

**“AT-RISK HOSPITALS”:
THE ROLE OF CAH STATUS IN MITIGATING
THE EFFECTS OF NEW PROSPECTIVE PAYMENT
SYSTEMS UNDER MEDICARE**

Working Paper No. 67

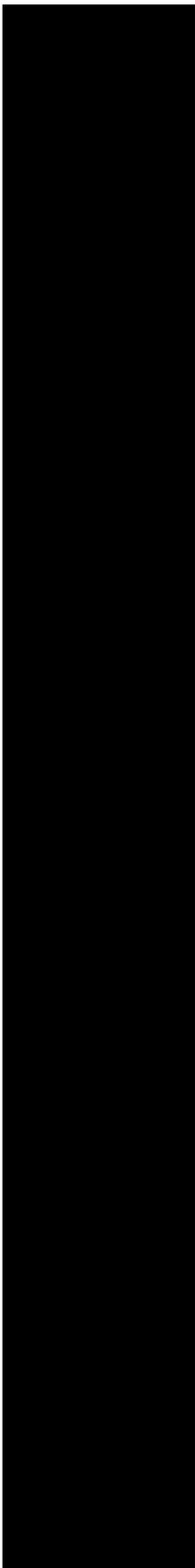
WORKING PAPER SERIES

North Carolina Rural Health Research Program

Cecil G. Sheps Center for Health Services Research
The University of North Carolina at Chapel Hill

725 Airport Road, CB #7590, Chapel Hill, N.C. 27599-7590
phone: 919/966-5541 fax: 919/966-5764

Sheps Center World Wide Web Address: www.shepscenter.unc.edu
NCRHRP address: www.unc.edu/research_programs/Rural_Program/rhp.html



**“AT-RISK HOSPITALS”:
THE ROLE OF CAH STATUS IN MITIGATING
THE EFFECTS OF NEW PROSPECTIVE PAYMENT
SYSTEMS UNDER MEDICARE**

February 8, 2000

Kathleen Dalton, Ph.D.
Hilda A. Howard, B.S.
Rebecca T. Slifkin, Ph.D.

North Carolina Rural Health Research Program

Cecil G. Sheps Center for Health Services Research
The University of North Carolina at Chapel Hill

© The University of North Carolina, 2000

Funding for this analysis was provided by the
Federal Office of Rural Health Policy under Contract Number CSURC0004-03-0

EXECUTIVE SUMMARY

This report examines rural not-for-profit hospitals that potentially qualify as Critical Access Hospitals (CAH) and identifies those facilities that are exposed to substantial financial risk as a result of Medicare's expansion of prospective payments systems (PPS) to non-acute care settings (outpatient, home health, and skilled nursing). We examine the finances of these hospitals to determine whether the Medicare cost-based reimbursement that is applicable to CAH facilities is likely to be more fiscally advantageous than payment that would be received under PPS. The analyses use Medicare cost report data from the federal fiscal year ending September 30, 1996, combined with county-level socio-demographic data from the Area Resource File.

We identify 769 hospitals that met the combination of ownership, size and location criteria that we established for possible CAH status. (There are another thirty-five for-profit hospitals that meet the remaining eligibility criteria that are not included in this study because non-profit status was a requirement for participation at the time that the CAH sample was identified.) These represent 29.6% of all rural hospitals in the 1996 cost report files as received from the Health Care Financing Administration (HCFA). Within this group, 69% were located in the West-Central and Mountain regions of the country. Eighty-six percent of the potential CAHs were authorized for swing-bed use, and more than 55% reported operating a certified home health agency. Potential CAH facilities were more dependent on outpatient business than were other hospitals; on average, outpatient services accounted for 50% of their total patient charges, compared to 45% among other rural hospitals and 36% among hospitals in metropolitan areas. Similarly, their Medicare Part B payments averaged 9% of net revenue, compared with 8% among other rural hospitals and 6% among urban facilities. HCFA has estimated that the proposed prospective payment system for hospital outpatient services would reduce Part B payments to small rural hospitals by approximately 14%. We estimate that this would have resulted in reductions to total net

revenue of 1% – 2% in the potential CAH facilities in our sample.

CAH facilities are paid by Medicare at "reasonable cost", for both inpatient Part A and outpatient Part B services. We found that Part A PPS payments already exceeded Medicare allowable costs for a significant subset of potential CAHs in 1996. This group of hospitals would not have financially benefited from converting to cost-based reimbursement for inpatient services in that year. Three hundred and eleven, or 40%, of the potential CAH sites that we identified also qualified as sole community hospitals (SCH), which are isolated rural hospitals that are deemed to be essential community providers. As SCHs, they have been eligible to receive certain adjustments to improve their inpatient PPS payment rates, based on their own historical cost per discharge. Within the group of facilities that are both CAH and SCH-eligible, inpatient PPS payments averaged 16% above costs, while in the remaining potential CAHs with PPS data, payments averaged only 6% above costs. Approximately 5% of the potential CAHs were either already exempt from inpatient PPS or were missing data in the 1996.

Potential CAHs were more likely than other hospitals to have total operating expenses that were greater than their patient revenues from all payers (70%, compared to 42% of other rural hospitals and 47% of urban hospitals). Thirty-three percent had expenses that also exceeded their total net revenues (that is, both patient and other non-operating income). Many potential CAHs, particularly in the West and Central regions, were operating at a loss even though they had strong positive PPS payment margins. These facilities are unlikely to receive financial benefit from converting to CAH status, even though they are the least able to absorb projected revenue reductions from the proposed prospective payment systems in non-acute settings.

There is uncertainty as to how the new PPS systems will actually affect rural hospitals, as these systems were not fully in place at the time of this analysis. We classified rural facilities as vulnerable to the new prospective payment systems if they had poor overall financial ratios in conjunction

with relatively high levels of dependence on outpatient, home care and skilled nursing services. Ninety percent of potential CAH facilities were identified as “at risk” by at least one of five possible risk criteria, and one third were identified by at least three out of five criteria. Of those classified as “at risk”, however, 48% are not likely to benefit financially from conversion to CAH status because they cannot afford to give up the positive margins that they now receive on PPS inpatient services. It should also be noted that recently passed legislation amending the Balanced Budget Act of 1997 could affect the status of those at-risk hospitals. The legislation makes several changes to the Medicare outpatient PPS as well as the home health and skilled nursing PPS rules. These provisions are intended to ameliorate, at least temporarily, some of the negative financial effects that had been projected from earlier BBA payment changes.

Many of the “at risk” potential CAHs are sole community hospitals. CAH status would be more broadly beneficial to the population of small, at-risk rural facilities if sole community hospitals that wished to convert to CAH status were allowed to retain their special Part A SCH reimbursement provisions. However, for some sole community hospitals, the mission of the institution may not be compatible with the limitations imposed on a CAH. For these “at risk” hospitals, an alternative approach would be legislation that allows all SCH facilities to receive outpatient reimbursement under the same cost-based rules that apply to CAH facilities, without having to convert to CAH status.

“AT-RISK HOSPITALS”: THE ROLE OF CAH STATUS IN MITIGATING THE EFFECTS OF NEW PROSPECTIVE PAYMENT SYSTEMS UNDER MEDICARE

Introduction

The Balanced Budget Act of 1997 (BBA (97)) contained a number of provisions that affect rural hospitals. Of particular importance is the expansion of Medicare’s prospective payment systems to non-acute care services, and the Medicare Rural Hospital Flexibility Program,

which creates a new limited service inpatient facility called a Critical Access Hospital (CAH). Conversion to a CAH places certain restrictions on a hospital (for details, see Reif et al., 1999) but allows the hospital to receive cost-based reimbursement from Medicare for hospital inpatient and outpatient services. The effect of the changes mandated by BBA (97) in reimbursement for services delivered in hospital-based outpatient departments, home health agencies and skilled nursing facilities should be a factor in the decision to apply for status as a CAH.

In November of 1999 Congress passed the Balanced Budget Act Refinement Act (BBA-RA), which delays some of the payment reductions that the BBA 97 had scheduled. BBA-RA also provides for rural hospitals with fewer than 100 beds to be “held harmless” by the new hospital outpatient PPS rules for a period of three years. As a result of this recent legislation, the role of CAH status as an adaptive strategy may be reduced, or at least delayed.

The purpose of this report is to identify rural hospitals that are exposed to substantial financial risk as a result of Medicare’s expansion of prospective payment systems to non-acute care settings, with emphasis on institutions that could qualify as Critical Access Hospitals if their states are eligible to participate in the Rural Hospital Flexibility Program. We identify those facilities where Medicare’s cost-based payment provisions for CAH facilities could effectively reduce or eliminate potential payment reductions for non-acute care. CAH status does not alter the reimbursement for home health or skilled nursing, but hospitals with high dependence on these services will be even less able to absorb simultaneous cuts from outpatient prospective payment, and may therefore be more likely to consider conversion to a CAH.

Conversion to a limited service hospital has both clinical and community implications. The decision to convert to CAH status is more than a financial determination. The CAH designation also allows rural hospitals more administrative flexibility in terms of compliance with the Medicare Conditions of Participation and certain staffing requirements. Those considerations, how-

ever, are beyond the scope of this paper, which is focused on the financial implications of CAH conversion for at-risk hospitals.

This report is organized in four parts. In the first, we describe our data sources and discuss the criteria used to identify the study sample of potential CAH facilities. Next, we present descriptive data on the group of identified hospitals, focusing on geographic distribution and demographic characteristics of the communities served. In the third section we describe the financial and operational characteristics of these facilities, including the extent to which they have diversified into home care and skilled and/or extended nursing care, their mix of inpatient and outpatient services, their Medicare utilization and payment-to-cost ratios, and their operating margins. In the last section we develop a classification system to identify hospitals at particular financial risk, based on historically poor margins or on greater-than-average dependency on Medicare-sponsored non-acute care services. We compare potential CAHs to other rural facilities based on this classification system. Rural hospitals with positive PPS margins are less likely to improve their financial status by converting to a CAH. We therefore combine the findings regarding high-risk hospitals with data on PPS payment-to-cost ratios in order to identify facilities that are likely candidates to apply for CAH status, based on whether they have historically earned a surplus from Medicare inpatient PPS services.

CAH status is one of four special designations that Congress has created to respond to the financial needs of rural hospitals and to protect rural populations' access to health care. The other three are sole community hospitals (SCH), Medicare-dependent hospitals (MDH) and rural referral centers (RRC). Hospitals receiving these designations are eligible for various exceptions and adjustments to the payment rules under inpatient PPS.¹ There is no overlap between the criteria for rural referral centers and those for CAH status. A hospital qualifying for CAH may, however, also qualify for SCH or MDH status. Under the current laws such a hospital would need to choose one designation under which to define its

Medicare reimbursement method. In this paper we address reimbursement issues facing hospitals that qualify under more than one designation.

Hospital Study Sample: data sources and criteria for selecting facilities eligible for Critical Access Hospital status

Hospital characteristics, cost and utilization data were taken from the most recently available year of Medicare cost reports as of July of 1999, which included facilities with fiscal years beginning between October 1995 and September 1996 (PPS Year 13). These were supplemented by county and ZIP code data from HCFA's current Provider of Services file, which is updated quarterly and available from HCFA. All short-stay hospitals with cost report data, including Rural Primary Care Hospitals (RPCH) and Medical Assistance Facilities (MAF), were included in the analytic files except for those located in Puerto Rico. County-level demographics and health resource statistics were obtained from the Area Resource File (ARF) and merged at the hospital county level. ARF data could not be merged for hospitals located in Alaska, due to restrictions in the county-level coding.

We identified all facilities that were closed, merged or acquired, or that converted to non-acute care settings after PPS 13 through a combination of sources, including HCFA's Provider of Services listing, the AHA Hospital Survey and local community or provider internet web sites. We used commercially available software to calculate the number of miles to the nearest Medicare-participating short-stay hospital, computed from the latitude and longitude of each hospital's ZIP code centroid. If a facility was known to have closed its doors or converted to a nursing home, ambulatory surgery or other outpatient facility (not including an RPCH, MAF or CAH) it was excluded from the distance variable computation even though its PPS 13 data were included in the main analyses.

Rural hospitals were defined as those located in non-metropolitan counties. To identify potential CAHs we drew from previous work

both at Project HOPE (Blanchfield et al., 1998) and the North Carolina Rural Health Research Program (Reif et al., 1999). First, we identified the group of facilities that met the mandatory requirements as delineated in the Balanced Budget Act of 1997, with the exception of the distance requirement. These requirements include: location in a county that is not an MSA and has not been reclassified for payment purposes to an MSA; being under public or non-for-profit control; and having a maximum of 15 licensed acute care beds (25 if it the facility is approved for swing bed use). Then we expanded the selection criteria to include hospitals with more than 15 licensed acute care beds but with an average daily census that was no higher than 80% of the maximum allowable acute bed capacity (or 12 acute patients per day). We assume that hospitals might be willing to reduce unused capacity in order to meet regulatory requirements, if their normal acute care patient load can be met within a 15-bed limit. Information on average daily census and staffed bed capacity was obtained from the PPS 13 cost report files. Location-related requirements, however, were based on the most recent available data for actual and reclassified MSA status.

The enabling legislation permits states to develop other, less stringent criteria for identifying “necessary providers” that qualify as a CAH, if they are part of an approved state rural health plan. To capture hospitals that might qualify based on optional state standards, we relied on answers to a survey of all state-level Office of Rural Health Directors that was conducted in 1998 by Reif and colleagues. First we identified hospitals meeting a less stringent criterion of no neighboring hospitals within 15 miles. Then we sequentially applied additional screens that were most commonly mentioned by the Directors in their responses. These included: status as a sole community hospital (SCH); being the only hospital in the county; location in a county with whole or partial designation as a Health Professional Shortage Area (HPSA); location in a county where the proportion of aged residents was above the state average; or location in a county where the unemployment rate was above the state aver-

age. Finally, we identified each of the hospitals that had actually applied for and received CAH status as of August 1999. This allowed us to compare characteristics of actual CAH facilities to those meeting our criteria for potential CAH status, to test the sensitivity of our selection criteria.

Table 1 identifies the number of facilities meeting each of these criteria as they were applied to the hospitals with PPS 13 data. Sixty-five percent (1,691) of all non-MSA short-stay hospitals are under non-profit or public ownership and have been reclassified to an urban area for PPS payment purposes. Although only 12% (315) of rural facilities had 15 or fewer licensed beds (or 25 swing beds) at the end of their PPS 13 reporting period, over 40% met our criterion of an average daily census of 12 or less (20 if licensed swing beds). Only 87 non-metropolitan facilities were identified as located 35 or more miles from the nearest Medicare-participating short-stay hospital. As expected, this is only a small proportion of rural hospitals, but it also constitutes only 8% of all facilities meeting the bed size and/or average daily census criteria. Relaxing the distance standard to no hospital within 15 miles and then applying the various proposed state-level screens, however, brought the total number of potential CAH facilities to 769, or nearly 30% of all non-MSA hospitals in the PPS 13 file.

There are four important aspects of this definition of “CAH-eligible” that are worth emphasizing. First, we intended it to be as inclusive as is reasonable, given the flexibility incorporated into the enabling legislation. Second, from secondary data collected at the hospital level, it is not possible for us to consider any additional federal regulations regarding staffing requirements or limits on the length of stay for any individual discharge. Consequently these restrictions are ignored in our definitions. The 96-hour limitation on individual Medicare stays was eliminated by BBA-RA, and replaced by an average annual length-of-stay limit of the same duration. However, the median length-of stay for all eligible CAH hospitals in our sample was 5.6 days, and less than 25% of them met the new 96-hour average criterion in their 1996 data. Thus, some

Table 1: Study Group Definition — Rural Hospitals That Could Qualify as CAH

	Number of Facilities	Percent of Total:	
		All U.S. MSA	Non-MSA
<i>Known Medicare-participating short-stay hospitals in 1995-96:</i>	4,927		
<i>Less: Facilities with no data in PPS 13 Cost Report File</i>	<u>-153</u>		
1. Total short stay facilities with cost data:	4775	<u>100.0%</u>	
2. Total located in non-MSA counties	2598	54.4%	<u>100.0%</u>
3. Total meeting criteria of non-MSA, not reclassified, under public or not-for-profit control and			
a. size criteria (<=15 beds , or 25 beds w/ swing) or	315	6.6%	12.1%
b. average daily census no greater than 80% of above bed size	<u>733</u>	15.4%	28.2%
4. Subtotal:	1048	21.9%	40.3%
5. Total from (4) above, meeting distance criterion of no other short-stay hospitals within 15-mile radius	770		
6. Total from (5) above, meeting the following optional state criteria for			
“necessary provider status” (figures in parentheses are the number and % of facilities that met each individual criterion):			
a. Sole Community Hospital status (334, or 43%)			
b. Only hospital in county (576, or 75%)			
c. HPSA county (488, or 63%)			
d. % pop over 65 > state average (668, or 87%)			
e. % unemployed > state average (460, or 60%)			
Facilities meeting at least one of five optional criteria	769		
Total CAH-Eligible Hospitals Identified	769	16.1%	29.6%

modification of clinical practice would be required for the majority of these facilities to take advantage of CAH status. Third, our criteria for identifying “necessary providers” are not exhaustive; we have applied distance and one other criterion, but we would expect state agencies to identify other grounds for qualification. We also estimate that an additional 35 hospitals would meet the criteria under the new BBA-RA modification, that permits for-profit facilities to participate in the Rural Hospital Flexibility Program. Thirty of these additional hospitals are located in the South Atlantic or south-central regions.

Finally, we were limited by our software to a distance computation based on the latitude and longitude of ZIP code centroids. This is a stricter definition of geographic isolation than is applied by HCFA in practice, as road miles are normally greater in number than “crow-flies” miles. Our

definition of geographic isolation may result in an underestimation of the number of potential CAHs. Of the 69 hospitals that were participating CAH facilities by August of 1999, 63 had cost data in the PPS 13 files. Among these, 17 would have been excluded from our list of potential CAHs because they were located less than 15 “crow-flies” miles from another facility. Ten of the 17 were RPCH/MAF sites that were, by statute, grandfathered in as CAH sites. Since RPCH/MAF facilities were created by earlier state and federal initiatives that used different size and location-related qualifying criteria, grandfathered facilities do not necessarily have to meet the current CAH criteria. (For a detailed discussion of these earlier programs, see Wright, Wellever and Felt, 1994.) The remaining seven facilities may be located in states with necessary-provider criteria that are less stringent than ours.

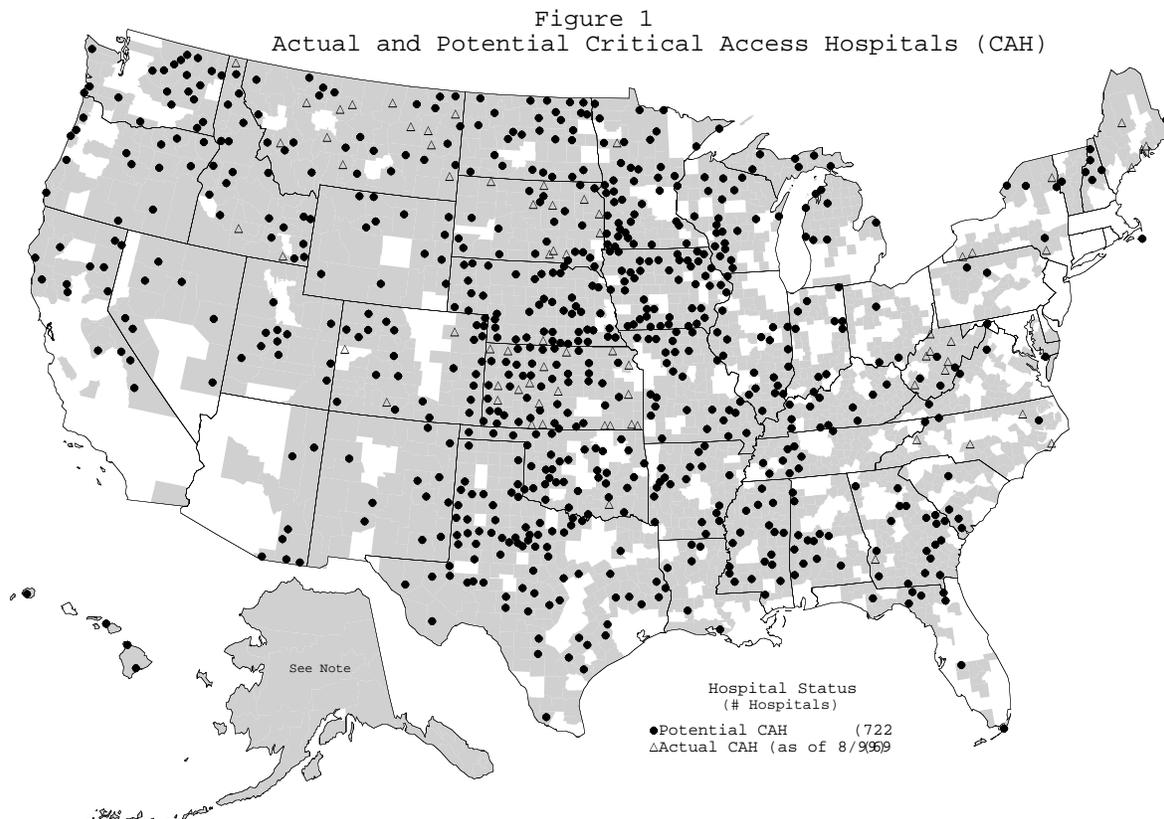
We viewed this as a standard research design problem of classification in the presence of measurement error. When we tested the effect of expanding our definition to include facilities located within 10 miles of another hospital, the number of qualifying hospitals grew from 769 to 971, but the new group included only ten of the sixteen previously excluded actual CAH facilities. We elected to retain the 15-mile standard for the remainder of the study, on the grounds that the improvement in sensitivity (correctly classifying all eligible hospitals) to be gained by reducing it to 10 miles was not worth the likely reduction in specificity (correctly classifying ineligible hospitals).

Potential CAHs: who are they, where are they and what type of communities do they serve?

Of our 769 potential CAH facilities, 60% are under public ownership or control, 5% are church-owned and 35% are private, non-profit institutions. By our selection criteria, 51% of all public hospitals that were located in non-metro-

politan areas qualified as potential CAH facilities. Among the potential CAHs that we identified, 41% were already sole community hospitals, and qualified for some cost-based adjustments to their inpatient prospective payment rates. Another 4% were RPCH or MAF sites, where both inpatient and outpatient services to Medicare beneficiaries were paid as outpatient Part B services, using modified cost-based rules. Beginning in FY 1998, additional hospitals may be eligible for payment adjustments under the rules for Medicare-dependent hospitals. Because this category was eliminated in FY 1994 but reinstated by BBA(97), our 1996 files do not identify any MDH facilities.

At the state level there is considerable variation in the proportion of qualifying hospitals (Figure 1). Table 2 presents individual state data, rank-ordered according to the number of potential CAHs. Four states (Delaware, Connecticut, New Jersey and Rhode Island) are listed as “not applicable” because they either had no rural hospitals qualifying according to our selection criteria, or had no non-metropolitan counties.



Source: Health Care Financing Administration: Hospital Cost Report Information System Minimum Data Set, PPS 13, 1996.
Produced By: North Carolina Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

* Note: Nonmetropolitan Counties are shown in beige. Metropolitan Counties are aggregated into white areas on the map. Potential CAHs could not be identified in Alaska due to Area Resource File limitations.

Table 2: Potential CAH, Rank-Ordered by Individual State

State	# Potential CAH Identified by our Criteria	% of Hospitals in that State	# of RPCH or MAF facilities in PPS 13	# of CAH as of 8/99
Texas	75	20.2%		
Kansas *	56	43.8%	11	19
Nebraska	46	52.3%		1
Iowa	43	38.1%		
Minnesota	42	31.1%		1
Oklahoma	37	34.6%		1
Montana	34	73.9%	11	12
Missouri	27	23.9%		
North Dakota	27	60.0%		
South Dakota *	26	59.1%	3	10
Colorado *	25	40.3%	1	3
Idaho	23	53.5%		3
Washington	21	25.0%		
Wisconsin	21	17.8%		
Georgia	19	13.1%		1
Illinois	19	9.8%		
Arkansas	18	23.7%		
Mississippi	18	18.9%		
California	14	3.7%		
Michigan	14	8.9%		
Oregon	14	22.2%		
Alabama	12	11.5%		
Wyoming	12	48.0%		
Kentucky	11	11.2%		
New Mexico	11	33.3%		
Utah	11	28.2%		
Indiana	10	9.0%		
Tennessee	10	8.5%		
West Virginia *	9	16.1%	6	7
Florida	8	4.2%		
Arizona	7	12.7%		
Nevada	7	30.4%		
Louisiana	6	5.0%		
New Hampshire	5	19.2%		
New York *	5	2.6%	2	4
North Carolina *	5	4.1%	3	4
Hawaii	4	18.2%		
South Carolina	4	6.8%		
Ohio	3	1.8%		
Virginia	3	3.4%		
Maine	2	5.3%		3
Pennsylvania	2	1.1%		
Maryland	1	2.1%		
Massachusetts	1	1.3%		
Vermont	1	7.1%		
Conn, N.J., R.I. & Del.	Not applicable	Not applicable		
Alaska	Not avail	Not avail		
Total	769	100.0%	37	69

* States with an (*) were originally included as demonstration states under EACH/RPCH legislation.

The number and proportion of CAH-eligible facilities varies by region, as is evident in Figure 1. The West Central and Mountain regions combined accounted for 69% of our CAH study group, though they account for only 35% of all hospitals nationally. In the West-North-Central census region, 40% of all hospitals were included in our CAH study group. At the other extreme, in the New England and Middle-Atlantic regions less than 5% of hospitals qualified. Texas has by far the most potential CAHs, though as of August, 1999 it had not yet had any of its hospitals apply for CAH status. This is in contrast to the state with the next largest, Kansas, which already has 18 hospitals participating in the program.

Table 3 summarizes the distribution of hospitals in our CAH study group, arrayed by categories based on the 1993 Urban Influence Codes (Ghelfi and Parker, 1995). Thirty-five percent of potential CAHs are located in counties adjacent to large or small metropolitan areas, although these facilities are predominantly in towns with a population of less than 10,000. Thirty-four percent are located in non-adjacent counties having towns with populations between 2,500 and 10,000, and 26% are located in non-adjacent counties with no population centers greater than 2,500. From Table 3 it appears that our selection criteria are reasonably effective in identifying the subset of geographically isolated rural facilities.

Using data from the Area Resource File, we compared characteristics of the counties where potential CAHs are located (“eligible counties”) to rural counties where other hospitals are located (“non-eligible counties”) and to urban counties,

across a variety of commonly measured demographic and socio-economic characteristics. Results are presented in Tables 4 and 5. As might be expected given the dominance of Western and Mountain areas in our study sample, the mean population density is substantially lower in eligible counties. Even when stratified by census region, the mean population densities for eligible counties within region are still considerably lower than those of other counties, which confirms that, in addition to identifying the most isolated facilities, our selection criteria have adequately identified the facilities serving the most isolated populations.

Consistent with the differences in population density and with our selection criteria, eligible counties have fewer health resources. The mean population served per practicing physician in 1996 was 66% greater among eligible than non-eligible rural counties. Forty-one eligible counties (5.8%) had in excess of 4,000 residents per physician, while only eight non-eligible rural counties (0.8%) had ratios that high. Eligible counties were also more than twice as likely as other rural counties to receive HPSA designation for the full county.

Across other socio-demographic characteristics, however, the differences between eligible and non-eligible counties are moderate. We found no evidence that eligible counties consistently represent more vulnerable populations.

Table 3: Location of Potential CAH by Community Size and Adjacency to Metropolitan Areas

County is located...	County has... City with population ≥10,000	No City with population ≥10,000	City with population 2,500 – 10,000	No City, or City w/population <2,500	Total
Adjacent to large metro area	4	29			33 (4%)
Adjacent to small metro area	23	216			239 (31%)
Not Adjacent	34		260	203	497 (65%)
Totals	61 (7.9%)	245 (66%)	260 (34%)	203 (26%)	769 (100.0%)

**Table 4: Comparing Counties With and Without Potential CAH Facilities
—Population Density (population per square mile, 1994)**

Census Region	Counties with CAH- Eligible Hospitals (703 counties)	Counties with Other Rural Hospitals (982 counties)	Urban Counties (727 counties)
All Regions (un-weighted average across all counties)	18.9	57.3	713.1
New England	44.1	61.7	865.1
Middle Atlantic	46.4	91.8	2429.3
South Atlantic	40.5	77.6	642.6
East North Central	37.8	75.9	468.2
East South Central	32.5	63.5	248.9
West North Central	13.7	36.1	447.4
West South Central	16.3	34.8	284.6
Mountain	5.6	21.5	278.5
Pacific	14.1	34.7	731.6

**Table 5: Comparing Counties With and Without Potential CAH Facilities —
Health Resources and Other Demographics**

(Figures represent group means or proportions)

Census Region	Counties with CAH- Eligible Hospitals (703 counties)	Counties with Other Rural Hospitals (982 counties)	Urban Counties (727 counties)
Health Professions Shortage Area Designation (1997)	63%	57%	62%
Population per Practicing Non-Federal Physician (1996)	2,012	1,295	878
Per Capita Income (1995)	\$16,967	\$17,473	\$21,806
Unemployment rate (1997)	5.6%	6.1%	4.6%
% population ≥ age 65 (1997)	17%	15%	13%
% >age 25 w/ high school (1990)	71%	69%	77%
% Families Below Poverty (1987)	18%	18%	12%
% population non-white (1990)	10%	13%	14%

Potential CAH: what are their operational and financial characteristics?

Long term care

Potential CAHs are more likely than other rural hospitals to provide long-term care of all sorts. Table 6 summarizes their participation rates in various types of extended care services, insofar as these are reported on the cost reports.

Ninety percent of our CAH study sample had long-term care beds of some sort; 86% were

licensed for swing beds, and one quarter of these operated licensed skilled or intermediate care beds in addition to their swing beds. Swing bed days averaged 18% of total inpatient days of care including both acute and long-term care. Among potential CAHs that were authorized for swing beds the average occupancy rate in the acute care units was 26%, as compared to 20% among those that were not. Swing days accounted for 27% of the total days of care provided in the acute-care units of authorized swing bed facilities, but there

Table 6: Participation in Extended Care

Potential CAH with:		
<u>Skilled or Intermediate nursing care beds:</u>		
Number (%)		205 (27%)
Nursing days as % total days:	mean (*)	76%
	Median	86%
<u>Authorized Swing Bed capacity:</u>		
Number (%)		659 (86%)
Swing-bed occupancy (as % of Acute capacity):	mean (*)	8%
	Median	5%
Swing bed days as % of total days:	mean (*)	18%
	median	9%
<u>Other extended care beds (**):</u>		
Number (%)		80 (10%)
Other extended care days as % total days:	mean (*)	74%
	median	82%

(*) Un-weighted average across all facilities that reported approved capacity for this service
 (**) Other extended care beds includes any convalescent care or other nursing beds that are not licensed at either a skilled or intermediate care level.

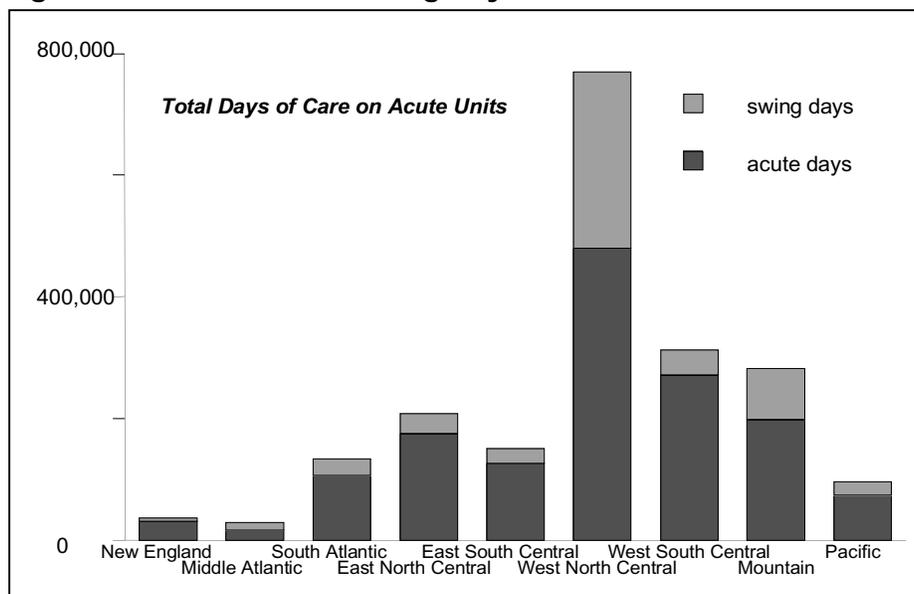
Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration.

is substantial geographic variation in these figures, as is evident from Figure 2. Five percent of hospitals that were authorized for swing bed use reported having no swing beds days during the year.

Reliance on long-term care business varies by state because it is heavily influenced by

Medicaid regulations, but certain regional patterns are noticeable. In general, the central and western states appear to have taken the greatest advantage of swing bed provisions. For example, 98% of eligible facilities in the west north central region operated swing beds, and they used them extensively. The average acute unit occupancy

Figure 2: Acute Care and Swing Days in Potential CAH Facilities



that was attributable to swing patients in these facilities was more than 10%. Out of 266 potential CAHs in this region, 48 (18%) also operated other unskilled extended care beds, the highest participation rate of any of the regions. Among these 48, other extended care days accounted for an average of 81% of their total inpatient days.

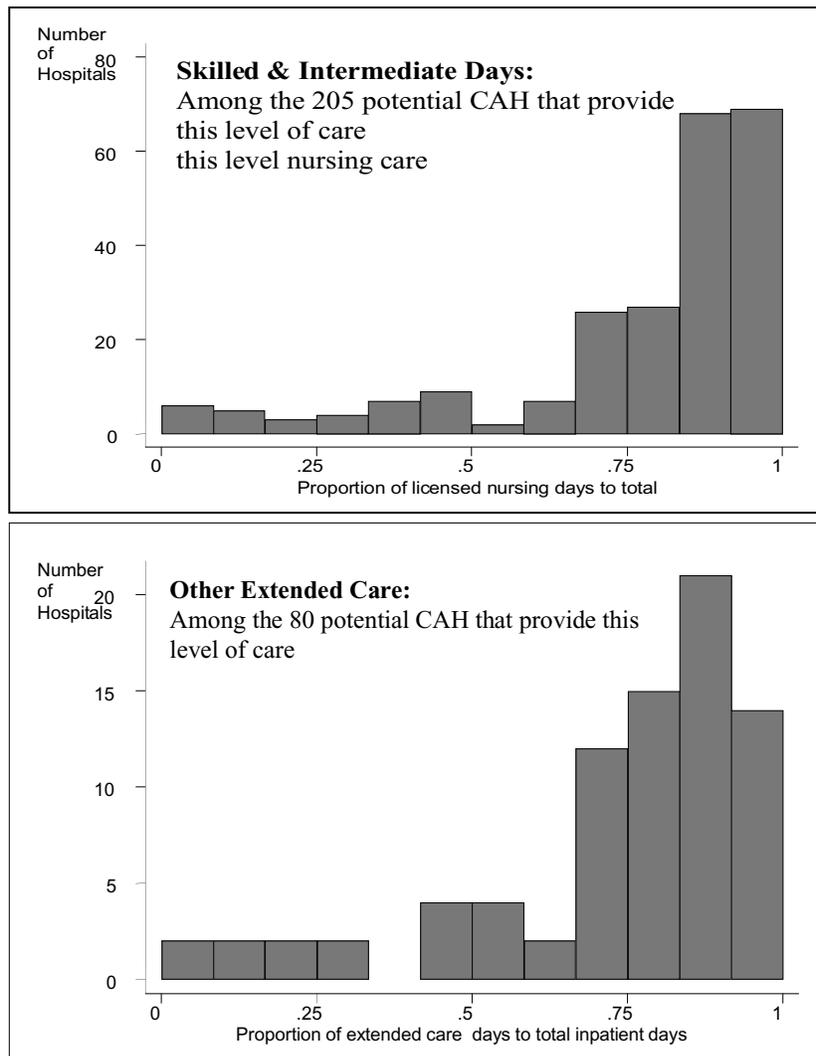
A significant subset of potential CAHs is heavily dependent on long term care, to the point where it may be more reasonable to consider these institutions as extended care facilities with some additional, but limited, acute care capacity. This is illustrated by Figure 3, which presents the distributions of skilled and other extended care

nursing days as a proportion of each hospitals' total inpatient days. RPCH and MAF sites, which are restricted in the amount and type of acute stays they provide, accounted for only a small proportion of the facilities contributing to the far right-hand bars of either of these graphs.

Home Health Services

More than 55% of all potential CAHs operated certified home health agencies (HHAs), compared with 59% of other rural hospitals, and 46% of hospitals located in metropolitan areas. Among potential CAHs that operated HHAs and provided charge documentation, home care

Figure 3: Distribution of Long-term Care Days as a Proportion of Inpatient Days Among Potential CAH



Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration

charges averaged 11% of total patient charges. (Eight percent of hospitals that reported having certified HHAs, however, failed to separate home care charges from other charges on the financial statement sections of their cost reports.) When we examined rates by region, home services ranged in importance from 7% to 20% of business for the average potential CAH. Patterns of hospital participation in home health services may be heavily influenced by states' historical certificate-of-need regulations. Many states in the New England and the north and south Atlantic regions had no potential CAHs participating in home care, while in the western and mountain states, participation rates were above 50%.

Outpatient Business

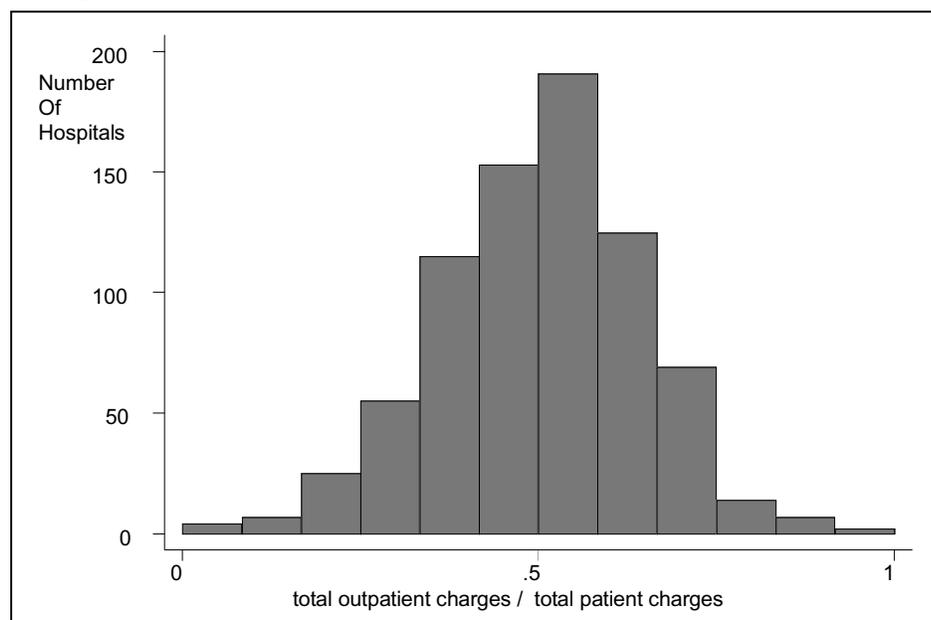
To assess hospitals' relative dependence on outpatient activities, we constructed a variable from the individual hospital revenue summaries, by dividing the sum of charges for all non-inpatient services by total patient service charges.ⁱⁱ Outpatient services account for a larger proportion of business among hospitals located in rural areas than among those in urban areas in general, but dependence on outpatient services is even greater among potential CAHs than it is among other rural hospitals. Outpatient charges average

50% of total patient charges in potential CAHs, as compared with 45% of total patient charges in other rural hospitals and only 36% in urban hospitals. These differentials are consistent across most regions of the country.

The change to prospective payment for outpatient services will only affect the Medicare portion of a hospital's outpatient revenue. To isolate the extent to which the potential CAHs rely on Medicare outpatient payments, we constructed a variable for net Medicare revenue based on outpatient Part B covered services. It is computed as the sum of Medicare Part B payments (under the current system, which is a blend of national fee schedules and hospital cost) plus the co-pay and deductible amounts billed to beneficiaries. It is expressed as a share of each hospital's total net patient service revenue. Payments for home care, ambulance and dialysis services are intentionally excluded from this variable. A small portion of the Part B services that are included in our variable may not come under the proposed outpatient PPS regulations (e.g., certain rehab therapies). However, we think the measure is an adequate proxy for an individual hospital's risk associated with the new outpatient prospective payment rules.

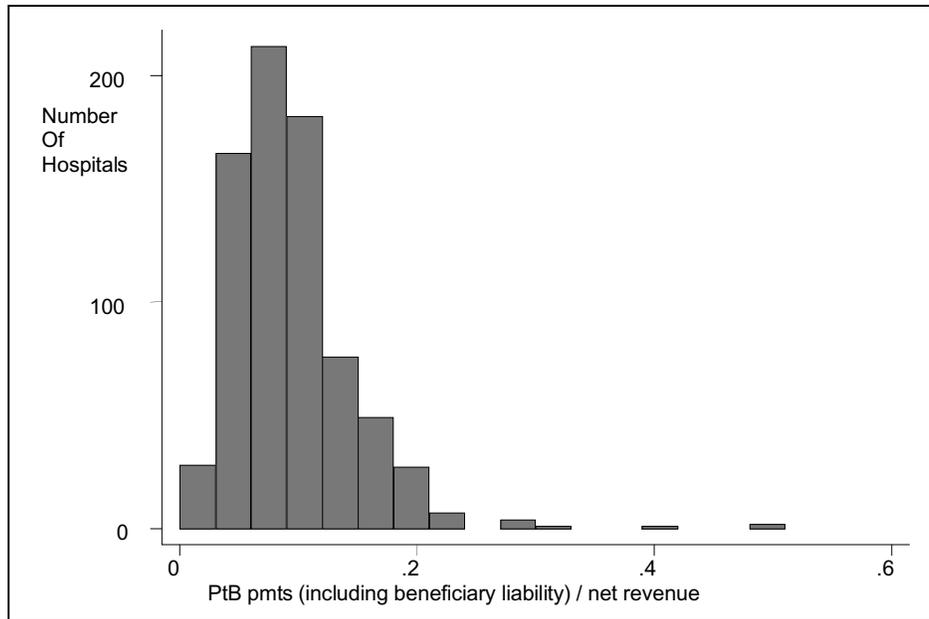
The two outpatient "share of business" variables have somewhat different distributions,

Figure 4: Distribution of Outpatient Charges as a Proportion of Total Charges Among Potential CAH Facilities



Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration.

Figure 5: Distribution of Payments for Medicare Part B Services as a Proportion of Net Revenue, Among Potential CAHs Facilities



Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration.

as can be seen by comparing Figures 4 and 5.

In Table 7 we compare the Medicare outpatient share of business variable by type of rural hospital and by region. The average for potential CAH facilities was 9%, and 8% for other non-metropolitan facilities. The mean among urban hospitals, for comparison, is only 6%. At the state level, the highest average Part B shares of net revenue were between 12% and 14% and occurred in the mid-west and west (Iowa, Kansas, Missouri, Nebraska and North Dakota). No state had an average less than 5%. Having a large share of business derived from outpatient services does not appear to be, by itself, a reliable indicator that a hospital is dependent on Medicare outpatient payments. While 15% of all facilities in our potential CAH group had individual Part B rates of less than 5%, many of these facilities had relatively high total outpatient service ratios.

HCFA conducted simulations of individual hospital outpatient payments under its proposed new payment system. The June 30, 1999 Federal Register contained revised estimates of expected changes in Part B payments attributable to a combination of the proposed prospective payment for outpatient services and changes in the rules for computing Part B co-payments due from

beneficiaries.ⁱⁱⁱ The published estimates are aggregated by selected hospital characteristics. The average payment reduction across all affected hospitals was projected to be 5.7%, but payments to rural hospitals with less than 50 beds were expected to decline by 13.8%.

Table 7 also includes HFCA's estimates of the expected impact of the proposed rules prior to the BBA-RA, as computed for all rural hospitals within census region. The biggest projected reductions appeared to be in the regions with the highest dependence on Medicare payments.

PPS inpatient payment ratios

As provided for in the Balanced Budget Act, CAHs are exempt from prospective payment and are paid, instead, under retrospective cost reimbursement. The BBA-RA now also allows CAH facilities the option of including professional fees in an "all-inclusive rate" method, similar to one that was available to RPCH providers. The intention of cost reimbursement is to protect low-volume, isolated facilities that might be unable to reduce their unit costs below the nationally standardized rates — both those set for inpatients (back in 1982) and those about to be set for outpatient services. Among the 737 poten-

Table 7: Comparison of Medicare Part B Payments as Percent of Net Revenue

(means are un-weighted averages, across all hospitals in category)

	Part B Payments Share of Net Patient Revenue		HCFA Projections: Total Estimated % Change in Part B Payments
	Among Potential CAH Facilities	Among Other Non-Metropolitan Hospitals	Among All Non-Metropolitan Hospitals
Nationally:			
N	756 (*)	1385	
Mean	9%	8%	-7.4%
Median	9%	7%	
By Region: (means)			
New England	7%	8%	-12.2%
Middle Atlantic	7%	7%	0.2%
South Atlantic	8%	7%	-7.7%
East North Central	9%	8%	-6.1%
East South Central	7%	6%	-6.5%
West North Central	12%	10%	-10.9%
West South Central	10%	8%	-10.6%
Mountain Pacific	7%	6%	-8.3%
Pacific	8%	7%	-3.4%

() Thirteen observations excluded from calculation due to inconsistent or missing data*

Sources: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration. Federal Register, June 30, 1999 p. 35265.

tial CAHs that were receiving Part A payments in 1996, these payments accounted for an average of 24% of net patient revenues from all sources (compared to 28% for other rural hospitals and 30% for urban hospitals). Thus, the Medicare inpatient share of business is not insignificant, despite the selection criteria that limit potential CAHs to very small facilities. Medicare patients accounted for 56% of total acute-care discharges in CAH-eligible facilities, compared to 49% in other rural hospitals and 39% in urban hospitals. Conversion to CAH status is not likely to be financially beneficial to an acute care facility if its PPS payments are already in excess of its costs.^{iv}

To determine the subset of potential CAHs that are likely to receive higher Medicare inpatient reimbursement under a cost-based system, we examined the Medicare payment-to-cost ratios for all hospitals paid by Medicare under inpatient PPS rules. Historically, hospitals in non-metropolitan areas have shown lower payment-to-cost ratios than have those in metropolitan

areas. The differential has been getting smaller over the last several years, but lower payment ratios still prevailed in PPS 13. The difference is primarily because rural hospitals are less likely to qualify for other payments adjustments, such as the indirect medical education adjustment and the disproportionate share. Potential CAH facilities as a group, however, were no more disadvantaged than other rural facilities. This is partially attributable to the high number of potential CAHs that are already eligible for payment adjustments as sole community hospitals. As shown in Table 8, PPS ratios are, on average, higher for SCHs than for other rural facilities. However, a substantial minority of hospitals in all categories continue to receive PPS payments below cost.

The distribution of PPS payment-to-cost ratios for our group of potential CAHs is plotted in Figure 6. Thirty-one percent were paid at or below cost in PPS 13. The comparable figure for other rural hospitals is also 31% and for urban

Table 8: Medicare Payment-to-Cost Ratios for Services Paid Under Inpatient PPS

	Potential CAH Facilities			All Other Hospitals		
	Number Of Hospitals	Average PPS Payment Ratio	% with PPS Ratio ≤ 1	Number Of Hospitals	Average PPS Payment Ratio	% with PPS Ratio ≤ 1
Located within MSA	---	---	---	2,550	1.17	21%
<u>Located in non-MSA:</u>						
No PPS payment adjustments	421	1.06	38%	997	1.11	33%
Sole Community Hospitals	311	1.16	23%	290	1.14	26%
Rural Referral Centers	---	---	---	91	1.12	25%
<i>Number of non-PPS providers</i>	27	---	---	10	---	---
<u>Number w/ incomplete margin data</u>	<u>10</u>			<u>169</u>		
Total Hospitals in Study	769			4,107		

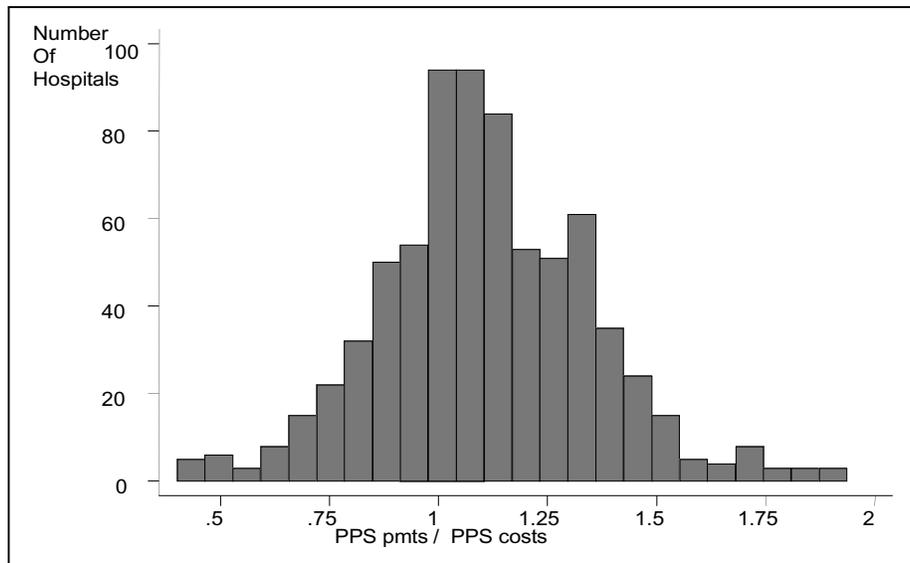
Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration.

hospitals it is 20%. It is important to keep in mind that these computations are derived from the period two years before BBA(97) became effective. In many instances, BBA(97) payment provisions preferentially reduced reimbursement to urban and teaching hospitals, so the geographic differentials that we notice in the 1996 data are probably less pronounced by 1999. From the cost reports, we have computed that on average, Medicare's PPS payments exceeded costs for all hospitals by approximately 14% in 1996 (11% for rural hospitals, 15% for non-rural). These ratios

are expected to decline between 1998 and 2001 as a result of the 1997 legislation, but they are not expected to drop below 1.0 (MedPAC, 1998).

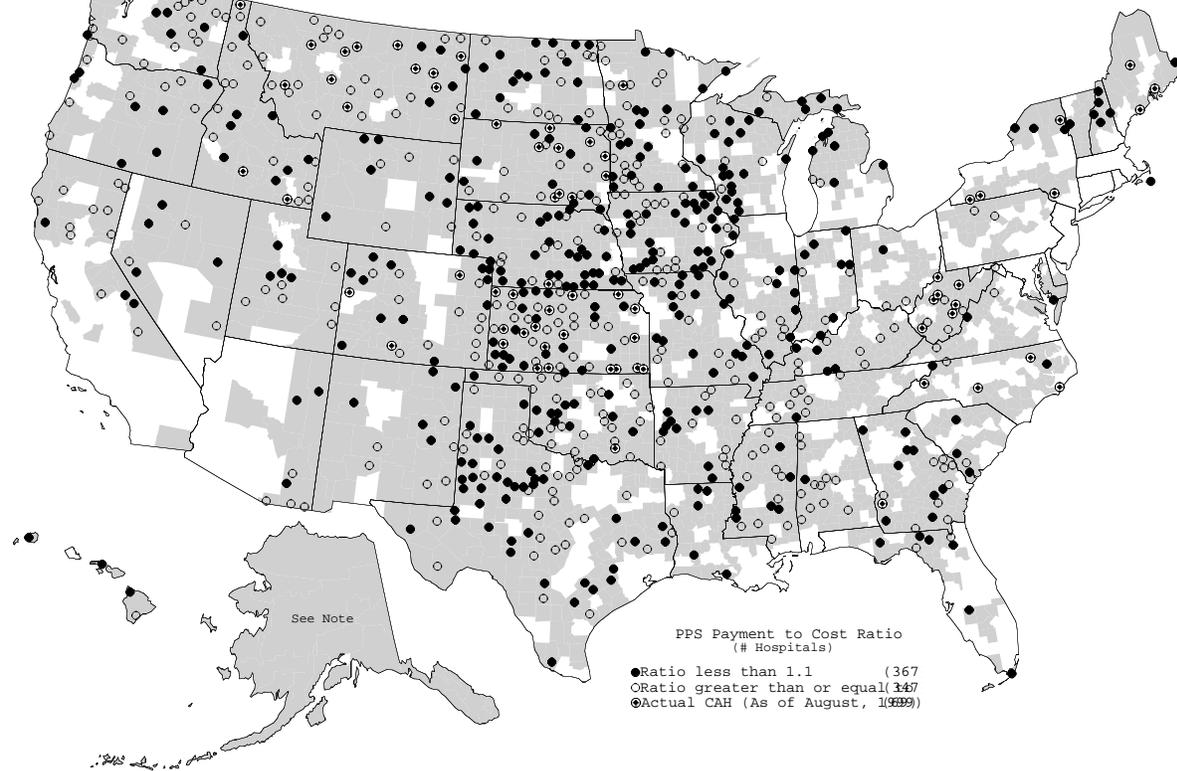
Facilities at which PPS payments substantially exceeded cost in 1996 are unlikely to benefit from CAH cost reimbursement provisions. However, from the distribution in Figure 6 it is evident that many potential CAHs were already unable to reduce their costs per discharge below national standardized rates by 1996. It is also possible that many hospitals that experienced moderately positive PPS payment ratios may find them-

Figure 6: Distribution of PPS Payment-to-Cost Ratios Among Potential CAH



Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration

Figure 7
 PPS Payment-to-Cost Ratios of Potential Critical Access Hospitals
 That Were Paid Under PPS in 1996



Source: Health Care Financing Administration; Hospital Cost Report Information System Minimum Data Set, PPS 13, 1996.
 Produced By: North Carolina Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

*Note: Nonmetropolitan Counties are shown in grey. Metropolitan Counties are aggregated into white areas on the map. Potential CAHs could not be identified in Alaska due to Area Resource File limitations.

selves facing PPS losses by 1999 or within the next few years. We feel that a PPS ratio of 1.1, in 1996, is a conservative cut-point to identify facilities that may have ratios at or below 1.0 by the year 2000. In Figure 7, we map potential CAHs categorized according to whether their 1996 PPS payment ratios were above or below 1.1, to identify those that, based solely on the status of their inpatient Medicare business, may benefit from CAH conversion.

Other financial indicators

Other financial ratios reveal that potential CAH facilities face significantly more difficulty than other hospitals in generating sufficient net revenue to cover operating costs, despite healthy PPS margins. Lower operating margins make them more dependent on non-operating income to meet their payroll and other obligations.

In order to develop other measures that were similar in construction to the PPS payment-to-cost ratios, we created two additional ratio-based financial variables. We defined “operating

ratio” as net patient revenues divided by operating expenses and “total revenue ratio” as total revenues (including investment income, donations and public appropriations) divided by total expenses. For these ratios, values below one indicate a failure to recover accrued costs with income earned during the accounting period. In Table 9 we compare the findings across each of these three ratios.

Seventy percent of potential CAHs had operating ratios below 1.0. Nearly half of the facilities that operated at a loss appeared to have access to other (non-operating) sources of support that were sufficient to cover their total expenses. Such sources included investment income, federal or private grants and donations, as well as support from state or local governments. Forty-seven percent of the potential CAH facilities reported receiving public appropriations, compared with only 20% of other non-MSA facilities and 14% of urban facilities. Among those reporting any public support, appropriation accounted for 6% of total revenues in the CAH group, while they

Table 9: Comparing Other Financial Ratios*(Means are un-weighted averages across all hospitals with complete margin data)*

	Potential CAH Facilities	Other Non- MSA Hospitals	Urban Hospitals
Mean PPS Payment Ratio: (Total PPS Pt A Payments ÷ PPS Expenses)	1.11	1.12	1.17
Percent of hospitals with ratios:			
Less than 0.9	17%	12%	7%
Between 0.9 and 1.0	13%	18%	13%
Between 1.0 and 1.1	20%	20%	19%
Greater than 1.1	46%	47%	59%
<i>N/A, or Incomplete margin data</i>	5%	2%	2%
Mean Operating Ratio: (Net Patient Revenue ÷ Operating Expenses)	0.93	1.01	1.00
Percent of hospitals with ratios:			
Less than 0.9	30%	10%	13%
Between 0.9 and 1.0	40%	32%	34%
Between 1.0 and 1.1	11%	43%	36%
Greater than 1.1	6%	12%	14%
<i>Incomplete margin data</i>	2%	2%	3%
Mean Total Revenue Ratio: (Total Net Revenue ÷ Total Expenses)	1.03	1.06	1.06
Percent of hospitals with ratios:			
Less than 0.9	5%	3%	6%
Between 0.9 and 1.0	28%	15%	15%
Between 1.0 and 1.1	48%	52%	48%
Greater than 1.1	17%	26%	25%
<i>Incomplete margin data</i>	3%	4%	6%

Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration.

accounted for only 3% in the other rural hospitals group and 4% in the urban group.

RPCH sites, that were already receiving cost-based reimbursement for both inpatient and outpatient services, appeared to be in particular financial difficulty. They were the most dependent on other sources of support. The mean operating ratio for hospitals that were operating as RPCH or MAF sites during PPS 13 was only 0.87, and their total revenue ratio averaged only 0.98. (Margin data was unusable for 6 out of the 37 such sites that were included in the PPS 13 file, but of the remaining 31 facilities, 21 had operating margins below 0.9 and another 5 were between 0.9 and 1.0.) Over half of these facilities reported receiving substantial external support in

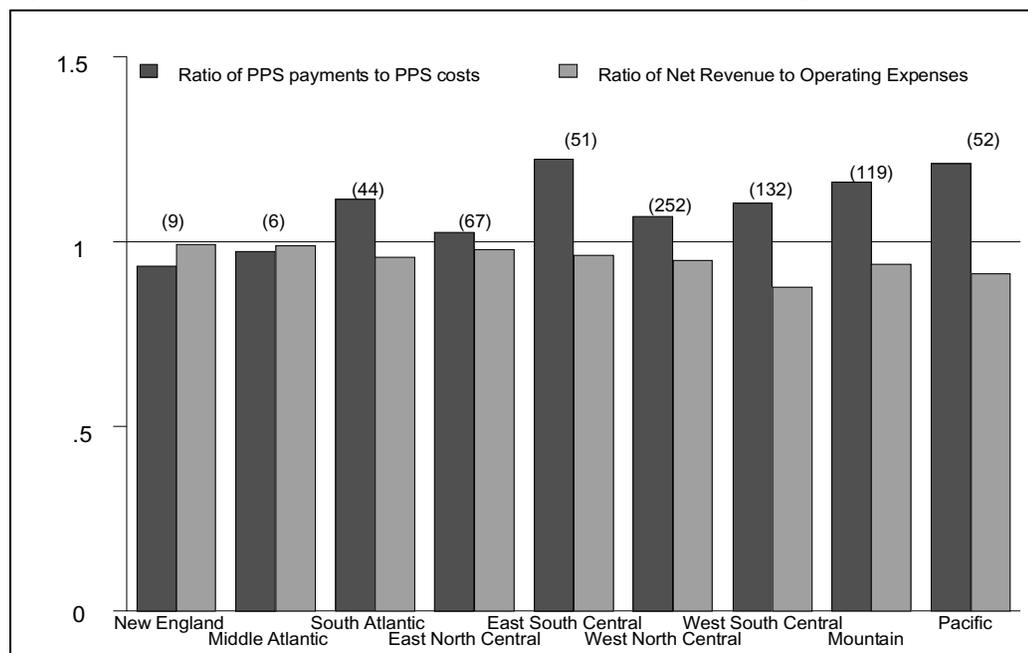
the form of appropriations, grants or donations.

There are very noticeable regional differences with respect to PPS payment ratios and operating ratios. The double bar chart in Figure 8 presents these two ratios for our CAH study sample, averaged by census region. The number appearing in parentheses at the top of each set of bars is the number of potential CAHs that were identified in that region.

In the western states, where the majority of potential CAHs are located, PPS payments averaged well above cost. At the same time, the regional mean and median operating ratios were below 1.0, despite the surpluses generated by the Medicare inpatients. To be in this financial position, these hospitals may be operating non-acute

Figure 8: PPS Payment and Operating Ratios Among Potential CAH Facilities

Note: The Y-axis measures the un-weighted average of the ratios within each region. Figures in parentheses represent the number of facilities contributing to that average.



Source: Hospital Cost Report Information System Minimum Data Set, Health Care Financing Administration.

services at considerable losses, or they may serve a large Medicaid and/or uninsured population. We would expect hospitals in this position to be the least able to absorb reductions in Medicare payments for outpatient care. Yet at the same time, they may also be unable to give up their inpatient PPS payments in excess of cost. For this group of facilities, CAH status does not look like a viable strategy to combat threatened revenue losses in the non-acute care settings.

“At Risk” Hospitals and CAH Status: Identifying the Overlap

In this last section we attempt to systematically classify hospitals according to characteristics described in the previous sections, in order to identify potential CAHs that also appear to be financially vulnerable to outpatient prospective payment. We have developed five indicators of risk according to whether the facility 1) falls above the national 67th percentile (top third) for percent of business attributable to outpatient services, 2) is in the top third for percent of business attributable to home health services, 3) is in the top third for percent of business attributable to

skilled nursing care, 4) is in the top third of the ratio of Medicare Part B hospital payments to net revenue, and 5) has an operating margin below 1.0. The distribution of potential CAHs and other rural hospitals across these indicators is summarized in Table 10.

A greater proportion of potential CAHs than other rural facilities was identified in every risk category except the third (skilled nursing). Only 2% of potential CAHs were not identified as “at risk” by any category, compared with 11% of the other rural hospitals. Over half the potential CAHs met three or more of the indicators, compared with 34% of other rural facilities.

To assess the impact of a “worst case” scenario with respect to outpatient prospective payments, we modeled the effect of a 15% reduction in total payments for Medicare Part B services on the 1996 operating ratios of all hospitals in our study population. Out of 221 potential CAH facilities that had operating ratios above 1.0, we computed that 20% would have been thrown into an operating loss (that is, net revenues would have been less than operating expenses) under such a scenario. The comparable proportion for other non-metropolitan hospitals, however, was only 12%,

Table 10: “At Risk” Indicators and Potential CAH Status

Risk Indicator	Potential CAH		Other Rural Hospitals	
1: High % Outpatient Business	466	(61%)	596	(42%)
2: High % Home Care Business	361	(47%)	547	(39%)
3: High % Skilled/Intermediate Care Business	224	(29%)	487	(35%)
4: High % Part B Payments to Total Net Revenue	410	(53%)	539	(38%)
5: Operating Expenses in Excess Of Net Operating Revenue	535	(70%)	603	(43%)
Risk Index Score (sum of 1-5)				
--- hospitals meeting all 5 of 5	18	(2%)	17	(1%)
--- hospitals meeting any 4 of 5	141	(18%)	136	(10%)
--- hospitals meeting any 3 of 5	252	(33%)	319	(23%)
--- hospitals meeting any 2 of 5	256	(33%)	432	(31%)
--- hospitals meeting any 1 of 5	87	(11%)	346	(25%)
--- hospitals meeting none	15	(2%)	158	(11%)
Total Number of Hospitals	769	(100%)	1408	(100%)

and for urban hospitals it was 10%.

Among the potential CAHs that are “at risk”, we identify the subset that might financially benefit from CAH status as the reimbursement rules are now written. In Table 11 we estimate the proportion that might benefit in the year 2000 from the cost reimbursement rules applicable to CAHs, given their PPS payment histories in the year 1996. Of all of the potential CAHs, 754 (98%) met at least one of our risk indicators, but 27 of them were already exempt from PPS payments. Another 10 had missing or inconsistent PPS margin data and could not be classified. Of the remaining 732 facilities, 52% had PPS payment ratios in 1996 that were below 1.1.^v This is the group of hospitals where conversion to CAH status might become a viable financial strategy, if they are unable to respond to payment reductions through lower unit costs. We have mapped this group, along with the 69 facilities that we have identified as actual CAH facilities as of August, 1999, in Figure 9.

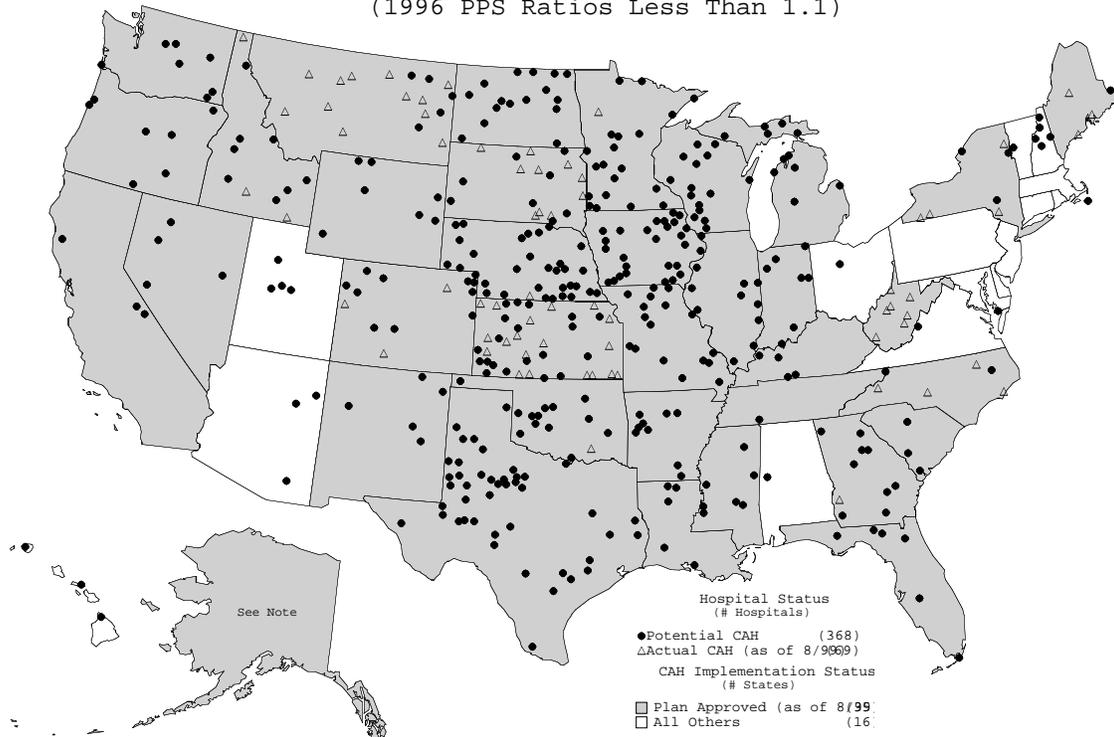
Finally we note that the proportion of “at risk” facilities *not qualifying* for CAH status is larger than we expected. The number of non-CAH

eligible, rural hospitals with high dependence on Medicare Part B payments and the number with operating expenses in excess of net revenue should be of particular concern. We identified 595 rural facilities that met both of these two risk indicators, of which 289 (49%) were not CAH-eligible, primarily because they did not meet the hospital size restrictions. Ninety percent of these were less than 100 beds and half of them were less than 50 beds. The majority of non-CAH “at risk” facilities were located in the North and South Central regions, and at least half were located 15 or more miles from their nearest neighboring hospital.

Table 11: "Overlapping" Facilities, by PPS Payment-to-Cost Ratios

Risk Indicator	Potential CAH that Qualify	Historical PPS Payment-to-Cost Ratios:		
		Low-Moderate (< 1.1)	High (≥ 1.1)	% Likely to Benefit from Cost-based Reimbursement
1) High % Outpatient Business	466	229	220	49%
2) High % Home Care Business	361	158	193	44%
3) High % Skilled/Intermediate Care Business	224	91	118	41%
4) High % Part B Payments to Total Net Revenue	410	224	164	55%
5) Operating Expenses in Excess of Net Operating Revenue	535	295	211	55%
Risk Index Score (sum of 1-5)	2.61	2.62	2.60	
--- hospitals meeting all 5 of 5	18	7	11	39%
--- hospitals meeting any 4 of 5	141	71	65	50%
--- hospitals meeting any 3 of 5	252	127	108	50%
--- hospitals meeting any 2 of 5	256	131	113	51%
--- hospitals meeting any 1 of 5	87	38	46	44%
--- hospitals meeting none	15	7	8	47%
Total Number of Hospitals	769			
Less: RPCH/MAF Sites	-27			
Less: Incomplete margin data	-10			
Facilities with PPS ratios:	732	381	351	52%

Figure 9
Potential Critical Access Hospitals Most Likely to Benefit from Con-
(1996 PPS Ratios Less Than 1.1)



Produced By: North Carolina Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

Source: Health Care Financing Administration; Hospital Cost Report Information System Minimum Data Set PPS 13, 1996; State Offices of State Hospital Associations; State Departments of Facility Licensure, 1999.

Summary and Conclusions

We have confirmed that low-volume rural hospitals are at greater financial risk than other hospitals from proposed changes to Medicare payment for non-acute services. There is a significant subset of rural hospitals that rely heavily on income from non-acute services, and/or are already unable to cover operating expenses with net patient revenue, for which any further reductions in non-acute payment could pose significant hardship.

We have identified those that are simultaneously “at risk” and potentially eligible for CAH status. Designation as a Critical Access Hospital specifically exempts a hospital from prospective payment for hospital-based outpatient care, by allowing it to receive reimbursement based on reasonable costs. However, the reimbursement provisions of the Rural Health Flexibility Program apply to both inpatient and outpatient care. We estimate that just over one half of the “at risk” potential CAHs might improve their Medicare payments by converting to cost reimbursement. We have mapped these facilities by ZIP code, to identify states where it may be particularly beneficial to educate hospital industry leaders and rural health advocates in order to take advantage of the Rural Hospital Flexibility Program. Many of these facilities currently rely on public appropriations to remain financially solvent, and are vulnerable to changes in their local economy. Conversion to CAH status may be a means to decrease reliance on public monies.

Among the remaining “at risk” potential CAH sites, however, Medicare’s prospective payments for inpatient acute services have historically exceeded costs, and are likely to continue to do so. The resulting Medicare surpluses are important to the hospitals’ overall financial stability. These facilities are less likely to benefit financially from CAH status, because reductions in their inpatient payments may outweigh improvements to outpatient payments. For these facilities, the issue remains as to what, if anything, should be done to address the financial vulnerability that will likely result from the move to non-acute care PPS.

Many of these hospitals were able to earn a surplus from inpatient PPS payments because

they were eligible for special payment provisions as sole community hospitals. A number of small rural hospitals that are eligible for both sole community status and CAH designation are also at substantial financial risk from non-acute care prospective payment. Whether the Rural Hospital Flexibility Program will benefit this group of “at-risk” sole community hospitals depends on whether the institution decides that accepting the CAH designation is consistent with its mission, as well as whether the relief from outpatient prospective payment offered under this designation outweighs the benefits currently received from their inpatient PPS payment arrangements. For the institutions that decide conversion to CAH is consistent with their mission, the Rural Hospital Flexibility Program would be strengthened if these hospitals had the option to retain the inpatient PPS reimbursement rules that were available to them as sole community hospitals.

It is quite possible that a number of rural hospitals that are eligible for both sole community and CAH designation will not choose to convert to a CAH, as the limitations of that designation (such as the 96-hour average length-of-stay limitation) may be in conflict with their mission. While not the primary focus of this analysis, the data do reveal that many of these institutions are at risk, and may need additional relief from revenue reductions brought about by the new non-acute prospective payment systems. Relief could be given to these hospitals in one of two ways: either by extending the cost-based outpatient provisions to all sole community hospitals, or by revising the inpatient rules for CAH facilities that qualify for more than one special rural designation.

Because BBA(97) does not mandate Medicaid reimbursement changes under the Rural Hospital Flexibility Program, we have not included any estimates of the effects of Medicaid cost reimbursement in our analysis. Medicaid utilization tended to be slightly less important for CAH-eligible facilities than others (12% of acute days of care, compared to 16% among other rural hospitals and 15% in urban hospitals). However, there is considerable variation in Medicaid dependence across hospitals in each of these

groups. In states where Medicaid programs choose to mirror the Medicare reimbursement rules for CAH status, and in potential CAHs where Medicaid utilization is at or above the mean, this could have a substantial influence on the hospitals' decisions.

Critical Access Hospitals are limited service inpatient facilities. Conversion to this status is a strategic decision that would normally be made in the context of clinical and community

needs as well as financial objectives. In this paper we have restricted our analyses to the financial bases on which the decision might be made, but the reimbursement implications are only one component to a complex decision. Many rural facilities may find ways to reduce their unit costs, or may be able to respond to the challenges of expanded prospective payment systems with other strategies.

REFERENCE LIST

Balanced Budget Act of 1997. P.L. 105-33. See the following:

Sec. 4201 (Rural Hospital Flexibility Program); Sec. 4523 (Prospective Payment System for Outpatient Hospital Services) ;Sec. 4602 & 4603 (Payments for Home Health Services).

Blanchfield, Bonnie B., Franco, Shelia J., and Mohr, Penny E. Critical Access Hospitals: How Many Will Qualify? Project HOPE Walsh Center for Rural Health Analysis. 1998 Nov 10.

Federal Register. Medicare Program; Prospective Payment System for Hospital Outpatient Services; Correction; Proposed Rule . 1999 Jun 30.

GAO (Government Accounting Office). Reports on Rural Primary Care Hospitals. Washington, D.C.; 1998 Feb 23; GAO/HEHS-98-60.

Ghelfi, LM and Parker, T. S. A New County-Level Measure of Urban Influence. Staff paper .

Washington, D.C.: Rural Economy Division, Economic Research Service, US Department of Agriculture; 1995.

MedPAC (Medicare Payment Advisory Commission). Report to the Congress: Medicare Payment Policy, V. II Chapter 3. Washington, D.C.; 1998 Mar.

Omnibus Budget Reconciliation Act of 1989. (PL 101-239) Sec. 6003(e).

Reif, Susan and Ricketts, Thomas C. The Medicare Critical Access Program: The First Year. The Journal of Rural Health, 15(1),61-66; 1999

Wright, George E., Wellever, Anthony, and Felt, Suzanne. Options for the Next Generation of Limited-Service Rural Hospitals: Background Paper. (commissioned paper for The Robert Wood Johnson Foundation, invitational workshop on Limited Service Rural Hospitals); 1994 Jun 9.

NOTES

ⁱ Sole community (SCH) status is granted to rural hospitals that can demonstrate that they are very isolated, or that they account for at least 75% of the secondary care that is provided to the Medicare residents within their service area. The SCH designation is a permanent component of PPS. Medicare-dependent (MDH) status was granted to rural hospitals that had not qualified as SCH, were less than 100 beds, and for which Medicare Part A patients accounted for at least 60% of total discharges or days of care during FY 1987. The MDH category was created by Section 6003(f) of OBRA 1989 (PL 101-239), and was originally applicable only between 1990 and 1993, during which time MDHs were paid according to the same rules as SCHs. The eligibility was later extended to 1994, but with reduced reimbursement advantages. BBA(97) restored the designation of MDH for facilities that had received it under the old regulations, applicable from 1998 to 2001, with the same reduced reimbursement adjustments. BBA-RA has restored MDH status until 2006.

Both sole community and Medicare-dependent hospitals have been allowed the option, each year, of being paid under the PPS rules based on a national standardized payment amount per discharge, or based on their own updated historical cost per case-mix-adjusted discharge. The historical cost has been computed from either 1982 or 1987, although BBA-RA now permits a phase-in of a new option using 1996 as the base year. Each year an SCH may choose whichever method results in higher payments (OBRA, 1989). This approach offers protection for low-volume, high-unit-cost facilities that are unable to compete against a national standard cost per discharge, while it retains some incentive for the hospital to control costs. In effect, it allows SCHs to compete against themselves, since they have an opportunity to keep the reimbursement difference if they can reduce their own case-mix adjusted real costs per discharge to an amount below their own historical levels.

ⁱⁱ The source for charge data by service-type (rather than payer-type) is the patient charge summary appearing on the financial statements at the end of each cost report. This data is provided to the Medicare program for informational purposes and may be less reliable than data taken from worksheets that actually influence reimbursement. In constructing these summary statistics, we excluded observations with clearly inconsistent values. We have not constructed a variable for total Medicare outpatient charges, because the summarized cost report files do not include Medicare settlement data for home health, ambulance or skilled nursing services.

ⁱⁱⁱ This change was also mandated by BBA 97(\$4521) and occurs at the same time as the prospective payment implementation. In the June 30 Notice, HCFA also computed expected payment reductions for special categories of rural hospitals (including sole community hospitals, Medicare-

Dependent Hospitals and Rural Referral Centers) under a 4-year phased in system, in recognition of special problems faced by low-volume providers. The BBA-RA then provided for a three-year “hold harmless” period during which rural hospitals with fewer than 100 beds would be protected from any overall payment reductions in hospital-based outpatient Part B payments.

^{iv} A 1998 Government Accounting Office study found that cost-based payments for RPCH inpatients between September, 1993 and May, 1996 averaged 8.8% higher than they would have been under the rules for rural DRG payments. They also found, however, that over 20% of the cases paid had stayed longer than the 72-hour limit imposed by the EACH/RPCH regulations. It was not clear whether cost-based payments would have exceeded DRG payments if the patients had been discharged within the 72-hour limit (GAO, 1998). CAH regulations impose a 96-hour limit on individual inpatient stays, and local PROs are allowed to grant exceptions for individual cases.

^v We also tested the sensitivity of these findings to our cut-off point for the PPS payment ratio. 42% of those “at risk” had PPS ratios below 1.05, and 61% had ratios below 1.20.