investing in better services to treat the patients' health problems.

F. Greater Risk for Hospitals ≠ Better Quality Care for Patients

1. The Phase-Out of Shared Savings in Favor of Downside Risk

Although the Medicare Shared Savings Program was designed specifically to achieve savings for Medicare, it actually caused Medicare spending to increase in its first four years. Per-beneficiary spending increased above the benchmark levels in more than one-third of ACOs from 2012-2016. Only about one-third of ACOs reduced spending enough to receive a shared savings bonus, but those bonuses were greater than the small amount net savings CMS received due to the overall changes in spending, so paying the bonuses increased total Medicare spending. In 2017 and 2018, Medicare did save more than it paid out in bonuses, but the net savings was very small – net savings to the Medicare program only amounted to \$36 per beneficiary in 2017 and \$75 in 2018, less than 1% of total spending.

CMS did not attribute the lack of significant savings in the Shared Savings Program to the many problems in the payment methodology. Instead, CMS said that ACOs did not have enough “financial risk” and announced that the program’s “upside only” track would be phased out. All ACOs will ultimately be required to accept “downside risk,” i.e., to pay penalties if spending increases beyond the benchmark established by CMS.

However, there is no evidence that simply increasing the financial risk for the hospitals, physicians, and other providers in an ACO will result in greater savings for Medicare. Moreover, requiring all ACOs to pay penalties when spending increases by more than arbitrary thresholds will make the program even more problematic for small rural hospitals and rural communities:

- **Greater financial risk creates greater financial harm for rural hospitals.** The factors described above that reduce the likelihood of ACOs receiving shared savings bonuses also increase the likelihood that they will have to pay penalties. Unlike large hospitals, rural hospitals are not making large profits on non-Medicare patients that can be used to pay penalties to Medicare, nor do they have financial reserves that would enable them to afford to pay penalties that are caused by random variations in spending.
- **Greater financial risk encourages stinting on patient care.** The problematic financial incentives in the shared savings program to stint on patient care would be even stronger if a rural hospital is trying to avoid paying a penalty to Medicare rather than merely trying to qualify for a bonus payment.

2. The Problems with Global Payment Programs

A number of large physician practices, independent practice associations, and health systems have withdrawn from the Medicare Shared Savings Program or have refused to participate at all because of the problematic structure of the program and the fact that it makes no actual changes in the way healthcare providers are paid for services. They have called for Medicare to pay ACOs using a “global payment” or “population-based payment” instead. Many of these organizations already have capitation contracts with Medicare Advantage plans and commercial HMO plans that pay them in similar ways.

In response, CMS has created a new demonstration program called “Direct Contracting” in which entities called “Direct Contracting Entities (DCEs)” could take financial risk for the total Medicare spending on a group of assigned beneficiaries and receive capitation payments instead of fees for some or all of the services they provide.²²²

Whether one calls this “global payment,” “population-based payment,” “capitation,” or “direct contracting,” and whether one calls the entity receiving the payment a DCE, ACO, or something else, the basic concept is the same:

- a group of healthcare providers (the DCE/ACO) receives a monthly payment for each Medicare beneficiary who is assigned to the group;
- the providers in the DCE/ACO no longer receive separate fees for the individual services they deliver to the assigned beneficiaries;
- if a provider who is not a member of the DCE/ACO delivers a service to one of the beneficiaries who is assigned to the DCE/ACO, that provider is paid a fee for that service by Medicare, but the monthly payments to the DCE/ACO are reduced by the amount of that fee.
- as a result, the total amount that Medicare spends on the assigned beneficiaries is equal to the monthly payments to the DCE/ACO to which those beneficiaries are assigned.

This arrangement provides far more flexible payment for the providers in the DCE/ACO than they receive under the Shared Savings Program, since the monthly payments are not tied to how many or what types of services are delivered. However, it also creates greater financial risk for the providers in the DCE/ACO than under the shared savings program. This risk is manageable for a large physician organization or health system that orders and delivers most of the services that the assigned beneficiary receives, but it is not manageable for a small rural hospital and clinic that only order and deliver a fraction of those services.

Moreover, a global payment system not only retains many of the same problems as the shared savings program for both patients and hospitals, it also has some of the same kinds of problems associated with hospital global budgets that were described in the previous chapter. Perhaps most importantly, there is no assur-

ance that the global payment amounts will be sufficient to cover the cost of delivering high-quality care to patients either when the program first begins or over time, nor is there any assurance that even if the payments are adequate, patients will actually receive the services they need. Capitation payment systems were widely used in the 1980s but then discontinued in most communities because of these problems.

The risks and problems associated with global payments far outweigh any benefits for small provider organizations. Consequently, global payments are not a solution for the problems facing rural hospitals and their communities.

VII. A BETTER WAY TO PAY RURAL HOSPITALS

KEY POINTS

A good payment system for rural hospitals and clinics must achieve three key goals:

- (1) Ensure availability of essential services in the community;
- (2) Enable safe and timely delivery of the services patients need at prices they can afford; and
- (3) Encourage better health and lower healthcare spending.

A Patient-Centered Payment System for rural hospitals and primary care clinics can achieve all three goals using the following five components:

- *Standby Capacity Payments* to support the fixed costs of essential services;
- *Service-Based Fees* for diagnostic and treatment services based on marginal costs;
- *Patient-Based Payments* for primary care management;
- *Accountability for quality and spending*; and
- *Value-based cost-sharing* for patients.

Standby Capacity Payments would be based on the number of *community residents*, not the number of *services delivered*.

A Standby Capacity Payment would be paid to a rural hospital by each health insurance plan (Medicare, Medicaid, Medicare Advantage, and commercial insurance) based on the number of members of that plan who live in the community, not based on the number of services the patients receive. This ensures that the hospital has adequate revenues to support the minimum standby costs of the emergency department, inpatient unit, laboratory, etc. regardless of how many patients actually need services during any given month or year.

Service-Based Fees would be much lower than current fees because they can be based on the *marginal (incremental) cost of services* rather than the *average cost*. If the hospital is receiving Standby Capacity Payments that support the *fixed* costs of essential services, the fees for individual services only need to cover the small amount of *additional* costs incurred when additional services are delivered.

Patient-Based Payments for primary care would be based on the number of *patients enrolled for primary care*, not the number of *visits patients make to the clinic*. The Rural Health Clinic or primary care practice would receive a monthly Comprehensive Primary Care Payment from a health insurance plan for each insured member who enrolls with the clinic for ongoing primary care. This payment would give the clinic the flexibility to deliver services in ways that work most effectively for patients, rather than being restricted to delivering only in-person visits at the clinic. The clinic would receive higher payments for patients who have higher needs to ensure they can receive high-quality care.

Payment amounts need to be adequate to support the cost of delivering high-quality care. The *method* of payment in a Patient-Centered Payment system would avoid the serious problems associated with fee-for-service payments, cost-based payment, global budgets, and shared savings programs. However, no payment system will sustain rural hospitals and clinics unless the *amounts* of payment are large enough to cover the cost of delivering high-quality care in small rural hospitals.

Hospitals and clinics should accept accountability for delivering high quality care and controlling spending. In return for receiving adequate, predictable, flexible payments to support essential services, rural hospitals and primary care clinics need to take accountability for delivering high-quality services and improving patient outcomes.

A. Goals for Rural Hospital Payment

How *should* a small rural hospital be paid? A good payment system would achieve three key goals:

1. Ensure availability of essential services in the community. A rural community needs to have assurance that the hospital emergency department and basic diagnostic and treatment services will be available to deliver high-quality services at all times. As discussed in Chapter III, there is a minimum cost involved in providing this capacity in a small community, and the hospital needs to have sufficient revenue

to cover that cost, regardless of how many people actually have emergencies or illnesses requiring treatment.

2. Enable safe and timely delivery of the services patients need at prices they can afford to pay. When residents have a health problem, payments should enable the hospital to provide safe, timely, and appropriate diagnostic and treatment services in the most efficient way possible. There should be no financial incentive for the hospital to either provide unnecessary services or to withhold or delay necessary and effective care. A patient and their insurance

plan should expect to spend more on the patient's care if the patient has more health problems or more serious problems, but not if the patient receives unnecessary services or has to be treated for problems caused by poor-quality care. Patients should be able to obtain the services they need at a price they can afford to pay.

- 3. Encourage better health and lower healthcare spending.** Although it is important to treat health problems efficiently and effectively, it is even better to prevent problems from occurring in the first place. A good payment system would enable community residents to have access to effective primary care and other services that can help improve their health, reduce the need for expensive treatments, and avoid the use of unnecessary services.

B. Effectiveness of Current Payment Systems in Achieving the Goals

Some of the payment systems discussed in the previous chapters are better than others in advancing one or more of these goals, but as shown in Figure 7-1 and discussed below, none of the payment systems is effective in achieving *all three goals*:

1. Ensuring Availability of Essential Services

- **Fee-for-Service Payment:** Fee-for-service payment does the worst job of ensuring availability of essential services in a rural community, since fee amounts are typically lower than the cost of delivering the service, and even if fees are adequate, revenues can fall below the minimum cost of operating the essential services when the volume of services decreases.
- **Cost-Based Payment:** A completely cost-based payment system would be the best at advancing this particular goal, because the hospital's payment would match the actual cost of operating the Emergency Department and other essential services, regardless of how many actual ED visits, lab tests, etc. are delivered. However, no rural hospital receives cost-based payment from all payers, and it would be undesirable for all payers to use cost-based payment because of the inefficiencies universal cost-based payment could create.
- **Global Budget:** A global budget prevents the hospital's revenue from *decreasing* if the number of ED visits and other services declines, but there is no assurance that the budget amount will be *adequate* to cover the cost of delivering those essential services, particularly if it is based primarily on the amount of revenues the hospital has received in the past.
- **Shared Savings/Global Payment:** Adding a shared savings program on top of fee-for-service payment can mitigate the reduction in revenues that occurs when the volume of services decreases, but it does not prevent revenues from falling below the minimum level needed to sustain essential services. Under a full global payment system, the hospital could lose a significant portion of its revenue if patients receive expensive services at other hospitals.

2. Enabling Safe, Timely, and Efficient Delivery of Needed Services

- **Fee-for-Service Payment:** Fee-for-service payment has both strengths and weaknesses in supporting high-quality, affordable care. Since fee-for-service payment provides more revenue when more services are delivered, it encourages the delivery of needed services as quickly as possible, but it also encourages delivery of unnecessary services. Since the payment for each service is fixed, the hospital has an incentive to deliver individual services efficiently, but it also has an incentive to avoid delivering services that cost more than the amount of the fees. The hospital receives a payment if a service is delivered, regardless of the quality or necessity of the service, and even if the service was needed to treat a problem the hospital itself caused. The hospital can make a higher profit if it charges more for services, but the higher patient cost-sharing associated with higher charges can prevent patients from seeking and obtaining the services they need.
- **Cost-Based Payment:** A cost-based payment system does the best job of ensuring payments are adequate to cover the cost of delivering high-quality services in a timely way, but it does the worst job of ensuring the services are delivered as efficiently as possible. If payments are tied closely to the costs of services, there is no reward for delivering unnecessary services, but there is also no penalty for failing to deliver necessary services, delaying the delivery of services, or delivering poor-quality services.
- **Global Hospital Budget:** A global budget does the best job of ensuring that services are delivered as efficiently as possible and that no unnecessary services are delivered, since the hospital's profits will increase when its costs decrease. However, a global budget also rewards the hospital for delaying or denying necessary services, since delivering fewer services reduces the hospital's costs and increases its profits, and a global budget penalizes the hospital for improving the quality of a service if that increases the cost of the service. Moreover, there is no assurance that the global budget will be adequate to cover the costs of delivering as many services as are needed in a high-quality way, potentially forcing the hospital to either withhold services or deliver poor-quality care. Patients may have to pay higher amounts for services because the focus of global budgets is controlling the amount spent by insurance plans, not the amounts patients pay for services.
- **Shared Savings/Global Payment:** Shared savings and global payment models create a financial incentive for a hospital to deliver fewer services, regardless of whether the services are needed by patients. Although these payment systems make adjustments in payments based on performance on quality measures, there are no measures of the quality of most of the services that patients receive, the measures that are used do not require that every patient receive high-quality care, and only small adjustments in payments are made even when performance is poor. Savings achieved through reduced utilization is shared between insurance companies and healthcare providers, not with patients.

3. Encouraging Better Health and Lower Healthcare Spending

- **Fee-for-Service Payment:** Fee-for-service payment does the worst job of encouraging better health and lower healthcare spending, because a hospital or primary care clinic is not paid at all if patients are healthy. Healthcare providers are paid more for delivering more services, not for achieving better outcomes; and their profits are generally higher when more services and more expensive services are delivered, even if fewer and lower-cost services would achieve similar or better results.
- **Cost-Based Payment:** Cost-based payment does the best job of enabling a small rural community to support the cost of delivering primary care and preventive services. However, since it covers the costs of delivering services regardless of their outcomes, it does nothing to encourage effective use of primary care and preventive care services instead of expensive treatment services.
- **Global Hospital Budget:** Global hospital budgets have been limited to hospital inpatient and outpatient services, and they do not change the way primary care services or Rural Health Clinic services are paid. In theory, a hospital can use the flexibility under the global budget to reallocate money from hospital services to primary care services and to pay for primary care services in innovative ways. However, as discussed in Chapter V, the need for hospital services will only decrease *after* primary care services are expanded/improved, so increasing spending on primary care would likely cause the hospital to lose money initially. Healthcare spending will generally only be reduced if the global budget is reduced, but reducing the global budget when the need for services has not

decreased would make it more difficult to sustain essential hospital services.

- **Shared Savings/Global Payment:** Under shared savings models, hospitals and primary care practices continue to be paid using fees for services, so the problems of fee-for-service payment still exist; the potential for a shared savings bonus reduces but does not eliminate these problems. Under a global payment, a hospital would have the flexibility to reallocate funding from hospital services to primary care, but as with the narrower hospital global budget, the need for hospital services will only decrease *after* primary care services are delivered, so the hospital would likely lose money initially. Moreover, there would be no reduction in overall spending under a global payment unless the amount of the payment is reduced (or is increased more slowly than would have otherwise occurred), and that could make it difficult to sustain primary care services in addition to essential hospital services.

FIGURE 7-1
Effectiveness of Alternative Approaches to Rural Hospital Payment

GOAL		EFFECTIVENESS IN ACHIEVING GOALS			
		Fee for Service	Cost-Based Payment	Global Budget	Shared Savings
1	Ensure Availability of Essential Services in the Community	Ineffective	Effective	Mixed	Ineffective
2	Enable Safe, Timely, and Efficient Delivery of Needed Services				
	Safety/Quality	Mixed	Mixed	Ineffective	Harmful
	Timeliness	Effective	Limited	Harmful	Harmful
	Efficiency	Mixed	Harmful	Mixed	Limited
	Appropriateness	Mixed	Limited	Mixed	Mixed
3	Encourage Better Health and More Affordable Care				
	Better Health	Limited	Limited	Harmful	Harmful
	Lower Spending	Harmful	Harmful	Mixed	Limited

C. A Patient-Centered Payment System for Rural Hospitals & Clinics

Clearly, a new and more effective payment system is needed for small rural hospitals. A *Patient-Centered Payment* system that achieves all three goals would have five components:

- 1. Standby Capacity Payments to Support the Fixed Costs of Essential Services.** *Standby Capacity Payments* would assure that the hospital receives the minimum amount of revenue it needs to adequately staff an Emergency Department and other essential service lines so it can be ready to deliver those services to patients when they need them.
- 2. Service-Based Fees for Diagnostic and Treatment Services Based on Marginal Costs.** When patients receive services, the hospital should receive *Service-Based Fees* that provide sufficient revenue to cover the marginal costs of delivering additional services in a timely, high-quality, efficient manner.
- 3. Patient-Based Payments for Primary Care Management.** Rural Health Clinics and primary care practices in the community should receive flexible *Comprehensive Primary Care Management Payments* for each patient instead of visit-based fees. The payments should provide the clinic/practice with adequate resources to help patients stay as healthy as possible and to effectively manage the health problems patients have.
- 4. Accountability for Quality and Spending.** In order to receive adequate payments to support delivery of services, hospitals and primary care clinics should be required to deliver every service in a high-quality manner. Hospitals and clinics should also be assisted and encouraged to change care delivery in ways that improve patient outcomes and reduce avoidable healthcare spending.
- 5. Value-Based Cost-Sharing for Patients.** The amounts that patients have to pay out of pocket for high-value services should be set at levels that the patient can afford, thereby enabling the patients to obtain the care they need to improve their health and avoid the need for more expensive services.

More details on each of these five components are provided below.

1. Standby Capacity Payment to Support the Fixed Costs of Essential Services

a. The Need to Pay Directly for Hospital Standby Capacity

The fee-for-service payment system includes separate fees for thousands of individual healthcare services, but there is no fee or other payment at all for what residents of a rural community would likely view as the most important service of all – the *availability* of a physician and emergency department to treat an injury or serious health problem *if* the resident experiences an injury or problem. Having health insurance that pays fees for ED visits, laboratory tests, or treatments is of little value if there is no Emergency Department, laboratory, or treatment capability in the community or if the ED and laboratory that do exist do not have adequate capabilities to diagnose and treat or stabilize patients.

The hospital's ability to deliver a service on short notice is often referred to as "standby capacity," because a minimum level of personnel and equipment must be standing by in case a patient needs the service, even if it turns out that no patient actually does need it. In most medium-sized and larger hospitals, there is little "standing by" in the ED, because patients are coming to the ED almost continuously around the clock, but services such as cardiac catheterization and trauma surgery do have to be on standby to ensure timely response for the subset of ED patients who are having a heart attack or have suffered a serious injury. However, in a small rural hospital, the ED is not in continuous use, and therefore special efforts are needed to ensure the hospital has adequate standby capacity in the ED so that patients can be treated in a timely fashion when they do need care. Similarly, in a small community, no laboratory tests may be needed on some nights, weekends, or even weekdays, but the laboratory must still have the ability to perform tests if they are needed in an emergency.

The 2020 coronavirus pandemic made many people aware for the first time that current payment systems do not ensure that hospitals have enough standby capacity to handle unexpectedly large increases in patient needs, including very large hospitals. The need for standby capacity is greatest, however, in small rural communities, because even a small increase in the number of patients represents a large percentage increase for the hospital if its average volume of cases is low. Moreover, whereas large hospitals will typically have other hospital units that can be repurposed during an emergency, and sufficient financial reserves to bring in additional staff to handle unexpected increases in volume, the small size and low margins at small rural hospitals have not allowed them to create similar capacity and reserves.

b. The Problems with Charging Higher Service Fees to Support Standby Capacity

Hospitals have traditionally paid for standby capacity by charging higher amounts for individual services or charging separate "facility fees." However, this approach is problematic for multiple reasons:

- **Prices for services are higher than costs.** Charging more for a service to cover standby capacity costs makes the price of the service higher than the marginal cost of delivering it. That increases the financial incentive for the hospital to deliver unnecessary services and increases the financial penalties when it avoids unnecessary services.
- **Services are less affordable.** Charging more for a service makes the service less affordable for patients; that can either discourage them from getting needed services altogether, or encourage them to seek the service elsewhere, both of which reduce the hospital's ability to sustain its services. This problem is more severe at a small rural hospital than at larger hospitals because a higher proportion of the rural hospital's costs are for standby capacity, so the higher fees needed to support the higher costs of services in rural areas become even higher in order to cover standby capacity costs.
- **Services are not being supported equitably by those who benefit from them.** Obtaining revenue only from those individuals who receive services means that healthy community residents are not paying at all to sustain the standby capacity that they want and need to have available in their community.

c. Making Payments Specifically for Standby Capacity

Healthcare is not the only area where standby capacity is needed in a community. A community that needs an emergency department also needs a fire department and an emergency ambulance service, but these other services receive funding to support the standby capacity from all those who benefit from having the service available, not just those who happen to need or use the service. For example:

- Communities do not force their fire department to support itself by charging high prices for extinguishing fires. The residents of the community provide funding to the fire department to ensure it has adequate equipment to fight fires, and they provide either funding or in-kind resources (i.e., volunteer firefighters) to ensure the department has adequate personnel.
- No emergency ambulance service can support itself solely based on the fees it receives for individual ambulance trips; the ambulance service also receives funding and/or in-kind support directly from the community to ensure that it has equipment and personnel standing by at all times.

Small rural hospitals need to receive similar support for their standby capacity. Rather than only receiving a payment for each patient who actually receives services from the ED during the month, the hospital needs to also receive a payment for each *potential* patient, i.e., each community resident who does not happen to need the ED during a particular month, but who benefits from having the ED and associated ancillary services available in case they do.

Standby capacity is an important *healthcare service*, because failure to provide it can result in worse outcomes and higher healthcare spending for residents of the community. Consequently, payments to support

standby capacity should come from health insurance plans.²²³

Support for standby capacity can be provided by paying the hospital a monthly **Standby Capacity Payment (SCP)** for each resident of the community in the following way:

- **Insurance Plans Pay Standby Capacity Payments for Each of Their Members Who Live in the Community Served by the Hospital.** For each resident of the hospital's service area who has health insurance, their insurance plan would pay the Standby Capacity Payment to the hospital each month. A health insurance plan is receiving a monthly premium for each of its members to ensure they can receive the healthcare services they need, and a portion of that premium should be paid to the hospital to ensure that it is ready to deliver those services to the plan's members when they need them. This per-member payment would be paid by the insurance plan in addition to Service-Based Fees for any individual services the individual receives if they go to the hospital for care; however, the Service-Based Fees for services in the essential service lines would be *lower* than typical fee for service payments, as discussed in the next section.
- **Total Standby Capacity Payments Are Set at Levels Adequate to Support the Fixed Cost of Standby Capacity.** In aggregate, the Standby Capacity Payments from all payers should be sufficient to support the fixed costs of adequate staffing and equipment for standby capacity for Emergency Department services, laboratory and radiology services, basic inpatient care, and other essential services, i.e., the cost that the hospital would have to incur even if only a small fraction of community residents actually need to use the services in any particular month.

For Medicare or a health insurance plan, paying a Standby Capacity Payment to a hospital in this fashion is similar to the way that Global Budget payments are paid to the hospital on a biweekly or monthly basis under the Pennsylvania Rural Health Plan described in Chapter V, except that the hospital would continue to receive fees for individual services in addition to the Standby Capacity Payments.

d. Standby Capacity Payments Must Be Specific to Individual Service Lines

Separate Standby Capacity Payment amounts should be defined for each essential service line operated by small rural hospitals, for four reasons:

- As discussed in Chapter III, the costs of operating a particular service line will vary from community to community for reasons beyond the control of the hospitals. The factors affecting this variation differ from service line to service line. As a result, the relative costs of the different service lines will also differ from community to community, even if communities are of similar size and have similar demographic compositions. For example, it will likely not be equally easy or difficult to attract and retain emergency room physicians, nurses, and lab techs in different communities, so the salary differentials between service line staffs and the need to pay for temporary staffing costs in each service line will differ from community to commu-

nity. The most effective way to ensure the hospital's aggregate revenues match these differences in costs is to define separate Standby Capacity Payment amounts for each service line.

- The service utilization rates of different demographic groups differ across service lines, so calculating separate Standby Capacity Payments for each service line will enable costs to be equitably apportioned among each payer based on the characteristics of members they insure in the community.
- Although even the smallest hospitals will operate the same core service lines (ED, acute inpatient, laboratory, radiology), hospitals that are large enough or have access to the necessary resources may want to offer additional service lines that should appropriately be paid using a Standby Capacity Payment, such as labor and delivery services or inpatient psychiatric services. Similarly, if a hospital decided to discontinue a particular service line, the Standby Capacity Payment amount based on that service line could be eliminated while the payments for other service lines would continue.
- If one hospital offers additional service lines such as maternity care or inpatient psychiatric services that are used by multiple communities, it would need to receive Standby Capacity Payments for those services from the residents of those other communities, not just for the residents of its immediate service area.

A hospital does not need to receive separate checks from a health plan for each of these service line-specific Standby Capacity Payment amounts; they can be combined into a single aggregate Standby Capacity Payment. However, just as current payments to hospitals are based on individual fees for individual services, the total amount the hospital receives needs to be based on appropriate Standby Capacity Payment amounts for each essential service line.

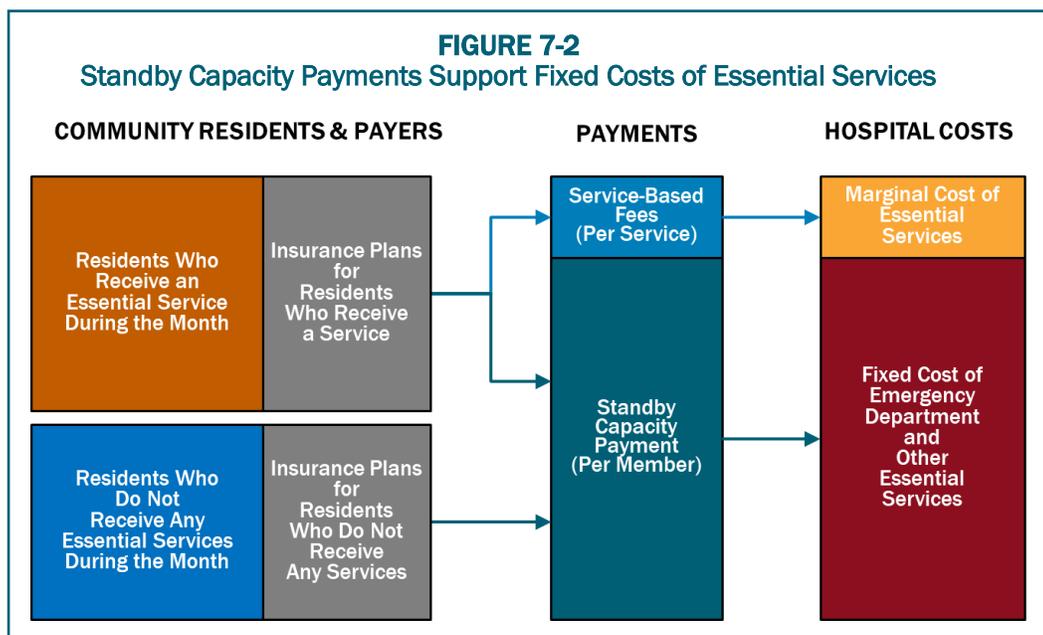
e. Focusing Standby Capacity Payments on Essential Services

A hospital should not receive Standby Capacity Payments (through health insurance) for services that would not be considered *essential* to offer locally, or if there are other providers already offering adequate access to that service in the same community. For example:

- if a non-emergency specialty service (e.g., a rheumatologist or dermatologist) is available in a nearby town and the subset of residents who need that service can obtain it either through a short drive or a telehealth connection, there would not be any justification for providing a Standby Capacity Payment to subsidize offering that service directly within the community itself.
- if a community already has one or more providers of a service that have adequate capacity to meet the community's needs, the hospital should not receive a Standby Capacity Payment for that service, although it could still operate the service and charge fees to pay for the services that are delivered. For example, if a community has one or community pharmacies, the hospital should not receive a Standby Capacity Payment to operate its own outpatient pharmacy. On the other hand, if the community has no community pharmacy because the number of patients is not sufficient to sustain one, then it could be appropriate to pay a Standby Capacity Payment to the hospital in order to open an outpatient pharmacy.

This approach is preferable to a hospital global budget that locks in a hospital's past levels of revenue, thereby either providing continued subsidies for unnecessary services or failing to provide adequate support for necessary services.

If a community wants to enable delivery of a service locally where local access is desirable but not essential, it could choose to provide a subsidy similar to a Standby



Capacity Payment, but do so using funding sources other than payments from health insurance plans. For example, if residents of a community wanted to have a specialty service available locally without the need to travel or use telehealth connections, but if it would be impossible to financially sustain local delivery of the service using standard payments because of the small number of patients, the community could decide to provide funding to the hospital to support that service using monies from local tax revenues or voluntary contributions, rather than from health insurance plans.

As discussed in Chapter II, many rural communities currently use local taxes to support their hospitals. However, in most cases, these taxes (or the majority of the tax revenues) are not used to support delivery of higher-than-minimum levels of services, but to subsidize underpayments by private health insurance plans for essential services. These local tax levies could be reduced if the hospital receives adequate Standby Capacity Payments from health insurance plans funded by the premiums local residents have already paid for health insurance.

f. Standby Capacity Payments Can Also Be Used With Larger Hospitals

Standby Capacity Payments could be used to pay for standby capacity at larger rural hospitals and at urban hospitals, not just small rural hospitals. The same problems with fee-for-service payment that make it difficult for a small rural hospital to sustain an Emergency Department or laboratory also make it difficult for a larger hospital to sustain a Trauma Center, Stroke Center, and other service that needs to be ready to provide services on a round-the-clock basis but are not actually used continuously. The residents of the region served by the larger hospital benefit from having these services available, but they and their insurance plans provide no financial support for them unless they actually use them.

Many hospitals charge high prices for all of their services and justify doing so based on the need to maintain standby capacity, even though many of the services are not available on a 24/7 basis and even though the extra revenue generated through the higher charges may be far more than is needed to sustain the services that do need to be available on a round-the-clock basis. Paying directly to support Standby Capacity at these hospitals would enable fairer pricing of services and more equitable financial support from patients and payers.

Moreover, it is much easier to define a Standby Capacity Payment for a specific service line at a larger hospital than it is to define a global budget for a large hospital. If there are several hospitals in the community but only one is providing a particular type of service (e.g., a Level I Trauma Center), then a Standby Capacity Payment can be paid to that hospital for that specific type of service, and the payments can be made for each individual who lives in the geographic area that depends on that service, including residents of a rural community that relies on having the service available so it can transfer local residents when they need it. If two or more hospitals in the same community are providing a service that requires standby capacity (e.g., two hospitals have emergency departments and cardiac catheterization capabilities), and there are not distinct geographic sub-areas

served by each, then the amounts of the Standby Capacity Payments for each hospital can be set based on the proportion of the residents who actually use the services for urgent needs. Other services can then continue to be paid for using standard fee for service methods.

2. Service-Based Fees for Diagnostic and Treatment Services Based on Marginal Costs

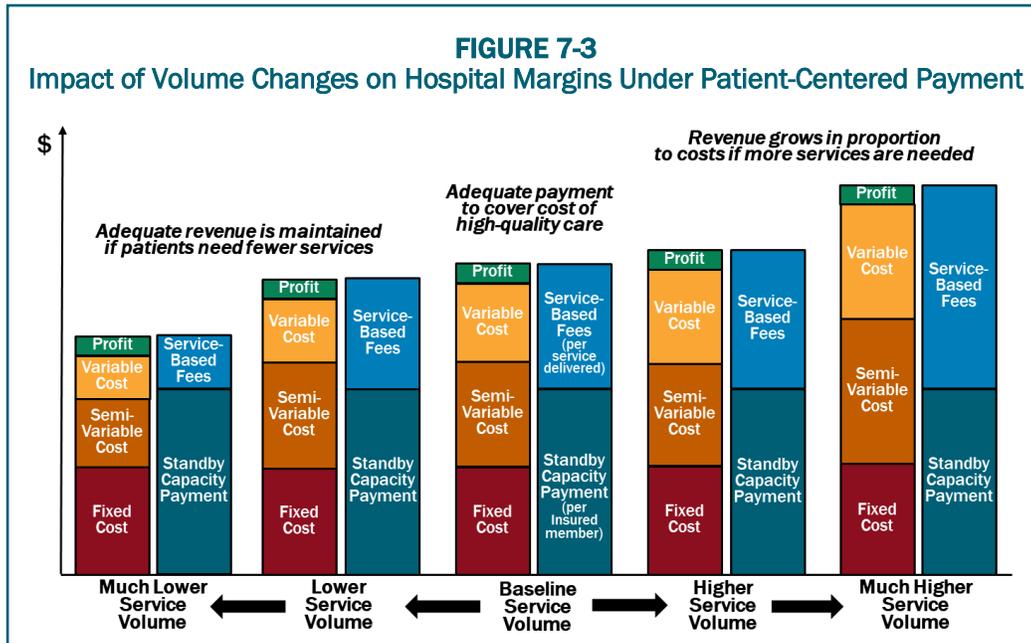
a. The Problems with Fees Based on Average Costs

In a fee-for-service payment system, a hospital will only break even financially on a service line if the fees paid for the services are equal to the average cost per service. However, as discussed in Chapter III, because a high proportion of the costs in most service lines are fixed or semi-variable in nature, the average cost per service changes whenever the number of services changes, so the fee amounts will always be either too high or too low. If fee levels are set based on the average cost of services at a particular level of volume, the hospital will make higher profits when more services are delivered and it will lose money when the number of services decreases.

b. Paying Separately for Variable and Semi-Variable Costs

If a hospital receives Standby Capacity Payments to support the *minimum* cost of operating a service line, it will still need to charge fees for individual services to support any *incremental* costs associated with delivering more than a minimal number of services. However, those fees can be lower than they are today because they will no longer need to cover the *fixed* costs of the service line that are paid through the Standby Capacity Payment. Rather than basing fees on the average cost of services as is done under fee-for-service systems, Service-Based Fees under a Patient-Centered Payment System can and should be based on the *marginal* cost of delivering services, i.e., the additional cost the hospital incurs when it delivers additional services. If fees for services are set at levels based on the marginal cost of additional services, then the hospital will not make significant profits by delivering more services nor will it incur significant losses when fewer services are delivered.

As shown in Figure 7-3, using two different types of payments to support a service line – a Standby Capacity Payment based on fixed costs, and Service-Based Fees for individual services based on marginal costs – will do a much better job of matching the hospital's revenues to its costs than either paying fees only when services are delivered, or paying a single global budget regardless of how many services are delivered. Moreover, using two different payments (the Standby Capacity Payment and the Service-Based Fee) is a more equitable way of charging patients (and their health insurance plans) for services than either traditional fees or global budgets, since patients who use more services will pay more but patients who need few services will still help support maintaining the capacity needed for them to receive services when they do need them.



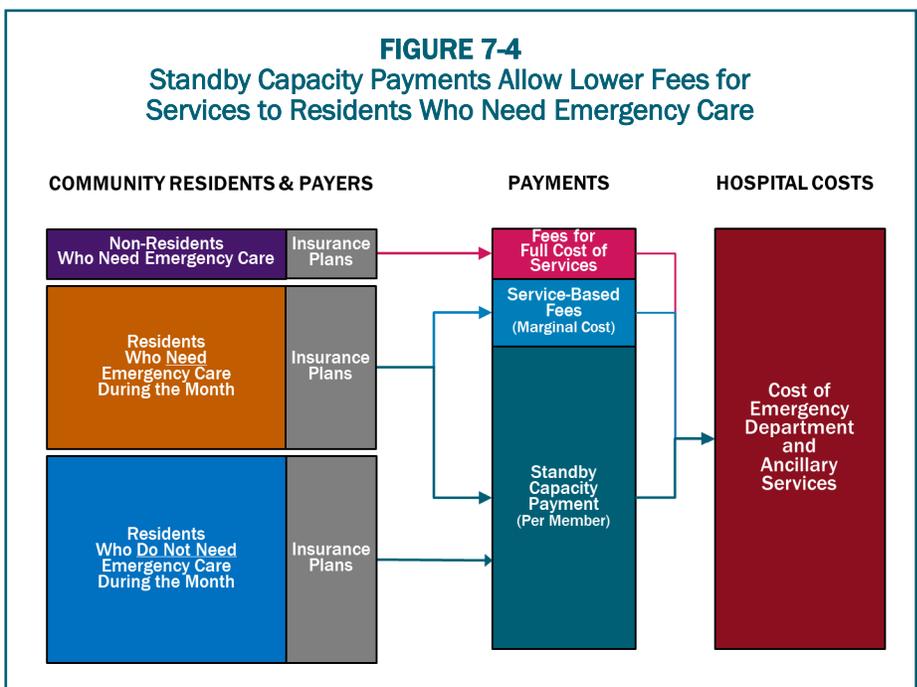
In most cases, it will be impossible to set Service-Based Fees that will exactly match the marginal cost of services at every level of service volume. As discussed in Chapter III, a significant portion of the costs in many service lines are neither truly fixed nor completely variable. The third category of costs are the “semi-variable” costs. They do not change when service volumes change by small amounts, but they increase significantly when the volume of services reaches a particular threshold. For example, one emergency room physician per shift is adequate when there are at most 1-2 visits every hour, but when volumes increase beyond that, the ED will likely need an additional physician on those shifts. That will increase the total cost of the ED significantly, but the ED will then be able to handle even larger volumes of service without much additional increase in cost. To address semi-variable costs, Service-Based Fees will need to be set based on the “average marginal cost,” with the average calculated over the likely range in volume expected in the service line in that community.

c. Higher Service-Based Fees for Non-Residents and Members of Non-Participating Insurance Plans

Although most of a rural hospital’s standby services are provided to residents, some are provided to non-residents who work in the community and to tourists and other visitors. The hospital will not receive Standby Capacity Payments for these non-residents, so it is unfair to charge the non-residents the same amount for a service as the amount charged when a resident receives a service. Moreover, in communities that have a lot of non-resident workers or visitors (e.g., in agricultural communities or tourist areas), the hospital may need to provide additional standby capacity in or-

der to deliver the higher volume of services, and it would be inappropriate to charge the insurance plans of the residents more for this.

To address this, the hospital would need to charge non-residents a higher amount for each service than it charges a resident who receives the same service, with the amount for the non-resident based on the average cost of services rather than the marginal cost of services. However, this does not mean that the hospital is really charging two different prices for the same service; it is merely collecting two different payments in two different ways – a two-part payment for residents and a single payment for non-residents. In effect, the hospital is giving a discount to the residents’ health insurance plans to reflect the Standby Capacity Payments they have made separately.



This is a more rational approach to providing discounts than the arbitrary, problematic, and secretive approach used today in contracting between health insurance plans and hospitals.

A similar approach would need to be used for any residents of the community whose health insurance plans are unwilling to pay Standby Capacity Payments for their members. These health plans would pay higher Service-Based Fees for essential services that are delivered to their members than the amounts paid by other health plans. This differential discounting is also more rational than the discounts used today.

Residents of the community who could afford to purchase health insurance but choose to “self-insure” could voluntarily agree to participate in the Patient-Centered Payment system by paying monthly Standby Capacity Payments to the hospital directly. In return, they would pay much smaller Service-Based Fees to the hospital when they did need a service. In effect, the individual would be “pre-paying” for a portion of their hospital care. This is actually the way that Blue Cross plans originally started – resident of the community made regular payments to the local hospital that ensured they could receive hospital care if they needed it, and the hospital received a more reliable stream of revenue than it would if it depended only on sick patients to pay the bills.²²⁴

d. Cost-Based Payment for Drugs and Medical Supplies

For drugs and medical supplies, a relatively small proportion of the cost to the hospital represents a fixed or standby capacity cost; the fixed costs consist primarily of whatever staff or equipment are used to store and dispense drugs (many small hospitals may rely on an external pharmacy for much of this), and the cost of any expensive drugs or supplies that the hospital needs to keep in stock in case of emergencies but which may not be used before their expiration dates. In addition, although the remaining costs will vary based on how many patients need treatment, the primary driver of the variation will not be the number of patients treated but the specific types of drugs and devices the patients need and the amounts the hospital has to pay for them.

While charging predetermined Service-Based Fees based on expected marginal costs is both feasible and desirable in other service lines, it is problematic for small rural hospitals to receive predetermined fees for drugs and supplies, or to have those payments bundled together with payments for other services as Medicare does in its payment systems. Because of the small quantities of drugs and supplies small hospitals purchase, they have little or no ability to negotiate low prices from suppliers, particularly for expensive drugs that do not have generic equivalents. Moreover, the need to use an unusually expensive drug or a large increase in the price of a drug can have a large financial impact on a small hospital.

Consequently, the most appropriate approach to pay for marginal costs in these cases is to reimburse the hospital for its actual acquisition costs for the drugs and supplies that are used. This is similar to the cost-based payment approach used by Medicare to pay Critical Ac-

cess Hospitals, except that the cost-based payment would be limited to the direct costs of the drugs and supplies, and all administrative and indirect costs would need to be supported through payments made on the hospital's other service lines.

e. Using Bundled Payments vs. Separate Fees for Individual Services

The fees that hospitals currently charge for services are generally associated with relatively narrowly defined services, i.e., there is a separate, different fee for each lab test or imaging study performed, each day of inpatient care received, etc. This approach provides the flexibility to customize the payment based on the exact services a patient received, so that the hospital receives higher fees for services that cost more to perform, and so the patient and insurance plan spend less if fewer services are needed and pay more if more services were needed.

Because of concerns that this system encourages hospitals to deliver unnecessary services, Medicare and many other payers use “bundled payments” for certain groups of related services. The earliest example of this was the case rate (“DRG”) payments Medicare began using to pay for inpatient care in 1983; under this system, the hospital receives a single payment for an inpatient admission, rather than separate payments for each day of care, each lab test performed during the stay, etc. In general, bundled payments have been found to reduce the growth in spending compared to unbundled payments, although the savings varies significantly depending on what is being bundled.²²⁵ But because bundled payment amounts are based on the “average” set of services delivered in the bundle, they can cause financial problems for a small hospital when one or more of the patients it treats need more than the average number of services that was used to determine the bundled payment amount.

There is nothing about the use of Standby Capacity Payments that precludes using case rates or bundled payments to pay for the incremental costs of individual inpatient admissions or outpatient services rather than paying separate Service-Based Fees for each individual service. If bundled payments are used for service lines that require standby capacity, the payments would simply need to be priced at the marginal cost of delivering the bundle of services, rather than the average cost.²²⁶ For example, Medicare could use the standard DRG categories and weights to pay different amounts for inpatient admissions based on differences in the patient's diagnoses and procedures, but the “conversion factor” would need to be lower than in the standard Medicare Inpatient Prospective Payment System, since the hospital would already be receiving Standby Capacity Payments for a portion of the costs that standard DRG payment amounts are supposed to cover.

However, because fees for individual services would be based on the marginal costs of those services, the incentive to deliver additional services would be lower than under the current fee-for-service payment system, and so it would be less likely that use of bundled payments or case rates would create any significant savings. Although the financial risk to the hospital would also be lower if a bundled payment is intended only to cover

marginal costs, the bundled payment could still cause financial problems for a hospital with very small numbers of patients.

3. Patient-Based Payments for Primary Care Management

a. Sustaining and Expanding the Other Essential Service – Primary Care

On the occasions when residents of a rural community experience a serious injury or a life-threatening illness, the most important healthcare service to have available in the community is a hospital with an Emergency Department and appropriate diagnostic and treatment services.

At all other times, however, the most essential service for residents of the community is effective primary care. Primary care is the only healthcare service that is specifically designed to help patients *prevent* health problems from occurring and to identify and treat new problems as early as possible so that outcomes will be better and treatment costs will be lower. Failure to provide adequate access to primary care in a community will result in poor health for residents, higher healthcare spending, and higher insurance costs.

b. The Problems with Visit-Based Payments and Other Fees for Primary Care Services

The fee-for-service payment system fails to provide adequate support for a small hospital ED because the hospital is only paid when a community resident visits the ED and it is paid nothing for the important service of standing by to serve other residents in case they have an emergency. Similarly, one of the reasons the fee-for-service payment system fails to provide adequate support for primary care practices and clinics is that the practice is paid when a patient needs to receive a specific service from the practice, but there is no payment at all if the practice succeeds in keeping the patient sufficiently healthy that the patient needs no direct services. The primary care practice incurs the same costs to employ physicians, nurses, and other staff regardless of how many services patients happen to need, and the goal of primary care should be to keep patients healthy, not to deliver more services.

Moreover, fees for primary care practices have traditionally only been paid when the patient makes a *face-to-face visit with a clinician* at the practice, while nothing is paid for many other important services that are an integral part of good primary care, such as providing care management for patients who have a chronic disease, coordinating care for patients with multiple health problems, responding to patient questions and problems by phone or email, and proactively contacting patients to ensure they receive adequate preventive care. The only way primary care practices have been able to cover the costs of delivering all of these other services is to charge more for face-to-face visits. However, this penalizes a practice that uses the other services to keep patients healthy or to avoid the need for face-to-face visits, and it discourages patients from making visits when they need them. Even in the cost-based payment sys-

tem Medicare uses for Rural Health Clinics, the payments are tied to the number of visits patients make, and patients who need to visit have to pay high cost-sharing amounts when they do.

In recent years, Medicare and other payers have begun paying fees for specific types of care management and other services in addition to face-to-face office visits. During the 2020 coronavirus pandemic, Medicare and other payers began paying primary care practices for a broad range of telehealth services, i.e., visits conducted by videoconference or telephone. While these additional payments reduced some of the distortions associated with paying only for traditional face-to-face visits, narrow definitions of the services and mismatches between payments and costs have created new problems of under-utilization and over-utilization, and there is no guarantee that the payments will be continued.

c. Using Patient-Based Payments Instead of Visit-Based or Service-Based Payments

There is growing agreement that the best way to pay for most of the services provided by a primary care practice is through a *monthly payment for each patient*, rather than through separate fees for each individual service delivered to the patient.²²⁷ Consequently, in a Patient-Centered Payment system, Rural Health Clinics and primary care practices should receive a *monthly Comprehensive Primary Care Payment (CPCP)* for each patient who has enrolled with the practice for ongoing care. The amount of the CPCP should be higher for patients who have *greater health needs*, and in aggregate, the monthly payments need to be *adequate to cover the cost of delivering high-quality primary care*. Under this approach:

- the monthly payment better matches the way the practice incurs most of its costs, i.e., the practice pays monthly salaries for clinicians and other staff and it makes monthly payments for utilities, space, and equipment.
- the payment gives the primary care practice the flexibility to deliver the best combination of services for each patient, without regard to whether there is a fee for that specific service or how large that fee is.
- the practice can afford to deliver more services to patients with greater needs, but it is no longer rewarded financially for delivering unnecessary services.
- the payment encourages the practice to obtain sufficient revenue by attracting and retaining patients, rather than by encouraging patients to make unnecessary office visits.
- a single payment for each patient dramatically reduces the administrative burden on the practice and the payer compared to billing separate fees for multiple types of services.

d. Payments Based on Patient Enrollment

In order for the primary care practice or clinic to receive a monthly CPCP for a patient, the patient should formally agree to receive all of their primary care services from the practice/clinic during the month. This “enrollment” with the practice enables the primary care practice to

know the specific patients for whom it will be responsible for providing proactive, high-quality primary care.

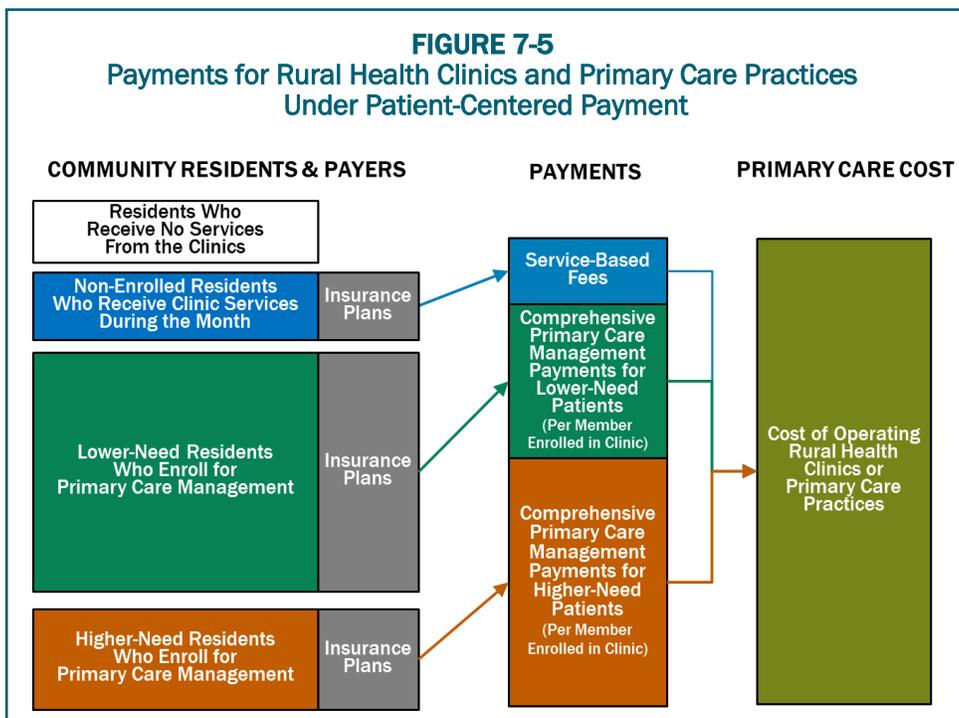
Enrolling with a clinic or primary practice to receive primary care services should not mean that the patient will need approval from that practice in order to receive specialty care services. The role of the clinic should be to help the patient receive the most effective services, not to serve as a “gatekeeper” for a health insurance plan. Moreover, a patient who does enroll should be able to disenroll at any time if they choose. This is easy to accomplish since the CPCM is paid monthly.

This approach is far superior to the “retrospective statistical attribution” methods that Medicare and other payers have used in their primary care medical home programs. In these programs, primary care practices receive monthly payments either in addition to or instead of fee-for-service payments, but they only know if they will be receiving a monthly payment for a patient *after* the month has ended, and moreover, they only receive the payment if calculations by the payer show that the patient made more office visits to that practice than to other practices during some previous period of time. These attribution systems have been shown to assign the wrong patients to practices, and they also penalize practices who use the flexibility in the monthly payments to deliver services in ways that maintain and improve patient health without requiring as many in-person office visits.²²⁸ Because of these problems, Medicare has recently begun allowing primary care practices to enroll patients rather than relying solely on attribution methods.

e. Stratifying Monthly Payments Based on Differences in Patient Needs

The primary care clinic should receive a higher monthly CPCM for a patient who has more health problems or other characteristics that would be expected to require more time and more services from the clinic staff. Paying the *same* amount for every patient, as has been done in many capitation payment programs, discourages a clinic from taking on clients with higher needs, because the clinic will need to use more resources to successfully manage the care of those clients but it would receive no additional revenue to pay for that. The *initial* CPCM for a *new* patient should also be higher because the practice will need to spend more time in assessing a new patient’s needs and developing a care plan during the first month.

In general, stratifying the CPCM into 2-4 different levels will likely be adequate to ensure a clinic receives adequate revenue to cover its costs if it has sicker or more complex patients. The criteria used to determine which patients qualify for the higher levels of payment should be based partly on the number or types of chronic diseases or health problems they have, but also on other factors that affect the patient’s and clinic’s ability to effectively use standard approaches to care management and treatment. For example, it will typically take more time to manage the care of a patient who has difficulty with communication (e.g., speaking a different language or having a cognitive impairment) or who has physical limitations that make it difficult or impossible to come to the clinic for services. The criteria used to determine which patients qualify for each category should be pre-defined as objectively as possible, while also allowing the clinicians in the clinic discretion to assign patients to higher categories based on unique needs.²²⁹



Stratified monthly payments with categories assigned by the clinician allow patients to be reassigned to different payment levels when their needs change. If a patient develops new health problems that require additional time and attention, the practice can receive additional resources immediately so that it can respond immediately. If the clinic and the patient are able to resolve temporary problems that had resulted in reclassification to a higher-intensity category, the patient can and should be reclassified to a lower-intensity category at that point.

“Risk-adjusting” the payments to the clinic (i.e., paying the same amount for every patient, but increasing or decreasing the amount of the payment based on the average of individual “risk scores” assigned to each patient) might seem like a more precise approach to payment than stratifying payments into several categories, but since the costs of delivering primary care do not change based on small differences in patient characteristics, this level of precision is both unnecessary and problematic. This approach can penalize clinics whose patients have fewer but more severe conditions, and it creates a financial incentive for the clinic to find more diagnoses to assign to the patient rather than to treat the patients’ conditions more effectively.²³⁰

It is also important to ensure that the primary care clinic can receive a higher payment for *each individual patient* who has higher needs. In its “Primary Care First” payment demonstration model, CMS plans to pay higher monthly payments to a clinic only if its *overall* patient population has a significantly higher *average* risk score.²³¹ This penalizes a practice that takes on a small number of sicker patients in the same way that an unadjusted capitation payment does. However, it also creates a perverse incentive for a practice to avoid taking on healthy patients, since healthy patients will reduce the average risk score for the practice and prevent it from qualifying for higher payments for any of its patients.²³² In a rural community that only has one primary care clinic, that clinic needs to serve everyone in the community and it needs adequate resources to do so regardless of the proportion of healthy vs. sick patients who happen to live in that community or want to enroll in the clinic.

f. Higher Monthly Payments for Clinics That Provide a Broader Range of Services

Not all primary care practices and clinics provide the same types of services. For example, a growing number of primary care clinics are trying to provide behavioral health services as an integral part of the care they deliver to patients, while others still focus primarily on delivering physical health services and refer patients needing behavioral health services to another provider who is better qualified to deliver them. In a small community, the primary care clinic may be providing maternity care, while a larger community may have a separate OB/GYN practice or birth center that delivers maternity care services.

A clinic that offers behavioral health services, maternity care services, or other specialized services will need to have appropriate staff and equipment to do so, and so

its monthly costs will be higher. To address this, the clinic will need to receive higher monthly payments in order to support the higher costs. If the additional services are only delivered to a well-defined subset of patients, then it may be appropriate to define a separate, higher monthly payment category for those patients.

g. Retaining Individual Fees for Selected Primary Care Services

Fees should continue to be paid for services delivered by Rural Health Clinics and primary care practices where there is a significant marginal cost to the clinic/practice associated with delivering the service. For example, administering vaccines to patients is a highly desirable service, but the primary care clinic/practice incurs significant additional costs to acquire and store vaccines, and the cost depends not only on how many patients are vaccinated but what type of vaccine they need and the current cost of that vaccine. Primary care clinicians can perform many types of procedures needed to treat injuries and other problems, but this requires them to have the necessary medical supplies and equipment to do so, and it would not be fair to charge all patients more for services that only a few patients will need.

Although it is appropriate to charge additional fees for these types of services, the fee should be as close as possible to the marginal cost of the service, since the more general fixed costs of the practice are already being supported by the monthly CPCM. In the case of drugs or medical supplies with unpredictable costs, it would be appropriate to reimburse the practice for its actual acquisition costs for the same reasons discussed earlier in the context of hospital services.²³³

In addition, if an individual does not want to enroll with the practice for ongoing care but that individual needs or wants one or more services that the practice can provide, the practice would charge that patient fees for those services instead of receiving a monthly payment for the patient.

4. Accountability for Quality and Spending

a. *The Need for Accountability by the Providers of Rural Care*

In return for receiving adequate, predictable, flexible payments to support essential services, rural hospitals and rural primary care clinics will need to take accountability for delivering high-quality services and improving patient outcomes. There are several reasons for this:

- It will be difficult to convince patients and private payers to pay more for hospital and primary care services in rural areas without assurance that the higher payments will result in high quality services.
- Because a significant portion of payments would no longer be tied directly to the number of services delivered, patients and payers will likely have concerns about whether access to services will decrease.
- It will be easier for payers to justify paying more for rural healthcare services if rural hospitals and primary care practices can help slow the overall growth in healthcare costs by improving the health of their residents of their community and reducing the delivery of unnecessary services.

b. *Standard “Value-Based Payment” Approaches Should Not Be Used*

The “value-based payment” systems currently used by Medicare and other payers in an effort to hold hospitals and physicians more accountable for quality and spending cannot and should not be used to create an accountability component in a Patient-Centered Payment system. Not only have these systems failed to encourage higher quality or lower costs, they are particularly problematic in rural communities because:

- **the measures do not produce statistically valid results for many types of rural residents and patients.** Small hospitals and primary care practices typically do not have enough patients to reliably use many outcome measures for specific types of patients (e.g., mortality rates for patients with heart failure), and in many small rural communities, there may not be enough patients to reach minimal levels of statistical reliability even for some process measures. In addition, risk adjustment is based on diagnosis codes recorded on claims forms; diagnosis codes tend to be under-reported by rural providers, and they also fail to capture barriers to care such as distance from the clinic and lack of support services in the community, so rural hospitals and clinics can appear to have healthier patients or worse outcomes than they really do.²³⁴
- **the measures do not clearly define the appropriate standard of care for individual patients.** In many cases, providers are not really expected to achieve 100% success on a quality measure because the standard of quality is not really applicable to all patients. However, most value-based payment systems do not permit providers to exclude patients from the measure even if the standard was inapplicable, so it is impossible to determine how many patients really don't receive the care they need.

- **the measures ignore the quality of care for the majority of patients.** Many of the quality measures used in value-based payment programs focus on specific health problems such as diabetes or hypertension; there are no measures at all for patients with other kinds of health problems, and at most a few measures designed for healthy patients. In a small rural community, there may not even be enough patients with common conditions to achieve minimum reliability levels on those measures (for example, only 11% of the total population and 27% of seniors have diabetes) As a result, the measures do not really assess the quality of care for the majority of patients.
- **the measures ignore the need to maintain quality as well as improve it.** Most quality measurement programs stop using quality measures if most providers are able to routinely achieve them (so-called “topped out” measures). However, that allows quality of care on those measures to worsen with no penalty, which is a particular problem in a payment system that is intended to encourage lower spending. The measures used to replace them typically focus on aspects of quality where it is unclear what level of performance is feasible for providers to achieve, so providers are more likely to be penalized because of the types of patients they treat rather than the quality of care they deliver.²³⁵
- **higher performance on the measures does not necessarily improve patient outcomes or achieve outcomes that are meaningful for patients.** For many commonly-used measures, there is little or no evidence indicating that better performance on the measures will actually improve outcomes for patients, and in some cases, improving the measure can make patients worse off.²³⁶
- **rural hospitals and clinics cannot control all of the key factors affecting the measures.** As discussed in Chapter VI, because a primary care clinic and rural hospital provide only a fraction of all the healthcare services that residents of a rural community receive, the hospital and clinic only have limited influence over many aspects of quality and spending. For example, in several of its payment models, CMS plans to use the total hospitalization rate for patients as the principal way of assessing performance.²³⁷ However, this includes hospitalizations due to accidents and infectious diseases, procedures that patients chose to receive at other hospitals, and local hospital admissions to treat complications of services delivered by specialty physician practices, tertiary hospitals, and post-acute care facilities; none of these hospital admissions could be prevented or avoided by the local clinic or hospital.²³⁸
- **the bonus/penalty structures attached to the measures have the potential to create significant financial harm for rural hospitals and clinics.** Typical pay-for-performance systems reduce payments to hospitals and clinics based on whether their performance on the quality measures is above or below national averages or percentiles. However, the small number of patients in a rural community means that a rural provider can easily be penalized simply due to random variation. Most hospital pay-for-performance systems reduce payments for poor performance but do not

increase payments for good performance, so there is no way for the hospital to offset penalties that occur due to random variations.

c. **Using Accountability Measures Appropriate for Rural Hospitals and Clinics**

A Patient-Centered Payment system should only hold small rural hospitals and primary care clinics accountable for aspects of quality that meet the following criteria:

- good performance in that area is important to the residents of the community, or there is strong evidence that it will result in better health outcomes for residents;
- performance can be controlled using the kinds of services that are or could be delivered by the hospital and/or clinic;
- a clear standard of performance can be defined for each individual service delivered to a patient that is feasible for the hospital or clinic to achieve with the resources available to it;
- performance against the standard can be reliably measured for the number of residents in the community or the number of patients treated by the hospital or practice; and
- performance can be measured accurately using data that are being collected or can be collected by the hospital/clinic with the resources available to it.

It would be desirable to assess the quality of care based on patient outcomes whenever possible. However, in most cases, it will only be feasible to use process measures because outcomes are difficult to measure reliably with small numbers of patients, and small providers in rural areas have less control over the factors that can affect outcomes for many types of conditions.²³⁹

Measures of Hospital Quality for Patient-Centered Payment

Measures of the quality of hospital care in a small rural community should focus on the essential services for which the hospital is receiving Standby Capacity Payments, particularly emergency room and inpatient care. The following measures satisfy the criteria described above and would have broad applicability to all or most of patients who visit the ED or are admitted to the hospital:

- **ED Response Time #1:** The amount of time that elapsed between the patient's arrival in the ED and their first contact with a physician or other clinician.
- **ED Response Time #2:** The number of patients who left the ED without being seen.
- **ED Response Time #3:** The amount of time that elapsed between the patient's arrival in the ED and the completion of an electrocardiogram, if the patient reported chest pain or other symptoms of a potential acute myocardial infarction.
- **Inpatient Falls:** Whether a patient fell during an inpatient stay.

- **Venous Thromboembolism Prevention:** Whether a patient admitted to the hospital received appropriate prophylaxis to prevent blood clots.
- **Medication Safety:** Whether a patient receiving inpatient care experienced an adverse event due to a medication error.

Several of these measures are already being collected and monitored by many small rural hospitals through their participation in the Medicare Beneficiary Quality Improvement Project (MBQIP).

For rural hospitals that admit larger numbers of patients for inpatient acute care or deliver surgical procedures, additional measures could be used, such as whether a patient who received surgery developed a surgical site infection.

Measures of Primary Care Quality for Patient-Centered Payment

For small primary care practices and clinics, the following quality measures could be used initially, since they have broad applicability to all or most of the patients enrolled for care with a small primary care clinic:

- **Access to Care:** Whether a continuously enrolled patient has been seen no less often than the recommended frequency (every year for children, every two years for adults, more frequently for individuals with a serious chronic disease).
- **Preventive Care:** Whether a patient is up to date on all recommended preventive care (for preventive care services that are available in the community).
- **Behavioral Health Screening:** Whether a patient has been screened for clinical depression and other behavioral health conditions and has received a follow-up plan if a condition is identified.

It would be desirable for Rural Health Clinics and primary care practices to transition from these kinds of process measures to patient-reported outcomes. One approach would be to use the What Matters Index in order to more comprehensively identify patient needs and assess their performance in addressing them.²⁴⁰ The What Matters Index is derived from patient-reported information on five issues:²⁴¹

- **Health Confidence:** The patient's level of confidence that they can manage or control most of their health problems.
- **Pain:** How much pain the patient has been experiencing recently.
- **Emotional Problems:** How much the patient has been bothered by emotional problems such as feeling anxious, irritable, depressed, or sad.
- **Polypharmacy:** The number of prescription medicines the patient is taking.
- **Adverse Effects of Medications:** Whether the patient is experiencing any side effects of their medications.

The *What Matters Index* has been shown to reliably identify patients who are at risk of hospitalization.²⁴² Information on the five issues in the What Matters Index are derived from a broader health assessment called How's

Your Health, which also provides more specific information on the patient's needs and priorities that can help the primary care clinic to deliver more effective services.²⁴³

d. Adjusting Payments Based on Performance

In most value-based payment systems, performance is evaluated in terms of the percentage of times that a standard of quality was achieved for a group of patients, and future payments to the provider are reduced if that percentage is lower than the percentage achieved by other providers or lower than some arbitrary threshold. This approach is problematic because:

- the provider is still paid for the service that was delivered to the patient that failed to meet the standard of quality, and in most cases, that patient has to pay for a portion of that payment. It is of little comfort to the patient who received poor quality care that the majority of other patients received good care or that the percentage of patients who received good care was higher than for other providers.
- providers can receive no penalty at all even if a large percentage of patients fails to receive high-quality care, as long as most other providers provide equally poor care. Moreover, a provider can be penalized for a low percentage score even though the quality measure was not applicable to many of the patients, since many quality measures do not allow patients to be excluded from the measure calculation even if delivering care in the way specified by the measure would harm the patient.
- the penalties result in the provider being paid less for services delivered today based on quality problems that occurred in the past, even though the quality problems may have been eliminated. Reducing payments based on outdated performance information can jeopardize the ability to continue delivering high-quality care.

Businesses in other industries are not paid for their products and services in this way. They do not charge customers at all if the product or service they deliver is defective. That approach reduces the business's revenue immediately rather in the future, and it ensures that the customer does not have to pay for a poor-quality product or service.

A similar approach can be used in healthcare. If rural hospitals and clinics receive payments that are adequate to support the cost of delivering high-quality care, they should be able to meet a minimum standard of quality for each service they deliver, so there is no reason why they should be paid when they deliver a service to a patient that fails to meet the standard. Consequently, for those aspects of quality where a minimum standard of performance can be defined that is feasible for a hospital or clinic to achieve, if the hospital or clinic fails to meet that standard for a particular patient, then the hospital/clinic should not charge that patient or their insurance plan for the service(s) associated with that measure.

For example:

- if the hospital is receiving a Standby Capacity Payment that is adequate to support the staffing of its Emergency Department, then it is reasonable to expect that every patient who comes to the ED should be seen in 30 minutes or less. If a patient is not seen within 30 minutes, the patient should still receive care, but the hospital should not bill the patient or their insurance plan any fees for that visit.
- if the primary care clinic is receiving a monthly Comprehensive Primary Care Payment for a patient, and if the patient has not been seen by the physician at the recommended frequency, then the clinic would no longer be able to bill for monthly CPC payments for that patient.

e. Supporting More Comprehensive Improvement of Quality and Affordability

Although it is only feasible to hold small rural hospitals and clinics *accountable* for a small number of quality measures, this does not mean they should ignore other aspects of the quality of care they deliver. Hospitals and clinics should also be encouraged and assisted to do *better* than the *minimum* standards of quality. In addition, although small rural hospitals and clinics cannot be held accountable for the number, types, and quality of healthcare services their residents receive from other healthcare providers, there may be ways that the hospital or clinic could redesign the care they deliver in ways that result in lower spending on those other services.

Examples of the types of quality/affordability improvement initiatives in which rural hospitals and clinics could potentially engage include:

- improving cancer screening and delivery of other preventive services to local residents;
- avoiding prescribing unnecessary, high-cost drugs;
- avoiding low-value testing for back pain and other common conditions;
- improving prenatal care to reduce low-birthweight babies and the frequency of Cesarean sections;
- avoiding unnecessary specialist referrals and transfers to other hospitals for low-risk cases;
- improving access to behavioral health services and opioid use disorder treatment;
- prompt treatment for newly-diagnosed diseases.

In general, these improvements will not occur by including financial "incentives" in the payment system, but by providing adequate resources and assistance. In order for small hospitals and clinics to successfully engage in a more comprehensive approach to improving quality and reducing spending, they need to:

- **know which opportunities for improvement exist in the community.** The health problems of residents and the care delivery patterns of providers differ dramatically across the country. An improvement initiative that was successful in a different community may have little impact in the local community, or pursuing it could divert time and resources away from a different initiative that would have far more impact locally. Small rural hospitals and clinics do not have the ca-

capacity to pursue large numbers of initiatives, so they need to be able to prioritize their improvement efforts.

- **have the capability to deliver care in different ways.** There are relatively few situations in which outcomes are improved by simply stopping something that is currently being done; usually something *different* needs to be done – either a new service needs to be delivered instead of or in addition to an existing service, or an existing service needs to be delivered in a different way. Even if small rural hospitals and clinics begin receiving adequate financial support for the services they *currently* deliver, that does not mean they will have the resources necessary to deliver *new* services or to change the way they deliver current services.

Three things are needed to help rural hospitals and clinics identify and prioritize opportunities for improving the quality and affordability of healthcare for the residents of their communities and to implement successful improvement initiatives:

- **Additional Data on the Quality of Local Services.** Small rural hospitals and clinics generally have only limited information on the quality of their own services because they do not have the staff, software, or expertise to collect additional data and analyze it. Medicare, health insurance plans, and other payers can provide the resources needed for more detailed data collection by supporting a “Pay for Reporting” initiative, i.e., paying the hospital or clinic an additional fee when it collects additional types of information that can help it identify where any quality problems may exist and allow the success of improvement efforts to be measured.
- **Information on Services Delivered by Other Healthcare Providers.** In most cases, rural hospitals and clinics only know about the services they deliver themselves, and they have little or no information about what other services their patients or the residents of the community are receiving from other providers either inside or outside the community, how much those services cost, etc. As a result, they have no way to identify opportunities for reducing total spending or redirecting their patients to higher-value sources of care. Since Medicare and health insurance plans do have these data, they should share both the data and analyses of the data with rural hospitals and clinics to help them identify opportunities for improvement and design interventions.
- **Resources to Implement Changes in Care Delivery.** In many cases, there are ways that a hospital or clinic could modify or expand its own services that would result in lower overall spending on healthcare services for the residents of the community, but the hospital/clinic does not have the resources to make those changes. To address this, hospitals and clinics should have the ability to design Performance Improvement Initiatives that would define the results they believe they can achieve and the resources they need to do so. Medicare and other health insurance plans should then provide additional upfront payments to support the proposed changes in services,

and hold the hospitals and clinics accountable for achieving the promised results.

As explained in Chapter VI, “shared savings” programs do not provide the resources that healthcare providers need to successfully improve the quality and affordability of care. However, if – and only if – the rural hospital is receiving the kinds of information and resources to identify opportunities and implement changes described above, it would be possible to add an additional “Total Cost of Care” component to the Patient-Centered Payment. A Total Cost of Care component would provide a bonus payment to the hospital or clinic if:

- total risk-adjusted healthcare spending on the residents of the community or the patients of the clinic decreased by a statistically significant amount compared to previous years; or
- total risk-adjusted healthcare spending was lower than the majority of other communities or primary care practices and did not increase compared to previous years.

If such a Total Cost of Care component is added, it should be designed only to encourage and reward the hospital or clinic for reducing spending or maintaining low spending by identifying and successfully pursuing improvement initiatives, not to penalize them if spending is high or increases. It is impossible to design such a penalty in a way that avoids unfairly penalizing a small hospital or clinic for spending increases they had no ability to control, and that could harm both the hospital/clinic and their patients.

5. Value-Based Cost-Sharing for Patients

Medicare and most commercial health insurance plans require patients to pay a portion of the costs of most outpatient services they receive. Although cost-sharing is ostensibly intended to discourage unnecessary utilization of services by patients and to encourage them to seek out lower-cost services and providers, in many cases, cost-sharing merely shifts costs from insurers to patients and causes patients to delay or avoid receiving services they need. Moreover, a vicious cycle is created: to cover the costs of services when volume decreases, hospitals and clinics have to increase their charges, which means patients have to pay more for services, which further discourages patients from obtaining services they need, forcing even further increases in charges and causing worse outcomes for patients and higher spending for payers.

Cost-sharing will need to be structured in different ways in order to most effectively use Standby Capacity Payments (SCPs) and monthly Comprehensive Primary Care Payments (CPCPs) in place of traditional fees for services:

- The use of Standby Capacity Payments will result in a lower Service-Based Fee when a patient receives a hospital service, since the Fee will be based on marginal costs rather than average costs. However, if standard co-insurance percentages are applied to these lower fees, the amounts paid by patients could be so low that they encourage unnecessary utilization of the ED or laboratory tests.

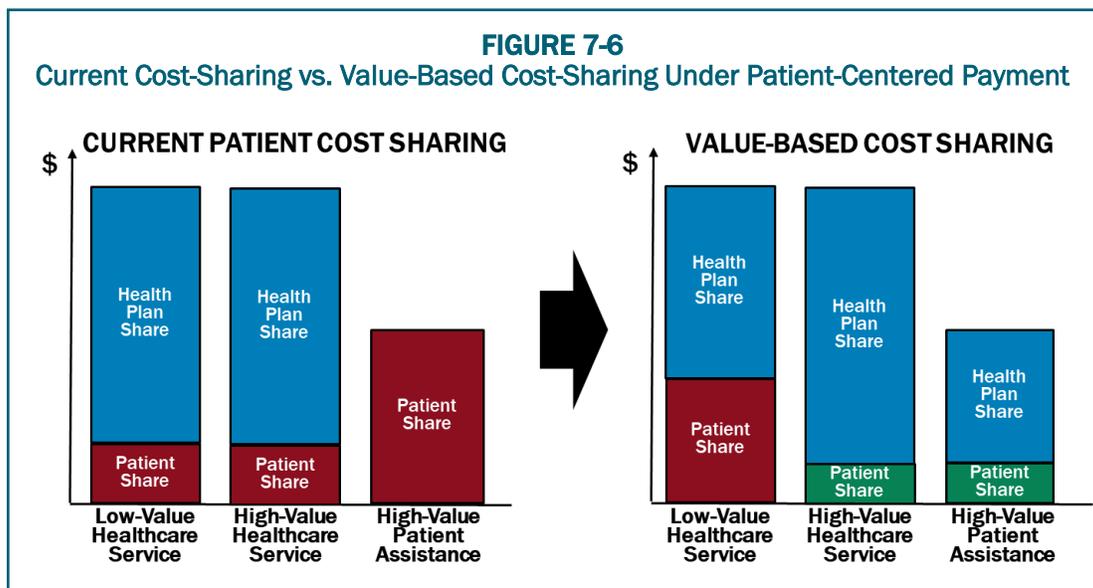
- The amounts of the monthly CPCP payments would need to be similar to the average amounts the clinic would receive during the month if visit-based payments were adequate to cover the clinic's costs. However, it would be undesirable to simply require patients to pay the same percentage of the monthly payments as they paid for individual visits. This would likely discourage some patients from enrolling in the clinic to receive primary care if they think the monthly payments would be more than they would have spent for visits. It could also encourage enrolled patients to make unnecessary visits to the clinic since there would be no difference in their cost-sharing based on the number of visits they made.

It will be difficult to reduce the aggregate amount of cost-sharing contributed by patients for all of the services they receive from the hospital or clinic because that would require payments from insurance plans to increase even more than the increase that is already needed to adequately cover the cost of services. However, that aggregate amount of cost-sharing could be collected in different ways that better encourage the use of high-value services and discourage the use of low-value services than current cost-sharing systems do. At least two types of changes would be desirable:

- **Flexibility to set lower cost-sharing rates for high-value services.** Currently, patients are charged no cost-sharing at all for certain services designated as preventive care services in order to eliminate financial barriers to receiving those services, but patients are required to pay the same copayment amount or the same percentage co-insurance for every other service they receive. Instead, the hospital and clinic should be able to set lower cost-sharing amounts for additional types of services they want to encourage the patient to receive, e.g., regular lab testing to monitor a chronic condition. Similarly, the hospital and clinic should be able to set higher cost-sharing amounts to avoid encouraging the use of undesirable services; for example, the cost-sharing for a visit to

the ED should be higher than the cost-sharing for use of the primary clinic, so that patients do not have a financial incentive to use the ED as their source of primary care.²⁴⁴

- **Flexibility to provide non-healthcare services that assist patients in adhering to care plans.** Even with lower cost-sharing amounts for individual services, patients who need multiple services may still face financial barriers in obtaining all of those services. Many patients also face financial barriers in obtaining healthcare services other than cost-sharing amounts; for example, even if there is no cost-sharing for a visit to the clinic, the patient may be unable to afford the costs for transportation or to take time off work. To address this, hospitals and clinics should have the legal flexibility to use their own revenues to provide assistance to clients, and they should be able to seek additional funding to support this as part of a Performance-Based Initiative.



SUMMARY OF PATIENT-CENTERED PAYMENT FOR RURAL HEALTHCARE SERVICES

1. Standby Capacity Payment for Each Essential Service Line

- A monthly Standby Capacity Payment is paid to the hospital by each health insurance plan for each of the plan's insured members who live in the community served by the hospital.
- The amount of the Standby Capacity Payment for each essential service line is set at a level such that the aggregate revenue is sufficient to support the fixed cost of operating that service line.

2. Service-Based Fees for Individual Hospital Services

- Health insurance plans also pay a fee when a community resident receives a service in an essential service line, with the amount of the fee based on the marginal cost of delivering an additional service at the hospital.
- Health insurance plans pay fees for other services that are based on the average costs of delivering those services at the hospital. Health insurance plans that do not agree to make Standby Capacity Payments would have to pay fees for all services based on the hospital's average cost of delivering the service.
- Health insurance plans reimburse hospitals for drugs and medical supplies based on their actual incurred cost.

3. Patient-Based Payments for Primary Care

- Health insurance plans pay Rural Health Clinics and primary care practices a monthly Comprehensive Primary Care Payment (CPCP) for each patient who has enrolled with the Clinic or practice to receive primary care.
 - ◆ Higher CPCP amounts are paid for patients with greater health problems and other needs.
 - ◆ Initial CPCP amounts are higher for new patients.
 - ◆ CPCP payments are higher at clinics that offer a broader array of services.
- Health insurance plans pay Service-Based Fees in addition to CPCP payments when enrolled patients receive selected primary care services, such as vaccinations and acute procedures.
- Health insurance plans pay fees for both visits and other primary care services that the clinic/practice delivers to non-enrolled patients.

4. Accountability for Quality and Spending

- Hospitals and clinics report on the quality of care using appropriate measures, e.g.,
 - ◆ Hospital quality: ED response time, inpatient falls, VTE prevention, medication safety
 - ◆ Clinic quality: Access to care, preventive care, behavioral health screening
- Hospitals and clinics do not charge for a service that fails to meet minimum quality standards.
- Health insurance plans provide data and additional payments to support efforts by hospitals and clinics to improve patient health and control total healthcare spending.

5. Value-Based Cost-Sharing for Patients

- Hospitals and clinics have the flexibility to set lower cost-sharing rates for high-value services.
- Hospitals and clinics have the flexibility to adjust cost-sharing amounts to assist patients in adhering to their care plans.

D. Examples of How Patient-Centered Payments Would Work

It is easier to understand the benefits of the Patient-Centered Payment System compared to global budgets, cost-based payment, and fee-for-service payments by examining how a hypothetical hospital or clinic would fare under the different scenarios about the volume of services and the cost of delivering those services discussed in previous sections.

1. Patient-Centered Payment for Emergency Department Services

How Patient Centered Payments Could be Defined for a Hypothetical Hospital ED

Figure 7-7 shows an Emergency Department at a hypothetical rural hospital with the same staffing and other costs as shown in Figure 3-7. In the Status Quo scenario, the ED has 12,500 visits, and it is assumed to be serving a community with 25,000 residents. For purposes of this example, it is assumed that 5% of the residents are uninsured and that 5% of the ED visits are made by uninsured residents. It is further assumed that an additional 5% of the ED visits are made by non-residents of the community (e.g., visitors, non-residents who are working in the community, etc.).

Under the Patient-Centered Payment system, the payment amounts are assumed to be set as follows:

- The Standby Capacity Payment is set at an average of \$100 per year for insured residents of the community (i.e., \$8.33/month). This generates enough revenue to cover almost 75% of the cost of operating the ED, assuming participation by all of the health insurance plans used by the residents.²⁴⁵
- The fee charged for each ED visit made by a community resident is set at \$65. (Separate payments would still be made for laboratory tests, drugs, etc.) The revenue from this fee would cover most of the remaining cost of operating the ED.²⁴⁶
- The fee charged for a visit made by a non-resident would be set at \$325, which is more than enough to cover the average cost per visit.

With these payment levels, the hospital receives a small positive (3%) margin on the ED operations.

Impacts of Changes in Volume on Hospital Revenues and Margins

Figure 7-8 shows the financial impact of changes in the number of ED visits.

- In Scenario A, the number of visits decreases by 10%, so revenues from visit-based fees decrease. However, most of the ED revenue is coming from the Standby Capacity Payment, not fees for individual visits, and there is no change in the Standby Capacity Payment due to changes in the number of services delivered. The reduction in visit fee revenue only reduces the total revenue by a small amount, so the ED breaks even, rather than experiencing a significant

		STATUS QUO			
		Community Residents	ED Visits	Payment	\$
Standby Capacity Payments					
	Insured Residents	23,750		\$100/year	\$2,375,000
	Uninsured Residents	1,250			
	Total Residents	25,000			
Service-Based Fees					
	Residents		11,250	\$65/visit	\$726,000
	Non-Residents		625	\$325/visit	\$203,000
	Uninsured		625		\$0
	Total Visits		12,500		\$929,000
Total Revenue					\$3,304,000
Total Cost					\$3,213,000
Profit/Loss (Margin)					\$92,000 +2.9%

FIGURE 7-8
ED Margins Under Patient-Centered Payment With Changes in Visits

	STATUS QUO		SCENARIO A Fewer Visits		SCENARIO B More Visits		SCENARIO C More Visits + Cost	
	ED Visits	\$	ED Visits	\$	ED Visits	\$	ED Visits	\$
Standby Capacity Payments		\$2,375,000		\$2,375,000		\$2,375,000		\$2,375,000
Service-Based Fees								
Residents	11,250	\$726,000	10,125	\$654,000	12,375	\$799,000	11,250	\$726,000
Non-Residents	625	\$203,000	563	\$183,000	688	\$223,000	3,000	\$975,000
Uninsured	625	\$0	563	\$0	688	\$0	750	\$0
Total Visits	12,500	\$929,000	11,250	\$837,000	13,750	\$1,022,000	15,000	\$1,701,000
Total Revenue		\$3,304,000		\$3,212,000		\$3,397,000		\$4,076,000
Total Cost		\$3,213,000		\$3,213,000		\$3,213,000		\$3,929,000
Profit/Loss (Margin)		\$92,000 +2.9%		(\$1,000) -0%		\$184,000 +5.8%		\$147,000 +3.7%

FIGURE 7-9
Impacts of Changes in Population vs. ED Visits Under Patient-Centered Payment

	SCENARIO C More Visits + Cost				SCENARIO D Population Increase			
	Residents	ED Visits	Payment	\$	Residents	ED Visits	Payment	\$
Standby Capacity Payment								
Insured Residents	23,750		\$100	\$2,375,000	30,400		\$97	\$2,934,000
Uninsured Residents	1,250				1,600			
Total Residents	25,000				32,000			
Service-Based Fees								
Residents		11,250	\$65	\$726,000		13,575	\$65	\$876,000
Non-Residents		3,000	\$325	\$975,000		675	\$325	\$219,000
Uninsured		750		\$0		750		\$0
Total Visits		15,000		\$1,701,000		15,000		\$1,095,000
Total Revenue				\$4,076,000				\$4,029,000
Total Cost				\$3,929,000				\$3,929,000
Profit/Loss (Margin)				\$147,000 +3.7%				\$100,000 +2.6%

loss as it would under a purely fee-for-service payment system.

- In Scenario B, the number of visits increases by 10%. Revenues from visit-based fees increase, but the revenue from Standby Capacity Payments stays the same, so there is a small increase in the margin, rather than the windfall profit that can occur under fee-for-service payment.
- In Scenario C, the number of visits increases significantly. The increase in the volume of visits is sufficiently high that the hospital needs to hire 2 additional FTE physicians in order to have two physicians on the high-volume shifts instead of one. The cost of operating the ED increases, but the hospital's revenue also increases because it receives more visit-based fees. The net result is that the hospital's profit improves slightly compared to the status quo scenario. In this scenario, it is assumed that most of the additional visits are made by non-residents (e.g., due to an increase in tourism), so the increased profit is generated by the non-resident visits.

Figure 7-9 shows an additional Scenario D which is identical to Scenario C except that the increase in visits to the ED is assumed to occur because the population of the community has increased significantly, not because there are more visits from non-residents. In this case, the revenue from visit-based fees would increase by a much smaller amount because the fees for visits by residents are much smaller than the fees for visits by non-residents. However, the revenue from the Standby Capacity Payments would increase because the population of the community had increased. In fact, the hospital could reduce the average Standby Capacity Payment (from \$100 to \$96 per year per resident) and still generate the same profit margin as it did in the Status Quo scenario in Figure 7-8 with a smaller population.

Figure 7-10 shows a comparison of the margins under cost-based payment, a global budget, and Patient-Centered Payment under all of the different scenarios. The hospital is better off financially under Patient-Centered Payment when visits decrease, and its profits increase less when visits increase, so Patient-Centered Payment does the best job of supporting improvements in primary care that could reduce ED use. The hospital is also much better off under Patient-Centered Payment than under a global budget if the number of visits increase significantly either because of more non-resident

visits or population growth that require an increase in staffing in the ED. Although the hospital could request an increase in the global budget to adjust for the higher staffing costs under Scenarios C and D, the Patient-Centered Payment system adjusts revenues automatically.

As in earlier discussions, the impacts depend on the scenario, and it is possible to construct scenarios in which the hospital would be better off under global payment or cost-based payment than under Patient-Centered Payment, but there is no guarantee that such scenarios would occur, and it is equally possible to construct scenarios in which there would be even more negative impacts under fee-for-service payment or a global budget than what is shown in Figure 7-10.

In addition, the impacts of Patient-Centered Payment depend on whether all of the health insurance plans in the community participate. If some payers continue to use fee for service payment, a smaller proportion of the hospital's revenues will come from Standby Capacity Payments, and the hospital's margins will be affected more significantly by changes in the number of ED visits. The residents and employers in the community can help maximize the percentage of the hospital's revenues coming from Patient-Centered Payments by choosing health insurance plans that pay in that way.

The Impact of Patient-Centered Payments on Patient Cost-Sharing

Depending on how the fees for services are set and how cost-sharing is defined, the cost to individual patients could be similar to what it is under fee-for service payment or even lower. For example, under fee-for-service payment, if the hospital charged \$325 for an ED visit, and if the patient owed 20% of that amount in cost-sharing, the patient would have to pay \$65 for the visit. Under Patient-Centered Payment, if the fee is \$65 for visit by a resident of the community, the resident could pay that full amount and spend no more than they would have otherwise (assuming the insurance plan is paying for the full Standby Capacity Payment). Since the cost to the patient is the same, there is no difference in the financial incentive or disincentive for the patient to visit the ED.

FIGURE 7-10
ED Margins Under Cost-Based Payment, Global Budget, and Patient-Centered Payment

	STATUS QUO	SCENARIO A Fewer Visits	SCENARIO B More Visits	SCENARIO C More Visits + Higher Cost	SCENARIO D Population Increase
ED Visits:	12,500	11,250	13,750	15,000	15,000
Profit/Loss on ED:					
Cost-Based + FFS	+2.9%	-2.5%	+8.2%	+1.9%	+1.9%
Global Budget	+2.9%	-2.7%	+8.4%	-6.8%	-6.8%
Patient-Centered Payment	+2.9%	0.0%	+5.8%	+3.7%	+2.6%

The Impact of Patient-Centered Payments on Insurance Plan Spending

From an insurance plan's perspective, the plan is not paying more or less for ED services than under a fee-for-service system, it is merely paying *differently*.

- Under fee-for-service, the insurance plan would pay \$325 for each visit (less whatever the patient pays in cost-sharing). Under Patient-Centered Payment, the insurance plan would pay \$65 for the visit plus the \$100 Standby Capacity Payment for the patient, for a total of \$165.
- If the patient makes two visits to the ED, the total spending by the insurance plan would be \$560 under fee-for-service payment but only \$230 under Patient-Centered Payment (\$100 + \$65 + \$65).
- On the other hand, under fee-for-service payment, the insurance plan would pay nothing for a patient who doesn't visit the ED, whereas it would pay \$100 per year for that patient under Patient-Centered Payment.

What should matter to an insurance plan is not how much more or less is spent on individual patients or services, but whether the *total spending* for the *population of patients* is higher or lower, and how *predictable* that spending is. In this regard, Patient-Centered Payment is far superior to fee-for-service payment, because the plan's spending is based primarily on how many members it has living in the community, not on how often those members visit the ED.

Patient-Centered Payments for Emergency Departments in Smaller Communities

In a smaller community, the cost of operating the ED may not be much less than it is in the larger community, but there will be fewer patients and visits to support the costs, so the Standby Capacity Payments and/or visit-based payments would need to be higher, just as the charges for visits need to be higher under fee-for-service payment in a smaller community.

Figure 7-11 shows the hypothetical ED with 5,000 visits per year that was originally described in Figure 3-7. It is assumed that there are 10,000 residents in the local community, 5% of whom are uninsured, and that 5% of the ED visits are made by non-residents.

The cost of operating the ED is lower than the cost of the ED with 12,500 visits per year shown in Figure 7-9, but the cost is only 16% lower even though there are 60% fewer visits, so the average cost per visit is more than twice as much – \$539 vs. \$257, and under a fee-for-service payment system, the hospital would need to charge twice as much for each visit to cover the cost of operating the ED.

Under the Patient-Centered Payment system, the payment amounts are assumed to be set as follows:

- The Standby Capacity Payment is set at an average of \$220 per insured resident. This generates enough revenue to cover 77% of the cost of operating the ED, assuming participation by all of the health insurance plans used by the residents.

FIGURE 7-11
Patient-Centered Payment for a Hypothetical ED in a Smaller Community

	STATUS QUO				SCENARIO A Fewer ED Visits		SCENARIO B More ED Visits	
	Residents	ED Visits	Payment	\$	ED Visits	\$	ED Visits	\$
Standby Capacity Pmt								
Insured Residents	9,500		\$220/year	\$2,090,000		\$2,090,000		\$2,090,000
Uninsured Residents	500							
Total Residents	10,000							
Service-Based Fees								
Residents		4,500	\$120/visit	\$540,000	4,050	\$486,000	4,950	\$594,000
Non-Residents		250	\$600/visit	\$150,000	225	\$135,000	275	\$165,000
Uninsured		250		\$0	225	\$0	275	\$0
Total Visits		5,000		\$690,000	4,500	\$621,000	5,500	\$759,000
Total Revenue				\$2,780,000		\$2,711,000		\$2,849,000
Total Cost				\$2,697,000		\$2,697,000		\$2,697,000
Profit/Loss (Margin)				\$83,000 +3.1%		\$14,000 +0.5%		\$152,000 +5.6%

- The fee charged for each visit made by a resident is set at \$120. The revenue from this fee would cover most of the remaining cost of operating the ED.²⁴⁷
- The fee charged for visits made by non-residents would be set at \$600, so that it is higher than the average cost per visit.

With these payment levels, the hospital generates a small positive (3%) margin on the ED operations, similar to the margin in the example of the larger ED in Figure 7-7.

As shown in Figure 7-11, a 10% increase or decrease in the number of visits would increase or decrease the operating margin for the ED by only 3%, because most of the revenues are not based on how many visits are made. The Standby Capacity Payments stabilize the hospital's margins and provide more predictable spending for payers when volumes change.

2. Patient-Centered Payment for Inpatient Services

Figure 7-12 shows the same hypothetical inpatient unit at a Critical Access Hospital that was shown previously in Figures 3-19, 4-6, and 5-11. For simplicity, it is assumed that the hospital only has acute inpatients (i.e. no swing beds), all of the hospitalized individuals live in the hospital's service area, and all of the hospitalized patients have health insurance. In the Status Quo scenario, the unit has an average daily census of 3.0, the staffing and other costs total \$2.4 million, and so the average cost per day is \$2,221. It is assumed that Medicare beneficiaries represent 25% of the individuals who live in the hospital's service area and 50% of the patients admitted to the hospital for acute inpatient care.²⁴⁸

Under the Patient-Centered Payment system, the payment amounts are assumed to be set as follows:

- Because hospitalization rates differ significantly by age, the Standby Capacity Payment for Medicare beneficiaries is set at \$490 per year per beneficiary (i.e., \$41 per month) and the Standby Capacity Payment for the rest of the population is set at \$100 per year per insured resident (i.e., \$8.33 per month). Overall, these amounts generate enough revenue to cover over 80% of the cost of operating the inpatient unit, assuming participation by all of the health insurance plans used by the residents.
- The Service-Based Fee is set at \$500 for each day a patient spends on the inpatient unit. The revenue from these per diem fees covers the remaining cost of operating the inpatient unit and generates a small positive (3.5%) financial margin.
- If the hospital admitted someone to the hospital who was not a resident of the community (e.g., a visitor to the community), it would charge \$2,500 per day, so that it receives more in revenue than the average cost of inpatient care. (In the example in Figure 7-8, it is assumed there are no non-resident admissions.)

Figure 7-13 shows the impact of changes in the number of inpatient admissions and costs, using the same scenarios shown in Figure 5-11:

- In Scenario A, the average daily census decreases by 16% to 2.5. The hospital loses some revenue because it has fewer inpatient days, but since the vast majority of the revenue comes from the Standby Capacity Payment, the inpatient unit remains in an approximately breakeven situation.
- In Scenario B, the average daily census doubles, and the hospital needs to double the number of nurses on the unit. The revenue from the per diem pay-

FIGURE 7-12 Patient-Centered Payment for a Hypothetical Rural Inpatient Unit				
STATUS QUO Acute Inpatient Census 3.0				
	Community Residents	Inpatient Days	Payment	\$
Standby Capacity Payments				
Residents on Medicare	2,500		\$490/year	\$1,224,000
Other Insured Residents	7,500		\$100/year	\$746,000
Total Residents	10,000			\$1,970,000
Service-Based Fees		1,095	\$500/day	\$547,000
Total Revenue				\$2,517,000
Total Cost				\$2,432,000
Profit/Loss (Margin)				\$86,000 3.5%

FIGURE 7-13
Inpatient Margins Under Patient-Centered Payment With Changes in Admissions

	STATUS QUO Acute Census: 3.0		SCENARIO A Fewer Admissions Acute Census: 2.5		SCENARIO B More Admissions Acute Census: 6.0		SCENARIO C Higher Cost Acute Census: 3.0	
	Days	\$	Days	\$	Days	\$	Days	\$
Standby Capacity Payments		\$1,970,000		\$1,970,000		\$1,970,000		\$1,970,000
Service-Based Fees	1,095	\$547,000	913	\$456,000	2,190	\$1,095,000	1,095	\$547,000
Total Revenue		\$2,517,000		\$2,426,000		\$3,065,000		\$2,517,000
Total Cost		\$2,432,000		\$2,432,000		\$2,911,000		\$2,552,000
Profit/Loss (Margin)		\$86,000 +3.5%		(\$4,000) -0.2%		\$154,000 +5.3%		(\$35,000) -1.3%

FIGURE 7-14
Inpatient Margins Under Cost-Based Payment, Global Budget & Patient-Centered Payment

	STATUS QUO	SCENARIO A Fewer Admissions	SCENARIO B More Admissions	SCENARIO C Higher Cost
Acute Census	3.0	2.5	6.0	3.0
Profit/Loss on Inpatient Unit				
Cost-Based + FFS	+3.5%	-5.5%	+39.8%	+1.0%
Global Budget	+3.5%	-1.0%	+9.1%	-1.3%
Patient-Centered Payment	+3.5%	-0.2%	+5.3%	-1.3%

ments increases sufficiently to cover the additional cost and maintain a positive margin.

- In Scenario C, the average daily census stays the same, but the cost of operating the unit increases. This causes a financial loss, but the loss is much smaller than what would occur under fee-for-service payment, a global budget, or cost-based payment.

Figure 7-14 shows that under Scenario A, the hospital is better off financially under the Patient-Centered Payment System than it would be under the cost-based payment system or a global hospital budget. In Scenario B, when admissions increase, the profits increase under Patient-Centered Payment, but by less than in the other models; this is a desirable thing since the hospital is not encouraged to admit patients inappropriately and it creates greater predictability of spending for insurance plans.

Scenario C shows that there is a similar incentive to control costs as under the global budget because the payment is not tied directly to the actual cost; however, there is also the same potential for the hospital to lose money if it experiences increases in costs for reasons beyond its control. Ideally, the hospital should make a large enough margin on services so that it can create a reserve account to deal with fluctuations in costs. If costs have increased permanently for reasons that cannot be avoided, the Standby Capacity Payments and/or

Service-Based Fees would need to be increased in future years.

3. Patient-Centered Payment for Essential Ancillary and Other Services

The impact of a Patient-Centered Payment System on laboratory services, radiology services, and other essential service lines would be similar to what is shown above. The Standby Capacity Payment would need to be set so that it is adequate to cover all or most of the fixed costs in the service line, and fees for individual services would be set at much lower levels than the amounts charged today. When volume changes, the hospital's margins on the service line would be more stable than they are under fee-for-service payment and better aligned with actual costs than they would be under a global budget.

4. Patient-Centered Payment for Primary Care Clinics

Figure 7-15 shows the revenues and costs for a hypothetical Rural Health Clinic with 9,000 visits per year. The total cost of operating the clinic is \$2.2 million, based on the same staffing and other costs shown for the clinic discussed in Chapter IV and shown in Figure 4-7. At this hypothetical clinic, it is assumed that 50% of the visits are made by Medicare beneficiaries (who are in the "Original Medicare" program, not a Medicare Advantage

FIGURE 7-15
Cost-Based Payment for a Hypothetical Rural Health Clinic

	STATUS QUO			SCENARIO A Fewer Clinic Visits		SCENARIO B More Clinic Visits	
	Clinic Visits	Payment	\$	Clinic Visits	\$	Clinic Visits	\$
Revenue							
Medicare (Cost-Based)	4,500		\$1,088,000	4,050	\$978,932	4,950	\$1,154,000
Other Payers (Fee-Based)	4,500	\$263/visit	\$1,185,300	4,050	\$1,067,000	4,950	\$1,304,000
Total Revenue			\$2,273,000		\$2,046,000	9,900	\$2,458,000
Total Cost			\$2,217,000		\$2,217,000		\$2,217,000
Profit/Loss (Margin)			\$56,000 +2.5%		(\$172,000) -7.7%		\$241,000 +10.9%

FIGURE 7-16
Patient-Centered Payment for a Hypothetical Rural Health Clinic

	STATUS QUO				SCENARIO A Fewer Clinic Visits		SCENARIO B More Clinic Visits	
	Enrolled Patients	Clinic Visits	Payment	\$	Clinic Visits	\$	Clinic Visits	\$
Comp. Primary Care Pmt								
Higher-Need Patients	800		\$85/month	\$816,000		\$816,000		\$816,000
Lower-Need Patients	3,700		\$30/month	\$1,332,000		\$1,332,000		\$1,332,000
Total Enrolled Patients	4,500			\$2,148,000		\$2,148,000		\$2,148,000
Visit Fees								
Enrolled Patients		8,500	\$0/visit	\$0	7,650	\$0	9,350	\$0
Non-Enrolled Patients		500	\$250/visit	\$125,000	450	\$113,000	550	\$138,000
Total Visits		9,000		\$125,000	8,100	\$113,000	9,900	\$138,000
Total Revenue				\$2,273,000		\$2,261,000		\$2,286,000
Total Cost				\$2,217,000		\$2,217,000		\$2,217,000
Profit/Loss (Margin)				\$56,000 +2.5%		\$44,000 +2.0%		\$69,000 +3.1%

plan), and the remainder have other types of health insurance. In contrast to the example shown in Chapter IV, it is assumed here that the insurance plans pay \$263 per visit, so the clinic receives enough revenue in total to cover its costs and generate a small positive (2.5%) margin.

Two scenarios are defined, one with an increase in patient visits and one with a decrease.

Under the *current* payment systems, in which cost-based payments from Medicare and fees from other payers are based on the number of visits:

- In Scenario A, the clinic begins to address more patient needs by phone, by email, or through visits with nurses or other clinic staff, so that the number of visits to the clinic that are eligible for traditional visit-based payments decreases by 10%. The clinic now experiences an 8% loss, because its revenues decrease when traditional visits decrease.
- In Scenario B, the number of visits to the clinic increase by 10%, and the clinic has a significant increase in profit.

Figure 7-16 shows the same clinic under Patient-Centered Payment. It is assumed that the clinic has enrolled a total of 4,500 patients for ongoing primary care management, so the clinic is eligible to receive monthly Comprehensive Primary Care Payments (CPCPs) for these patients. A small proportion (18%) of the patients are assumed to be higher-need patients for which the clinic will receive higher monthly CPCPs. The CPCP payment is set at \$30 per month for the lower-need patients and \$85 per month for the higher-need patients. The example assumes that a small number of patients who do not want to enroll for ongoing care or whose health insurance plan is unwilling to make payments under the Patient-Centered Payment system also visit the clinic to receive care; it is assumed that 500 of the 9,000 annual visits are made by these non-enrolled patients, and the fee for each of these visits is \$250.

- In Scenario A, when the number of visits to the clinic decreases because the clinic begins providing services in different ways, the clinic's revenue remains almost unchanged, because it is receiving payments based on how many patients are *enrolled*, not based on how often they visit the clinic.
- In Scenario B, when the number of visits to the clinic increases, the clinic continues to receive sufficient revenue to cover its costs, but it does not receive a large windfall profit that could encourage it to see patients unnecessarily.

E. Impact on Healthcare Spending of a Patient-Centered Payment System

1. Both the *Method of Payment* and the *Adequacy of Payment* Are Important

The previous sections demonstrate that a Patient-Centered Payment system is a better method of paying rural hospitals and clinics than fee-for-service, cost-based payment, global budgets, shared savings, or global payments because it would be more effective in helping the hospitals and clinics achieve all three of the goals defined at the beginning of this chapter: (1) ensuring availability of essential services in the community, (2) enabling safe and timely delivery of the services patients need at prices they can afford to pay, and (3) encouraging better health and lower healthcare spending.

While a better *method* of payment is necessary for achieving these goals, it is not sufficient. Rural hospitals and clinics also need an *adequate amount* of payment. All of the examples shown in the previous section assume that the payment amounts under a Patient-Centered Payment system would be set at levels that are adequate to support appropriate levels of staffing, wages, equipment, and other costs needed to enable the delivery of high-quality care in a rural Emergency Department, inpatient unit, or primary care clinic. Moreover, the comparisons made to global budgets and other payment systems assumed that the revenue the hospital or clinic would receive under those systems would *also* have been adequate to cover the hospital or clinic's costs in the "status quo" scenario, thereby enabling the relative impacts of the different payment methods in various scenarios to be determined.

2. Increases Will Be Needed in Payments to Many Small Rural Hospitals and Clinics

As shown in Chapters II and III, the amount of revenue that many small rural hospitals and clinics are receiving under current payment systems is *not adequate* to support the minimum cost of delivering essential services in a safe and timely way. No matter what method is used to pay a hospital, if it cannot receive enough revenue to cover its costs, it could be forced to close.

This does not mean that every rural hospital needs to receive more revenues under a Patient-Centered Payment system:

- Some larger hospitals are delivering non-essential services, and under a Patient-Centered Payment system, they could reduce or eliminate these services and reduce their costs without losing as much revenue as they would under current payment systems. This would enable them to improve their margins without receiving more revenues.
- Some hospitals have higher-than-necessary expenses in essential service lines, and they support those higher costs by charging higher-than-necessary prices to private payers. These hospitals could receive lower revenues than they do today without harming their margins if they reduced or eliminated the excess costs. The Patient-Centered Payment System could

encourage that by more clearly defining what it *should* cost to deliver essential services and by paying for standby costs directly rather than allowing hospitals to justify charging high facility fees for all services based on the need to support standby costs in some service lines.

The hospitals that will need more revenues are the very small rural hospitals that are losing money on patient services, that are delivering only essential services, that are delivering those services with the minimum level of staffing needed to ensure quality care, and that do not have the ability to demand high prices from private payers in order to subsidize inefficiencies in their operations. These hospitals need to receive more revenues under *any* payment system, but the increase in revenues needed under a Patient-Centered Payment system could be lower than under other payment systems because of the incentives the payments create to avoid unnecessary services and to deliver essential services efficiently.

3. Increases in Payments from Private Payers Will Be Needed

As shown in Chapter II, the biggest shortfalls for most small rural hospitals are a result of the low payments they receive from private payers. This means that in most cases, the biggest increases in payments will need to come from private health plans – both Medicare Advantage plans and commercial insurance plans. The need for increases in private payer payments and the size of the increases needed varies significantly by state, as shown in Chapter II: in some states, commercial insurance plans are paying more than the average cost of services at small rural hospital hospitals, but in others, they are paying far less. Even if a private health plan is paying the same amount to a small rural hospital as it pays a large rural hospital, it is likely causing a loss, or a bigger loss, for the small hospital. But in many cases, it appears that private health plans are actually paying small rural hospitals less than what they pay large urban hospitals for the exact same service, even though there is no difference in the quality of the service or any other legitimate basis on which to do so.

Conversely, for most small rural hospitals, only small increases in Medicare payments will be needed because most small rural hospitals are designated as Critical Access Hospitals and so they are already paid close to their actual costs. As shown in Chapter II, for most small rural hospitals, Medicare pays more for services than private payers do, whereas at large hospitals, Medicare typically pays less.

4. Increases in Payments from Medicaid

The extent to which Medicaid payments will need to increase will vary by state. As shown in Chapter II, some state Medicaid programs pay Critical Access Hospitals and Rural Health Clinics based on their actual costs or even pay them more than their costs. Some states have a special subsidy programs for small rural hospitals that offset losses due to low Medicaid fees for services or limited Medicaid eligibility. For these hospitals in these states, the *method* of payment can change without nec-

essarily requiring an increase in the total *amount* of payment.

In other state, increases in Medicaid payments to the hospitals would be needed. However, even in states where the Medicaid payment rates are lower than private insurance payments, the much larger number of privately-insured patients at rural hospitals means that no matter what is done to increase Medicaid payments, the hospitals' financial viability will depend on receiving adequate payments from private insurance plans.

5. Increases in Payments to Hospitals Will Likely Focus on Primary Care and Emergency Care

The fact that a small rural hospital is losing money on patient services overall does not mean that it is losing money on every service line or that losses in different service lines are of equal magnitude. Increases in payment will need to focus on the service lines where the losses are greatest.

Unfortunately, the cost reports that hospitals file with Medicare and state governments do not include the actual amounts of revenue that hospitals receive for individual service lines. Hospitals report the amounts they *charged* for services by service line and they report the *aggregate* actual payments they receive for all service lines combined, but this information is of limited value because the ratio of payments to charges will generally differ dramatically by service line based on the types of insurance the patients had and the amounts that each payer pays for different types of services. Moreover, as shown in Figure 3-34, the ratio of costs to charges also differs dramatically by service line. What matters for the hospital's profitability is how *actual payments* in each service line compare to the *actual costs* of operating that service line.

Many small rural hospitals do not know exactly how much individual service lines are contributing to their overall profits and losses, and hardly any know what the service line-specific margins are by *payer*. This type of information is usually impossible to determine using standard billing and accounting systems, and most small rural hospitals do not have sufficient staff or resources to carry out the detailed analysis needed to determine service line-specific margins by payer.

In 2016, a group of ten small Critical Access Hospitals in Washington State did perform this analysis with financial and technical assistance from the Washington State Hospital Association, the Washington Department of Health, and the Washington Health Care Authority as part of the Washington Rural Health Access Preservation (WRHAP) project.²⁴⁹ They found that:

- **Losses on Rural Health Clinics and other primary care clinics were the largest contributor to overall hospital deficits.** All of the hospitals had significant losses on their clinics. On average, clinic revenues only covered 2/3 of the costs of operating the clinics and the losses at the clinics contributed 30% or more of the total losses at the hospitals.
- **Losses on Emergency Department services were also significant.** Eight of the ten hospitals analyzed had

losses on their Emergency Departments. On average, the hospitals were paid 9% less than the cost of ED visits.

- **Losses on inpatient services were much smaller.** Seven of the ten hospitals had losses on their inpatient services, but these shortfalls were smaller than the deficits for the Emergency Departments, averaging about 4% of costs.
- **Low payments from commercial payers and Medicaid were the largest contributor to losses.** Low payments from commercial payers were the largest contributor to the deficits at all of the Rural Health Clinics analyzed; Medicaid payments were also significantly below costs at a majority of the clinics. The biggest shortfalls for emergency department visits were associated with uninsured patients, Medicaid clients, and commercially insured clients, but their relative importance varied significantly from hospital to hospital. Since all of the hospitals were Critical Access Hospitals and received cost-based payments from Medicare, losses on Medicare patients were much smaller than the losses on patients with other types of insurance.
- In most (but not all) of the hospitals, radiology and laboratory testing services were profitable and helped to offset losses in the other service lines and reduce the need for local tax levies.

If similar analyses were performed for hospitals and clinics in other states, the results would likely be different because of the differences by state that were described in Chapter II. However, the data shown in Figure 2-12 indicates that in most cases, low payments by private insurers for Rural Health Clinic services are likely a significant contributor to losses at small rural hospitals. In addition, the data shown in Figure 2-55 and 3-14 suggests that low payments for ED services are also likely a significant contributor to hospital's overall losses.

Consequently, much of the increase in payments needed to support rural hospitals will likely focus on support for primary care and emergency care, not for inpatient care or ancillary services.

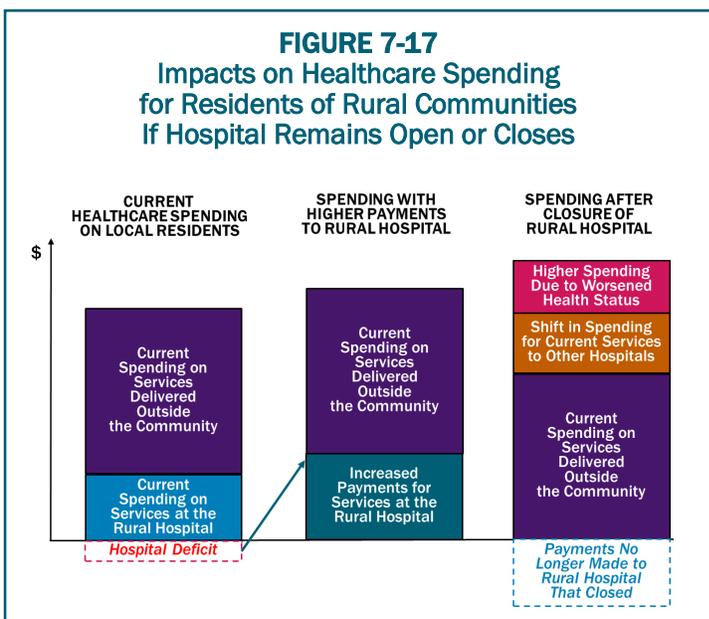
6. Will Higher Payments for Small Rural Hospitals and Clinics Increase Healthcare Spending?

Health insurance plans that need to increase their payments to rural hospitals will likely object that higher payments will increase total health care spending and force increases in health insurance premiums. However, this implicitly assumes that a rural hospital (and any Rural Health Clinics it operates) can and will continue to operate without any increase in payment. As the growing number of hospital closures across the country demonstrates, that is not a realistic assumption. If the rural hospital closes, then overall spending may actually increase by more than the increase that would occur by paying the rural hospital more for its services. There are several reasons for this:

- If a private health plan is paying less for services at the rural hospital than at larger hospitals, when the rural hospital closes, the residents of the local community

will have to go to a larger hospital to obtain services, and the health insurance plan will end up spending more for the services anyway.

- Even if the health plan has been paying the same amount or less for the same services at larger hospitals than at the rural hospital, individuals who go the larger hospitals when the rural hospital in their community closes may be more likely to receive unnecessary services or unnecessarily expensive services than they would have from the rural hospital or clinic in their community.
- If closure of the local hospital causes the residents of the community to obtain fewer necessary services because the services are no longer as easily accessible, their health problems may not be diagnosed and treated promptly, and that can result in the need for even more expensive services. For example:
 - ◆ if residents no longer have access to effective primary care services in their community, they will be less likely to receive preventive care and less likely to receive proactive assistance in managing a chronic disease.
 - ◆ if residents no longer have ready access to an emergency department that can provide a rapid diagnosis and at least initial treatment when an injury, heart attack, stroke, or other serious problem occurs, the patients could suffer greater disabilities that will require extended and expensive therapy.
 - ◆ if residents no longer have easy access to laboratory testing, they will be less likely to manage a chronic condition effectively or have a new condition diagnosed quickly and accurately.
- If a large health system acquires the hospital, it may prevent closure in the short run, but the health system will likely demand higher payments for the hospital's services from private health plans as part of the system's overall contract, and those payments may be much higher than what would have been needed to keep the rural hospital both open and operating independently.



Even if total spending on the residents of the community does increase, the increase will be small because of the small percentage of the spending that currently is used for services delivered at the rural hospital. The purpose of health insurance is not to spend as little as possible on healthcare services, but to enable people to receive the healthcare services they need.

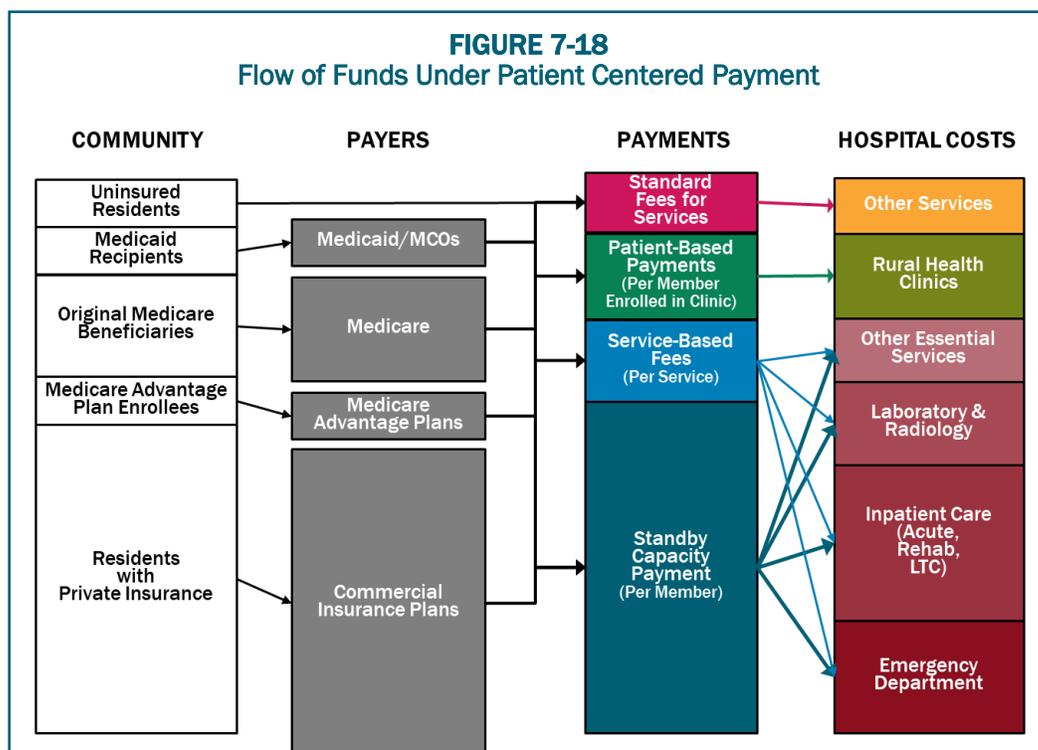
F. Operationalizing Patient-Centered Payments

A number of implementation steps will be needed in order to successfully implement a Patient-Centered Payment system for hospitals. Several of these steps are different than those which are currently carried out under fee-for-service or cost-based payment systems:

- Defining the Hospital's Essential Service Area.** The geographic service area whose residents rely on the hospital for essential services must be defined in order to determine the appropriate amount of standby capacity and to determine for which residents the Standby Capacity Payments should be paid. This *Essential Service Area* may need to be defined differently for service lines that are only operated by a subset of hospitals; for example, since only a subset of rural hospitals offer obstetric services, the Essential Service Area for maternity care at those hospitals will be larger than the hospitals' Essential Service Area for the emergency department, laboratory, and other core services.
- Estimating the Cost of Delivering High-Quality Hospital and Primary Care Services.** In order to ensure the Standby Capacity Payments and the fees for individual hospital services are adequate to support the fixed

costs and marginal costs of delivering high-quality services, estimates of those costs for different size hospitals are needed. Similarly, for primary care clinics, since the monthly Comprehensive Primary Care Payments need to be adequate to support an appropriate combination of services for patients, not just face-to-face visits with clinicians, estimates of the costs of delivering high-quality primary care in small clinics are needed. These estimates should be developed using a methodology similar to the examples in Chapter III, rather than simply taking statistical averages of current costs, in order to ensure the amounts are adequate to support high-quality care, so rural hospitals and clinics will need to play a central role in developing the estimates.

- Determining the Relative Amounts of Payments for Different Subpopulations of Residents and Patients.** The monthly Standby Capacity Payments and Comprehensive Primary Care Payments need to be set at levels that reflect the different needs of different subgroups of residents and patients. For example, since older individuals are more likely to be admitted to a hospital for acute care than younger residents of the community, it makes sense for the hospital to receive a higher Standby Capacity Payment for inpatient services from Medicare and Medicare Advantage plans than for younger members of other health insurance plans.
- Establishing Billing Codes for Standby Capacity Payments.** The Standby Capacity Payments can be easily implemented within a hospital's current billing system and a health plan's current claims payment system by establishing a new billing code for each essential service line. The hospital would then submit a billing form to the health plan using these Standby Capacity Payment codes for each resident in the hospital's service area who is insured by that health plan. Alternatively,



the health plan could simply determine which of its members live in the hospital's service area and send the hospital the total of the applicable Standby Capacity Payments.

These steps, and the processes needed to implement them, may seem complex, but every payment system involves similar or greater levels of complexity. For example, in the standard Medicare systems for paying hospitals, CMS has to set payment amounts for 700 separate Diagnosis Related Groups (MS-DRGs) that are based on differences in patients' diagnoses, the procedures that were performed in the hospital, and complications that arose during the hospital stay. CMS also sets payments for over 700 different categories of out-patient services defined using Ambulatory Payment Classifications (APCs), and hospitals have to submit a claim with the appropriate procedure codes and diagnosis codes each time they deliver a service. The payment system for physicians requires that payment amounts be assigned to over 14,000 Current Procedural Terminology (CPT) and Healthcare Common Procedural Coding System (HCPCS) codes, with adjustments to the payment amounts based on whether the service was delivered in a hospital or not, whether multiple procedures were performed on the same day, whether all components of a procedure were performed, and other factors. It is difficult to imagine how the Patient-Centered Payment system could be more complex than that.

Those who advocate for use of hospital global budgets or global payments because of their "simplicity" do not seem to understand all of the complex steps that are involved in determining which patients and which services are included and excluded, how the global budgets and benchmarks are updated each year, how quality measures are calculated and how payments are adjusted based on them, how adjustments to budgets and

payments are made when special circumstances arise, etc. Chapter V describes only part of the complex process that Maryland uses to update each hospital's global budget in an effort to ensure that the budget amount is adequate without being excessive. Hospitals in Maryland still submit claims forms for every individual service they submit, they have to adjust the charges for those services multiple times in order to stay within the budget, and the state regulates the amounts of the individual charges using a separate process beyond what was described in Chapter V. The process that will be used in the Pennsylvania Rural Health Model will likely be similarly complex, and if it is not, the "simplicity" of the payments could harm both hospitals and patients by failing to provide sufficient revenues to sustain high-quality services.

In fact, many of the same steps that are needed to implement the Patient-Centered Payment system are also needed for a hospital global budget or global payment model. For example, in order for a hospital to receive a global budget to provide services, the geographic area it will be serving needs to be identified, and a mechanism for allocating the budget among different payers is needed. Moreover, the only way to ensure the budget will be adequate to support the costs of essential services will be to have estimates of what those costs are or should be, not simply what the hospital's revenues have been in the past. Since the Patient-Centered Payment system will be far more effective than a global budget system, it makes more sense to perform these types of steps in order to implement the former rather than the latter.

VIII. HOW TO SAVE RURAL HOSPITALS BEFORE IT'S TOO LATE

KEY POINTS

More than 800 rural hospitals – 40% of all rural hospitals in the country – are at risk of closing in the near future. Most of these are small rural hospitals located in isolated communities where loss of the hospital will severely limit access to health care services. More than 30 million people could be directly harmed if these hospitals close, and people in all parts of the country could be affected through the impacts on workers in agriculture and other industries.

Adequate, appropriate payments for small rural hospitals are essential for preventing closures. Most closures will *not* be prevented by technical assistance programs, one-time grants, permission to stop providing inpatient services, global hospital budgets, or shared savings programs. The only way to prevent closures and support high-quality rural healthcare is to create a new payment system that will: (1) ensure availability of essential services in the community; (2) enable safe and timely delivery of the services patients need at prices they can afford to pay; and (3) encourage better health and lower healthcare spending. A *Patient-Centered Payment System* would achieve all of these goals.

It will cost about \$3.7 billion per year to prevent closures of the at-risk hospitals and preserve access to rural healthcare services, an increase of only 1/10 of 1% in total national healthcare spending. The increase in spending needed to eliminate rural hospital losses is tiny in comparison to the total amount currently spent on healthcare. Moreover, spending would likely increase even if hospitals close because reduced access to preventive care and prompt treatment will cause residents of the rural communities to need even more services in the future. Paying more now to preserve local services is a better way to invest resources.

Most of the increase in spending will support primary care and emergency care, not inpatient or ancillary services. Available information indicates the biggest causes of losses at most small rural hospitals are underpayments for primary care and emergency services.

Every payer will need to change the way it pays small rural hospitals, but the biggest changes must be made by private health insurance companies. Although most payers are underpaying small rural hospitals, the biggest cause of negative margins in most small rural hospitals in most states is low payments from private insurance plans and Medicare Advantage plans.

Employers and residents in rural communities need to choose private insurance plans that pay their hospitals adequately and appropriately. Most private insurance plans are unlikely to increase or change their payments unless businesses, local governments, and residents choose health plans based on whether they pay the local hospital adequately and appropriately. State insurance departments and state insurance exchanges can help by requiring health plans to disclose their payment methods and amounts for small rural hospitals and by encouraging the plans to use Patient-Centered Payments instead of traditional fees.

Medicaid programs and managed care organizations need to pay rural hospitals adequately and appropriately for their services. Expanding eligibility for Medicaid will help more rural residents afford healthcare services and reduce losses at hospitals from serving uninsured patients. However, small rural hospitals will benefit most from receiving higher Medicaid payments for their services. CMS should authorize states to require Medicaid MCOs to use Patient-Centered Payments and to pay adequately for services at small rural hospitals.

Congress should create a Patient-Centered Payment program in Medicare for small rural hospitals. Although Medicare is not the primary cause of deficits at small rural hospitals, creation of an appropriate payment system in Medicare can serve as a model for other payers. However, the “global budget” demonstration programs proposed to date are unlikely to help most rural hospitals and they could harm many of the smallest hospitals.

Rural hospitals need to be transparent about their costs, efficiency, and quality, and they should do what they can to control healthcare spending for local residents. In order for purchasers and patients in rural communities to support higher and better payments at their hospitals, they need to have confidence that the hospitals will use the payments to deliver high-quality services at the lowest possible cost, and that the hospitals will proactively identify and pursue opportunities to control healthcare costs for community residents. Small rural hospitals should estimate the minimum feasible costs for delivering essential services using an objective methodology, proactively work to improve efficiency of services, and publicly report on the quality of their care.

A. The Need for Rapid Action to Prevent Closures and Sustain Rural Healthcare

The rural hospitals that have closed in recent years are just the tip of a very large iceberg. More than one-third of the rural hospitals in the country could close in the near future unless appropriate actions are taken quickly to prevent that.

Hundreds of Rural Hospitals Were at Immediate Risk of Closure Before the Pandemic

Over 500 rural hospitals – more than one-fourth of the rural hospitals in the country – were at **immediate risk of closure** even before the coronavirus pandemic because of continuing financial losses and lack of financial reserves to sustain operations. These hospitals had:

- **Persistent Financial Losses:** The hospitals had a cumulative negative total margin over the most recent 3-year period for which financial data were available²⁵⁰; and
- **Low or Non-Existent Financial Reserves:** The hospitals either (a) had total liabilities exceeding all assets other than buildings and equipment, or (b) had assets greater than liabilities, but only by enough to sustain continued losses for at most 2 years.²⁵¹

As shown in Figure 8-1, almost every state had at least one rural hospital at immediate risk of closure, and in 14 states, 20% or more of the rural hospitals were at immediate risk.

These estimates likely understate the severity of the problem that exists today. Margins at most hospitals are likely to be substantially worse in 2020 because of the combination of the higher costs hospitals incurred during the pandemic and the reduction in revenues because patients avoided seeking non-emergency services.

Hundreds More Rural Hospitals Are at High Risk of Closing in the Future

Over 300 additional rural hospitals are at **high risk of closure** in the near future. These hospitals fall into two categories:

- **Low Financial Reserves.** This category consists of hospitals that had assets greater than liabilities, but the difference would only have been enough to cover the hospital's average annual losses for at most 5 years.
- **High Dependence on Non-Patient Service Revenues.** The second group of hospitals have had positive total margins, but only because they receive large amounts of funding from local taxes, state subsidies, or other sources of funds sufficient to offset losses on patient services. Moreover, these hospitals either have liabilities in excess of assets, or their net assets would not be large enough to offset the patient service losses for more than two years. Since it is not clear that these hospitals can continue receiving large amounts of revenue from other sources in the future, they also have to be considered at high risk of closure.

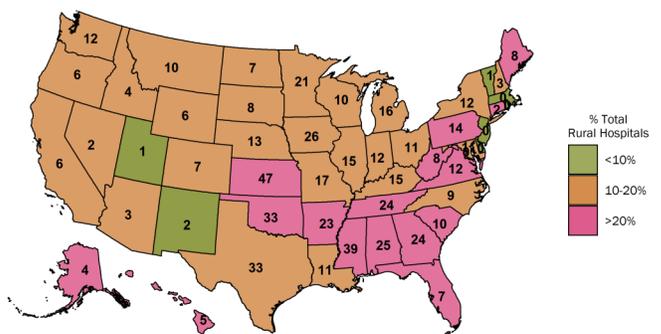
Rural Hospitals In Almost Every State Are at Risk of Closing

In total, over 800 rural hospitals – 40% of all rural hospitals in the country – are either at immediate risk or high risk of closure. As shown in Figure 8-2 and Table 8-1, more than 20% of rural hospitals are at risk of closing in almost every state in the country, and in 14 states, the majority of the rural hospitals are at risk of closing. More than 20 million people who live in the areas served by the at-risk hospitals could be directly affected if the hospitals were to close.

Most Rural Hospitals at Risk of Closing Are in Isolated Rural Communities

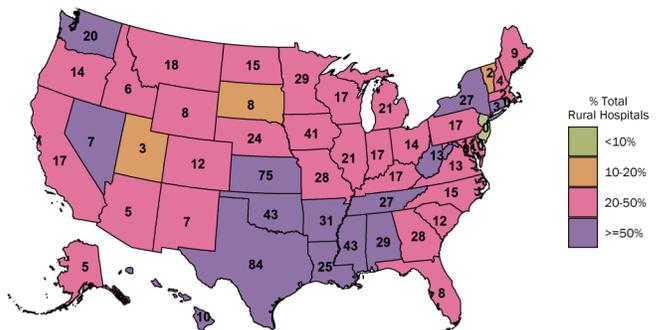
Almost all of the rural hospitals that are currently at immediate or high-risk of closure are in isolated rural communities. 89% are more than a 20-minute drive away from the next-closest hospital, and 49% are more than 30 minutes away. In many cases, the closest hospital is also a hospital that is struggling financially. Two-thirds (69%) of the at-risk rural hospitals are more

FIGURE 8-1
Rural Hospitals at Immediate Risk of Closing



Risk of closure is based on persistent financial losses and low financial reserves.

FIGURE 8-2
Rural Hospitals at Immediate or High Risk of Closing



Risk of closure is based on persistent financial losses and low financial reserves, or high dependence on grants, local taxes or other revenues not derived from patient services.

**TABLE 8-1
RURAL HOSPITALS AT IMMEDIATE OR HIGH RISK OF CLOSING**

State	Total Rural Hospitals	Number at Risk of Closing	Percent at Risk of Closing	Number at Immediate Risk of Closing	Percent at Immediate Risk	Number at High Risk of Closing
Alabama	45	29	64%	25	56%	4
Alaska	13	5	38%	4	31%	1
Arizona	17	5	29%	3	18%	2
Arkansas	48	31	65%	23	48%	8
California	52	17	33%	6	12%	11
Colorado	41	12	29%	7	17%	5
Connecticut	3	3	100%	2	67%	1
Delaware	2	0	0%	0	0%	0
Florida	21	8	38%	7	33%	1
Georgia	62	28	45%	24	39%	4
Hawaii	12	10	83%	5	42%	5
Idaho	28	6	21%	4	14%	2
Illinois	73	21	29%	15	21%	6
Indiana	51	17	33%	12	24%	5
Iowa	91	41	45%	26	29%	15
Kansas	106	75	71%	47	44%	28
Kentucky	69	17	25%	15	22%	2
Louisiana	47	25	53%	11	23%	14
Maine	25	9	36%	8	32%	1
Maryland	4	1	25%	1	25%	0
Massachusetts	5	2	40%	0	0%	2
Michigan	63	21	33%	16	25%	5
Minnesota	90	29	32%	21	23%	8
Mississippi	64	43	67%	39	61%	4
Missouri	58	28	48%	17	29%	11
Montana	51	18	35%	10	20%	8
Nebraska	72	24	33%	13	18%	11
Nevada	13	7	54%	2	15%	5
New Hampshire	17	4	24%	3	18%	1
New Jersey	1	0	0%	0	0%	0
New Mexico	24	7	29%	2	8%	5
New York	51	27	53%	12	24%	15
North Carolina	53	15	28%	9	17%	6
North Dakota	37	15	41%	7	19%	8
Ohio	70	14	20%	11	16%	3
Oklahoma	72	43	60%	33	46%	10
Oregon	32	14	44%	6	19%	8
Pennsylvania	44	17	39%	14	32%	3
Rhode Island	0	0	0%	0	0%	0
South Carolina	25	12	48%	10	40%	2
South Dakota	45	8	18%	8	18%	0
Tennessee	52	27	52%	24	46%	3
Texas	145	84	58%	33	23%	51
Utah	21	3	14%	1	5%	2
Vermont	13	2	15%	1	8%	1
Virginia	28	13	46%	12	43%	1
Washington	40	20	50%	12	30%	8
West Virginia	24	13	54%	8	33%	5
Wisconsin	72	17	24%	10	14%	7
Wyoming	23	8	35%	6	26%	2

than 30 minutes away from a hospital that had a positive financial margin in the most recent year. Depending on where community residents live in relation to the hospital, the time they would need to travel to reach another hospital could be even greater than this, as explained in Chapter I.

When there is only one hospital in the community and the next-closest hospital is many miles away, closure of the hospital means that the community residents have *no ability at all* to receive emergency or inpatient care without traveling long distances. Maintaining timely access to emergency care and adequate capacity for inpatient care in small rural communities is particularly important when severe and unexpected events occur. The 2020 pandemic clearly demonstrated the value of having hospitals with standby capacity in both rural and urban areas, but similar issues arise on a smaller scale every year with hurricanes, wildfires, influenza outbreaks, and other emergencies.

The impact is much greater than just loss of access to an Emergency Department and inpatient care, however. In many small rural communities, the hospital is likely the only place where residents can get laboratory tests or imaging studies, and it may be the only or principal source of primary care in the community. When one of these rural hospitals closes, the community can effectively lose its entire healthcare system, not just a hospital.

The Risk of Closure is Highest for the Smallest Rural Hospitals

The small rural hospitals discussed earlier in this report are at much higher risk of closure than larger rural hospitals. As shown in Figure 8-3, more than half of all rural hospitals with less than \$30 million in total annual expenses are at risk of closure, and more than one-third are at immediate risk of closure. In contrast, less than one-third of larger rural hospitals are at risk of closure.

Rural Hospital Closures Affect Everyone, Not Just Rural Residents

Rural hospital closures affect not only the residents of rural communities, but also people who live in urban areas. As shown in Chapter I, the entire nation depends on rural communities to supply food, energy, and recreation, and the continued viability of those industries depends on whether their workers and families have access to adequate healthcare services. The 2020 pandemic proved that health problems in rural communities can lead to food shortages in urban areas.

The rural hospitals that are risk of closing are located in counties that produced over \$130 billion in agricultural products in 2017, representing more than one-third of the nation's agricultural production. If large numbers of these hospitals are allowed to close, people everywhere could be harmed.

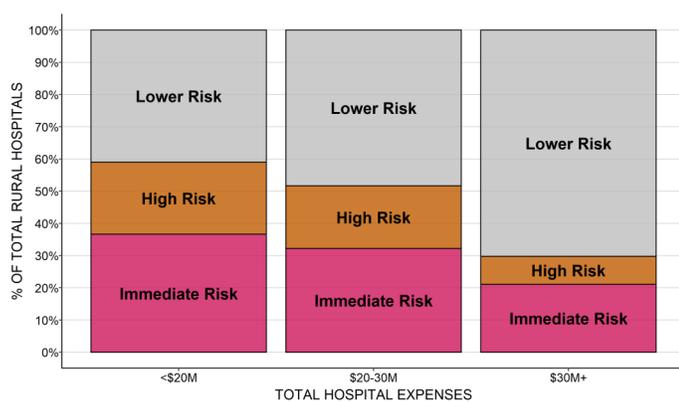
B. The Need for a Better Payment System for Rural Hospitals

1. What Will Not Solve The Problem

Although there is growing awareness and concern about the problem of rural hospital closures, most of the policies and programs that have been proposed or implemented will not solve the problem, and in some cases, they could make things worse:

- Technical Assistance Programs.** The analyses in Chapters II and III clearly show that the financial losses at rural hospitals are primarily due to the fact that the payments they receive from private and public payers are not adequate to support the costs of the services they provide, not because they deliver services efficiently. No amount of technical assistance can help a hospital unless it can receive revenues that are at least as much as the minimum cost of delivering essential services.
- Higher Payments for Inpatient Care.** Increasing the amounts paid to a small rural hospital for inpatient admissions does nothing to address shortfalls in payment for the Emergency Department, Rural Health Clinic, or other essential services that represent the vast majority of the hospital's services and costs. As a result, higher payments for inpatient care may reduce the deficit at a hospital, it will not eliminate them.²⁵² Moreover, paying more for each *admission*, rather than paying more to support inpatient capacity, makes it more difficult for the hospital to provide primary care and transitional care services that would reduce admissions and readmissions for chronic conditions.
- One-Time Funding to Offset Losses in the Pandemic.** Federal assistance to offset the costs and financial losses hospitals experienced during the coronavirus pandemic will help rural hospitals in the short run, but it will do nothing to address the more fundamental problems with payment systems that placed hundreds of hospitals at risk of closing even before the pandemic occurred.

FIGURE 8-3
Risk of Closure in Rural Hospitals



Risk of closure is based on persistent financial losses and low financial reserves, or high dependence on grants, local taxes or other revenues not derived from patient services.

- Expanding Eligibility for Critical Access Hospital Status.** Most of the hospitals that are at risk of closure are already designated as Critical Access Hospitals, and that status has not enabled them to avoid financial losses. Allowing additional hospitals to receive cost-based payment from Medicare could reduce their losses, but it will not make them solvent because it will not address the significant shortfalls in payments from other payers.
- Allowing Hospitals to Stop Providing Inpatient Services.** As explained in Chapter III, in most cases, eliminating a rural hospital’s inpatient unit can make it worse off financially, not better off, while preventing residents of the local community, particularly senior citizens, from receiving inpatient care close to home for the common acute conditions and exacerbations of chronic conditions. Although creating a “Rural Emergency Hospital” classification is intended to preserve rural emergency services, it could actually make them harder to sustain in many cases. Even if the hospital wants to stop delivering inpatient services and would be better off financially doing so, it still needs a payment system that will support the delivery of high-quality outpatient care.
- Global Hospital Budgets.** The primary goal of global budget programs and “capitated payments” is to reduce spending for payers, not to provide adequate support for rural hospitals. As discussed in Chapter V, locking in a hospital’s current revenue can help a large hospital that is delivering unnecessary services, but it does nothing to help a small hospital that has inadequate revenues to deliver essential services.
- Shared Savings and Risk-Based Payments.** The primary goal of these and most other current “value-based payment” programs is also to reduce spending for payers, not to provide adequate financial support for rural hospitals. As shown in Chapter III, it costs more per person to provide high-quality care in a

small rural community than in larger communities, but most current payment programs penalize small hospitals because of that, even if the hospital is operating as efficiently as possible and the quality of care is high. Moreover, most current value-based payment programs are specifically designed for very large numbers of patients, not the small populations in rural communities.

2. What Will Solve the Problem

As discussed in Chapter VII, in order for the residents of rural communities to receive affordable, high-quality healthcare, the *method* health insurance plans use to pay small rural hospitals needs to achieve three goals. It must:

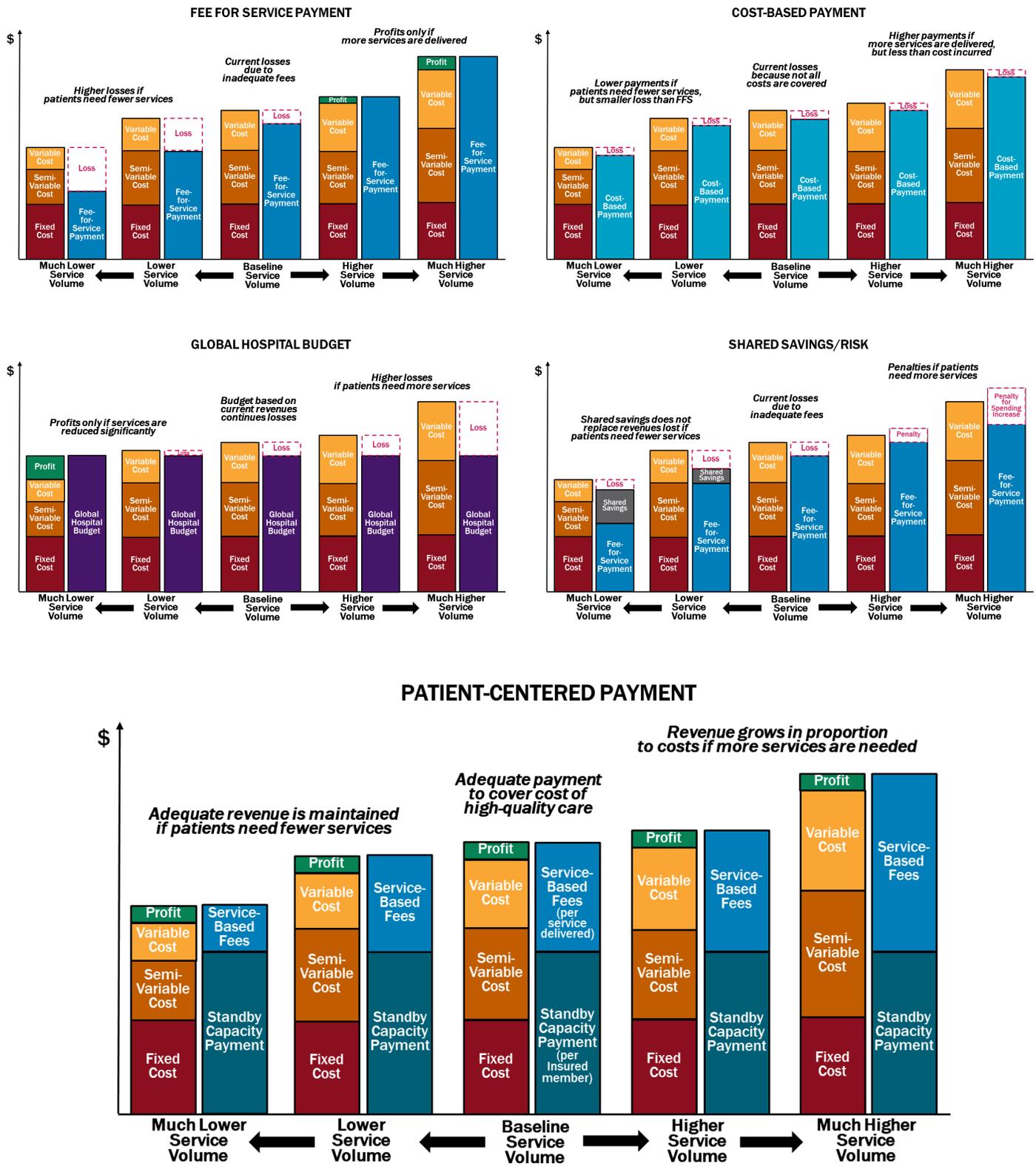
1. Ensure availability of essential services in the community;
2. Enable safe and timely delivery of the services patients need at prices they can afford to pay; and
3. Encourage better health and lower healthcare spending.

As shown in Figure 8-4, current fee-for-service, cost-based payment, and shared savings systems do not achieve all of these goals, and neither would a hospital global budget or global payment program. It is not sufficient to make changes that just address one or two of the goals. For example, increasing fee-for-service payment amounts could eliminate hospital deficits and ensure availability of essential services in the short run, but this would do nothing to eliminate the penalties created by fee-for-service payment when hospitals work to improve the health of their residents. Conversely, changing the method of payment, without increasing the amount of payment sufficiently to cover the minimum costs of delivering services, will not prevent hospitals from closing. Incentives to improve the quality of services mean nothing if there are no services left to improve.

FIGURE 8-4
Effectiveness of Alternative Approaches to Rural Hospital Payment

GOAL		EFFECTIVENESS IN ACHIEVING GOALS				
		Fee for Service	Cost-Based Payment	Global Budget	Shared Savings	Patient-Centered Payment
1	Ensure Availability of Essential Services in the Community	Ineffective	Effective	Mixed	Ineffective	Effective
2	Enable Safe, Timely, and Efficient Delivery of Needed Services					
	Safety/Quality	Mixed	Mixed	Ineffective	Harmful	Effective
	Timeliness	Effective	Limited	Harmful	Harmful	Effective
	Efficiency	Mixed	Harmful	Mixed	Limited	Effective
	Appropriateness	Mixed	Limited	Mixed	Mixed	Effective
3	Encourage Better Health and More Affordable Care					
	Better Health	Limited	Limited	Harmful	Harmful	Effective
	Lower Spending	Harmful	Harmful	Mixed	Limited	Effective

FIGURE 8-5
Impact of Volume Changes on Rural Hospital Margins Under Alternative Payment Systems



A Patient-Centered Payment System would advance all three of these goals. As explained in detail in Chapter 7, an effective Patient-Centered Payment System for rural hospitals has five components, all of which are essential to success.

1. Standby Capacity Payments to support the fixed costs of essential services.
2. Service-Based Fees for diagnostic and treatment services based on marginal costs.
3. Patient-Based Payments for primary care management.
4. Accountability for quality and spending.
5. Value-based cost-sharing for patients.

Under a Patient-Centered Payment System, separate payments for standby capacity and individual services better match the way that costs change when patients need more or fewer services than any other approach. As a result, as shown in Figure 8-5, a Patient-Centered Payment System is the only payment system that:

- Provides adequate payment to sustain essential services even if patients are healthier and need fewer services;
- Does not encourage stinting on necessary care; and
- Does not encourage delivery of unnecessary care.

3. The Cost of the Solution

It is impossible to prevent rural hospital closures without spending more money on small rural hospitals. The majority of small rural hospitals, no matter efficiently they are operated, are not receiving payments that are large enough to pay for the minimum costs of delivering those services. A “value-based payment” system will not help rural residents to receive high-quality care unless the payments are *adequate* to cover the cost of delivering that care. Value-based payment should be about paying adequately but not excessively for high-quality care, not simply about creating savings.

Although there are hundreds of rural hospitals at risk of closure, the total amount of money needed to prevent them from closing is relatively small because most of the hospitals are small. As discussed in Chapter I, the majority of hospitals in the country are rural, but the total spending for services at those hospitals represents only 10% of the more than \$1 trillion spent nationally on hospitals each year and only 3% of the more than \$3 trillion annual spending on all healthcare services. The increase in payments needed to eliminate the deficits at the at-risk rural hospitals would only increase national healthcare spending by a fraction of a percent. Specifically:

- Eliminating the losses for the Immediate Risk rural hospitals would cost approximately \$1.7 billion per year.
- Eliminating the losses for High-Risk rural hospitals would cost an additional \$2 billion per year.

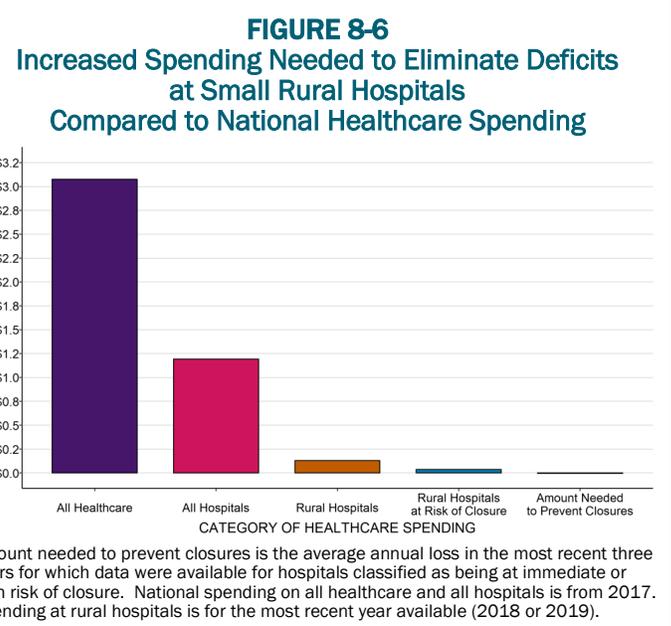
Combined, the \$3.7 billion in funding needed to address the revenue shortfalls in all of these rural hospitals at risk of closing would require an increase of one-tenth of one percent in the more than \$3 trillion spent on health

care each year. The amount is so small in relation to total healthcare spending that it is barely visible in Figure 8-6.

This small increase in spending is also only 1/40 of the more than 4% average increase in healthcare spending that occurs every year. A large portion of the annual increase in spending nationally is caused by excessive prices and the delivery of unnecessary services; that portion of additional spending neither preserves access to care nor improves the quality of care. If high prices and unnecessary services can be reduced, a portion of the savings should be redirected to preserving access to rural healthcare services.

As explained in Chapter VII, it is likely that much of this increase in funding will be used to support delivery of *primary care and emergency care*, not inpatient care or ancillary services. There is widespread recognition nationally that primary care is underfunded, so efforts to increase payments for primary care will also be helpful to small rural hospitals. There have also been proposals to pay rural hospitals more to sustain their emergency department services, but these proposals would require hospitals to eliminate their inpatient services; as discussed in Chapter III, eliminating inpatient services would make many hospitals worse off financially as well as reducing access to inpatient care, rehabilitation, and long-term care for rural communities.

In addition, as discussed in Chapter VII, *failure* to pay rural hospitals adequately and appropriately will likely *also* cause healthcare spending on the residents of those communities to increase in the future, because reduced local access to preventive care and prompt treatment will cause the residents to need even more services and more expensive services than they would otherwise. It is impossible to know whether these increases would be more or less than the increases in spending required to prevent rural hospitals from closing, but the goal should be to provide good care at the most affordable cost for residents of every community, not to spend as little as possible.



C. Achieving Multi-Payer Payment Reform for Rural Hospitals

A rural hospital should provide access to high-quality services to all residents of the community, not just a subset of them. The hospital cannot do this if only one or two payers change the way they pay for services.

Every payer – every commercial insurance plan, every Medicare Advantage plan, every Medicaid Managed Care Organization, every state Medicaid agency, and Original (fee-for-service) Medicare – needs to pay rural hospitals both *adequately* and *appropriately*. The best way to do that is by using a Patient-Centered Payment System.

In order for small rural hospitals to be adequately and appropriately by *all* payers, actions will need to be taken by a broad range of stakeholders, including the residents and employers in rural communities as well as health insurance companies, state governments, and the federal government.

1. Changing Payments from Private Insurance Plans

The payers who most need to change the way they pay small rural hospitals are private health insurance companies. As shown in Chapter 2, the biggest cause of negative margins in most small rural hospitals in most states is low payments from private insurance plans, including both commercial insurance plans and Medicare Advantage Plans. Even in states where Medicaid payments for services are lower than private insurance payments, most rural hospitals have far more privately-insured patients than patients on Medicaid, so a short-fall in private payments has a much bigger impact on the hospital's total margin.

Moreover, if payments from private insurance plans are high enough to not only cover the costs of services to privately insured patients, but to give the hospital a small positive margin on those services, that margin would also offset the losses the hospitals experience due to bad debt. For the smallest rural hospitals, a median profit margin on private-pay patients of only 7% would be sufficient to eliminate losses on bad debt. Under a Patient-Centered Payment System, Standby Capacity Payments would be set based on the number of residents of the community who have insurance, so that the aggregate revenues from those payments are sufficient to cover the costs of services to both insured and uninsured residents.

Why Private Health Plans Are Unlikely to Change on Their Own

Despite the importance of having private insurance companies change the way they pay rural hospitals, it is unlikely that most of them will do so without significant pressure from businesses, citizens, and government. There are several reasons for this:

- Paying rural hospitals more than they receive today will increase a plan's "medical loss" and reduce the insurance company's profit.²⁵³ Although the percentage increase in a plan's total spending will likely be

very small because rural hospitals represent such a small proportion of total healthcare spending, even a small increase in the amount the plan spends on healthcare services translates into a very large reduction in the amount of profits the insurance company can retain.²⁵⁴

- Making changes in contracts with hospitals, in benefit designs for patients, and in the internal systems used to make payments will increase the insurance company's administrative costs, which will also reduce its profits. Even though the cost of changing to a Patient-Centered Payment System will be relatively small because it can be implemented easily within an existing claims payment system, any increase at all in the plan's administrative costs will translate into a reduction in profits for the insurance company. This is also true for insurance companies that are simply processing claims for self-insured businesses; even if the business is willing to pay the hospital more or differently, it needs a health insurance company or third-party administrator (TPA) that is willing to implement the changes.
- Even though failure to sustain the rural hospital may increase health care costs in the community in the future, an insurance company can address that by increasing its premiums. In fact, the insurance company will need to charge higher premiums in the future in order to maintain or increase its profits, since profits and administrative costs are limited to a maximum percentage of total premium revenues.

What Communities Can Do to Encourage Changes in Private Health Plan Payments

There are several ways that private health insurance companies can be encouraged to implement the payment reforms that small rural hospitals need:

- **Employers and community residents should only choose a health insurance plan that pays their rural hospital adequately and appropriately.**

Employers and citizens in rural communities likely have no idea that the insurance plan they are using may be helping to force their local hospital out of business. It does them little good to have an insurance plan with low premiums and/or low copayments if there is no longer a hospital or clinic in the community where they can use that insurance. Moreover, their premiums could increase even more in the future if healthcare spending increases because there is no longer a local source for preventive care and early treatment.

However, there is only an incentive for an insurance plan to pay differently if it believes that doing so would increase its membership or that failure to do so would cause it to lose a large number of customers. The decisions made by the largest employers in the community about which health insurance plans to use will have the biggest impact on those plans' willingness to change, simply because of the larger number of plan members who will be affected.

In the short run, employers and citizens can focus on ensuring the health plan pays adequate amounts for

services, while indicating that health plans will need to implement Patient-Centered Payments in future years in order to continue selling insurance in the community.

- **Public and private employers in rural communities, including hospitals, should work together through purchaser coalitions to choose health insurance plans that pay adequately and appropriately.**

Most employers in rural communities are small businesses that individually represent only a small number of potential members for any health insurance company. By acting collectively, however, the employers can have much a greater impact on what a health insurance company will be willing to do. The employers can accomplish this by forming a healthcare purchasing coalition and either using information assembled through the coalition to make similar decisions about which plans to purchase, or by having the coalition purchase insurance collectively on their behalf. This is particularly important in regions where there is one dominant private insurance company, since other insurance companies are only likely to enter the market if there is a critical mass of purchasers who are willing to change the insurance plan they use.

- “Employers” includes local governments and school districts, not just private businesses. In most communities, they are larger than the majority of private businesses.
- Many businesses in the community will be part of national or multi-state firms, and the local manager does not make the decisions about which health insurance plan is used. These large firms can help their employees in rural areas by choosing health insurance carriers that pay rural hospitals adequately and appropriately.
- Hospitals are typically categorized as “providers” of healthcare, not “purchasers.” However, in most communities, the rural hospital is one of the largest employers in the community and so it is also one of the largest customers for a health insurance company in the community.²⁵⁵ The hospital is also in the best position to help other employers in the community determine whether the insurance plans they are using are paying adequately and appropriately for the hospital’s services. The biggest collective impact will likely be achieved if other employers in the community work together with the hospital to determine which health insurance plans will pay the local hospital adequately and appropriately while also providing the most affordable premiums overall. However, as discussed further below, hospitals must take steps to convince other employers that the hospital will use adequate health insurance payments to deliver high-quality care as efficiently as possible.
- A purchaser coalition does not need to be limited to one community. In states with many small rural hospitals, all of the hospitals will need to be paid differently by private health plans, and the same health plans are likely providing insurance in multiple communities, so a bigger impact can be

achieved if the employers in several communities work together collectively.

- If a health plan is selling insurance to multiple employers in a region, it may also be more likely to sell insurance to individual community residents who purchase health insurance on an insurance exchange, so employers in the community could influence the individual insurance market as well as the group insurance market for their employees.
- **Medicare beneficiaries should only choose a Medicare Advantage plan that pays their rural hospital adequately and appropriately.**

As shown in Chapter II, Medicare Advantage plans can be some of the most problematic payers for small rural hospitals. This is not only because they fail to pay adequately or appropriately for services at all rural hospitals, but at Critical Access Hospitals, they also reduce the proportion of services that are eligible for cost-based payment from Medicare.

However, a small rural hospital can only be underpaid by a Medicare Advantage Plan if a Medicare beneficiary who lives in the community has chosen to enroll in that plan. Medicare beneficiaries in rural communities have no idea that the plans they choose because of low premiums and other benefits may be helping to force their local hospital out of business. In many cases, seniors may be more likely to preserve access to local healthcare services by staying on Original Medicare rather than enrolling in a Medicare Advantage plan. The beneficiaries need information and education from the rural hospital in order to make the right choices about their Medicare coverage.

- **When there are health plan choices available to residents of the community, rural hospitals should refuse to contract with the plans that have the most problematic payment systems.**

A rural hospital can encourage health insurance companies to change by refusing to contract with a particular health plan if it fails to pay adequately and appropriately for the rural hospital’s services. However, this can harm local residents if they have few choices of health plans; if the hospital is not “in network” for the available health plans, the residents may have to pay higher cost-sharing amounts to receive services and that would make it more difficult for them to receive needed services and increase the hospital’s bad debt.

If residents in the community do have a choice of health plans, then if the hospital contracts only with the plans that do provide adequate and appropriate payment, it could help to accelerate use of those plans by employers and residents. This can best be done if hospitals work with employers on a coordinated effort to change the payment system.

- **State insurance departments and state insurance exchanges should require health insurance plans to disclose the methods they use to pay rural hospitals and the amounts they pay, evaluate the adequacy of the payments, and encourage the plans to use Patient-Centered Payments for rural hospitals.**

State insurance departments and state insurance exchanges can help by requiring each health insur-

ance plan to disclose the payment system it uses to pay small rural hospitals in the state and to demonstrate how the plan provides adequate, appropriate payments that achieve all three of the goals for rural hospital payment reform. This would enable consumers and purchasers to make more informed decisions about which insurance plans to use. In addition to requiring transparency about the methods of payment, the adequacy of payments could be assessed during reviews of the plans' network adequacy and/or premium increase requests submitted by the plans. A state agency's ability to do these things will depend on the extent of its regulatory powers and the extent of health insurance competition in rural communities, so some states will likely be able to do more than others.

2. Changes Needed in Medicaid

A state's Medicaid program affects the financial viability of its rural hospitals in two different ways:

- **Insurance Coverage.** In states that have more restrictive Medicaid eligibility requirements, a larger number of low-income residents may have no health insurance and be unable to pay for the services they receive at the hospital. The more low-income individuals without insurance there are in a rural community, the greater the likelihood of financial losses at the community's hospital.
- **Payment for Services.** For individuals who *do* have Medicaid coverage, the payments small rural hospitals receive from most state Medicaid programs are below hospitals' costs and are generally lower than what Medicare and private health plans pay. In these states, the more individuals who are on Medicaid in the rural community, the greater the likelihood of financial losses at the community's hospital.

The Limited Benefit for Small Rural Hospitals From Expanding Medicaid Coverage

Many people have advocated for expanding Medicaid coverage as a way to help small rural hospitals. However, only a subset of the uninsured patients receiving services at rural hospitals in non-expansion states would likely qualify for Medicaid even if it were expanded. Moreover, as shown in Chapter 2, in the states that have expanded Medicaid, Medicaid payments to rural hospitals have worsened, resulting in little net financial benefit to the hospitals.

Consequently, although expanding Medicaid coverage is desirable for many reasons, it is less likely to prevent rural hospital closures than improving the way the state Medicaid program pays rural hospitals. Moreover, if a small rural hospital receives Patient-Centered Payments from Medicaid and a most other payers, the Standby Capacity Payments will enable it to provide essential services to uninsured patients.

The Difficulties of Improving Medicaid Payments for Rural Hospitals

In states where the state Medicaid agency directly pays healthcare providers for their services, the agency can simply decide to use a Patient-Centered Payment system for rural hospitals in the state and begin doing so.

However, in most state Medicaid programs, hospitals and clinics are now paid primarily by Medicaid Managed Care Organizations (MCOs). Medicaid MCOs are typically health insurance companies that the state Medicaid agency has contracted with to "manage" healthcare services for most or all Medicaid beneficiaries. The MCO receives a global payment from the state for each Medicaid beneficiary, and the MCO then pays hospitals and clinics for their services to those beneficiaries, typically using fees for individual services.

It will be much more difficult for a state Medicaid program to ensure adequate and appropriate payments for its rural hospitals if the state uses Medicaid MCOs, since each MCO will have to agree to change the way it makes payments. MCOs will be unlikely to do so voluntarily for the same reasons described earlier for commercial insurance plans. Paying a hospital or clinic more and changing the method used to pay them will reduce the MCOs' profit, whereas if the rural hospital closes and Medicaid beneficiaries receive fewer services as a result, the MCO's profit will increase. If Medicaid beneficiaries' health worsens, and that causes their need for healthcare services to increase in the future, the state will have to pay the MCOs more, since federal law requires that the MCO receive an "actuarially sound" payment from the state.²⁵⁶ These higher payments will also allow the MCOs' profits to increase.

State Medicaid programs cannot simply require MCOs to change the way they pay rural hospitals, because regulations issued by the Centers for Medicare and Medicaid Services (CMS) limit states' ability to specify how MCOs should pay healthcare providers or how much they should pay. Under the regulations, a state is only permitted to require that a Medicaid MCO implement a "value-based purchasing model" that is "intended to recognize value or outcomes over volume of services" or to require an MCO to participate in a "delivery system reform or performance improvement initiative." Moreover, CMS requires that any payments the MCO is required to make must be "based on the utilization and delivery of services" and "advance at least one of the goals and objectives in the state's quality strategy," and participation must be available, using the same terms of performance, to a "class of providers" providing services related to the payment model. If a state wants to require such a payment model, it has to receive approval from CMS before it can do so, and the arrangement "cannot be renewed automatically."²⁵⁷

A state Medicaid program is also prohibited from making payments directly to hospitals to address perceived shortfalls in their revenues. In the past, many states made "supplemental payments" to hospitals, but CMS regulations no longer permit them to do so for services that the MCOs pay for. The only exception is the "wrap-around payments" that federal law requires states to use in order to offset the low amounts that most MCOs pay to Rural Health Clinics for their services.²⁵⁸

Federal and State Actions Are Needed to Improve Medicaid Payments to Rural Hospitals

It will be very slow and inefficient if every state is forced to submit a separate request to CMS to require Medicaid MCOs to change the way they pay small rural hospitals, wait for CMS to review the request, make revisions in response to CMS questions, and then wait for final approval. In order for rural hospitals to get adequate and appropriate payments as quickly as possible, both the federal and state governments should take the following actions:

- **CMS should establish a policy indicating that approval will be given to states that want to require MCOs to use a Patient-Centered Payment system for small rural hospitals, and CMS should quickly approve state proposals to do so.** The design of the Patient-Centered Payment system described in Chapter VII clearly satisfies the requirements for a “value-based purchasing model” or “delivery system reform initiative” under CMS regulations. Because hospitals would still receive fees for individual services under a Patient-Centered Payment system, it meets the requirement that payments be based on the utilization and delivery of services (in contrast to a global budget model, which provides the same payment regardless of how many services are delivered). Because the payment amounts are designed to ensure delivery of essential services, and because payments are only made if services meet quality standards, a Patient-Centered Payment System satisfies CMS requirements that payments advance quality goals and recognize value over volume. If CMS does not believe that Patient-Centered Payments meets those regulatory requirements, it should change the regulations rather than force undesirable changes in the Patient-Centered Payment model that could harm hospitals.
- **In states with small rural hospitals that use Medicaid MCOs, the state Medicaid agency should request approval from CMS to require MCOs to use Patient-Centered Payments for rural hospitals that wish to participate.** The state Medicaid agency should work with the state’s rural hospitals to ensure the design of the program will provide adequate payment to support the hospital’s essential services and to ensure that MCOs are implementing the payments correctly. If purchaser coalitions in the state are working to encourage implementation of Patient-Centered Payments by private health plans, it would be desirable for the state to also participate as a purchaser in order to ensure a coordinated, multi-payer approach.
- **In states with small rural hospitals that do not use Medicaid MCOs, the state Medicaid agency should begin using Patient-Centered Payments to pay rural hospitals that wish to participate.** In these states, the Medicaid agency should work with the state’s rural hospitals to design the Patient-Centered Payments and then the state should implement the payments with hospitals that wish to participate. If a purchaser coalition in the state is working to encourage implementation of Patient-Centered Payments by private health plans, it would be desirable for the state to work with the coalition to ensure a coordinated, multi-payer approach.

3. Changes Needed in Medicare

Medicare Is Not the Primary Cause of Financial Problems at Most Small Rural Hospitals

For most small rural hospitals, the Medicare program is currently their “best” payer, in the sense that the losses on Medicare patients are smaller than the losses on patients with other types of insurance. This is because most small rural hospitals are classified as Critical Access Hospitals and thereby receive cost-based payment for the services they deliver to Medicare beneficiaries (except for beneficiaries who have enrolled in a Medicare Advantage plan). Medicare may or may not be the best payer for hospitals that do not qualify for Critical Access Hospital status; as shown in Chapters II and III, the majority of small rural hospitals that are not CAHs lose money on their Medicare patients. However, the losses on privately-insured patients at many of these hospitals are still larger.

As discussed in detail in Chapters IV and VII, cost-based payment is problematic for many reasons, and the way Medicare has implemented it for Critical Access Hospitals is particularly problematic for the hospitals. Some people inappropriately refer to Medicare’s system as “cost-plus” payment, but there is no “plus” in the payments, only a minus. Due to federal sequestration requirements, Critical Access Hospitals currently can be paid at most 99% of their costs for services delivered to Medicare beneficiaries, even though no business could survive if it were only paid 99% of its costs. In addition, hospitals are only eligible for the program if they are more than a minimum mileage from other hospitals, regardless of the travel time that would be required for patients to reach the other hospitals or whether the other hospitals offer similar services with comparable quality, so many small rural hospitals that would be appropriate for the program cannot participate.

Changes in the current Medicare cost-based payment systems would certainly be desirable. For example, eliminating sequestration reductions and the productivity adjustment for Rural Health Clinics would reduce losses on Medicare patients for small rural hospitals, and requiring Medicare beneficiaries to pay the same amounts for services at Critical Access Hospitals that they pay at larger hospitals would help both the patients and the hospitals. However, these changes alone would be unlikely to eliminate losses or prevent closures at most small rural hospitals.

Use of Patient-Centered Payment in Medicare is Desirable But Not Essential

A properly designed Patient-Centered Payment system would be beneficial for both Critical Access Hospitals and for small rural hospitals that do not qualify for designation as a Critical Access Hospital. Consequently, it would be desirable for Medicare to make Patient-Centered Payment available to all small rural hospitals. Moreover, because the payments used by Medicare often serve as a model for other payers, implementation of a Patient-Centered Payment system by Medicare could accelerate implementation of the system by other payers.

While it would be *desirable* for Medicare to implement Patient-Centered Payment, it is not *essential* for success. As shown in Chapter 2, increasing Medicare payments alone would have only eliminated financial losses at about 2% of small rural hospitals in 2018. If private health plans and Medicaid programs paid adequately but Medicare made no changes at all, most of the small rural hospitals that are experiencing financial problems would likely be able to remain open. Conversely, there will be little benefit for small rural hospitals if *only* Medicare changes the way it pays small rural hospitals, while private health plans and Medicaid do not.

CMMI Demonstrations Could Harm Rural Hospitals

A corollary is that it would be better for Medicare to do nothing than to make changes in payments that would be worse for small rural hospitals or that would cause other payers to delay action in implementing Patient-Centered Payments. For several years, the CMS Center for Medicare and Medicaid Innovation (CMMI) has been actively encouraging states to replicate the Pennsylvania Rural Health Model that was designed by CMMI, even though that program would be unlikely to help the smallest rural hospitals and would likely harm many of them. As discussed in Chapter V, the CMMI CHART Model announced in August 2020 would create an approach to global budgets that is even less favorable than the approach that has been used in Pennsylvania. Moreover, because it will likely take 3-4 years before even a preliminary evaluation is completed and 7 or more years for a final evaluation to be completed, these demonstration projects could easily cause other states and private health plans to “wait to see the results” before doing anything for the majority of rural hospitals in the country. If this happens, many small rural hospitals will likely be forced to close in the meantime.

It is unlikely that CMMI would ever implement a demonstration that would effectively address current inadequacies in payments for small rural hospitals or primary care clinics because CMMI is prohibited by law from testing payment models that would require higher spending by the Medicare program.²⁵⁹ Although CMMI is authorized to implement demonstrations that are not *initially* budget neutral, it cannot continue them unless they are expected to reduce Medicare spending. This is why the Pennsylvania Rural Health Model merely continues current payment amounts for rural hospitals rather than increasing them sufficiently to eliminate hospital deficits, and why the CHART Model explicitly requires reductions in payments to hospitals and provides no mechanism for increasing payments to erase current deficits. Any new program would have similar limitations unless Congress changes the enabling legislation for CMMI.

How Medicare Should Help Small Rural Hospitals

Medicare can and should be a leader in implementing Patient-Centered Payments for rural hospitals. To achieve that:

- **Congress should create a Patient-Centered Payment program for Medicare beneficiaries in which any small rural hospital can voluntarily enroll.** Hundreds of small rural hospitals need help, and they need it now. No small demonstration program can provide that help. Congress should use the same approach that it used when it created the Critical Access Hospital program, i.e., creating a different payment model in Medicare for small rural hospitals, and giving rural hospitals the option of whether to participate. Congress used a similar approach when it created the Medicare Shared Savings Program – it is a permanent program, not a temporary demonstration project, and participation by hospitals and physicians is voluntary, not mandatory. These programs were implemented as part of the regular Medicare program, not through CMMI or its predecessor agency.

Most of the payment systems Medicare currently uses to pay hospitals have been implemented without “testing” them first through CMMI or other means. In addition to the voluntary payment system created for Critical Access Hospitals:

- The Inpatient Prospective Payment System (i.e., hospital DRGs) was designed and implemented for most hospitals across the country in 1983 without any evaluation demonstrating that it would work.²⁶⁰ It was implemented nationwide just 14 months after Congress passed the authorizing legislation.
- The Outpatient Prospective Payment System was implemented in 2000 to pay hospitals for outpatient procedures, with no testing or evaluation prior to implementation.

Instead of being tested in an artificial demonstration, all of these payment systems were made available nationally in a phased but rapid approach. Since then, they have been monitored and regularly adjusted to correct any unanticipated problems and to adapt the payment systems as changes in medicine, technology, and other factors occurred over time. The same approach can be used to implement Patient-Centered Payments for rural hospitals.

D. What Rural Hospitals Need to Do

1. The Need for Transparency About Rural Hospital Costs and Efficiency

In order to be successful for patients and payers as well as for hospitals, the payment system for rural hospitals needs to achieve *all three* of the goals defined earlier, not just one or two of them:

- In order to *ensure availability of essential services in the community* and to *enable safe and timely delivery of services to patients*, the payments made to rural hospitals need to be large enough to cover the minimum costs they will incur in delivering high-quality care.
- In order to *enable patients to receive services at prices they can afford to pay* and to *encourage lower healthcare spending*, the payments must be no larger than necessary to cover the lowest costs a rural hospital can feasibly achieve while delivering high-quality care.

Rural hospitals are in the best position to define what payment amounts are large enough, but no larger than necessary, to achieve all of these goals. This requires not only that they understand what it costs to deliver essential services, but also that they pursue every feasible opportunity to reduce their costs without harming patients.

As shown in Chapter III, the average cost per service even in the most efficiently operated small rural hospital will be higher than in larger hospitals, and the cost will be even higher for some small hospitals than others for many reasons that are beyond the control of the hospitals. However, it is impossible to determine from the cost data that hospitals currently report whether individual hospitals have higher-than-average costs for reasons they can or cannot control.

In order for purchasers and payers to be willing to pay adequately to support rural hospitals' services, they will need to have confidence that the payment amounts recommended by rural hospitals are, in fact, no larger than necessary to deliver high-quality care to patients, and that any differences in payments between hospitals are necessary to address factors beyond the control of the hospital, not to subsidize inefficiencies. The data to demonstrate this will need to come from hospitals.

Unfortunately, most purchasers and payers are unlikely to have confidence in payment amounts recommended by hospitals, at least initially, because so many hospitals across the country have been secretive about their costs and have engaged in problematic activities designed primarily to maximize profits rather than control costs. For example, a number of studies have shown extremely large variations among hospitals in charges and payments for individual services and utilization of services that cannot be justified based on patient needs or differences in unit costs.²⁶¹

To address this:

- **Small rural hospitals that want to receive adequate, appropriate payments should work together to objectively estimate the minimum feasible costs for delivering essential services and publicly release the methodology used to make the estimates.** The methodology used in Chapter III to estimate costs of essential services at rural hospitals can serve as a starting point for this. Rural hospitals can build in greater detail to reflect the impacts of different staffing plans, equipment costs, etc.
- **Individual hospitals should be transparent about how and why their own costs differ from the estimated minimum costs of delivering services.** For example, a hospital could show how the loss of a physician or other clinician in the ED or clinic resulted in higher costs to use a *locum tenens* physician and to recruit a permanent placement.
- **Hospitals need to provide information showing how much they are currently paid for services by each payer compared to the cost of delivering those services.** As discussed in Chapter VII, it is currently impossible to determine exactly which services are losing money at small rural hospitals and which payers are underpaying them for their services. It will be difficult to get payers to pay more or differently unless there is clear evidence that they are underpaying for services today.
- **Small rural hospitals that want to receive adequate, appropriate payments should proactively pursue efforts to improve their efficiency and provide evidence demonstrating they are achieving success.** For example, if rural hospitals generate comparable information about the costs of operating various service lines, and compare their own costs to those of other hospitals, many hospitals will likely identify approaches used by other hospitals that could be adapted to their own facility.
- **Small rural hospitals will need funding and technical assistance programs to carry out these tasks and to implement new payment systems.** The federal government spends significant amounts of money every year to support research on rural hospital issues and to provide technical assistance to rural hospitals. A significant portion of this funding needs to be devoted to generating the information on costs of service delivery and causes of losses at rural hospitals that will support development and implementation of improved payment systems.

2. The Need for Transparency about the Quality of Care and Quality Improvement at Rural Hospitals

In addition, many purchasers and payers will likely resist paying more to small rural hospitals and clinics without assurance that the hospitals/clinics are delivering high-quality care and taking active steps to improve care wherever feasible. Most of the quality measures typically used by Medicare and other payers to assess the quality of care in hospitals are inaccurate or inappropriate for use with small rural hospitals, but most rural hospitals do not provide patients or purchasers with any alter-

native information demonstrating that they deliver high quality care. This can cause both purchasers and patients to believe that the quality of care in small rural hospitals is poor or that the hospitals are not concerned about quality.

To address this:

- **Small rural hospitals that want to receive adequate, appropriate payments should publicly report on the quality of their care using quality measures that can be included in the accountability component of the payment model.** The hospital quality measures described in Chapter VII (e.g., ED response time, medication safety, etc.) can be collected and reported by every small rural hospital, and the clinic quality measures can be collected and reported by any hospital that operates a Rural Health Clinic. Collecting and reporting these measures now will not only demonstrate that the hospital currently delivers high-quality care, but help prepare it to take accountability for success on those measures as part of a Patient-Centered Payment system. Many small rural hospitals are already collecting these measures through the Medicare Beneficiary Quality Improvement Program (MBQIP)²⁶², so they simply need to release the results publicly.
- **Small rural hospitals should work with purchasers and payers to identify potential opportunities for reducing avoidable healthcare spending that the hospitals could implement once a Patient-Centered Payment system is in place.** It will be much easier to demonstrate to purchasers and payers that Patient-Centered Payments will help to control spending and improve outcomes if they see concrete examples of how hospitals would change care delivery in ways that would improve quality and reduce spending.

APPENDIX

Data and Methodology

Sources of Data

The names and addresses of hospitals, the hospital's ownership type, and the number of licensed inpatient beds at each hospital were obtained from the Provider of Services (POS) File maintained by the Center for Medicare and Medicaid Services (CMS). This file is publicly available on the CMS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Provider-of-Services/index>. The March 2020 version of the POS file was used. Hospital latitude and longitude coordinates were determined from the hospital address using the Google Maps Geocoding API (<https://developers.google.com/maps/documentation/geocoding/overview>).

Data on costs and revenues for hospitals were obtained from the Hospital Cost Reports that hospitals are required to submit to the Centers for Medicare and Medicaid Services (CMS) using Form CMS-2552-10. These data are maintained in the CMS Healthcare Cost Report Information System (HCRIS) and are publicly available on the CMS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Cost-Reports/Cost-Reports-by-Fiscal-Year>. The July 2020 versions of the files were used, which contained complete reports for most hospitals through FY2018 and reports for about one-fourth of hospitals for FY2019.

Data on the number of Emergency Department visits at each hospital for 2013 and 2017 were provided by the American Hospital Association from its AHA Annual Survey database. <https://www.ahadata.com/aha-annual-survey-database>.

Additional data on costs and revenues for hospitals in California were obtained from the data California hospitals file annually with the California Office of Statewide Health Planning and Development (OSHPD). These data are publicly available on the OSHPD website at <https://oshpd.ca.gov/data-and-reports/cost-transparency/hospital-financials/#complete-annual>. The most recent data available were for fiscal years ending in 2017.

Additional data on costs and revenues for hospitals in Tennessee were obtained from the Joint Annual Reports that hospitals in Tennessee file annually with the Tennessee Department of Health. These reports are publicly available on the Department of Health website at <https://www.tn.gov/health/health-program-areas/statistics/health-data/jar.html>. In most cases, the 2018 report was used, but since the fiscal year beginning and ending dates in the Tennessee reports differ from those in the HCRIS data, some 2017 reports were used if the fiscal year better matched the fiscal year period in the most recent CMS HCRIS data.

Classifications and Exclusions

Only hospitals classified as short-term general acute care hospitals were included. Hospitals were excluded if they did not have Provider Category 01 and Subtype 10 in the Provider of Services file. Hospitals that provide only psychiatric care, rehabilitation services, or long-term care but were classified as short-term hospitals in the POS file were also excluded. In addition, some hospitals that provide only specialty surgical or other types of care were excluded. Hospitals operated by the Indian Health Service (IHS) were excluded because they are paid through the IHS and comparable information on payments and profitability cannot be calculated using the data in HCRIS.

Hospitals were classified as “rural” if they are located in an area classified as rural by the Health Resources and Services Administration (HRSA), i.e., if they are either (1) in a nonmetropolitan county or (2) in a metropolitan county but in a subcounty area that has a Rural Urban Community Area (RUCA) code of 4 or greater. The rural status of most hospitals was derived from a list maintained by the Cecil G. Sheps Center for Health Services Research at the University of North Carolina. <https://www.shepscenter.unc.edu/programs-projects/rural-health/data/>. Hospitals that opened after that list was prepared were classified as rural if they met the HRSA criteria. Critical Access Hospitals were not considered to be “rural” unless they were located in an area that met the HRSA criteria, so because of this and the exclusions described above, the number of rural hospitals discussed in this report is somewhat smaller than the number reported in other analyses.

Hospital cost reports were excluded if the report did not cover a full fiscal year. This includes hospitals that changed their fiscal year dates and filed two partial year reports, and hospitals that opened, closed, or merged with another hospital during the year and only filed a partial year report. In addition, existing hospitals that are newly classified as a Critical Access Hospital and Critical Access Hospitals that give up that classification will generally file separate partial-year cost reports under different provider numbers before and after reclassification, so the exclusion of partial-year cost reports excluded the cost reports for these hospitals during the reclassification year.

Hospital cost reports were also excluded if no operating expenses or patient revenue were reported. For example, hospitals that are owned by Kaiser Permanente do not report patient service revenues. A few cost reports were excluded because of what appeared to be errors in the data that could not be resolved.

A hospital was classified as “closed” if it appeared on the list maintained by the Cecil G. Sheps Center for

Health Services Research at the University of North Carolina, or if it was not classified as “Active” in the Termination Status field in the Provider of Services file. Some of the hospitals reported as closed on the Sheps Center list did not file separate cost reports, so these hospitals could not be included in the cost analyses. For a number of facilities, “closed” means that the hospital stopped providing inpatient services, but continued to provide outpatient services, often as part of another hospital system.

Hospital cost reports from California were only included if the hospital had a Medicare hospital provider number and if it reported patient service revenues.

Calculation of Variables

Average Daily Acute Census

The Average Daily Acute Census was determined by combining the total number of acute inpatient days and total observation days reported on Lines 1 and 28 of Worksheet S-3 and dividing by 365.

Total Expenses

The hospital’s Total Expenses were determined by summing the amounts reported on Lines 4 and 28 on Worksheet G-3.

Total Margin

A hospital’s “Total Margin” is calculated by subtracting the hospital’s Total Expenses from its Total Revenues. The Total Revenues are determined by summing the amounts reported on Lines 3 and 25 of Worksheet G-3 in Form CMS-2552-10. (The Total Margin is the same as the amount that is reported as “Net Income” on Line 29 of Worksheet G-3.

Patient Services Costs, Revenues, and Margins

None of the lines on the cost report accurately represent what would appropriately be defined as total “Patient Service Costs,” so this amount was calculated by combining the total reimbursable expenses reported on Line 118 of Worksheet A and the professional services costs and other patient services costs reported on Worksheet A-8.

Patient Service Revenues is the “net patient revenues” amount that is reported on Line 3 of Worksheet G-3.

The Patient Services Margin is calculated by subtracting Patient Services Cost from Patient Service Revenues.

Service Line Costs and Charges

The costs of individual service lines were obtained from Worksheets A and B. Costs for professional services delivered to patients were obtained from Worksheets A-8 and A-8-2. Detailed information on costs for Rural Health Clinics operated by the hospital were obtained from Worksheets M-1, M-2, M-3, and M-4.

The total charges for each service line were obtained from Worksheet C and Worksheet G-2.

Costs, Payments, and Margins for Medicare Beneficiaries

Information about costs and payments for patients who have Original Medicare (i.e., Medicare beneficiaries who have not enrolled in a Medicare Advantage Plan) were obtained from Worksheets E, E-2, E-3, and E-4. However, the amounts reported as “costs” on these worksheets are calculated according to the Medicare rules for determining cost-based payments, and in some cases, they do not accurately reflect the proportion of costs that are actually associated with the Medicare beneficiaries. To address this, the following adjustments are made:

- For hospitals with swing beds, the cost per day of inpatient acute care and the cost per day of skilled nursing care on swing beds are re-estimated by using the total cost of the inpatient unit reported on Line 30 of Worksheet C; the number of days of inpatient acute care and SNF-level care and NF-level care in swing beds reported on Worksheet S-10, and the hospital’s charges for those different levels of care reported on Worksheet G-2 (if the hospital reported separate charges). In most cases, this assigns a higher cost to NF-level care in swing beds that what is calculated on Worksheet D-1, so the cost assigned to Medicare beneficiaries for acute care and SNF-level is lower.
- The cost of Rural Health Clinic services is re-calculated without the productivity adjustment on Worksheet M-2
- If the hospital has Graduate Medical Education costs, only a fraction of this cost is assigned to Medicare beneficiaries.

Medicare payments for hospice services operated by the hospital are not included on the cost reports, so these are estimated based on the standard Medicare payment amounts for hospice services in the year in which the services were delivered.

After making adjustments, the estimated Medicare costs for all categories of services are summed to determine the total Medicare Cost, and the total Medicare payments for all categories of services are summed to determine the Medicare Payment. The Medicare Margin is then calculated by subtracting the Medicare Cost from the Medicare Payment. Even though Critical Access Hospitals are only paid 99% of the amount Medicare calculates as hospital costs, the margin calculated here can be higher than 100% because of the lower estimate for the cost of inpatient care

Professional services delivered by physicians and other clinicians are not considered by Medicare to be a “hospital cost.” Medicare pays for these services using the Medicare Physician Fee Schedule, and the amounts of payment are not included on the cost report. There is no information on the cost report that can be used to determine the proportion of these services that are received by Medicare beneficiaries. Consequently, neither the payments nor the costs associated with these amounts are included in the costs, payments, or margins that are calculated for Medicare. These costs and payments are included in the hospital’s Patient Services Cost and Patient Services Revenue, however, so they

end up being part of the Private/Other category calculated below.

Costs, Payments, and Margins for Medicaid Beneficiaries

The Medicaid Payment for patient services is obtained by combining the amounts on Line 2 and Line 5 of Worksheet S-10. In addition to payments for individual services to patients enrolled in Medicaid, many hospitals receive Disproportionate Share Hospital (DSH) and/or other supplemental payments from their state Medicaid program. The amounts of these payments differ significantly across states and among hospitals within the state, so whether and how they are included can significantly affect the amount calculated as the hospital's margin on services to Medicaid patients. Unfortunately, these payments are not reported in consistent ways on the cost reports. Some hospitals include all or part of the payments as part of Line 2 on Worksheet S-10, some report the payments separately on Line 5 of Worksheet S-10, and some report all or part of the payments as "Other Income" on Worksheet G-3, which makes it difficult to determine how much of the total amount of Medicaid payments reported on Worksheet S-10 is included in the amount of Net Patient Revenues reported on Worksheet G-3 and how much is included as Other Income on Worksheet G-3. In order to avoid double counting, the amount counted as Medicaid Payments is reduced below the amount reported on Worksheet S-10 if it appears that a portion of the payments reported on Worksheet S-10 are also reported as Other Income on Worksheet G-3.

Hospitals calculate the cost of services to Medicaid patients on Line 7 of Worksheet S-10 by applying the overall cost-to-charge ratio for the entire hospital to the total Medicaid charges reported on Line 6 of Worksheet S-10. However, this can overestimate or underestimate the cost if Medicaid patients receive a different mix of services than other patients do. This is particularly a concern for hospitals with a large number of Medicaid patients receiving long-term care in hospital swing beds. In order to create a more accurate estimate, the information on how many Medicaid patients received inpatient services on Worksheet S-3 is used to estimate the costs and charges for inpatient services to Medicaid patients, and then the costs for outpatient services are estimated using the average cost-to-charge ratio for outpatient services.

The Medicaid Margin is then calculated by subtracting the estimated costs for services to Medicaid patients from the estimated Medicaid payments for those services.

Costs, Payments, and Margins for Other Patients

The payments and estimated cost for Children's Health Insurance Program (CHIP) patients are obtained from Lines 9 and 11 on Worksheet S-10. This is a relatively small amount for most hospitals, and so it is not reported separately in most of the analyses in this report.

The payments and estimated cost for patients covered by other state or local indigent care programs are obtained from Lines 13 and 15 on Worksheet S-10. This is

a relatively small amount for most hospitals, and so it is not reported separately in the analyses.

The estimated cost and any payments for uninsured patients who qualify for charity care are obtained from Column 1 of Lines 21 and 22 on Worksheet S-10. Each hospital establishes its own criteria as to which patients qualify for charity care, so the cost in this category will vary across hospitals based on both differences in the number of uninsured patients receiving services and differences in the charity care criteria.

The estimated cost of bad debt for *insured non-Medicare* patients who *qualify for charity care* (i.e., the portion of the amounts they owe for cost-sharing or uncovered services that they cannot or do not pay) is obtained from Column 2 of Lines 21 and 22 on Worksheet S-10. This is a relatively small amount for most hospitals, and so it is not reported separately in the analyses.

The Bad Debt Cost for insured non-Medicare patients who do *not* qualify for charity care is obtained from Line 28 on Worksheet S-10. The Bad Debt Margin is calculated by subtracting the Bad Debt Cost from zero.

The Private/Other Cost is calculated by subtracting the estimated costs for Medicare, Medicaid, CHIP, indigent care, and uninsured charity care patients from the Patient Service Costs. As noted earlier, a small portion of this represents the cost of professional services delivered to Original Medicare beneficiaries. It also includes the cost of services to patients with Medicare Advantage Plans, which are private payers.

The amount of Private/Other Payment is calculated by subtracting the estimated payments for Medicare, Medicaid, CHIP, indigent care, and uninsured charity care patients from the total Patient Service Revenues. As noted earlier, a small portion of this represents Medicare professional services fees for services delivered to Original Medicare beneficiaries. It also includes payments from Medicare Advantage Plans, which are private payers.

The Private/Other *Allowed Amount* is calculated by taking the total Private/Other Payment and adding the Bad Debt Cost and the bad debt cost for insured patients who qualify for charity care.

The Private/Other Margin (often referred to in the text as "Private Payer Margin") is calculated by subtracting the Private/Other Cost from the Private/Other Allowed Amount. The Allowed Amount (which includes the estimated cost of bad debt) is used so that the Private/Other Margin represents the amount of profit or loss the hospital would have received if insured patients had paid what they owed. This avoids double-counting with the Bad Debt Margin. The sum of the Private/Other Margin and the Bad Debt Margin represents the total net Margin for the privately insured and self-insured patients in this category, i.e., the actual payments received for the services minus the cost of the services.

Other Income

The Other Income amount used in this report represents the difference between Non-Patient Service Revenue and Non-Patient-Service Cost. Non-Patient Service Revenue is calculated by subtracting the hospital's Patient Service Revenue from its Total Revenue, and Non-Patient Service Cost is calculated by subtracting Patient Service Cost from the hospital's Total Expenses.

Percentage Margins

In this report, the percentage margin for a category of payers is calculated by dividing the dollar margin for that category by the costs of services for patients covered by that payer (i.e., $\text{Margin} = [\text{Revenues} - \text{Costs}] / \text{Costs}$). This is different than the standard approach of using payments or revenues in the denominator. When revenues and costs differ by small amounts, the two approaches lead to similar results. For example, if a hospital has \$20 million in expenses and \$19 million in revenues, the standard approach would calculate a margin of -5.26% ($[\$19\text{M} - \$20\text{M}] / \$19\text{M}$) whereas the approach used in this report will calculate a margin of -5.0% ($[\$19\text{M} - \$20\text{M}] / \$20\text{M}$). However, in the kinds of extreme situations which often face small hospitals, particularly with individual payers, the results of using the two approaches are very different, and the approach used in this report leads to a more easily understandable result. For example, if a hospital is only receiving revenues sufficient to cover one-half of its costs, the approach used in this report will calculate a margin of -50% (e.g., in the case of the hospital with \$20 million in expenses, the margin with \$10 million in revenues is calculated as $[\$10\text{M} - \$20\text{M}] / \$20\text{M}$, or -50%), whereas the standard approach calculates a margin of -100% ($[\$10\text{M} - \$20\text{M}] / \$10\text{M}$). If the hospital receives no revenues at all to cover a particular set of costs (e.g., for the costs associated with uninsured charity care patients), the approach used in this report calculates a margin of -100%, whereas a margin cannot be calculated under the standard approach because the denominator would be zero. Similarly, if a hospital is receiving payments that are 50% higher than its costs, the approach used in this report calculates the margin as +50% (e.g., $[\$30\text{M} - \$20\text{M}] / \$20\text{M}$), whereas the standard approach calculates a margin of +33% ($[\$30\text{M} - \$20\text{M}] / \$30\text{M}$). The standard approach is based on the way profits are calculated for for-profit businesses, which assume that prices are set by the market and businesses must keep their costs below those prices. In contrast, for rural hospitals and other essential community services, the cost depends on the services that need to be delivered, and payments need to be set at amounts sufficient to cover those costs. For example, Medicare's payment to a Critical Access Hospital is calculated as 101% of the hospital's cost (although the payment is then reduced by 2% under current sequestration rules). Consequently, it makes more sense to normalize margins based on costs rather than payments.

Contribution to Total Margin

The percentage margin for a specific type of payer is calculated by subtracting the costs of services delivered to the patients insured by that payer from the amounts the payer paid for those services, and then dividing by the costs of those services. Although this is an accurate reflection of how well a particular payer is supporting the costs of services to its own patients, it is not the best way to show the impact of that payer on the hospital as a whole, because different payers represent different proportions of the total costs of services at the hospital.

For example, imagine a hypothetical hospital with a -6% total margin that has two payers. The margin on Payer A's patients is -10% (i.e., Payer A pays 10% less than the cost of the services its patients received) and the margin on Payer B's patient is -5%. Payer A might appear to be the biggest cause of the hospital's overall loss, but if Payer A represents only 20% of the hospital's patients/costs and Payer B represents 80% of the patients/costs, then Payer A will contribute -2% to the hospital's total margin (20% of costs times payments that are 10% below costs), and Payer B will contribute -4% (80% x -5%), so Payer B is actually causing the majority of the hospital's loss.

Consequently, many of the charts in the report show a payer's *contribution* to the hospital's *total* margin, rather than the margin on the payer's own patients. The Contribution to Total Margin is calculated by dividing the dollar margin for the payer by the hospital's Total Expenses (or in some cases, Total Patient Service Costs) rather than by the costs just for that payer, i.e., $\text{Payer Contribution to Total Margin} = [\text{Payer-Specific Payments} - \text{Payer-Specific Costs}] / \text{Total Hospital Expenses}$.

Net Assets

Current Net Assets is calculated by subtracting Current Liabilities for all fund categories (obtained from Line 45 on Worksheet G) from Current Assets (obtained from Line 11 on Worksheet G). The difference is used rather than the more traditional "current ratio," so that the difference can be compared to the hospital's margin and total expenses.

Total Net Assets (Other Than Fixed Assets) is calculated by subtracting both Current Liabilities and Long-Term Liabilities (obtained from Line 50 on Worksheet G) from the sum of Current Assets and Other Assets (obtained from Line 35 on Worksheet G).

Payer Costs, Payments, and Margins for Hospitals in California

In the California data, the total payments from each category of payer were obtained from the Net Patient Revenue line on Page 12 of each hospital's Annual Disclosure Report. The cost of services for each category of payer was estimated by taking the Total Charges for that payer reported on Page 12 and multiplying by the overall cost-to-charge ratio for the hospital (which was calculated by dividing the sum of the Total Charges for all payers on Page 12 by the hospital's total expenses obtained from Page 8 of the Annual Disclosure Report). Bad Debt Cost

was calculated by multiplying the Provision for Bad Debts amount on Page 12 by the overall cost-to-charge ratio for the hospital.

Payer Costs, Payments, and Margins for Hospitals in Tennessee

In the Tennessee data, the total payments from each category of payer were obtained from the Net Patient Revenue column on Schedule E of each hospital's Joint Annual Report. The cost of services for each category of payer was estimated by taking the Total Charges for that payer reported on Schedule E and multiplying by the overall cost-to-charge ratio for the hospital (calculated by dividing the sum of the Total Charges for all payers by the hospital's total expenses). Bad Debt Cost was calculated by multiplying the Adjustments to Charges on Schedule E by the overall cost-to-charge ratio for the hospital.

Median Amounts

At a very small hospital, the numbers of patients and amounts of cost and payment in individual categories can vary significantly from year to year simply because of random variation and one-time events. Consequently, although it would be desirable to use the most recent data for analyses in order to provide the most current picture of hospitals' financial status and costs, use of a single year's data can be misleading, particularly when examining small groups of small hospitals. To avoid reporting findings that might only apply to the most recent year, most of the analyses in the report are based on the median amounts for each hospital calculated over the 3-year period from 2016-2018. For example, if a hospital has a "negative total margin," it means the hospital had a negative *median* total margin from 2016-2018. If the hospital had a positive margin in one year and negative margins in two years, the hospital would be classified as having a negative margin, and vice versa. If the report states that some proportion of a group of hospitals had a negative total margin, it means that proportion of the hospitals had a *median* total margin that was negative over the three-year period.

In most cases, the statistics in the report also use the median as a measure of central tendency for groups of hospitals, since it is affected less by outliers than the mean value. When the report refers to the "median" amount of a variable for a group of hospitals, it usually means the "median of the medians," i.e., the 3-year median for *each* hospital is calculated, and then the median of those amounts is calculated across *all of the hospitals* in the group.

Hospital Service Area and Population

It is difficult to determine an exact service area for a rural hospital, since it does not deliver every service that a particular patient may need at a particular point in time, and patients may be willing or able to travel farther for certain services or during more favorable weather conditions. In order to estimate the approximate size of the population served by a hospital, a likely service area was constructed using the zip code in which the hospital is located and a group of additional nearby zip codes. A nearby zip code was included in the hospital's service area if either (1) the hospital is the closest hospital to that zip code and at least one Medicare beneficiary who lives in that zip code had been admitted to the hospital between 2013 and 2018, or (2) the hospital had received at least 3% of the hospital admissions of Medicare beneficiaries during that time period. The number of times that Medicare beneficiaries living in a zip code were admitted to each hospital was determined using the Hospital Service Area files that are publicly available on the CMS website (<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Hospital-Service-Area-File/index>). The population of the service area was then determined using population estimates from the United States Census Bureau for the Zip Code Tabulation Areas associated with the zip codes in the service area.

ENDNOTES

1. U.S. Department of Health and Human Services, Center for Medicare and Medicaid Services. *National Health Expenditure Accounts*.
2. Between 2008 and 2018, data from the National Health Expenditure Accounts show that the annual percentage increase in hospital spending was higher than the increase in spending on prescription drugs in all but two years (2014 and 2015). From 2015 to 2018, the percentage increase in hospital spending (15.2%) was almost three times as high as the increase in spending on prescription drugs (5.6%).
3. U.S. Department of Commerce, Bureau of Economic Analysis. *National Income and Product Accounts: Personal Income*.
4. Spending by hospital bed count is derived from the Hospital Cost Reports that hospitals are required to submit to the Centers for Medicare and Medicaid Services. (U.S. Department of Health and Human Services, Center for Medicare and Medicaid Services. *Healthcare Cost Report Information System*.) Data on total hospital spending comes from the National Health Expenditure Accounts, *op. cit.*
5. In this report, a hospital is considered as being located in a rural community and is referred to as a “rural hospital” if it is located either in a nonmetropolitan county or in a portion of a metropolitan county that has a Rural Urban Community Area (RUCA) code of 4 or greater. See the Appendix for details.
6. These statistics are calculated using data from the CMS Healthcare Cost Report Information System (HCRIS), *op. cit.* See the Appendix for details on the methodology used to calculate the measures reported in the text.
7. HCRIS data. See the Appendix for details on the methodology.
8. HCRIS data. See the Appendix for details on the methodology.
9. The count is based on county population estimates for 2018 from the U.S. Department of Commerce, United States Census Bureau.
10. On average in the U.S., there are about 100 acute hospital admissions per year per 1,000 people, so in a rural county with 25,000 residents, one might expect about 2,500 hospital admissions per year for the residents of the county. (Since rates of hospital admissions vary significantly by age and sex, the actual number would be higher or lower depending on the demographics of the county.) Since a small rural hospital would not be able to handle the most complex patients, not every patient from the county will be admitted to the local hospital. Assuming 70% of the 2,500 admissions could be handled by the rural hospital and the average length of stay is 3 days, this would result in 5,250 total acute inpatient days, or an average daily census of 14.4.
11. Most rural hospitals have a licensed bed capacity that is much larger than their average daily acute census for two reasons. First, there is significant and unpredictable day-to-day variation in the number of individuals requiring inpatient care, and the hospital has to maintain adequate capacity to admit patients when they need it. As will be discussed in Chapter III, occupancy levels have to be lower in small hospitals than in large hospitals because of the greater variability in day-to-day utilization. Second, most small rural hospitals use some of their inpatient beds to deliver rehabilitation services and/or long-term nursing care as well as short-term acute care. Moreover, the fact that a hospital is licensed for a certain number of beds does not mean that the hospital will have sufficient staff on duty for all of those beds at times when there not enough patients to occupy all of them,
12. American Hospital Association. *Annual Survey of Hospitals, 2017*.
13. HCRIS data. See the Appendix for methodology.
14. Driving distances and driving times between hospitals were calculated using the Google Maps Distance Matrix API. <https://developers.google.com/maps/documentation/distance-matrix/overview>
15. Conversely, individuals who live in between the rural hospital and the alternative hospital may not have to travel much farther to reach the alternative hospital than they do to reach their current hospital.
16. Carlson, AP *et al.* “Low Rate of Delayed Deterioration Requiring Surgical Treatment in Patients Transferred to a Tertiary Care Center for Mild Traumatic Brain Injury.” *Neurosurgery Focus* 29(5) (2010).
Fuentes B *et al.* “Futile Interhospital Transfer for Endovascular Treatment in Acute Ischemic Stroke.” *Stroke* 46:2156-2161 (2015).
Newgard, CD *et al.* “The Cost of Overtriage: More Than One-Third of Low-Risk Injured Patients Were Taken to Major Trauma Centers.” *Health Affairs* 32(9): 1591-1599 (2013).
17. Maron DF. “Maternal Health Care is Disappearing in Rural America.” *Scientific American*, February 15, 2017.
18. U.S. Department of Agriculture, National Agricultural Statistics Service. *2017 Census of Agriculture*.
19. U.S. Department of Commerce, Bureau of Economic Analysis. *Gross Domestic Product by County, 2018*.
20. U.S. Department of Agriculture, National Agricultural Statistics Service. *2017 Census of Agriculture*.

21. Agriculture in Eastern Washington State is supported either directly by the Columbia River or by the Columbia Basin Project, which is the largest water reclamation project in the country. The Grand Coulee Dam, located in the middle of the region, provides water to the Columbia Basin Project through more than 1600 miles of canals, which in turn provide irrigation water to over 600,000 acres of land. The hydroelectric plants at the Grand Coulee Dam are the largest single power station in the United States. The region also contains the Channeled Scablands that were shaped by Ice Age floods.
22. U.S. Department of the Interior, National Park Service. *Visitation Numbers* <https://www.nps.gov/aboutus/visitation-numbers.htm>
23. Most of the top 10 National Parks are very large and have multiple entrances and attractions. In some cases, one part of the park is close to a larger hospital, but in another part of the park, the only nearby hospital is a small rural hospital. For example, the main entrance to the Olympic National Park is in Port Angeles and is only 6 minutes from the Olympic Medical Center, but the Hoh Rain Forest Center on the southwestern side of the Park is nearly two hours from Port Angeles and 46 minutes away from Forks Community Hospital. (Travel times were calculated using the Google Maps Distance Matrix API.)
24. Artiga S, Rae M. *The COVID-19 Outbreak and Food Production Workers: Who is at Risk?* Kaiser Family Foundation, June 3, 2020.
25. University of North Carolina, Cecil G. Sheps Center for Health Services Research. <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>
26. In some cases, a different hospital or other entity took over operations of the emergency services and outpatient services when the inpatient services were terminated.
27. Driving distances and driving times between hospitals were calculated using the Google Maps Distance Matrix API. <https://developers.google.com/maps/documentation/distance-matrix/overview>
28. Doctors Hospital at Deer Creek, a 10-bed hospital that was located in Leesville, Louisiana, closed in January 2019. It was located 0.3 miles from Byrd Regional Hospital, a 60-bed hospital which continues to operate. Leesville is a rural community near the Louisiana-Texas border which had an estimated population of 5,713 in 2018.
29. U.S. Department of Commerce, United States Census Bureau.
30. U.S. Department of Commerce, United States Census Bureau. *2018 Population Estimates*.
31. Chereb S. "Tonopah Hospital Closes, Leaving Medical Care 100 Miles Away," *Las Vegas Review-Journal*, August 21, 2015.
32. Johnson B. "Officials Seek to Revive Rural Tonopah Hospital," *Nevada Public Radio*, November 22, 2019.
33. Kyser H. "Four Years Later, Tonopah Recovering from Hospital Closure." *Nevada Public Radio*, November 14, 2019
34. King, M. "DeQueen Medical Center Closes Doors, Part of Larger Trend of Closings," *Arkansas Money & Politics*, May 8, 2019.
Stromquist, K. "As De Queen's Hospital Struggles, Workers, Residents on Edge," *Arkansas Democrat-Gazette*, January 13, 2019.
35. Artiga S, Rae M. *The COVID-19 Outbreak and Food Production Workers: Who is at Risk?* Kaiser Family Foundation, June 3, 2020.
36. Centers for Disease Control, based on July 2, 2020 data. <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/county-map.html>
37. Bachman M. "County Passes Ordinance to Sell Bonds, Fund Hospital Construction." *The DeQueen Bee*, September 14, 2020.
38. Harmsen AMK et al. "The Influence of Prehospital Time on Trauma Patients Outcome: A Systematic Review." *Injury* 46(4):602-609 (2015).
Nicholl J et al. "The Relationship Between Distance to Hospital and Patient Mortality in Emergencies: An Observational Study." *Emergency Medicine Journal* 24:665-668 (2007).
Tansley G et al. "Effect of Predicted Travel Time to Trauma Care on Mortality in Major Trauma Patients in Nova Scotia." *Canadian Journal of Surgery* 62(2): 123-130 (April 2019).
39. Gujral K and Basu A. *Impact of Rural and Urban Hospital Closures on Inpatient Mortality*. National Bureau of Economic Research Working Paper 26182 (August 2019).
40. Shen Y and Hsia RY. "Association Between Emergency Department Closure and Treatment, Access, and Health Outcomes Among Patients With Acute Myocardial Infarction." *Circulation* 134(20): 1595-1597 (2016).
Shen Y and Hsia RY. "Does Decreased Access to Emergency Departments Affect Patient Outcomes? Analysis of Acute Myocardial Infarction Population 1996-2005." *Health Services Research* 47(1) Part 1:188-210 (2012).
Hsia RY and Shen Y. "Emergency Department Closures and Openings: Spillover Effects on Patient Outcomes in Bystander Hospitals," *Health Affairs* 38(9): 1496-1504 (2019).
41. Nationally, most hospital closures have occurred in urban areas, and as shown in the text, some closures in rural communities have occurred where another hospital was nearby or where emergency services continued to be offered even though the hospital was "closed." As a result, studies that do not differentiate between the circumstances surrounding hospital closures are less likely to show negative impacts on mortality rates or other outcomes. For example, a study that found no significant change in mortality rates following closures of either rural or urban hospitals did not control for differences in the travel time to the next-closest hospital or for whether emergency services continued to be offered at the site of the closed hospital. Moreover, its primary outcome measure was all-cause mortality for Medicare beneficiaries, not mortality for specific conditions that are sensitive to hospital travel time. Although it examined time-sensitive conditions, it only did so for closures overall, not for closures in rural areas. Joynt KE et al. "Hospital Closures Had No Measurable Impact on Local Hospitalization Rates or Mortality Rates," *Health Affairs* 34(5): 765-772 (2015).

42. Massarweh NN et al. "Association Between Travel Distance and Metastatic Disease at Diagnosis Among Patients With Colon Cancer." *Journal of Clinical Oncology* 32(9):942-948 (2014).
43. Kozhimannil KB et al. "Association Between Loss of Hospital-Based Obstetric Services and Birth Outcomes in Rural Counties in the United States," *JAMA* 319(12):1239-1247 (2018).
44. Probst, JC et al. "Economic Impact of Hospital Closure on Small Rural Counties, 1984 to 1988: Demonstration of a Comparative Analysis Approach." *The Journal of Rural Health* 15(4): 375-390 (Fall 1999).
Manlove JL and Whitacre BE. *Short-Term Economic Impact of Rural Hospital Closures*. Paper presented at the Southern Agricultural Economics Association's 2017 Annual Meeting, February 4-7, 2017.
45. Holmes GM et al. "The Effect of Rural Hospital Closures on Community Economic Health." *Health Services Research* 41(2): 467-485 (April 2006).
46. Ellison A. "22 Hospital Bankruptcies in 2019." *Becker's Hospital Review*, January 6, 2020.
Ellison A. "29 Hospital Bankruptcies in 2020." *Becker's Hospital Review*, June 3, 2020.
47. The bottom of each box in Figure 2-1 shows the 1st quartile (i.e., 25% of the hospitals have a margin lower than this amount) and the top of the box shows the 3rd quartile (i.e., 25% of the hospitals have a margin higher than this amount) for the category of hospitals. The center line in each box represents the median value for the hospitals in the category. The ends of the "whiskers" extending above and below each box represent the 5th and 95th percentiles, so 90% of all hospitals are within the range shown.
48. The "rural hospitals that closed" are those that appear on the list maintained by the Cecil G. Sheps Center for Health Services Research at the University of North Carolina.
49. Data on costs and revenues for hospitals are from the Hospital Cost Reports that hospitals are required to submit to the Centers for Medicare and Medicaid Services. (U.S. Department of Health and Human Services, Center for Medicare and Medicaid Services. *Healthcare Cost Report Information System*.) The methodology used to calculate the measures in this report is described in the Appendix.
50. In this report, a "margin" is calculated by subtracting the hospital's expenses from its revenues and then dividing the difference by the expenses (i.e., $\text{Margin} = \frac{\text{Revenues} - \text{Expenses}}{\text{Expenses}}$), rather than the standard approach of using revenues in the denominator. When revenues and expenses differ by small amounts, the two approaches lead to similar results. For example, if a hospital has \$20 million in expenses and \$19 million in revenues, the standard approach would calculate a margin of -5.26% ($\frac{\$19\text{M} - \$20\text{M}}{\$19\text{M}}$) whereas the approach used in this report will calculate a margin of -5.0% ($\frac{\$19\text{M} - \$20\text{M}}{\$20\text{M}}$). However, in the kinds of extreme situations which often face small hospitals, particularly with individual payers, the results of using the two approaches are very different, and the approach used in this report leads to a more easily understandable result. For example, if a hospital is only receiving revenues sufficient to cover one-half of its costs, the approach used in this report will calculate a margin of -50%
- (e.g., in the case of the hospital with \$20 million in expenses, the margin with \$10 million in revenues is calculated as $\frac{\$10\text{M} - \$20\text{M}}{\$20\text{M}}$, or -50%), whereas the standard approach calculates a margin of -100% ($\frac{\$10\text{M} - \$20\text{M}}{\$10\text{M}}$). If the hospital receives no revenues at all to cover a particular set of costs (e.g., for the costs associated with uninsured charity care patients), the approach used in this report calculates a margin of -100%, whereas a margin cannot be calculated under the standard approach because the denominator would be zero. Similarly, if a hospital is receiving payments that are 50% higher than its costs, the approach used in this report calculates the margin as +50% (e.g., $\frac{\$30\text{M} - \$20\text{M}}{\$20\text{M}}$), whereas the standard approach calculates a margin of +33% ($\frac{\$30\text{M} - \$20\text{M}}{\$30\text{M}}$). The standard approach is based on the way profits are calculated for for-profit businesses, which assume that prices are set by the market and businesses must keep their costs below those prices. In contrast, for rural hospitals and other essential community services, the cost depends on the services that need to be delivered, and payments need to be set at amounts sufficient to cover those costs. Consequently, it makes more sense to normalize margins based on costs rather than payments.
51. "Current net assets" is defined here as the difference between current assets and current liabilities. The difference is used rather than the more traditional "current ratio," so that the difference can be compared to the hospital's margin and total expenses. For example, if the hospital's current net assets is positive, but the dollar amount is comparable in size to the dollar amount the hospital is losing each year, then continued losses will push the current net assets below zero within the next 1-2 years, and the hospital will likely be unable pay all of its bills.
52. Weber L, Ostrov BF. "Hospital Executive Charged in \$1.4B Rural Hospital Billing Scheme." *Kaiser Health News*, June 30, 2020.
53. Weber L, Ostrov BF. "The Collapse of a Hospital Empire – And Towns Left In The Wreckage." *Kaiser Health News*, August 20, 2019.
54. Moffeit M. "Bled Dry: How a Hospital Died Under the Care of a Texas Doctor." *The Dallas Morning News*, December 2, 2016.
55. There is considerable year-to-year variation in hospital profits, particularly for small hospitals, and a hospital can experience a profit or loss in a particular year for reasons that are not indicative of the hospital's fundamental financial strength or weakness. 2020 will likely be a particularly unusual year for most hospitals because of the coronavirus pandemic.

56. All of the hospitals shown in Figure 2-3 have an average daily acute census under 15. However, they differ significantly in the number and types of services they deliver, which makes it difficult to compare their “sizes” in an apples-to-apples way. Some studies have attempted to measure the relative sizes of hospitals by combining the numbers of inpatient and outpatient services into a measure of “equivalent discharges,” but Medicare Cost Reports do not include information on the numbers or types of services other than inpatient admissions. Moreover, in order to combine the volumes of different services into a single measure of volume, assumptions must be made about the relative “sizes” of different types of services. Those assumptions are typically based on the relative amounts Medicare pays for services, but that begs the question of whether Medicare payments accurately reflect the cost or intensity of services in small rural hospitals. Because of these problems, this report will use the total annual expenses at a hospital in order to compare the total sizes of hospitals.
57. Most private health insurance plans require patients to pay co-payments or co-insurance on most of the individual services they receive. They also generally require patients to pay the full amount for most services until a deductible is reached, and many individuals now have “high deductible” plans that cause the patient to be the sole payer for many services.
58. Although these additional revenues can offset losses from other payers, the net benefit will be smaller or potentially negative if hospitals have to incur additional costs in order to receive these revenues. For example, some states impose special taxes or fees on hospitals and use the revenues to obtain additional federal Medicaid matching funds. The combined amounts are then distributed to hospitals. If the formula used to distribute the funds gives some hospitals significantly more than the amount they contributed plus matching funds, other hospitals could potentially receive less in funding than they contributed in taxes/fees.
59. For Original Medicare beneficiaries, the charges for the services they receive and the amounts Medicare pays for the services are reported separately for inpatient stays and outpatient services and also for services delivered by any Rural Health Clinics, home health agencies, Skilled Nursing Facilities (SNFs), inpatient psychiatric units, and inpatient rehabilitation units operated by the hospital. Payments made to the hospital for services delivered by employed physicians and other services paid on a fee schedule (i.e., not paid for on the basis of cost or through one of the Medicare prospective payment systems) are not reported separately, but this represents only a small portion of the payments associated with Medicare patients.
60. Medicaid programs differ from state to state, and different hospitals use different approaches to recording Medicaid revenues. Hospitals that receive Medicaid Disproportionate Share (DSH) payments sometimes report those as part of the Medicaid payments for individual services, and sometimes report them as “Other Income.” In addition, it appears that some hospitals have not reported all payments from Medicaid Managed Care Organizations (MCOs) as “Medicaid” payments, particularly in the initial years when a state transitioned to an MCO structure, so a small portion of the “Private/Other” category in this report likely consists of Medicaid payments.
61. The “net revenue” from a payer is the gross charges billed for services minus the discounts and adjustments that are required under the payment schedule or contract with that payer. In general, net revenue represents the payers’ “allowed amounts” for services minus any unpaid patient cost-sharing.
62. Although payments from Medicare Advantage (MA) plans are often classified as “public” or equated with Medicare, these plans can set or negotiate rates with hospitals that are higher or lower than what the hospital would receive for Original Medicare beneficiaries and they can establish cost-sharing requirements for patients that are higher or lower than what is required for beneficiaries enrolled in Original Medicare, just as a commercial insurance plan can do.
63. For example, this includes payments from the Veterans Administration and Workers Compensation programs. In addition, this category includes services delivered to Original Medicare beneficiaries by employed physicians, ambulance services, and reference laboratory services, since Medicare does not consider these to be “hospital services.” Analysis indicates that for most hospitals, only about 2-3% of the costs and revenues in this overall category will be associated with these services, so profits or losses on them will have little impact on most hospitals’ margins in this category or their overall margins. However, some hospitals, particularly larger hospitals, employ a larger number of physicians and other clinicians (either specialists or primary care providers), and for them, a larger percentage of costs and revenues in this category will represent Original Medicare beneficiaries, particularly if a high proportion of the residents of the hospital’s service area are elderly.
64. Self-pay patients are patients who do not have insurance but who do not meet the hospital’s standards for charity care. In addition, this category includes patients who have insurance that does not cover the service the hospital provided. For example, health insurance plans do not typically cover long-term nursing care or assisted living services provided by many small rural hospitals. However, only a small portion of costs and revenues at rural hospitals are associated with these types of services.
65. Hospitals report bad debt separately for Medicare and other payers. The amount described here as “bad debt” represents only the *non-Medicare portion* of the hospital’s total bad debt.
66. Each hospital establishes its own criteria as to which patients qualify for charity care, so losses in this category will vary across hospitals based on both differences in the number of uninsured patients receiving services and differences in the charity care criteria used.
67. Since seniors with Medicare Advantage plans are included in the private-pay category, the proportion of services associated with *all* Medicare beneficiaries (i.e., both those with Original Medicare and those who enrolled in Medicare Advantage) is likely closer to the proportion of services associated with patients who have employer-sponsored insurance, individual insurance plans, or who pay for services directly. However, the percentage of individuals eligible for Medicare who enroll in Medicare Advantage plans varies significantly from state to state and from county-to-county within states, so the percentage of services to seniors that are in the Medicare category vs. the Private Payer category can vary significantly for individual hospitals.

68. The cost of services for the Private/Other category is estimated by taking the total cost of patient services at the hospital and subtracting the portion of the cost that is attributed to Original Medicare patients, Medicaid patients, CHIP and indigent care patients, and uninsured charity care patients based on the charges billed for those patients. See the Appendix for additional details.
69. The estimated cost of bad debt is added to the estimated revenue for the Private/Other category before calculating the margin in that category, so that it represents the amount of profit or loss the hospital would have received if patients (other than patients qualifying for charity care) had paid what they owed. This avoids double-counting with the Bad Debt category (where the margin is calculated by subtracting the cost of bad debt from zero). In other words, the Private margin represents the profit or loss associated with the “allowed amount” of payment for patient services and the Bad Debt margin represents the loss on the services and portions of services for which patients failed to pay. The sum of the margins in these two categories represents the total net margin for privately insured and self-insured patients, i.e., the actual payments received for the services minus the cost of the services.
70. Mathematically:
- Category-Specific Dollar Margin = Revenue in the Category – Estimated Cost of Services in the Category;
- Category-Specific Percentage Margin = Category-Specific Dollar Margin / Estimated Cost in the Category.
71. Mathematically:
- Contribution to Total Margin = Category-Specific Dollar Margin / Total Hospital Expenses.
72. For example, imagine a hypothetical hospital with a -6% total margin that has two payers. The margin on Payer A’s patients is -10% (i.e., Payer A pays 10% less than the cost of the services its patients received) and the margin on Payer B’s patient is -5%. Payer A might appear to be the biggest cause of the hospital’s overall loss, but if Payer A represents only 20% of the hospital’s patients/costs and Payer B represents 80% of the patients/costs, then Payer A will contribute -2% to the hospital’s total margin (20% of costs times payments that are 10% below costs), and Payer B will contribute -4% (80% x -5%), so Payer B is actually causing the majority of the hospital’s loss.
73. If a patient needs drugs or a lab test during the ED visit, those costs will be assigned to other cost centers.
74. For example, if one payer’s patients received \$200,000 in ED services and \$100,000 in lab tests, while a second payer’s patients received \$100,000 in ED service and \$200,000 in lab tests, then using a service-line specific approach, the estimated cost of services for the first payer would be \$125,000 (0.5 x \$200,000 + 0.25 x \$100,000), whereas the estimated cost for the second payer would be \$100,000 (0.5 x \$100,000 + 0.25 x \$200,000). However, if the overall cost-to-charge ratio for the hospital is 0.35 (the overall ratio will always be somewhere inside the range of the individual cost-to-charge ratios) then each hospital would be assigned a cost of \$105,000 (0.35 x \$300,000), which is too little for the first payer and too much for the second.
75. Kronick R, Neyaz SH. *Private Insurance Payments to California Hospitals Average More Than Double Medicare Payments*. West Health Policy Center (May 2019).
76. For example, if a hospital uses a higher mark-up in setting charges for x-rays than for CT scans, then using the average cost-to-charge ratio for the radiology department will cause costs to be overestimated for x-rays and underestimated for CT scans. Some hospitals use a separate cost center for CT scans that allows different cost-to-charge ratios to be calculated and used, but others do not.
77. State Medicaid programs are also required to have special payment arrangements for RHCs. They generally pay more for RHC visits than other primary care visits, although not necessarily enough to cover costs. “Payment for Services Provided by Federally-Qualified Health Centers and Rural Health Clinics,” Social Security Act §1902 (bb).
78. Hospitals also incur bad debt for Original Medicare patients. These patients are required to pay 20% of the total payment allowed by Medicare for most outpatient services after meeting a deductible. Some Medicare beneficiaries have a supplemental insurance plan, but the majority do not, and some of these individuals may not be able to afford to pay some or all of the cost-sharing amount. However, Medicare reimburses hospitals for about 2/3 (65%) of the bad debt for Original Medicare beneficiaries, so bad debt losses for Original Medicare patients are generally much less than the bad debt losses for privately-insured patients.
79. Bad debt represents the estimated cost of the service the patient received but failed to pay for. The hospital reports the charges for the services the patient received but did not fully pay for, and that is then converted into an estimated cost using the cost-to-charge ratios at the hospital; any payment actually received is subtracted from that amount. However, a portion of bad debt represents patients who have failed to pay for their cost-sharing, even though their insurance paid the remaining amount for the service, and so the amount assigned to this will depend on how the hospital determines the amount of charges that it assigns to bad debt.
80. The “cost” of bad debt and uninsured is estimated the same way as the cost for uninsured charity care patients, and it may be higher or lower than the actual cost of services.
81. At rural hospitals, a median of 89% of the total amounts unpaid by patients is bad debt rather than amounts for patients with insurance who qualify for charity care, and at the smallest rural hospitals (i.e., those with total expenses less than \$20 million per year), the median is 98%.
82. State Health Access Data Assistance Center (SHADAC). *New 2018 State-Level Estimates of Medical Out-of-Pocket Spending for Individuals with Employer-Sponsored Insurance Coverage*. (February 2020). Available at: <https://www.shadac.org/sites/default/files/publications/ESIMedicalOutOfPocketDataBrief.pdf>.

83. Figure 2-15 shows the percentage profit or loss on the costs of services for *that payer's patients*, whereas Figures 2-10 and 2-14 show the contribution each payer makes to the hospital's *overall profitability*. The numerator (the dollar profit or loss) is the same in both cases, but in Figure 2-15 the denominator is the *hospital's cost of services just to that payer's patients*, whereas in Figures 2-10 and 2-14, the denominator is the *hospital's total expenses*.
84. Although it is generally believed that hospitals use profits on private-pay patients to offset losses on Medicaid service patients, Figure 2-15 shows that this "cost-shifting" cannot occur in most of the smallest rural hospitals because there are no profits on the private-pay patients. This difference has not been identified in other analyses of cost-shifting because most analyses do not distinguish between urban and rural hospitals, and none have distinguished between small rural hospitals and larger rural hospitals.
85. 73% of small rural hospitals are classified as Critical Access Hospitals, whereas the majority (56%) of larger rural hospitals have other classifications (e.g., Sole Community Hospital, Medicare Dependent Hospital, or Low-Volume Hospital).
86. Seven states (Connecticut, Delaware, Massachusetts, Maryland, New Jersey, Rhode Island, and Vermont) and the District of Columbia have no rural hospitals that had less than \$20 million in total expenses during the 2016-18 period. Maryland had one rural hospital this small, but it closed in 2020 and so it is excluded from the analyses. Maine, New Hampshire, and Oregon each had only one rural hospital this small, although they have many larger rural hospitals.
87. *Rural Hospitals and Medicaid Payment Policy*. Medicaid and CHIP Payment and Access Commission (August 2018).
88. Marks T et al. *Factors Affecting the Development of Medicaid Hospital Payment Policies: Findings from Structured Interviews in Five States*. Medicaid and CHIP Payment and Access Commission (September 2018).
89. *Rural Hospitals and Medicaid Payment Policy*. Medicaid and CHIP Payment and Access Commission (August 2018).
90. Texas Health & Human Services Commission. *Medicaid 1115 Waiver*. <https://hhs.texas.gov/laws-regulations/policies-rules/waivers/medicaid-1115-waiver>
91. Association of Washington Public Hospital Districts. <http://www.awphd.org>.
92. As noted earlier, a small portion of this category represents payments from other government programs, such as the Veterans Administration and Workers Compensation programs, and Original Medicare payments for services that are not considered to be "hospital services," such services delivered by employed physicians, ambulance services, and reference laboratory services.
93. California Office of Statewide Health Planning and Development. *Hospital Financials*. <https://oshpd.ca.gov/data-and-reports/cost-transparency/hospital-financials/#complete-annual> Details on the methodology used to analyze these data are in the Appendix.
94. In contrast to Medicare cost reports, which limit "bad debt" to the amounts that patients fail to pay, the California reports include all types of bad debt, including amounts that a health insurance plan was obligated to pay but failed to do so.
95. Figure 2-39 showed the margin on private payer patients as a percentage of the *cost of the services delivered to those patients*. Figure 2-44 shows the margin as a percentage of the hospital's *total expenses*.
96. In 2017-18, there were nearly three times as many Tennessee rural hospitals with less than \$20 million in total expenses as there were with \$20-30 million in expenses (22 vs. 8).
97. Tennessee Department of Health. *Joint Annual Reports*. <https://www.tn.gov/health/health-program-areas/statistics/health-data/jar.html> Details on the methodology used to analyze these data are in the Appendix.
98. Figure 2-46 showed the margin on private payer patients as a percentage of the *cost of the services delivered to those patients*. Figure 2-51 shows the margin as a percentage of the hospital's *total expenses*.
99. White C, Whaley C. *Prices Paid to Hospitals by Private Health Plans Are High Relative to Medicare and Vary Widely: Findings from an Employer-Led Transparency Initiative*. RAND Corporation (2019). Available at: https://www.rand.org/pubs/research_reports/RR3033.html
100. The RAND data are based on claims data for approximately 4 million covered lives made available by several dozen self-insured employers, the state All-Payer Claims Databases in Colorado and New Hampshire, and some health plans. This is a large population, but since it represents only about 2% of the U.S. population with employer-sponsored health insurance and since the individuals included are disproportionately concentrated in several states and in self-insured plans, the results based on these data may not be representative of all private payments in all parts of the country. Moreover, even though the data include a large number of individuals and claims for services in aggregate, there are too few services at some hospitals, particularly small hospitals, to allow reliable estimates of payment levels at those hospitals for individual services.
101. Because of the small number of claims for individual services available to the RAND researchers and because claims for different sets of services were available at different hospitals, the researchers calculated "standardized" payments for inpatient and outpatient services that would be comparable between different hospitals. The standardized payment was calculated by weighting the actual payment amounts for individual services by the estimated relative costs of those services. The weight for an inpatient admission was based on the relative weight of the applicable Diagnosis Related Group (MS-DRG) in the Medicare Inpatient Prospective Payment System, and for an outpatient service, the weight was based on the relative weight of the associated Ambulatory Payment Classification (APC) in the Medicare Outpatient Prospective Payment System.
102. The reasons why costs are higher at smaller hospitals is discussed in detail in Chapter III.

103. The estimated Medicare payment in the RAND report was calculated based on the Medicare payment system and parameters applicable to that hospital. For example, payments for a Critical Access Hospital were estimated based on the cost and charges for services at that hospital, whereas payments for other hospitals were based on amounts calculated under the Inpatient Prospective Payment System.
104. *Change Healthcare Healthy Hospital Revenue Cycle Index*, Change Healthcare (June 26, 2017).
105. Levinson D. *Medicare Advantage Appeal Outcomes and Audit Findings Raise Concerns About Service and Payment Denials*. Office of Inspector General, U.S. Department of Health and Human Services Report OEI-09-16-00410 (September 2018).
106. Pollitz K, Cox C, Fehr R. *Claims Denials and Appeals in ACA Marketplace Plans*. Kaiser Family Foundation (February 25, 2019).
107. States with state-based exchanges such as California and New York were not included in the analysis.
108. Martin J. "Health Plan Credentialing Delays Affect Physicians, Patients." *Texas Medicine* 112(11):47-53 (2016)
109. Suntay RJ. "3 Reasons Why Physician Credentialing Red Tape Hits Rural PA Especially Hard." *HAP News*, October 16, 2019. The Hospital and Healthsystem Association of Pennsylvania. Available at <https://www.haponline.org/News/HAP-News-Articles/Latest-News/3-reasons-why-physician-credentialing-red-tape-hits-rural-pa-especially-hard-1>
110. Curran D, Hart R, Henderson J, Shaw T. "The Health Care Crisis Texas Isn't Talking About." *Rural Matters* (Fall 2019). Texas Organization of Rural & Community Hospitals.
111. Coverage for the uninsured charity care patients would reduce the number of hospital with losses by at most 2.6%, and the reduction would be less if the payments for those patients were lower than the cost of services. Only a portion of patient bad debt represents patients who do not have insurance, so the number of hospitals experiencing losses would likely decrease by much less than 14% if they did have insurance.
112. American Hospital Association. *Annual Survey of Hospitals, 2017*.
113. Although hospitals report how much of the ED cost is for "salaries" vs. "other costs," some hospitals employ emergency room physicians while others contract with physician staffing firms, and hospitals may contract with temporary staffing agencies when they have vacancies for physicians, nurses, and other staff, so two hospitals can spend different amounts on salaries even with similar staffing levels.
114. Collins M. "Staffing an ED Appropriately and Efficiently." *ACEP Now* (August 1, 2009). Available at: <https://www.acepnow.com/article/staffing-ed-appropriately-efficiently/>
115. There are 8,760 hours in the year (365 days x 24 hours); if one assumes that a full-time physician will work 2,000-2,200 hours per year (40-45 hours per week x 49-50 weeks per year), the hospital will need at least 4 full-time equivalent (FTE) physicians to staff the ED.
116. Hartmann M, Graziadei J. "Thirty Miles at Sea – Providing Consistent Care in an Inconsistent Environment." *New England Journal of Medicine* 376(14): 1306-1307 (April 6, 2017).
117. *Ibid.*
118. Most hospitals schedule nurse staffing for patient care units in 12 hour shifts, and a nurse will typically work three 12-hour shifts per week. If a full-time nurse works 50 weeks over the course of the year, this represents a total of 1800 hours, rather than the 2080 hours typically used to define an FTE in other industries, and the time required for ongoing training means that the actual hours a nurse will spend delivering patient care will be lower than 1800. Since there are a total of 8,760 hours in the year (365 days x 24 hours/day), the hospital will need at least 4.9 nurses (8,760 / 1,800) to provide round-the-clock staffing.
119. As discussed in the first section, about 60% of the total expenses at small rural hospitals are associated with direct patient services and 35% represent indirect costs. Since the total indirect costs are about 60% of the total direct costs, allocating the indirect costs to the direct costs will, on average, make the total cost of a service line 60% higher than its direct costs. The actual percentage will vary by service line, however, because each indirect cost center is allocated to the service lines based on the formulas intended to reflect the relative usage of the indirect services. For example, the hospital's dietary services will be primarily used for inpatients, so most of the dietary costs will be allocated to the inpatient service line. The high cost of the physicians in the ED makes the direct cost in that service line relatively high, so the percentage of overhead costs is lower.
120. Use of clinic providers to staff the ED can be problematic for a busy clinic because some or all of the ED visits will occur at the same time as a scheduled clinic appointment. However, it also can be helpful financially for a clinic in a smaller community that does not have enough patients or scheduled visits to fully occupy the clinic providers. There is also an opportunity for greater continuity of care if the physician who treats the patient during the ED visit was already the patient's primary care physician or if that physician begins seeing the patient in the clinic for follow-up care after the ED visit.
121. Galli R et al. "TelEmergency: A Novel System for Delivering Emergency Care to Rural Hospitals." *Annals of Emergency Medicine* 51(3): 275-284 (March 2008).
122. For example, if a hospital with 10,000 visits during the entire year had 6,000 visits during three summer months and 4,000 visits during the remainder of the year, the number of visits during the summer would represent nearly 3 visits per hour on average, and this would likely require having two physicians and nurses on duty at all times. In contrast, the visits during the rest of the year would only represent one visit every 2 hours, and that would only require a single physician and nurse. The additional physician and nurse needed during the summer months would increase the total number of FTE physicians/nurses needed by 25% compared to an ED that received 10,000 visits spread evenly over the course of the year.

123. The “adjusted” spending amounts shown in Figure 3-10 represent a reduction of 8.7% in the estimated amounts from Figures 3-7 and 3-8 in order to reflect three years of inflation, so they are more representative of what costs in those years would have been. Data are not shown for 15,000 visits because very few of the smallest rural hospitals have that many ED visits.
124. A small part of the variation in the chart is because the cost per visit is calculated for hospitals with visits ranging from 90-110% of the visit level shown. Some of the variation may also be due to the fact that the ED visit data came from the American Hospital Association survey and the cost data came from the Medicare cost reports.
125. As will be discussed in Chapter IV, Critical Access Hospitals are paid for ED visits in a different way by Medicare and some state Medicaid programs, but their payments are still tied to the number of visits made to the ED.
126. This represents only the payment for the services of the physicians, nurses, and other staff in the ED, not for lab tests, imaging studies, drugs, etc. that the patients received during the visit.
127. Some communities do operate “freestanding” emergency departments that are not part of an inpatient hospital. However, Medicare pays less for visits at these EDs than it pays for visit to a hospital ED, even though it will generally cost as much or more to operate a freestanding ED as a hospital-based ED (the level of staffing required will be the same, and the costs may well be higher because the ED can no longer rely on an inpatient unit to provide backup nursing support and to share general administrative costs). As a result, it is generally only feasible to operate a free-standing ED if it is able to get high per-visit payments from private health plans. This is harder to do in small rural communities than in larger communities because, as explained in the previous section, a low volume of visits makes the cost per visit very high.
128. Phillip PJ, Mullner R, Andes S. “Toward a Better Understanding of Hospital Occupancy Rates.” *Health Care Financing Review* 5(4): 53-61 (1984).
129. An average daily census of 2 patients is equivalent to 730 patient days during the year. If the average length of stay is 2.5 days, the 730 patient days represents 292 distinct patients. Since each patient will have to be both admitted and discharged, this means there will be 584 admissions and discharges during the year, for an average of 1.6 per day.
130. Cramer ME, Jones KJ, Hertzog M. “Nurse Staffing in Critical Access Hospitals: Structural Factors Linked to Quality Care.” *Journal of Nursing Care Quality* 26(4): 335-343 (2011)
131. The indirect cost ratio for the inpatient unit is larger than the ratio for the ED because the larger amount of space in the inpatient unit and higher use of certain central services such as dietary makes the indirect cost allocation higher for the inpatient unit. Also, the more expensive personnel in the ED will make the direct cost of the ED higher relative to other service lines, so the overhead ratio for the ED will be lower.
132. The “adjusted” spending amounts shown in Figures 3-21 and 3-23 represent a reduction of 8.7% in the estimated amounts from Figures 3-20 and 3-22 in order to reflect three years of inflation, so they are more representative of what costs in those years would have been.
133. Two hospitals can have the same average daily census with different total numbers of patients if one hospital has fewer admissions who stay slightly longer. The cost of inpatient services may be the same at the two hospitals because the average census is the same, and if so, the cost per day will be the same, but the cost *per patient* will be higher at the hospital with fewer admissions and a longer length-of-stay.
134. As will be discussed in Chapter IV, Critical Access Hospitals are paid for inpatient stays in a different way by Medicare and some state Medicaid programs, but inpatient revenues at Critical Access Hospitals are still tied to the number of inpatients.
135. The hospital will have an arrangement with an outside laboratory to process tests beyond the minimum that must be performed on site.
136. In small hospitals, each lab tech will need to perform most or all of the different tests that are done in the laboratory, whereas larger hospitals that perform a larger number of tests and a broader array of tests may have lab techs with more specialized training who focus on certain kinds of tests.
137. It is possible but unlikely that there would be someone in a very small community who has the necessary training to work as a laboratory technician and who would be willing and able to work only part-time. A hospital might contract with an outside entity to provide laboratory services rather than employing lab techs directly, but the same considerations for staffing of essential on-site testing will apply regardless of who is actually employing the staff.
138. A lab tech on the night shift can perform tests that are needed immediately at night while also processing some of the non-urgent tests on specimens collected during the day, so having a lab tech working at night does not necessarily mean the hospital will need to hire an additional lab tech to work during the day.
139. The methodology for estimating the hospital’s service area is described in the Appendix.
140. The “adjusted” spending amounts shown in Figure 3-29 represent a reduction of 8.7% in the estimated amounts from Figure 3-27 in order to reflect three years of inflation, so they are more representative of what costs in those years would have been.
141. For example, there were 9,070 lab tests per 1,000 Medicare beneficiaries in 2018, but only 3,900 imaging studies. For younger patients, data from the Health Care Cost Institute show that in 2017, 1,238 lab/pathology services were delivered per 1,000 insured members compared to 334 radiology services. Health Care Cost Institute. *2017 Health Care Cost and Utilization Report*. (February 2019).
142. The “adjusted” spending amounts shown in Figure 3-33 represent a reduction of 8.7% in the estimated amounts from Figure 3-31 in order to reflect three years of inflation, so they are more representative of what costs in those years would have been.

143. *Delivering High-Value Healthcare Services in Rural Areas of Washington State: Phase 1 Findings and Recommendations of the Washington Rural Health Access Preservation (WRHAP) Project*. Washington State Hospital Association, Washington State Department of Health, and Washington Health Care Authority (January 2017). Available at: <https://wrhapgroup.org/pdfs/Phase1/Phase%201%20Findings%20and%20Recommendations%20of%20the%20WRHAP%20Project%2C%20January%202017.pdf>
144. "Payment for Services Provided by Federally-Qualified Health Centers and Rural Health Clinics," Social Security Act §1902(bb).
145. For example, some hospital RHCs have to fly in a physician to provide services during a portion of the week, and the cost of the travel makes this "part-time provider" very expensive.
146. The "adjusted" spending amounts shown in Figure 3-39 represent a reduction of 8.7% in the estimated amounts from Figure 3-38 in order to reflect three years of inflation, so they are more representative of what costs in those years would have been.
147. Private health plans will pay more for new patients, more for longer visits, and more when procedures are performed, but this is unlikely to be sufficient to offset the low payments for most visits.
148. The proposed Rural Emergency Medical Center Act of 2018 (H.R. 5678, 115th Congress) would have allowed a Critical Access Hospital or other small hospital to be designated as a "Rural Emergency Medical Center" if it provided 24-hour emergency medical care and observation care but no acute inpatient care. A Rural Emergency Medical Center (REMC) would be paid by Medicare for outpatient services under the Outpatient Prospective Payment System, and would also receive an additional "facility payment...that accounts for the fixed costs of the rural emergency medical center services and the low volume of services provided by such center." If the REMC provided skilled nursing care services, it would be paid at 110% of the standard Medicare rates.
149. Medicare Payment Advisory Commission. "Chapter 2: Using Payment to Ensure Appropriate Access to and Use of Hospital Emergency Department Services." *Report to the Congress: Medicare and the Health Care Delivery System, June 2018*.
150. Figure 3-42 assumes that the hospital could eliminate all of the direct costs and half of the overhead costs associated with the inpatient unit, and that non-Medicare payers pay the hospital the same percentage of its charges for inpatient care as those payers pay on average for all services. Even if it were assumed that all of the overhead costs allocated to the inpatient unit could be eliminated, the majority of small rural hospitals would still lose money by closing the inpatient unit.
151. Smith DG. *Paying for Medicare: The Politics of Reform*. Aldine de Gruyter 1992.
152. Although the Diagnosis Related Group (DRG) payments in the IPPS are not typically described as "fees," a fee is simply a predetermined amount paid for a service, and a DRG payment in IPPS is a fixed amount paid when a service (a hospital admission) is delivered.
153. United States General Accounting Office. *Rural Hospitals: Factors That Affect Risk of Closure*. GAO Report HRD-90-134 (June 1990).
154. *Ibid*.
155. *Ibid*.
156. 42 U.S.C. 1395i-4
157. Medicare increases payments to other hospitals based on the amount of uncompensated care the hospital delivers, but there is no similar payment adjustment for Critical Access Hospitals.
158. The 101% calculation is performed before the patient contribution is deducted, but the 2% sequestration reduction is performed after the patient contribution deduction, so the total amount the hospital receives will generally be higher than 99% of costs, particularly for certain kinds of outpatient services. For example, if the total outpatient cost attributable to Medicare beneficiaries was \$1 million and the charges for those beneficiaries totaled \$2 million, then the total payment in step 2 would be \$1,010,000 (101% of \$1 million), the patients would be expected to contribute \$400,000 (20% of \$2 million), Medicare would be responsible for \$610,000, sequestration would reduce the Medicare payment to \$597,800, and so (assuming the patients paid their full cost-sharing amounts) the hospital would receive \$997,800, or 99.8% of the cost. The total Medicare payment will never be more than 100%, however.
159. Cost-based payment for Rural Health Clinics was first authorized by Congress in 1977 in an effort to address shortages of physicians in rural areas.
160. RHCs at hospitals with more than 50 beds, and RHCs that are not based at hospitals, can also receive "cost-based" payments from Medicare, but for these RHCs, the payment per visit can be no higher than a maximum ceiling established by Medicare. The ceiling in 2020 was \$86.31 per visit, which is far below what Chapter III showed the cost per visit at an RHC would likely be. This means that as a practical matter, most Rural Health Clinics that are not owned by hospitals are paid on a fee-for-visit basis with fees equal to the payment ceiling, rather than based on their actual costs.
161. Most ED visits with physicians are classified as Level 4 or Level 5 visits. In 2018, Medicare paid ED physicians \$119.52 for a Level 4 ED visit and \$176.04 for a Level 5 ED visit. Assuming that two-thirds of visits at small rural hospitals are Level 5 and one-third are level 4, this results in an average payment of \$157.20. Hospitals that bill for the physician services are paid 15% more than the standard fees, bringing the average to \$180.78. Sequestration on the Medicare portion of the payment will then reduce the amount to \$178.
162. In the example in Figure 4-4, the fees Medicare pays for physician visits are higher than the cost of the portion of the physician's time allocated to visits, which more than offsets the losses from the low payments from private payers.

163. Under the cost-based payment system, it is more difficult for the hospital to reduce its losses by reducing costs than under fee-for-service payment, because when the cost of a service line is reduced, the amount of cost-based payment from Medicare would also decrease. Moreover, if the overhead cost from one cost center is reassigned to another cost center, it will simply increase losses in those other cost centers.
164. *Rural Hospitals and Medicaid Payment Policy*. Medicaid and CHIP Payment and Access Commission (August 2018).
165. U.S. Department of Health and Human Services. *Medicare Beneficiaries Paid Nearly Half of the Costs for Outpatient Services at Critical Access Hospitals*. Office of Inspector General Report OEI-05-12-00085 (October 2014)
166. If the hospital's budget is exceeded in one year, it is reduced the following year, and the hospital then has to reduce its fees for services in order to stay within the lower budget. The budget would then presumably return to something closer to the previous level in the next year, and fees would be increased correspondingly.
167. In Maryland, Medicare, Medicaid, and Medicare Advantage plans pay 6% less than the regulated fee amounts, and commercial health plans pay the full amount of the fees. The levels of the fees are set high enough to avoid losses due to the 6% discounts.
168. Maryland Health Services Cost Review Commission. <https://hscrc.maryland.gov/>
169. Maryland Health Services Cost Review Commission. *Global Budget Revenue Agreements and Addendums*. Available at <https://hscrc.maryland.gov/Pages/gbr-tpr.aspx>
170. "Savings" is defined in the program as having occurred when actual spending is less than the amount CMS projects it would have spent if hospital spending in Maryland had increased at the same rate that hospital spending increased in the rest of the country. Spending did not have to decrease in Maryland, nor did spending have to be lower than in the rest of the country, it simply had to increase at a slower rate.
171. Maryland Health Services Cost Review Commission. *Global Budget Revenue Adjustments*. <https://hscrc.maryland.gov/Pages/gbr-adjustments.aspx>
172. *3M Patient Classification Methodologies*. https://www.3m.com/3M/en_US/health-information-systems-us/drive-value-based-care/patient-classification-methodologies/
173. The factors that are used in Maryland to make these adjustments are changed over time.
174. Rural Policy Research Institute and Stratis Health. *Rural Innovation Profile: Global Budget Process as an Alternative Payment Model* (2017). Available at: <https://ruralhealthvalue.public-health.uiowa.edu/files/McCready-Global-Budget-2017.pdf>
175. The Maryland global budget only applies to the "regulated revenue" at a hospital. Hospitals that provide outpatient services at sites away from the hospital campus can obtain additional revenue for some of those services.
176. Mortensen K, Perman C, Chen J. "Innovative Payment Mechanisms in Maryland Hospitals: An Empirical Analysis of Readmissions Under Total Patient Revenue," *Healthcare* 2(3): 177-183 (September 2014). Roberts ET et al. "Changes in Hospital Utilization Three Years Into Maryland's Global Budget Program for Rural Hospitals." *Health Affairs* 37(4): 644-653 (April 2018). Pine JM et al. "Maryland's Experiment With Capitated Payments for Rural Hospitals: Large Reductions in Hospital-Based Care." *Health Affairs* 38(4): 594-603 (April 2019). Done N, Herring B, Xu T. "The Effects of Global Budget Payments on Hospital Utilization in Rural Maryland." *Health Services Research* 54(3): 526-536 (May 2019).
177. Some of the hospitals' services may be provided to residents of rural communities, but the hospitals themselves are not located in a community designated as rural.
178. Mortensen K, Perman C, Chen J. *op cit*. Roberts ET et al. *op cit*. Done N, Herring B, Xu T *op cit*.
179. Pine JM et al. *op cit*.
180. Roberts ET et al. *op cit*. Pine JM et al. *op cit*. Done N, Herring B, Xu T *op cit*.
181. RTI International. *Evaluation of the Maryland All-Payer Model* (November 2019).
182. Centers for Medicare and Medicaid Services. *Hospital Compare datasets*. <https://data.medicare.gov/data/hospital-compare>
183. RTI International. *Evaluation of the Maryland All-Payer Model* (November 2019).
184. Center for Medicare and Medicaid Innovation. *Pennsylvania Rural Health Model*. <https://innovation.cms.gov/innovation-models/pa-rural-health-model>
185. There are no restrictions on where Medicare beneficiaries can receive services. A private insurance plan would have to change its benefit design in order to require its members to use the global budget hospital or to create financial disincentives for seeking care elsewhere.
186. In Maryland, where all hospitals are regulated, the state makes a determination as to whether an increase in services at one hospital represents the delivery of unnecessary services or a shift in market share from other hospitals, and the state makes different adjustments in the hospitals' budgets in each case. In the Pennsylvania model, there is no method of changing how much non-participating hospitals are paid for services, so the only way to meet the overall spending target is to reduce the budget at the rural hospital.
187. Centers for Medicare and Medicaid Services. *Community Health Access and Rural Transformation (CHART) Model Fact Sheet*. August 11, 2020. <https://www.cms.gov/newsroom/fact-sheets/community-health-access-and-rural-transformation-chart-model-fact-sheet>
188. The second track in the CHART Model is the "ACO Transformation Track" which will provide additional payments to 20 ACOs in rural areas that participate in the Medicare Shared Savings Program.
189. The details are based on the Notice of Funding Opportunity for the CHART Community Transformation Track (CMS-2G2-21-001) issued on September 15, 2020.

190. The Maryland global budgets only apply to hospitals, not physician practices. Similarly, the Pennsylvania Rural Health Model only changes payments for hospital services, not for physician services.
191. The hospital may also need to increase the number of nursing assistants and incur other higher costs, and it might use a different mix of RNs and LPNs, but for simplicity, the example assumes only a change in registered nurses, who are the most expensive staff on the unit. Figure 5-10 assumes that the indirect costs allocated to the inpatient unit would not change in the short run if there were an increase in the number of patients on the unit, which is why the cost is different than the amount shown in Figure 3-20 for the same number of patients.
192. RTI International. *Evaluation of the Maryland All-Payer Model* (November 2019).
193. RTI International. *Evaluation of the Maryland All-Payer Model* (November 2019).
194. The estimates use a base amount equal to the average of the hospital's revenues in 2012 and 2013, and then calculate the hospital's payments in 2015 and subsequent years by increasing the base amount either (1) for Critical Access Hospitals, by the increase in the hospital's inpatient cost per day from the prior year, or (2) for non-Critical Access Hospitals, by the national average increase in Medicare per capita inpatient and outpatient hospital spending compared to the prior year. The discount factor for the smallest communities is then applied. No adjustment is made for quality performance.
195. The loss would be smaller if every payer participated in the global budget program, but there would still be a loss because of the higher cost associated with hiring the nurse care manager with no increase in the global budget to pay for that.
196. Wolfe PR, Moran DW. "Global Budgeting in the OECD Countries." *Health Care Financing Review* 14(3):55–76 (1993).
197. Street A, Duckett S. "Are Waiting Lists Inevitable?" *Health Policy* 36:1-15 (1996).
198. O'Reilly J et al. "Paying for Hospital Care: The Experience With Implementing Activity-Based Funding in Five European Countries." *Health Economics, Policy and Law* 7 (1): 73-101 (2012).
199. Palmer KS et al. "Activity-Based Funding of Hospitals and Its Impact on Mortality, Readmission, Discharge Destination, Severity of Illness, and Volume of Care: A Systematic Review and Meta-Analysis." *PLOS ONE* 9 (10). (October 2014).
200. *Waiting Times for Health Services: Next in Line*. OECD Health Policy Studies (2020).
201. *Ibid*.
202. McKillop I, Pink GH, Johnson LM. *The Financial Management of Acute Care in Canada: A Review of Funding, Performance Monitoring and Reporting Practices*. Canadian Institute for Health Information (2001).
203. Lave JR, Jacobs P, and Markel F. "Transitional Funding: Changing Ontario's Global Budgeting System." *Health Care Financing Review* 13(3): 77-84 (1992).
204. Sutherland JM. *Hospital Payment Mechanisms: An Overview and Options for Canada*. Canadian Health Services Research Foundation. (2011)
205. In 2005, the Supreme Court of Canada struck down a law that banned the sale of private insurance for medically necessary services in Quebec in response to a lawsuit filed by a physician in Quebec on behalf of a 73-year old patient who had waited one year for a hip replacement. *Health Care in Canada 2009: A Decade in Review*. Canadian Institute for Health Information (2009). In 2011, a survey of specialty physicians reported a wait time of 19 weeks between referral from a general practitioner and elective treatment. Barua B, Rovere M, and Skinner BJ. *Waiting Your Turn: Wait Times for Health Care in Canada, 2011 Report*. Fraser Institute (2011).
206. *Ibid*.
207. *Ontario's Action Plan for Health Care*. Ontario Government (2012).
208. Mossialos E, Djordjevic A, Osborn R, and Sarnak D. *International Profiles of Health Care Systems*. The Commonwealth Fund (May 2017).
209. *Hallway Health Care: A System Under Strain*. Ontario Government (January 2019).
210. Ferguson R. "Ontario Hospitals Ask for Nearly \$1 Billion to Ease Hallway Health-Care Problem." *The Star* (January 17, 2020).
211. Section 1899 of the Social Security Act (42 U.S.C. 1395jjj).
212. Centers for Medicare and Medicaid Services. *Medicare Shared Savings Program: Shared Savings and Losses and Assignment Methodology*. (August 2020).
213. Centers for Medicare and Medicaid Services. *CMS Finalizes "Pathways to Success," an Overhaul of Medicare's National ACO Program*, December 21, 2018. <https://www.cms.gov/newsroom/press-releases/cms-finalizes-pathways-success-overhaul-medicare-national-aco-program>
214. For simplicity, it is assumed here that there the minimum savings rate and minimum loss rate are zero, so the hospital shares in any savings or cost increases, and there is no adjustment in the bonuses or penalties based on quality measures.
215. Centers for Medicare and Medicaid Services. *Medicare Geographic Variation Public Use File*. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation>
216. The Medicare Shared Savings Program only applies to Medicare beneficiaries in "Original Medicare," not to those who have enrolled in a Medicare Advantage plan, so the number of beneficiaries who could be potentially be assigned to an ACO will often be 20-40% smaller than the total number of Medicare beneficiaries living in the county.
217. Centers for Medicare and Medicaid Services. *Shared Savings Program Accountable Care Organization Public-Use Files*. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/SSPACO/index>
218. Centers for Medicare and Medicaid Services. *Medicare Geographic Variation Public Use File*. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation>

219. Kosar CM et al. "Association of Diagnosis Coding With Differences in Risk-Adjusted Short-Term Mortality Between Critical Access and Non-Critical Access Hospitals." *JAMA* 324(5): 481-487 (2020).
220. Average spending per Medicare beneficiary is about \$10,000 per year, so with 5,000 assigned beneficiaries, the total spending attributed to the ACO would be about \$50 million.
221. This would happen even in a Critical Access Hospital receiving cost-based payment if the reduction in rehabilitation services occurs primarily among Medicare beneficiaries.
222. Center for Medicare and Medicaid Innovation. *Direct Contracting Model Options*. <https://innovation.cms.gov/innovation-models/direct-contracting-model-options>
223. The Medicare Payment Advisory Commission stated that "if standby emergency and primary care capacity are the desired services, then Medicare should subsidize the cost of facilities' standby capacity with an annual fixed payment rather than increased payments per inpatient day." Medicare Payment Advisory Commission. "Chapter 2: Using Payment to Ensure Appropriate Access to and Use of Hospital Emergency Department Services." *Report to the Congress: Medicare and the Health Care Delivery System, June 2018*.
224. Starr P. *The Social Transformation of American Medicine*. Basic Books (1982).
225. Yee CA, Pizer SD, Frakt A. "Medicare's Bundled Payment Initiatives for Hospital-Initiated Episodes: Evidence and Evolution." *The Milbank Quarterly*, August 21, 2020.
226. Sutherland JM. "Pricing Hospital Care: Global Budgets and Marginal Pricing Strategies." *Health Policy* 119: 1111-1118.
227. Miller HD. *The Problems With "Primary Care First" and How to Fix Them*. Center for Healthcare Quality and Payment Reform (May 2019). http://www.chqpr.org/downloads/Fixing_Problems_with_Primary_Care_First.pdf
228. Miller HD. *Measuring and Assigning Accountability for Healthcare Spending*. Center for Healthcare Quality and Payment Reform. (August 2014). Available at: <http://www.chqpr.org/downloads/AccountabilityforHealthcareSpending.pdf>
229. This approach is equivalent to the different levels of payment for physician office visits under standard fee-for-service systems. Physicians categorize the visit as Level 1, Level 2, Level 3, Level 4, or Level 5 based on the complexity of the patient's needs and services; there are explicit criteria for how this assignment is to be made, but the physician uses clinical judgment to determine which level is appropriate for each patient.
230. Miller HD. *How to Create an Alternative Payment Model*. Center for Healthcare Quality and Payment Reform (December 2018). http://www.chqpr.org/downloads/How_to_Create_an_Alternative_Payment_Model.pdf
231. Center for Medicare and Medicaid Innovation. *Primary Care First Model Options*. <https://innovation.cms.gov/innovation-models/primary-care-first-model-options>
232. Miller HD. *The Problems With "Primary Care First" and How to Fix Them*. Center for Healthcare Quality and Payment Reform (May 2019). http://www.chqpr.org/downloads/Fixing_Problems_with_Primary_Care_First.pdf
233. For example, Medicare pays Rural Health Clinics for the actual cost of vaccines administered to Medicare beneficiaries, whereas the rest of the payment is based on the number of visits they made.
234. Kosar CM et al. "Association of Diagnosis Coding With Differences in Risk-Adjusted Short-Term Mortality Between Critical Access and Non-Critical Access Hospitals." *JAMA* 324(5): 481-487 (2020).
235. Miller HD. *Measuring and Assigning Accountability for Healthcare Spending*. Center for Healthcare Quality and Payment Reform. (August 2014). Available at: <http://www.chqpr.org/downloads/AccountabilityforHealthcareSpending.pdf>
236. MacLean CH, Kerr EA, Qaseem A. "Time Out - Charting a Path for Improving Performance Measurement." *New England Journal of Medicine* 378(19):1757-1761 (2018).
237. Center for Medicare and Medicaid Innovation. *Primary Care First Model Options*. <https://innovation.cms.gov/innovation-models/primary-care-first-model-options> *Kidney Care Choices Model*. <https://innovation.cms.gov/innovation-models/kidney-care-choices-kcc-model>
238. Miller HD. *The Problems With "Primary Care First" and How to Fix Them*. Center for Healthcare Quality and Payment Reform (May 2019). http://www.chqpr.org/downloads/Fixing_Problems_with_Primary_Care_First.pdf
239. Miller HD. *How to Create an Alternative Payment Model*. Center for Healthcare Quality and Payment Reform (December 2018). http://www.chqpr.org/downloads/How_to_Create_an_Alternative_Payment_Model.pdf
240. A primary care payment model using monthly payments that are risk-stratified and performance-adjusted using the What Matters Index was developed by Jean Antonucci, MD in 2018 and recommended for implementation by the Physician-Focused Payment Model Technical Advisory Committee (PTAC). Antonucci J. *An Innovative Model for Primary Care Office Payment* (March 18, 2018). Available at <https://aspe.hhs.gov/system/files/pdf/255906/ProposalAntonucci.pdf>. The PTAC recommendation is available at https://aspe.hhs.gov/system/files/pdf/255726/ReportToTheSecretary_Antonucci_10.20.18.pdf
241. Wasson JH et al. "Development of a Care Guidance Index Based on What Matters to Patients." *Quality of Life Research* 27(1): 51-58 (2018).
242. Wasson JH, Ho L, Soloway L, and Moore GL. "Validation of the What Matters Index: A Brief, Patient-Reported Index That Guides Care for Chronic Conditions and Can Substitute for Computer Generated Risk Models." *PLOS ONE* 12(2): e0192475 (February 22, 2018).
243. Nelson EC et al. "Patient Reported Outcome Measures in Practice." *BMJ* 2015;350:g7818 (2015).

244. CMS plans to allow providers in its Direct Contracting Model to waive cost sharing from Medicare beneficiaries for some types of services in order to “reduce financial barriers so that certain beneficiaries may obtain needed care and better comply with treatment plans, thereby improving their own health outcomes.” Center for Medicare and Medicaid Innovation. *Direct Contracting Model: Global and Professional Options Request for Applications*, 11/25/2019, pages 24-25. <https://innovation.cms.gov/files/x/dc-rfa.pdf>
245. It would be appropriate to have higher amounts for Medicare beneficiaries than for younger residents because of the differences in their average utilization rates, but for simplicity, only the average will be shown in this example.
246. For simplicity, a single fee is shown here, rather than separate fees for the hospital and the physician. Since every visit will include both the hospital and physician components, the net effect on revenues and margins is the same.
247. For simplicity, a single fee is shown here, rather than separate fees for the hospital and the physician. Since every visit will include both the hospital and physician components, the net effect on revenues and margins is the same.
248. The example assumes that all payers are participating in the Patient-Centered Payment system, so in this case, “Medicare” will include both Original Medicare and Medicare Advantage.
249. *Delivering High-Value Healthcare Services in Rural Areas of Washington State: Phase 1 Findings and Recommendations of the Washington Rural Health Access Preservation (WRHAP) Project*. Washington State Hospital Association, Washington State Department of Health, and Washington Health Care Authority (January 2017). Available at: <https://wrhapgroup.org/pdfs/Phase1/Phase%201%20Findings%20and%20Recommendations%20of%20the%20WRHAP%20Project%2C%20January%202017.pdf>
250. Some hospitals had a positive total margin in one year, but the losses in the other years were large enough to offset that. At small hospitals, margins can be artificially high or low in one year because of variability and uncertainty about payment, so calculating the net margin over a 3-year period is a more robust measure of profitability.
251. The hospital’s total current and long-term liabilities were subtracted from the total current and other assets, excluding fixed assets (buildings and equipment). If this net amount was positive, it was divided by the average of the total margins for the most recent three years to estimate the number of years before total assets would fall below total liabilities.
252. The Medicare Low-Volume Hospital Payment Adjustment increases payments under the Inpatient Prospective Payment System for certain rural hospitals that have less than 3,800 discharges per year. The maximum increase is 25% for hospitals that have 500 or fewer discharges (which is equivalent to an average daily acute census of about 3-4 patients), and the adjustment decreases linearly for hospitals with more discharges, with no adjustment at all for hospitals that have more than 3,800 discharges (equivalent to an average daily census of about 26 patients). As shown in Figure 3-25, the average cost per day at hospitals with an average census of 3 is twice the average cost at hospitals with 10 or more patients, and the cost for hospitals with fewer patients is even higher, so a 25% increase in payments per admission at the smallest hospitals will not eliminate the difference between payments and costs for inpatient care.
253. Even though the standby capacity payments and service fees based on marginal costs would reduce variation in spending and potentially reduce avoidable utilization, the fact that payments are already so low would still likely result in higher spending in the short run for the health insurance plan.
254. For example, if 80% of premium revenues are used to pay medical expenses, 15% are used to pay administrative costs, and 5% represents profit for the insurance company, then a 1% increase in the total amount of medical expenses translates into a 20% reduction in the amount of profit the insurance company can retain.
255. Even if the rural hospital is self-insured, it will still be using a health insurance company or other Third Party Administrator (TPA) to process claims for services its employees receive from other hospitals and healthcare providers.
256. *Actuarial Soundness*. 42 CFR §438.4
257. *Special Contract Provisions Related to Payment*. 42 CFR §438.6
258. Wachino V. *Letter to State Health Officials Re: FQHC and RHC Supplemental Payment Requirements and FQHC, RHC, and FBC Network Sufficiency Under Medicaid and CHIP Managed Care*, April 26, 2016. Center for Medicaid and CHIP Services.
259. Section 1115A of the Social Security Act created the Center for Medicare and Medicaid Innovation to “test innovative payment and service delivery models to reduce ... expenditures ... while preserving or enhancing the quality of care.” 42 U.S.C. 1315a.
260. Although the Health Care Financing Administration (the predecessor to the Centers for Medicare and Medicaid Services) sponsored a demonstration project in New Jersey to pay hospitals under a DRG system, the demonstration was not completed or evaluated before the Inpatient Prospective Payment System was implemented nationally and the DRG system used in New Jersey was significantly different from the system Medicare implemented nationally. Hsiao WC et al. *Lessons of the New Jersey DRG Payment System*. *Health Affairs* 5(2):32-45 (1986). Smith DG. *Paying for Medicare: The Politics of Reform*. New York: Aldine de Gruyter (1992).
261. White C, Whaley C. *Prices Paid to Hospitals by Private Health Plans Are High Relative to Medicare and Vary Widely: Findings from an Employer-Led Transparency Initiative*. RAND Corporation (2019). Available at: https://www.rand.org/pubs/research_reports/RR3033.html
Health Care Cost Institute. *2018 Health Care Cost and Utilization Report*. February 2020. <https://healthcostinstitute.org/annual-reports/2020-02-13-18-20-19>
262. U.S. Department of Health and Human Services, Health Resources and Services Administration. *Medicare Beneficiary Quality Improvement Project*. <https://www.hrsa.gov/rural-health/rural-hospitals/mbqip>



CENTER FOR
HEALTHCARE
QUALITY &
PAYMENT REFORM

320 Fort Duquesne Boulevard
Suite 20-J
Pittsburgh, PA 15222

www.CHQPR.org
