



## Change in Profitability and Financial Distress of Critical Access Hospitals from Loss of Cost-Based Reimbursement

Mark Holmes, PhD and George H. Pink, PhD

*This brief is part of a series of three briefs providing information for policy makers and stakeholders as policy changes for Critical Access Hospitals (CAHs) are considered. This one focuses on the projected financial impact that a reduction in Medicare payments might have on CAHs. The others focus on the potential increases in beneficiary travel distance if financially-vulnerable CAHs close, and the rural-urban differences in inpatient costs and use among Medicare beneficiaries.*

### BACKGROUND

Concerns about the use of the Medicare Prospective Payment System (PPS) for rural hospitals arose in the 1990s. Rural and small hospitals face factors, such as diseconomies of scale, which could hinder financial performance in comparison to urban and larger hospitals. For these reasons, federal law makers created special payment classifications under the Medicare program, recognizing that many rural hospitals are the only health facility in their community, and their survival is vital to ensure access to health care. One of these classifications was created under the Medicare Rural Hospital Flexibility Program: Critical Access

#### KEY FINDINGS

Over the past few years, policy makers have increasingly focused on the implications of Critical Access Hospitals (CAHs) being paid on a cost-basis relative to how similar services are paid for in traditional Medicare administered pricing systems. As policy makers consider possible changes to CAH reimbursement, the potential financial impact and implications for access should be considered. This brief models the impact of potential changes. Under the scenario(s) of:

- **20% and 30% reductions to Medicare revenue**, the percentages of CAHs with negative operating margins are projected to be 72% and 80%, respectively. The distribution is largely independent of distance to nearest hospital.
- **20% reduction to Medicare revenue**, 39% of hospitals that are 25-35 miles from the nearest hospital and 36% of those that are greater than 35 miles from the nearest hospitals are projected to be at high or mid-high risk of financial distress.
- **30% reduction to Medicare revenue**, 45% of hospitals that are 25-35 miles from the nearest hospitals and 41% of those that are greater than 35 miles from the nearest hospitals are projected to be at high or mid-high risk of financial distress.

Such a substantial reduction in financial viability could lead to an increase in the number of CAHs experiencing insolvency, bankruptcy or closure, with deleterious effects on the health and economic well-being of these communities.

Hospital (CAH). CAHs can have no more than 25 beds and must be: 1) at least 15 miles by secondary road or mountainous terrain OR 2) 35 miles by primary road from the nearest hospital OR 3) declared a “necessary provider” by the state’s governor. Unlike traditional hospitals that are paid under PPS, Medicare pays CAHs based on each hospital’s reported costs. Each CAH receives 101%<sup>1</sup> of its Medicare allowable costs for outpatient, inpatient, laboratory and therapy services, as well as post-acute care in the hospital’s swing beds.

By nearly all accounts, financial performance and condition improved after hospitals converted to CAH status,<sup>2</sup> accompanied by a commensurate decrease in the closure rate of small rural hospitals.<sup>3</sup>

Several recent proposals to reduce federal spending have targeted CAHs for cuts to Medicare reimbursement:

1. Reducing CAH payments from 101% to 100% of reasonable costs.<sup>4</sup>
2. Eliminating the CAH designation for hospitals that are less than 10 miles from the nearest hospital.<sup>4</sup>
3. Eliminating the CAH program altogether and converting all CAHs to PPS.<sup>5</sup>
4. Removing Necessary Provider CAHs’ permanent exemption from the distance requirement.<sup>6</sup>

The potential reduction in Medicare revenue resulting from a conversion from CAH to PPS is uncertain, since estimates vary considerably. In a 2005 study, Medicare

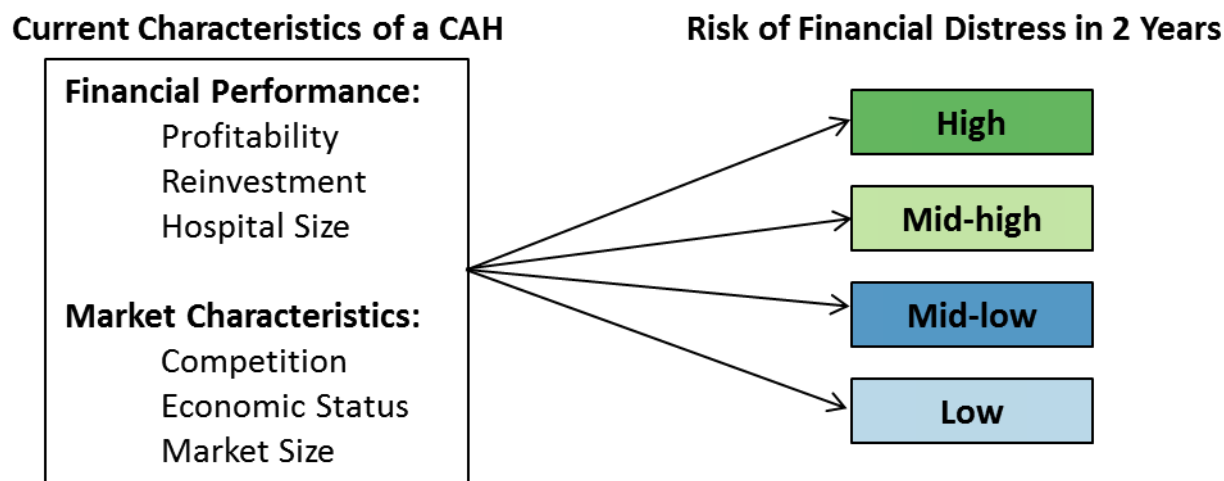
Payment Advisory Committee (MedPAC) found that CAHs “reported over \$3,000,000 per hospital in cost-based Medicare payments in 2003” and “the difference between CAH payments and PPS payment rates per hospital was roughly \$850,000.” Furthermore, “roughly all of the \$850,000 represented increased payment rates to CAHs rather than volume increases”.<sup>3</sup> Thus MedPAC estimated that under PPS, CAHs would be paid approximately 30% less ( $\$850,000 / \$3,000,000 = 28.3\%$ ) for inpatient, outpatient, laboratory, and post-acute (swing bed) services as compared to cost-based reimbursement. Similarly, in 2011, the Congressional Budget Office (CBO) estimated that “hospitals benefiting from the special adjustments for CAHs, Medicare Dependent Hospitals (MDHs), and Sole Community Hospitals (SCHs) are paid about 25% more, on average, for inpatient and outpatient services than the payments that would otherwise apply”.<sup>5</sup> If current revenue is 25% higher than PPS, then PPS is 1/1.25, or 80% of current revenue. Thus, CBO estimates that reversion to PPS would be a 20% decrease in Medicare revenue to CAHs, MDHs, and SCHs. The Department of Health and Human Services Office of the Inspector General (OIG) took a different approach, but estimated that the net effect of conversion would be approximately a 17% decrease in Medicare revenue to a CAH. Overall these proposals estimate that reversion from CAH to PPS would entail a 17% to 28% reduction in Medicare revenue.

This brief examines the potential change in profitability and financial distress of CAHs if they lose cost-based reimbursement.

## MODEL

In April 2011, the Flex Monitoring Team<sup>7</sup> published a Findings Brief describing a model to predict financial distress among CAHs.<sup>8</sup> Figure 1 shows the model that uses current financial performance variables (current profitability, reinvestment, and hospital size) and market characteristic variables (competition, economic status, and market size) to assign CAHs to one of four levels that predict the risk or likelihood that a CAH will be in financial distress two years later. Financial distress is defined as equity decline, unprofitability, and possible closure.

**Figure 1. Model of CAH Financial Distress**



A key variable in the model of CAH financial distress is operating margin, which is defined as operating income divided by operating revenue. It measures the control of operating expenses relative to operating revenue. A positive value indicates an operating profit because operating revenue is greater than operating expenses. High positive values often indicate greater patient volumes, which drive down the cost per unit of service. A negative value indicates an operating loss because operating revenue is less than operating expenses.

## METHODS

To estimate the reduction in Medicare revenue from eliminating the CAH designation, we used 2011 fiscal year Medicare cost reports from the Healthcare Cost Report Information System files. Medicare inpatient (acute and swing) and outpatient revenue were calculated for all CAHs. These amounts were then reduced by 20% (the approximate CAH supplemental payment estimated by CBO) and 30% (the CAH approximate supplemental payment estimated by MedPAC). Total net patient revenue was then recalculated using the reduced Medicare revenue amounts to estimate what revenue would have been under PPS reimbursement. These adjusted revenue calculations were used to re-compute the financial indicators included in the CAH financial distress model, and then the model was used to assign each CAH to one of the four levels of risk of financial distress. The method assumes that only the Medicare reimbursement changes and all else remains the same (Medicare beneficiary cost-

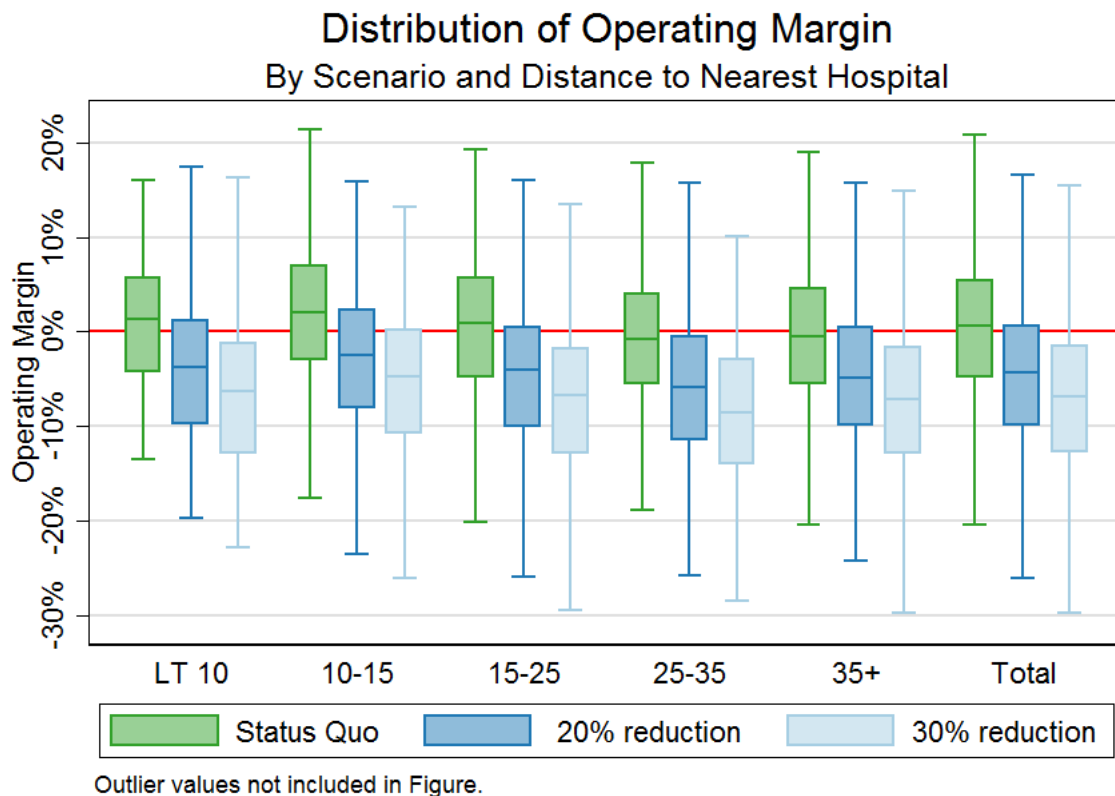
sharing, Medicaid and other revenue, expenses, volume, and market). Due to incomplete cost reports and missing data on some variables, our sample size is 1,215 CAHs (out of a total of 1,332).

Short-term stay, non-federal hospitals were identified from the Centers for Medicare & Medicaid Services Provider of Services File. Geographic Information System methods were used to calculate the distance from each CAH to all other hospitals within 250 miles; the minimum distance was retained, and each CAH was assigned to a distance category based on how far it was from the closest hospital. Overall, the distribution of distance to nearest hospital was comparable to other distance calculations, although distances for some individual hospitals may vary.

## RESULTS

Figure 2 presents a boxplot of the distribution of the 2011 operating margin by Medicare revenue scenario and distance to nearest hospital. The horizontal line in the middle of each box is the median (50<sup>th</sup> percentile), the lower edge of the box is the first quartile value (25<sup>th</sup> percentile), and the upper edge of the box is the third quartile value (75<sup>th</sup> percentile). The “whiskers” at the bottom and top of the vertical lines represent the distribution of the bulk of the remaining values.

**Figure 2. 2011 Distribution of Operating Margin by Medicare Revenue Scenario and Distance to Nearest Hospital**

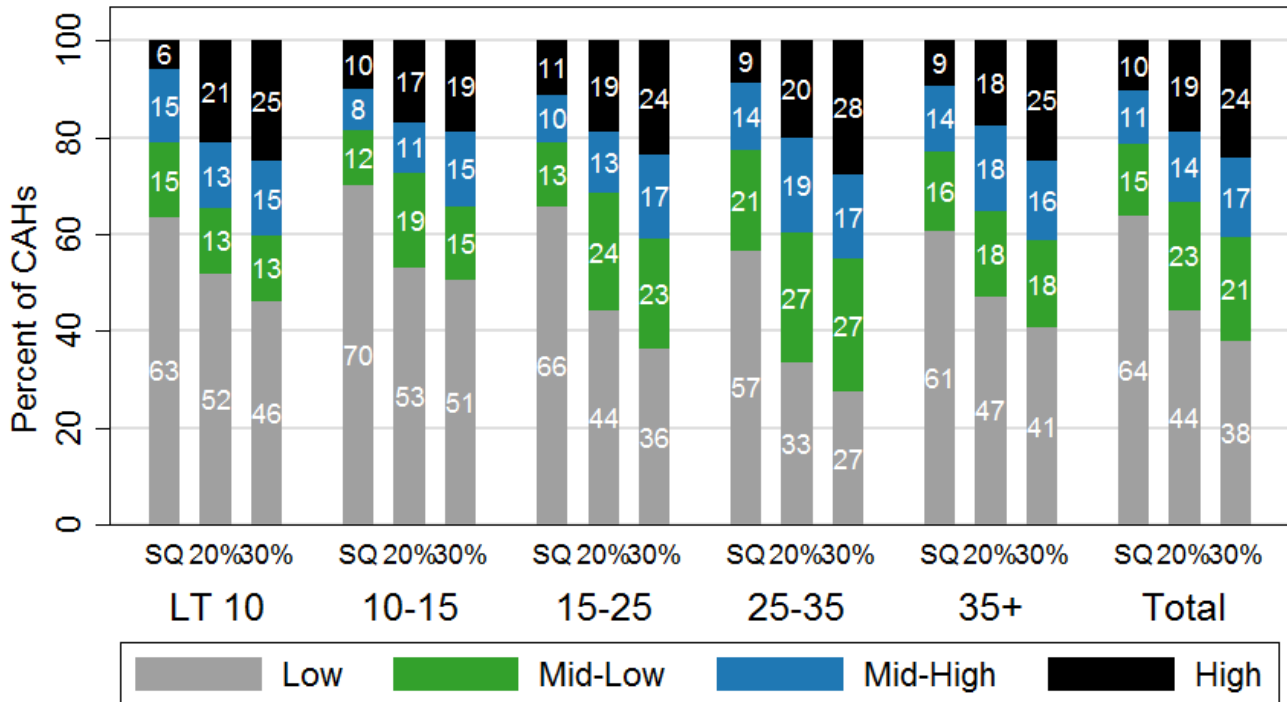


There are three Medicare revenue scenarios (Status Quo, 20% reduction, 30% reduction) and six groups of distance to nearest hospital [less than 10 miles (n=52), 10-15 miles (n=190), 15-25 miles (n=561), 25-35 miles (n=237), greater than 35 miles (n=105), and all hospitals (n=1,215, including 5 with unknown distance)]. Under the Status Quo scenario, approximately half of CAHs have an operating margin greater than zero. Under the scenarios of reductions of 20% and 30% to Medicare revenue, the percentages of CAHs that have negative operating margins are projected to be 73% and 81%, respectively. The distribution is largely independent of distance to nearest hospital, although there would be a slightly lower percentage of hospitals with a negative operating margin in the 10-15 mile group.

Figure 3 presents the distribution of risk of financial distress (low, mid-low, mid-high, and high) by Medicare revenue scenario and by distance to nearest hospital. The figure shows that under both revenue reduction scenarios and regardless of hospital location, the percent of hospitals at low risk (lowest segment of each column) decreases while the percent of hospitals at high risk (top segment) increases. Under the Status Quo scenario, about 10% of CAHs have high risk of financial distress. Under

the scenarios of reductions of 20% and 30% to Medicare revenue, the percentages of CAHs at high risk of financial distress are projected to be 19% and 24%, respectively. Unlike the operating margin results, distance to nearest hospital is associated with the effect of Medicare revenue scenario on risk of financial distress. Under the scenario of a 20% reduction to Medicare revenue, the percentage of CAHs at high and mid-high risk of financial distress is projected to be 39% for hospitals that are 25-35 miles and 36% for those greater than 35 miles from the nearest hospital. Under the scenario of a 30% reduction to Medicare revenue, the percentages of CAHs at high and mid-high risk of financial distress are projected to be 45% for hospitals that are 25-35 miles from the nearest hospital and 41% for those greater than 35 miles from the nearest hospital.

**Figure 3. Risk of Financial Distress by Medicare Revenue Scenario and Distance to Nearest Hospital**



Scenarios: SQ = Status Quo; 20% = 20% reduction in Medicare Revenue; 30% = 30% reduction in Medicare Revenue.  
 N = 1215 CAHs (5 w/ unknown distance), 2011 fiscal years.

## DISCUSSION

### What did we find?

Under the reduction scenarios of 20% and 30% to Medicare revenue, this study found substantial increases in the percentages of CAHs with negative operating margins and CAHs at high and mid-high risk of financial distress. High risk of financial distress conveys a considerably higher likelihood of financial events that challenge the hospital's survival. For example, hospitals in the high risk of financial distress category were 15 times as likely to be operating at a negative fund balance and almost nine times as likely to operate at a loss for three years in a row compared to the hospitals with the lowest financial risk of distress.<sup>8</sup> The number of hospitals predicted to operate with a negative fund balance in the next two years increases from 99 to 165 under a scenario of 30% reduction to Medicare revenue.

### What would we expect to see if this high risk of financial distress occurs?

The first sign could be an increase in the number of CAHs experiencing *insolvency*, which occurs when a CAH can no longer meet its financial obligations with its lenders as debts become due. Insolvency may lead to *reorganization bankruptcy* (Chapter 13), in which debtors restructure their repayment plans to make them more easily met, or *liquidation bankruptcy* (Chapter 7), in which debtors sell certain assets in order to make money they can use to pay off their creditors. The most dire outcome of financial distress is *closure*, in which a CAH no longer exists as an acute care hospital and either converts to another type of facility or closes its doors altogether.

### What are the policy implications?

The implicit policy in the CAH enabling legislation was recognition that a higher reimbursement level was necessary to ensure that timely access to health care was equitable. Equity and access would be threatened by removal of cost-based reimbursement as the larger number of CAHs at mid-high and high risk of financial distress will likely result in some (perhaps many) CAH

closures. Closure will benefit some of those facilities that survive, so final equilibrium distribution of risk might not be so bad for hospitals remaining in the market.

Eliminating the CAH payment classification would have considerable adverse financial consequences on the hospitals: between 36% and 45% would be at high or mid-high risk of financial distress, challenging their ability to remain financially viable in the long run. More important, perhaps, there is a disproportionate impact on CAHs furthest from other hospitals; consequently, access would be at greater risk for those beneficiaries who would travel farthest to the next hospital. Such a substantial reduction in financial support could lead to a renewal of the high closure rates of the 1990s with concomitant deleterious effects on the health and economic well-being of these communities.

1. Currently reduced to 99% under sequestration as part of the Budget Control Act of 2011.
2. Holmes M, Pink G, Slifkin R. *Impact of Conversion to Critical Access Hospital Status on Hospital Financial Performance and Condition*. Flex Monitoring Team Policy Brief #1, November 2006. (<http://www.flexmonitoring.org/documents/PolicyBrief1.pdf>).
3. Medicare Payment Advisory Committee (MedPAC). *Report to Congress: Issues in a Modernized Medicare Program*, Chapter 7 Critical Access Hospital. June 2005. ([http://www.medpac.gov/publications/congressional\\_reports/June05\\_Table\\_of\\_Contents.pdf](http://www.medpac.gov/publications/congressional_reports/June05_Table_of_Contents.pdf)).
4. *Living within Our Means and Investing in the Future: The President's Plan for Economic Growth and Deficit Reduction*, September 19, 2011.
5. Congressional Budget Office. *Reducing the Deficit: Spending and Revenue Options*, March 19, 2011.
6. Office of the Inspector General. *Most Critical Access Hospitals Would Not Meet the Location Requirement if Required to Re-enroll in Medicare*, August 2013.
7. Flex Monitoring Team ([www.flexmonitoring.org](http://www.flexmonitoring.org)).
8. Holmes M, Pink G. *Impact of Conversion to Critical Access Hospital Status on Hospital Financial Performance and Condition Risk of Financial Distress Among Critical Access Hospitals: A Proposed Model*. Flex Monitoring Team Policy Brief #20, April 2011. ([http://www.flexmonitoring.org/documents/PolicyBrief20\\_Strategies.pdf](http://www.flexmonitoring.org/documents/PolicyBrief20_Strategies.pdf)).

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**North Carolina Rural Health Research Program**  
Cecil G. Sheps Center for Health Services Research  
The University of North Carolina at Chapel Hill  
725 Martin Luther King Jr. Blvd. | Chapel Hill, NC 27599  
919-966-5541 | [www.shepscenter.unc.edu/programs-projects/rural-health](http://www.shepscenter.unc.edu/programs-projects/rural-health)