

Medicare Copayments for Critical Access Hospital Outpatient Services— 2009 Update

Sara Freeman, MS
Kathleen Dalton, PhD
RTI International

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MedPAC
601 New Jersey Avenue, NW
Suite 9000
Washington, DC 20001
(202) 220-3700
Fax: (202) 220-3759
www.medpac.gov

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Final Report

Prepared for

Jeff Stensland, PhD
Medicare Payment Advisory Commission
601 New Jersey Avenue, NW
Suite 9000
Washington, DC 20001

Prepared by

Sara Freeman, MS
Kathleen Dalton, PhD
RTI International
3040 Cornwallis Road
Research Triangle Park, NC 27709

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Sara Freeman, MS
Kathleen Dalton, PhD

Medicare Payment Advisory Commission Project Officer: Jeff Stensland, PhD

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Executive Summary

ES.1 Purpose of the Study

The purpose of this study is to estimate the additional burden of Part B coinsurance on beneficiaries receiving outpatient services at Critical Access Hospitals (CAHs).

CAHs receive cost-based reimbursement for inpatient acute, swing-bed, and outpatient services delivered to Medicare beneficiaries. Medicare patients at CAHs owe coinsurance on outpatient services on the basis of 20 percent of applicable Part B charges. Under the outpatient prospective payment system (OPPS), charge-based coinsurance is being phased out, replaced by coinsurance based on 20 percent of the OPPS price under the fee schedule for Ambulatory Patient Classification (APC) units. Because the fee schedule is generally much lower than charges, an unintended consequence of cost-based reimbursement implemented under the Rural Hospital Flexibility Program is that beneficiaries receiving care at a CAH have a higher coinsurance burden than those going to PPS hospitals.

Any reduction in the way that coinsurance is computed will change the amounts due from patients or their secondary insurers (including Medicaid) on the Medicare cost report. Under cost-based reimbursement, Medicare pays 101 percent of all Part B allowable costs net of deductibles, coinsurance, and primary payer amounts. Any reduction in coinsurance therefore results in additional outlays for the Medicare program.

This study builds on previous work conducted by RTI International in which we reviewed this issue and considered possible policy options to address unequal coinsurance burdens. Our analysis found that in the 2006 period, coinsurance accounted on average for 33 percent of total payments for Medicare-covered services. Because this is a dynamic problem, we have been asked to conduct further analyses to identify ongoing changes in CAH charges, costs, and service mix and their resulting effects on beneficiary coinsurance burdens.

ES.2 Scope of Work

RTI was asked to update its earlier study, using data from 2008 and 2009. Specifically, we were asked to review recent changes in the volume of outpatient claims, charges, cost-to-charge ratios, payments, and coinsurance in CAHs; compare charge-based coinsurance in CAH settings to the costs of Part B services; look for changes in the rates of growth by service group; re-estimate the potential costs to the Medicare program of changing to cost-based coinsurance; and consider effects on Medicaid copayments. Finally, we were asked to comment on the advantages and potential problems associated with converting copayments from 20 percent of charges to 20 percent of costs.

ES.3 Data and Methods

Data for this analysis come from the Medicare cost reports and outpatient claims in the Standard Analytic File (SAF). Our hospital sample included CAHs that were operating as of January 2009 and had filed a full-year cost report in 2008 or 2009 (“Period 3”). Cost reports were matched to CAHs with reports in our study from 3 years earlier (“Period 2”). Outpatient claims were extracted for the Period 3 reports. Period 3 data were then merged with Period 2 data to complete the analytic file. Of 1,274 CAHs in the Period 3 sample, 1,072 had Period 2 data from 3 years earlier. The remaining 202 CAHs had either Period 3 data only or were in our previous sample but could not be matched by cost reports 3 years apart. RTI’s previous study tracked changes in key study variables over a 3-year period, 2002–2003 to 2005–2006; in this study we were able to track changes in the same variables over another 3-year period.

ES.4 Findings

Mean coinsurance per CAH claim in Period 3 was \$214, the median was \$80, and the 95th percentile was \$831. We aggregated by beneficiary within CAH and found yearly copayments greater than \$1,000 for 20.5 percent of beneficiaries, up from 14.3 percent in Period 2. The proportion of beneficiaries with yearly copayments greater than \$3,000 rose from 1.7 percent in Period 2 to 3.3 percent in Period 3. These totals do not include any coinsurance paid at other facilities or to physicians.

Cost-to-charge ratios (CCRs) for Medicare ancillary services dropped 4.6 percent from Period 2 to Period 3. This is a smaller decline than we observed in the previous analysis (13%). Lower CCRs equate to higher mark-up; as mark-up rates increase, the excess coinsurance burden at CAHs increases. There was variation by service group in the extent to which CCRs dropped or increased. Diagnostic Radiology and Magnetic Resonance Imaging (MRI) saw the greatest proportional declines, 12 percent and 11 percent, respectively. A few service groups had increases in the 2 percent range, including Respiratory Therapy. The Computerized Axial Tomography (CAT) Scan service group had the lowest aggregate CCR for the full Period 3 sample, 0.129, indicating a mark-up rate of 675 percent.

The growth rate of charges (17.7 percent) and costs (11.7 percent) slowed considerably from Period 2 to Period 3 compared with the previous growth rates from Period 1 to Period 2 (38.6% and 27.6%). However, because increases in charges continue to outpace those of costs, beneficiary liabilities as a share of the total payment for Medicare services (including diagnostic laboratory testing) rose from 33.3 percent to 35.1 percent. CAHs in which beneficiary liability was more than 50 percent of the total payment increased to 6.3 percent for the full Period 3 sample (from 2.3% in Period 2 and 1.1% in Period 1).

Outpatient diagnostic laboratory services are not subject to coinsurance. For CAH services that were subject to Part B coinsurance, coinsurance amounts accounted for 47 percent of the estimated cost of services in Period 3, up from 44 percent in Period 2. Because some individual services (e.g., Cardiology and CAT Scan) tend to have CCRs that are below 0.20, beneficiaries may pay more in coinsurance for a service than Medicare allows for the cost of that service.

We observed extensive regional and state variation by service in median values of coinsurance as a percentage of covered costs. In four states—Florida, Kentucky, Massachusetts, and Virginia—the

median values of coinsurance as a percentage of covered costs for CAT Scans and MRIs were greater than 100 percent.

ES.5 Cost of Policy Change

RTI reviewed the cost to the Medicare program of policy changes that would reduce the coinsurance burden on CAH patients. We used cost reports and claims data to estimate the cost to the Medicare program if CAH coinsurance were computed on the basis of 20 percent of estimated costs rather than 20 percent of charges.

From Period 3 cost report data, RTI estimated that cost-based coinsurance would have added \$724 million to Medicare program payments for Part B services, although downstream reductions in allowable Medicare bad debt might have offset this by at least \$64 million. The \$724 million represents a 57 percent reduction in beneficiary coinsurance.

Sixty-four percent of Period 3 Medicare Part B allowable bad debt was attributable to coinsurance amounts for dually eligible beneficiaries, occurring in states where the Medicaid program does not cover the full 20 percent of charges. This was a marked increase from Period 2 (37 percent). Depending on the state Medicaid program's cost sharing design, some of this portion of bad debt could be eliminated by reducing coinsurance. However, the Medicare program would have no net savings—it would merely transfer the payment to the interim payment stage from the bad debt settlement stage. In states where the Medicaid program's coinsurance cost sharing is based on a reduced percentage of a fee schedule amount, the Medicare program might not see any reduction in bad debt.

An alternative estimating approach, using information from individual claims instead of aggregate cost report data, yielded similar results. From 6.1 million Period 3 claims that were matched by dates to the available cost reports, RTI estimated that cost-based coinsurance would have added \$749 million to Medicare program payments for Part B services, before taking any offsets for bad debt into consideration.

The cost of the policy change arises from the beneficiary copayment being brought down from the level they pay in the CAH (about 47 percent of estimated covered costs) to the level they would pay in a PPS hospital (probably no more than 20 percent). Policymakers would have to decide how to finance this cost. Obviously the Medicare program could absorb the entire cost of the policy change. Alternatively, the program cost could be fully or partially offset with other changes within CAH hospital payments or with more broadly targeted Medicare payment changes.

ES.6 Discussion of Policy Options

RTI examined three options for implementing a change in the computation of Part B coinsurance for CAHs to reduce this burden. The first two assume that the policy goal is to bring coinsurance in line with costs rather than charges. The third assumes that the policy goal is to create parity in coinsurance such that the beneficiary is neither advantaged nor disadvantaged according to where he or she seeks care.

1. Each CAH has an aggregate outpatient CCR computed by the Medicare Administrative Contractor that is used to compute interim payments for Part B services. Option 1 would apply the hospital's existing interim rate converter to coinsurance amounts. The advantage to this approach is that it would be simple to administer. The disadvantage is that, although CAH beneficiaries would be paying coinsurance that is 20 percent of costs on average, individuals would still be overpaying or underpaying coinsurance for specific services, on the basis of variation in individual service CCRs.
2. The second option would use service-specific CCRs for each individual CAH to estimate costs for both coinsurance and Medicare interim payments. The greater the number of service-specific CCRs applied, the closer the policy option gets to achieving the goal of having beneficiaries pay coinsurance based on costs, but also the less feasible the option becomes because of administrative complexity. A more modest and potentially more feasible approach would be to use a limited set of service-specific CCRs.
3. The third option would require CAHs to code their Part B claims as though they were paid under OPSS in order to group services by APC and compute the OPSS-equivalent coinsurance. Medicare interim payments could be computed by applying the interim rate to allowable charges net of this OPSS-equivalent coinsurance. The principal benefit to this option is that beneficiaries would be treated equally across hospital settings, without paying more on the basis of either the hospital's prospective payment status or its mark-up policies. When this option was discussed in RTI's previous report, we commented that it would have substantial administrative costs, because the CAHs would have to start entering the Healthcare Common Procedure Coding System (HCPCS) codes (needed for APC assignments) on their outpatient bills. Since that time, CAHs have begun to submit HCPCS codes for most services, and Option 3 would be less of an administrative burden.

Introduction

This report for the Medicare Payment Advisory Commission (MedPAC) presents the findings of RTI International's contract to re-examine coinsurance burdens to beneficiaries receiving outpatient services at Critical Access Hospitals (CAHs). The scope of work for this contract directs RTI to study the coinsurance burden for beneficiaries receiving outpatient care at CAHs and to evaluate the costs and challenges of possible policy changes to bring that burden in line with what would apply in prospective payment system (PPS) hospital settings. Specific questions we were asked to address include these:

- How have the volumes of outpatient claims, charges, costs, payments, and coinsurance changed for CAHs over recent years? How do the changes compare with those in earlier time periods?
- How does Part B coinsurance in CAH settings compare with cost of services?
- What would be the cost to the Medicare program of a change in CAH settings from charge-based to cost-based outpatient copayments?
- What are the benefits and potential problems associated with changing copayments from 20 percent of charges to 20 percent of costs?

CAHs receive cost-based reimbursement for inpatient acute, swing-bed, and outpatient services delivered to Medicare beneficiaries. Medicare patients at CAHs owe coinsurance on outpatient services on the basis of 20 percent of applicable Part B charges. In contrast, at hospitals paid using Medicare's outpatient prospective payment system (OPPS), charge-based coinsurance is being phased out, replaced by coinsurance based on 20 percent of the OPPS price under the fee schedule for Ambulatory Patient Classification (APC) units. RTI first identified the potential for disproportionately higher coinsurance burdens as an unintended consequence of cost reimbursement in a 2006 report prepared for the Centers for Medicare & Medicaid Services (CMS).¹ The report documented that beneficiaries receiving outpatient care at a CAH paid more in coinsurance than they would have paid if the services had been received at a PPS hospital. Further evidence of this problem was documented in 2008 by RTI under a contract to MedPAC.² In that study, RTI also found that the burden of excess CAH coinsurance increased over time because CAH charges can increase without restraint, whereas coinsurance computed under the OPPS is constrained by increases in regulated rates.

CAHs may set their charges at any rate they desire. Currently there is no financial incentive for CAHs to moderate their rate increases. Charge-based coinsurance that beneficiaries are unable to pay (or

¹*Analysis and Monitoring of Critical Access Hospital Growth and Cost Trends*, 2005, Contract Number 500-02-0033.006.

²*Medicare Copayments for Critical Access Hospital Outpatient Services*, 2008, Contract Number RFP0306MEDPAC, Task E4034808.

Introduction

that state Medicaid programs do not cover) becomes bad debt, and CAHs are reimbursed at 100% for bad debt. If a bad debt policy change were to take effect lowering the bad debt reimbursement rate for CAHs, it could serve as a disincentive to increase charges.

Medicare currently reimburses CAHs at 101 percent of program cost *net* of any primary payer amounts, deductibles, and coinsurance. Thus, any change in policy that reduces coinsurance for CAH services will necessarily translate to an offsetting increase in Medicare interim payments. Only a minority of Medicare beneficiaries are personally responsible for their coinsurance amounts—for most, coinsurance and deductibles are paid by secondary insurance policies or by state Medicaid programs.³ For beneficiaries with secondary insurance, it is the insurer rather than the beneficiary that would benefit by any change to reduce CAH coinsurance burdens. State Medicaid programs, however, do not necessarily pay all of the coinsurance due from outpatient services, and the impact of a change in policy is harder to estimate. We address this issue in more detail in *Section 4.2*.

In this study, RTI returns to the study question by examining more recent data to support the need for a policy change to reduce the coinsurance in CAH settings, and we estimate the budget impact. Our technical approach is described in *Section 2*. Our findings, from a review of the cost-to-charge ratios for key outpatient services delivered in CAHs and how they have changed in recent years, and also our estimates of the differences between charge-based and cost-based coinsurance across types of services, are presented in *Section 3*.

The burden from excess charge-based coinsurance at CAHs is directly related to CAH pricing policies, specifically the extent to which facility charges exceed costs and exceed APC payments for covered services. If we accept the premise that APC payments are tied to expected costs, an argument can be made that beneficiaries should not pay more than 20 percent of estimated costs for equivalent services delivered at CAHs. One policy option to address the discrepancy between CAHs and other settings is, therefore, to change the CAH copayments to 20 percent of estimated costs rather than charges. If we accept a broader premise of prospective payment, that APC payments are tied to the expected costs of the average efficient provider, an argument can also be made that beneficiaries should not pay more than 20 percent of the APC payment, because the beneficiary should not be responsible for variations in provider costs. These policy options are discussed in more detail in *Section 4* and *Section 5*.

³Based on data from the 2007 Medicare Current Beneficiary Survey, roughly 89 percent of beneficiaries nationwide have supplemental coverage, in the form of Medicaid or secondary insurance. Source: Kaiser Family Foundation. Chartpack: *Examining Sources of Supplemental Insurance and Prescription Drug Coverage among Medicare Beneficiaries*, August 2009. <http://www.kff.org/medicare/upload/7801-02.pdf>

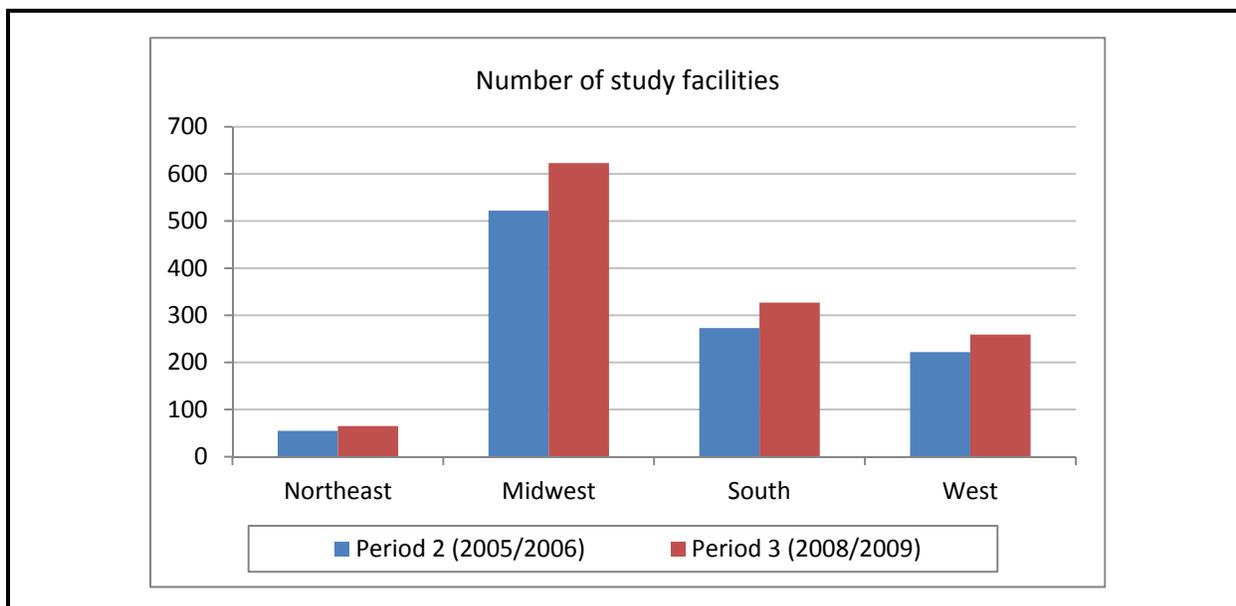
Technical Approach

2.1 Study Population

The study sample is defined from the population of CAHs operating as of January 2009, restricted to those with a filed cost report in 2008 or 2009 that covers a full 12-month period or longer (minimum of 363 days) and could be matched to calendar year 2008 or 2009 Standard Analytic File (SAF) outpatient claims. Where possible, the most recent cost report was matched with a report from 3 years earlier in our previous study, to identify changes in key measures over time. We created a file with two subgroups—matched CAH pairs (hospitals with CAH status in both time periods and with cost reports 3 years apart, $n = 1,072$) and unmatched CAHs (facilities with later period data only or with cost reports 2 or 4 years apart, $n = 202$). Throughout this report, the earlier matched cost reporting period (2005–2006) is referred to as Period 2 and the later one (2008–2009) as Period 3.⁴ The composition of the final sample is 1,072 Period 2 facilities and 1,274 Period 3 facilities.

As shown in *Figure 2-1*, CAHs are not evenly dispersed throughout the country. The Midwest has the greatest number, followed by the South. The Northeast has very few CAHs. At least one CAH is present in every state except Connecticut, Delaware, Maryland, New Jersey, and Rhode Island.

Figure 2-1. Hospital Study Sample by Region and Period



Source: RTI International analysis of Medicare Cost Reports, FY2005–FY 2009.

⁴Any comparisons referring to the previous report's Period 1 correspond to the 2002–2003 cost reporting period.

2.2 Data

The two principal data sources for this analysis are the Medicare cost reports from the Hospital Cost Report Information System (HCRIS) files and hospital outpatient claims from the Standard Analytic File (SAF). The SAF data exclude claims for Medicare Advantage (MA) enrollees.⁵ Medicare cost reports were used to compute cost-to-charge ratios (CCRs) by type of service from the data on Worksheet C. We also obtained total Part B costs, payments, coinsurance and deductible amounts, and reimbursable bad debts from Worksheet E Part B.

CCRs were computed at the level of individual cost centers as reported by each facility and also from data rolled up to key service groups.⁶ Following the approach used by CMS in setting OPSS rates, CCRs were edited to remove ratios less than 0.01 or greater than 10 or those with normalized ratios greater than ± 3 standard deviations from the geometric mean for each line. See *Appendix Table A-1* for results of CCR editing by service group.

MedPAC provided RTI with calendar year 2008 and 2009 outpatient claims. RTI matched the claims by provider numbers and beginning and ending dates of fiscal year cost reports in the study sample. Extracted variables included line-item data on charges and coinsurance amounts by service, plus claim-level data on payments and deductibles.⁷ Ancillary services were identified by revenue center codes and grouped into 18 key service groups,⁸ 16 of which were analyzed: Pharmacy, Diagnostic Laboratory Testing, Medical Supplies, Diagnostic Radiology, Computerized Axial Tomography (CAT) Scan, Magnetic Resonance Imaging (MRI), Respiratory Therapy, Rehabilitation Therapy, Cardiology, Emergency Room, Surgery, Gastrointestinal (GI) Services, Blood, Anesthesia, Clinic, and Observation.

A total of 10,988,803 individual Medicare claims were matched by provider for our Period 3 analysis. Line-item and claims-level costs were estimated by applying the edited CCRs from the Medicare cost report data to the covered charges in the claims files, using an RTI adaptation of CMS' published Outpatient Revenue Code Crosswalk.

All charge and cost figures are expressed in 2006 dollars unless otherwise noted. Data were adjusted for inflation using the Medicare PPS Hospital Input Price Index, based on the quarter end date of the hospital cost report. Provider-level data were annualized in instances where the Medicare cost report (and therefore also the matched claims) covered more or less than a full year.

⁵Rural MA participation has always been well below urban participation, but it began to increase sharply in 2005 and 2006 with the introduction of regional preferred providers and the new "private fee-for-service option" (<http://healthplantracker.kff.org/>). Any figures in this report showing changes between 2006 and 2009 in total CAH Medicare claims and dollars reflect spending for a somewhat reduced base of traditional Medicare fee-for-service beneficiaries.

⁶In a 2008 project for CMS (*Refining Cost to Charge Ratios for Calculating APC and DRG Relative Payment Weights*), RTI identified problems from misclassification of nonstandard cost centers. RTI developed a routine for correcting the most commonly miscoded cost centers. Although misclassification is less common in the CAH reports than in the reports for larger PPS hospitals, we ran the CAH HCRIS files through this routine for this updated analysis as we had done 3 years earlier.

⁷In the previous analysis, RTI had excluded a small subset of claims (0.06%) with line items greater than 45 line items per claim. The Period 3 analysis includes them.

⁸Two service groups were not analyzed, Professional Fees, and the catch-all group, Other.

2.3 Approach

The following types of analyses were conducted:

- review of CAH pricing trends based on CCRs from the Medicare cost report
- conversion of outpatient claims from charges to cost using hospital-specific, service-specific CCRs
- review of claims volume, charges, cost, and payments over two study periods
- review of coinsurance amounts as a percentage of estimated cost, by key service areas
- estimation of cost to the Medicare program of changes in coinsurance policy from a percent-of-charges basis to a percent-of-costs basis
- examination of bad debt and the extent to which it is attributable to Medicaid.

Findings

Because Medicare beneficiary coinsurance at CAHs is based on charges and the Medicare program's reimbursement to CAHs is cost-based, the relationship between costs and charges is critical. If the growth in charges outpaces the growth in costs, the coinsurance burden increases for beneficiaries. In this section, we present our Period 3 findings and note changes from earlier time periods.

3.1 Changes in Critical Access Hospital Costs, Charges, and Pricing Strategies

Cost-to-charge ratios for CAHs continue to vary widely across facilities and across services within facility. The aggregate average ratio of Part B costs to charges for ancillary and outpatient services in the matched CAH sample was 0.465 in Period 2 and 0.444 in Period 3, a reduction of 4.6 percent over the 3 years. Between Period 1 and Period 2, the decline in this same aggregate ratio was 13.4 percent. This shows a pattern of continued decline in CCRs, but the decline is not as dramatic as it was in the earlier study period. An aggregate CCR of 0.444 corresponds to an average mark-up of 125 percent over cost.⁹

Figure 3-1 shows the distribution of matched Period 2 and Period 3 data expressed as mark-up rather than CCR. A small number of CAHs in both periods have total ancillary charges that are less than total ancillary costs, and these account for the small number of facilities that show a negative mark-up percent. The median mark-up rose slightly between periods; Period 3 data show more extreme values at the 90th percentile and above.

Table 3-1 shows changes over the study period in CCRs computed by types of cost centers. The data for matched CAHs in both periods are shown at the top, and data for all Period 3 CAHs are shown below.¹⁰ Aggregated across all providers, CCRs for Observation (equivalent to those for Routine Care) and Clinic continue to be the highest, averaging above 1.000 in both periods.¹¹ CAT Scan, MRI, Diagnostic Radiology, and Cardiology had the lowest CCRs, all under 0.300 for Period 3 and decreasing

⁹CCRs are computed as the (cost/charge) and can range in value from 0 to infinity. A mark-up rate is an inverse measure derived from the same data, computed as ((charges – cost)/cost); it has a range from negative to positive. A CCR above 1.0 implies a negative mark-up, that is, charges set below cost.

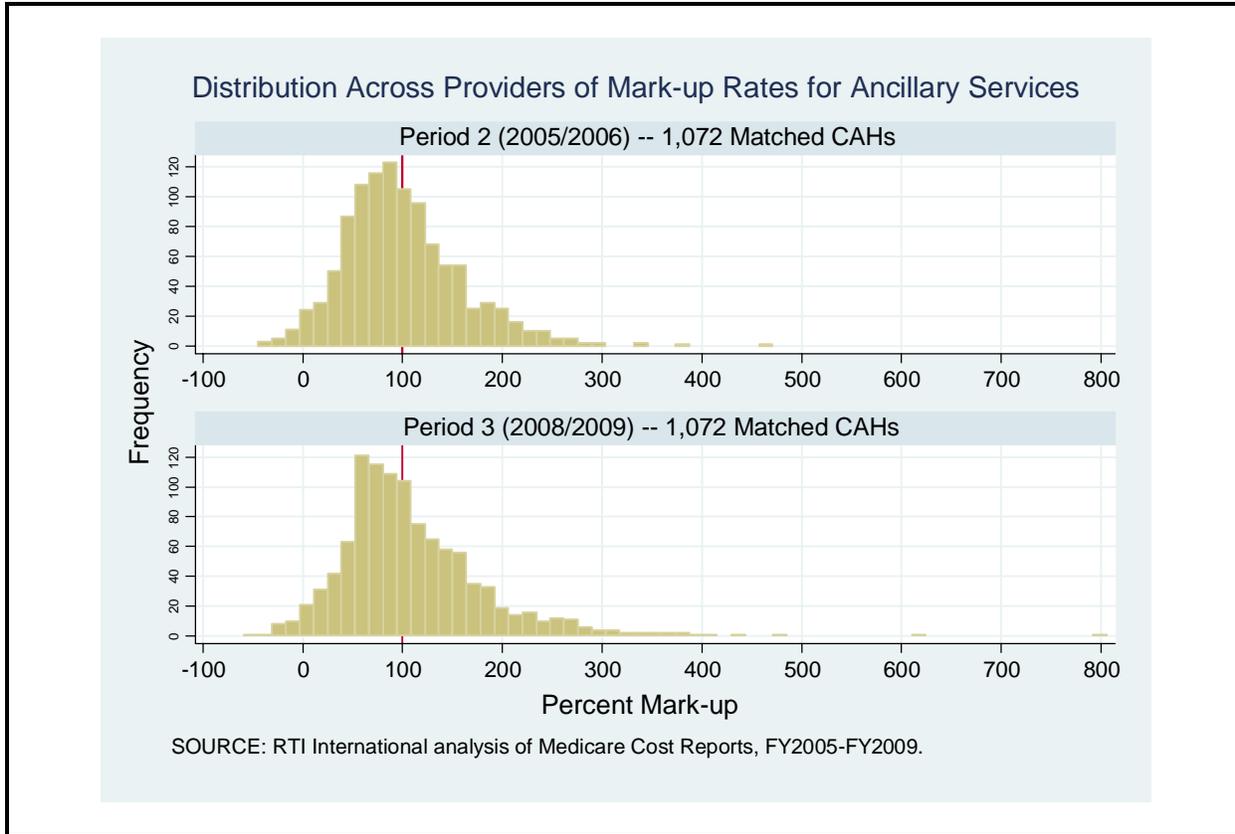
¹⁰Period 2 results in this analysis vary slightly from the previous report's Period 2 findings because this Period 2 matched subset consists of 1,072 CAHs and the CAHs are no longer stratified by their Period 1 status (CAH or PPS).

¹¹The CCR for Adult and Pediatrics Routine Nursing Care (line 25 of the cost report) was used as the ratio for Observation in this report, as the Observation cost center is not populated with data on Worksheet C. Later calculations that are made to populate this line on Worksheet D Part V are based on prorated costs from line 25.

Findings

over the 3 years.¹² CCRs declined for 10 of the 16 services from Period 2 to Period 3, and one of the largest declines was for the Emergency Room cost center.

Figure 3-1. Critical Access Hospital Pricing for Ancillary Services



As was noted in the previous analysis, large differences in CCRs across types of service cost centers have important implications for excess beneficiary liability under charge-based coinsurance. If a CCR is below 0.200 (not uncommon for Cardiology, Diagnostic Radiology, or other Imaging services), then patients at a CAH are absorbing out-of-pocket expenses that are actually greater than the allowable cost of the service to the Medicare program. This is not a new problem; abnormally high charge-based copayments were encountered in many hospital settings before the phased-in coinsurance reductions that accompanied the implementation of OPSS. However, it is a more pronounced problem now because it creates a particular disadvantage for residents of small rural communities. It is also more frequent now because, as this analysis indicates, mark-up rates are continuing to rise for most services at CAHs.

We also found variation in mark-up across regions, raising still more equity issues for beneficiaries. Overall, hospital CCRs remain lowest in the Northeast and highest in the West. The South

¹²Although claims files confirm that a large percentage of CAHs provide CAT Scanning and MRI services, relatively few CAHs report either service on a separate line in the cost report. Most combine these with other Diagnostic Radiology, on line 42.

showed the greatest percentage change in mean hospital CCR, dropping about 4 percent over the 3-year period. Additional detail on CCRs by region and by state has been included with this report as *Appendix Tables A-2a* and *A-2b*. In *Appendix Table A-2b*, the states are ranked by lowest mean hospital CCR on the basis of the full Period 3 sample. Florida and Indiana had the lowest CCRs, decreasing 24 percent and 11.5 percent, respectively.

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Findings

Table 3-1. Edited Cost-to-Charge Ratios by Service Group

Service Group	Matched Pair CAHs Period 2 and Period 3						3-year Change in Aggregate CCR	
	Period 2 (2005/2006)			Period 3 (2008/2009)				
	Obs	(unweighted) Mean CCR	Aggregate CCR	Obs	(unweighted) Mean CCR	Aggregate CCR	Absolute	Percent
Observation (Routine Care)	1,063	1.829	1.427	1,055	1.861	1.437	0.010	0.7%
Surgery	902	0.663	0.474	892	0.651	0.451	-0.024	-5.0%
GI Services	15	0.446	0.307	16	0.603	0.315	0.007	2.4%
Anesthesia	686	0.749	0.479	674	0.685	0.430	-0.050	-10.4%
Radiology-Dx	1,061	0.454	0.331	1,068	0.420	0.292	-0.039	-11.9%
CAT Scan	92	0.266	0.145	96	0.267	0.138	-0.007	-5.1%
MRI	77	0.372	0.299	84	0.371	0.266	-0.033	-11.0%
Laboratory	1,064	0.439	0.351	1,066	0.412	0.319	-0.032	-9.1%
Blood	277	0.868	0.670	287	0.822	0.656	-0.015	-2.2%
Respiratory Therapy	914	0.547	0.416	890	0.586	0.426	0.009	2.3%
Rehab Therapy	1,047	0.738	0.646	1,048	0.722	0.628	-0.018	-2.8%
Cardiology	678	0.301	0.282	639	0.302	0.273	-0.010	-3.4%
Medical Supplies	1,036	0.515	0.407	1,025	0.546	0.417	0.009	2.3%
Pharmacy	1,064	0.438	0.383	1,063	0.442	0.384	0.001	0.3%
Clinic	832	1.477	1.155	881	1.485	1.157	0.002	0.2%
Emergency	1,066	1.070	0.699	1,063	1.024	0.627	-0.073	-10.4%
Ancillary	1,066	0.545	0.465	1,060	0.532	0.444	-0.021	-4.6%
Hospital	1,072	0.689	0.578	1,072	0.672	0.547	-0.031	-5.4%
All Period 3 CAHs								
Service Group	Period 3 (2008/2009)							
	Obs	(unweighted) Mean CCR	Aggregate CCR	Obs	(unweighted) Mean CCR	Aggregate CCR		
Observation (Routine Care)	1,256	1.827	1.393					
Surgery	1,067	0.640	0.447					
GI Services	19	0.711	0.337					
Anesthesia	802	0.662	0.398					
Radiology-Dx	1,267	0.408	0.287					
CAT Scan	112	0.250	0.129					
MRI	98	0.360	0.262					
Laboratory	1,264	0.406	0.318					
Blood	340	0.837	0.643					
Respiratory Therapy	1,063	0.573	0.418					
Rehab Therapy	1,242	0.715	0.622					
Cardiology	755	0.294	0.268					
Medical Supplies	1,221	0.542	0.417					
Pharmacy	1,265	0.437	0.376					
Clinic	1,038	1.491	1.165					
Emergency	1,265	0.995	0.613					
Ancillary	1,260	0.523	0.438					
Hospital	1,274	0.660	0.539					

SOURCE: RTI International analysis of Medicare Cost Reports, FY2005-2006 and FY2008-2009.

3.2 Analysis of Critical Access Hospital Claims

3.2.1 Distribution of Charges, Costs, and Coinsurance Across Claims

To identify the magnitude of excess coinsurance at CAH facilities, RTI examined the distribution of charges and coinsurance across all Period 3 claims that were subject to coinsurance. Under current regulations, beneficiaries do not owe coinsurance on outpatient diagnostic laboratory tests or on certain preventive services. Of the roughly 11 million Period 3 claims, about 6.1 million had coinsurance amounts greater than \$1.

Repeating the analysis requested by MedPAC in our previous study, RTI separately analyzed line items for Part B-covered drugs. Of the 6.1 million claims with coinsurance analyzed, approximately 30 percent included Part B drug charges, and of these, nearly half (47%) included charges for the special revenue code 0636 that is used for infusion agents. This latter finding represents an increase from Period 2, in which 37 percent of Part B drug claims included revenue code 0636 charges. Although there are a number of smaller value claims for administered drugs, among drug claims with covered charges of \$1,000 or more, most are for infusion agents. These include high-cost items for chemotherapy and rheumatology, which are repeated services for which the burden of coinsurance can be particularly difficult.

Table 3-2 provides additional information on the distribution of charges, costs, and coinsurance amounts across all claims and then across all line items for drug charges. Median coinsurance due (conditional on having any) was \$80, but more than 10 percent of claims had coinsurance higher than \$560. The percentage of claims with coinsurance greater than \$500 rose from 8.4 percent in Period 2 to 11.9 percent in Period 3. In about 3 percent of Period 3 claims, it is greater than \$1,000. Among claims with covered drugs charges, 10 percent show pharmacy-related coinsurance of \$175 or more, implying charges for Part B covered drugs of \$875 or more.

To isolate possible differences in impact by small compared with large claims, we estimated cost-based coinsurance from claims in Period 3 using the estimated costs for each claim as computed from the provider CCRs for Pharmacy. We divided claims into groups by charge volume and computed coinsurance for each claim on the basis of 20 percent of estimated cost net of deductibles. *Table 3-3* shows the results of this exercise as run on samples for pharmacy line items and for line items where we found charges for infusion drugs. The rightmost column shows mean values (unweighted) for the percent reduction in coinsurance that was computed across all claims in the sample. For all groups, the percent reduction in coinsurance is consistent with what we expect, given that the Pharmacy aggregate average CCR is 0.376 for these hospitals. The percent reduction Period 3 results are nearly identical to the Period 2 results in the previous report—again an expected finding because the matched-pair Pharmacy aggregate CCRs shown in Table 3-1 show little change.

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Table 3-2. Distribution of Critical Access Hospital Charges, Costs, and Coinsurance per Claim

Period 3 (2008/2009) — 1,274 CAHs			
All Part B Outpatient Claims			
6,097,412 Claims with coinsurance > \$1			
(Dollars not adjusted for inflation)			
	Covered Charges per Claim	Covered Costs per Claim	Coinsurance per Claim
Mean	1,278	557	214
Minimum	5	1	1
25th percentile	197	92	25
Median	537	232	80
75th percentile	1,575	645	255
90th percentile	3,302	1,352	564
95th percentile	4,731	2,060	831
99th percentile	9,008	4,404	1,632
Maximum	204,595	98,910	39,660
Part B Covered Drugs Only			
1,773,834 Claims with coinsurance > \$1			
(Dollars not adjusted for inflation)			
	Covered Charges per Claim	Covered Costs per Claim	Coinsurance per Claim
Mean	499	198	100
Minimum	5	1	1
25th percentile	46	18	9
Median	125	48	25
75th percentile	326	124	65
90th percentile	878	338	175
95th percentile	1,873	736	374
99th percentile	7,546	3,123	1,509
Maximum	160,274	59,651	32,055
<p>RTI calculated estimated costs by multiplying the service-specific cost-to-charge ratios from the Medicare Cost Reports by covered charges. Claims with costs < \$1 were excluded from the analysis.</p> <p>SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF, fee-for-service claims only), CY2008-CY2009.</p>			

Table 3-3. Charge-Based versus Cost-based Coinsurance for Part B-Covered Drugs

Period 3 (2008/2009) — 1,274 CAHs					
1,773,834 Claims With Coinsurance > \$1					
(Dollars not adjusted for inflation)					
Claim Type and Size	Number of claims	Mean covered charge per claim	Coinsurance per claim		
			Actual	Estimated cost-based	Mean percent reduction
Part B Drug claims					
<=\$100	782,784	44	9	4	-58%
\$100 to \$1,000	834,600	312	62	24	-61%
\$1,000 to \$10,000	146,047	2,849	569	231	-60%
>\$10,000	10,403	16,768	3,353	1,264	-62%
Total	1,773,834	499	100	39	-60%
Infusion Drugs only					
<=\$100	392,144	42	8	3	-58%
\$100 to \$1,000	339,284	316	63	25	-61%
\$1,000 to \$10,000	98,407	3,219	643	268	-58%
>\$10,000	8,843	16,757	3,351	1,267	-62%
Total	838,678	702	140	56	-59%
NOTE: RTI calculated estimated costs by multiplying the service-specific cost-to-charge ratios from the Medicare Cost Reports by covered charges. Claims with costs < \$1 were excluded from the analysis.					
SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF, fee-for-service claims only), CY2008-CY2009.					

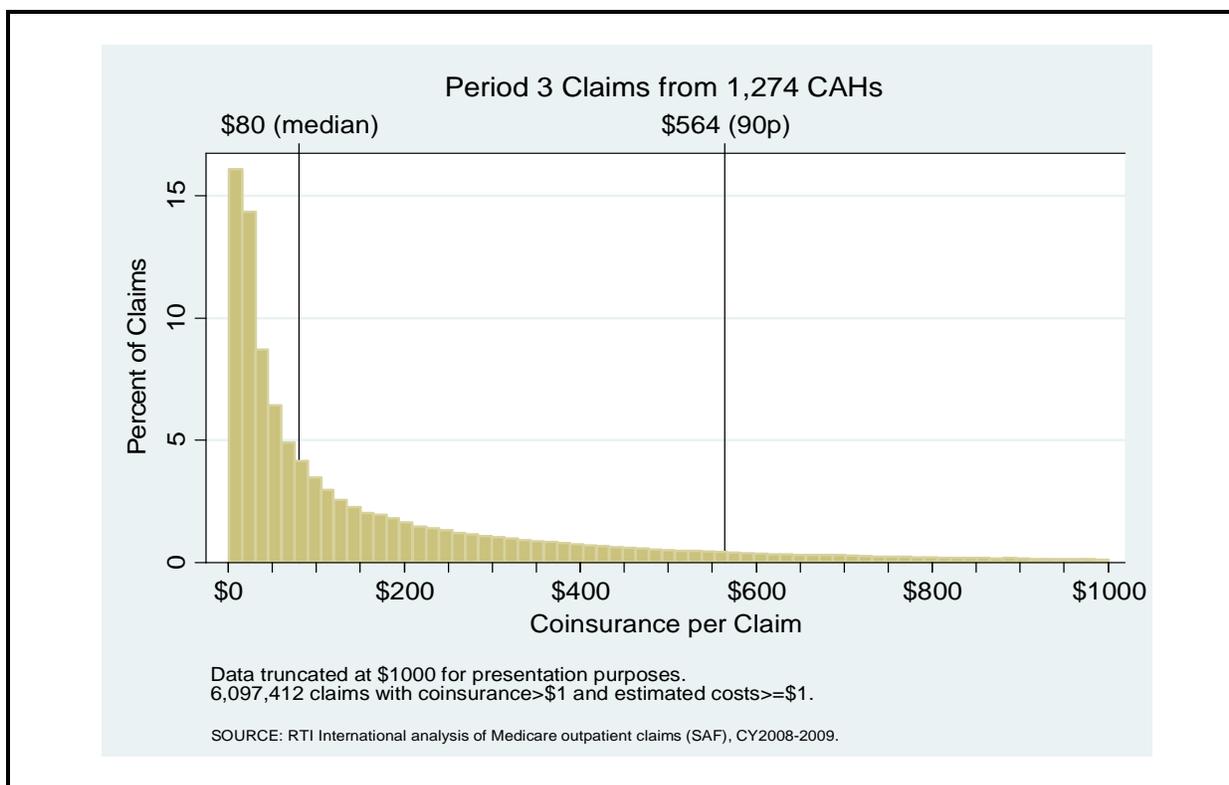
Regional differences in coinsurance per CAH claim are more pronounced in this Period 3 analysis (*Table 3-4*). The median coinsurance in the South (\$105) is more than double that of the Northeast (\$50) and 24 percent higher than the West (\$85). This difference is likely attributable to higher mark-up rates in specific high-volume cost centers—Pharmacy, Diagnostic Radiology, and Clinics—as well as geographic differences in service delivery. The percentage increase in the overall volume of claims from Period 2 to Period 3 was smallest for the South (Northeast 46%; Midwest 22%; South 17%; West 26%). However, the percentage point difference in coinsurance as a percentage of covered costs was greatest for the South, and this region now has the highest percentage, 40.8 percent.

Table 3-4. Critical Access Hospital Coinsurance by Region

	Medicare Outpatient Coinsurance Per Claim			
	Period 3 (2008/2009) — 1,274 CAHs			
	6,097,412 Claims With Coinsurance > \$1 (Dollars not adjusted for inflation)			
	Northeast	Midwest	South	West
Mean Coinsurance (\$)	174	210	228	236
Minimum	1	1	1	1
25 th percentile	19	23	36	28
Median	50	76	105	85
75 th percentile	181	255	279	274
90 th percentile	449	565	576	607
95 th percentile	731	823	834	907
99 th percentile	1,575	1,568	1,576	1,917
Maximum	25,412	29,774	39,660	32,937
Number of Claims	664,087	3,187,853	1,187,195	1,058,277
Number of Claims with Coinsurance > \$500	57,972	383,029	147,118	138,724
Percent of Claims with Coinsurance > \$500	8.7%	12.0%	12.4%	13.1%
Number of Claims with Coinsurance > \$1000	18,673	99,307	38,851	44,040
Percent of Claims with Coinsurance > \$1000	2.8%	3.1%	3.3%	4.2%
Total Coinsurance	115,254,690	671,027,436	271,186,917	249,351,544
Total Covered Charges	701,779,250	3,984,835,377	1,632,516,593	1,474,670,902
Total Covered Cost	293,528,181	1,790,555,186	664,749,064	644,482,438
Coinsurance as a Percent of Covered Charges*	16.4%	16.8%	16.6%	16.9%
Coinsurance as a Percent of Covered Costs	39.3%	37.5%	40.8%	38.7%
* Percent is less than 20 because diagnostic laboratory testing charges can be included with other charges on a claim.				
SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF, fee-for-service claims only), CY2008-CY2009.				

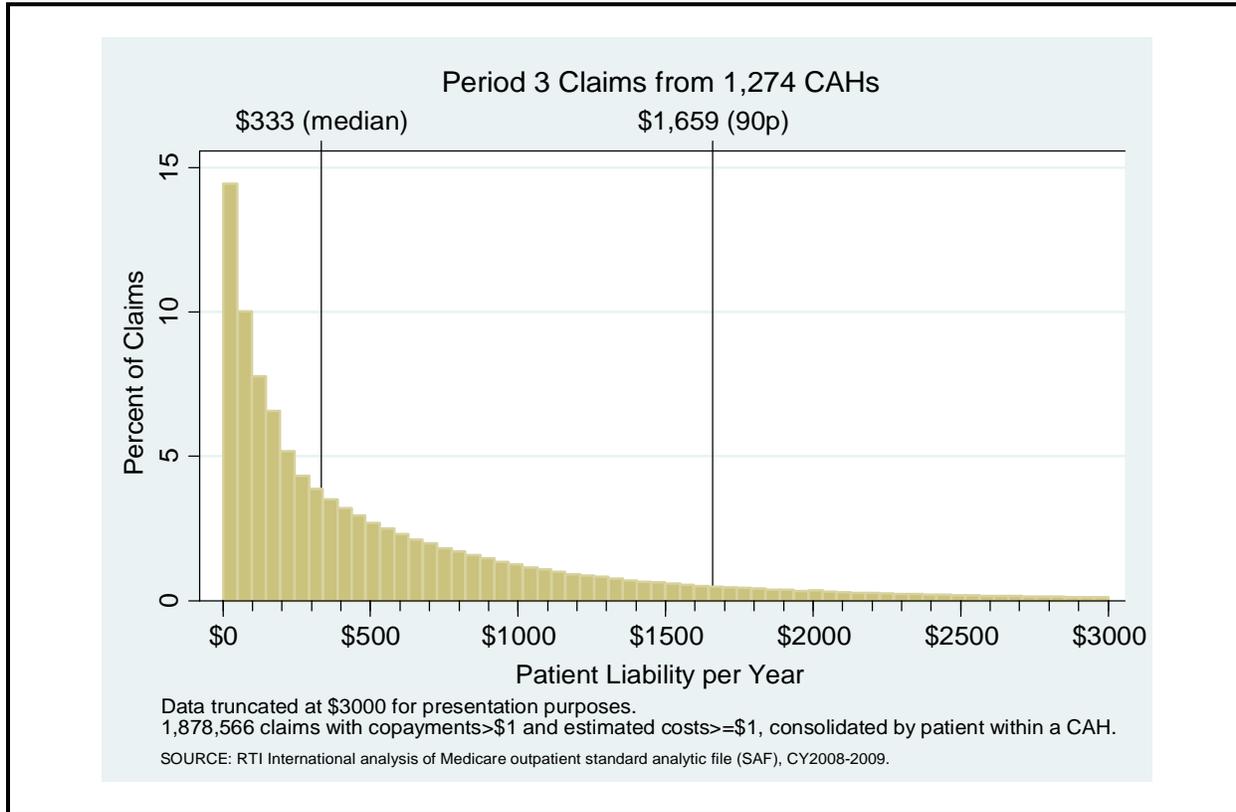
Figure 3-2 is a histogram showing the distribution of total Period 3 coinsurance amounts per CAH claim. As is common with health care expenditure data, the distributions show very long right tails, so for ease of visual representation we truncated the graphed data near the 99th percentile. Most beneficiaries have multiple visits to a CAH within the same year. **Figure 3-3** is a histogram showing the distribution of total Period 3 copayments (coinsurance and deductibles) *per beneficiary*, where the beneficiary is counted once per CAH.¹³ Whereas the median coinsurance per claim is \$80, the median Period 3 copayment per beneficiary per CAH is more than 4 times that amount, at \$333. Of the 1.9 million beneficiaries with Period 3 copayments, nearly 400,000, or about 20 percent, had yearly Part B copayments to a single CAH that were greater than \$1,000, up from 14 percent in Period 2. The percentage with yearly copayments greater than \$3,000 nearly doubled, from 1.7 percent to 3.2 percent.

Figure 3-2. Distribution of Coinsurance Amounts per Critical Access Hospital Claim



¹³A beneficiary who received services from more than one CAH during Period 3 would be counted as two (or more) observations in this analysis. Approximately 90 percent of beneficiaries in this sample visited only one CAH and 9 percent visited two. Fewer than 1 percent had visits at 3 to 16 different CAHs.

Figure 3-3. Distribution of Yearly Copayments per Critical Access Hospital Beneficiary



3.2.2 Provider-Level Claims Summaries

Tables 3-5A and 3-5B summarize changes over the 3 years from Period 2 to Period 3 in mean claims volume, charges, estimated costs, deductibles, coinsurance, and payment amounts per CAH. Both tables follow the same data format and both present annualized data to reflect expected volume over a 12-month period; actual dollars are summarized in *3-5A*, and inflation-adjusted dollars are summarized in *3-5B*. In both tables coinsurance amounts average only 15 percent of total CAH charges net of deductibles, because claims charges include line items for diagnostic laboratory tests on which coinsurance is not owed.

**Table 3-5A. Outpatient Claims, Charges, Costs, and Payments per Provider—
Annualized Data**

	CAH Status in Both Period 2 and Period 3				
	Period 2 (2005/2006)		Period 3 (2008/2009)		3-year Percent Change
Provider-level Distribution of Claims Data	Obs	Mean	Obs	Mean	
Claims	1,072	8,279	1,072	8,415	1.6%
Covered Charges	1,072	5,088,254	1,072	6,584,179	29.4%
Estimated Covered Costs ¹	1,072	2,301,049	1,072	2,827,321	22.9%
Deductibles	1,072	12,700	1,072	30,628	141.2%
Charges Net of Deductibles	1,072	5,075,554	1,072	6,553,551	29.1%
Estimated Costs Net of Deductibles	1,072	2,288,349	1,072	2,796,693	22.2%
Coinsurance	1,072	763,735	1,072	979,546	28.3%
Primary Payer Amount	1,072	4	1,072	11	180.9%
Medicare Program Amount	1,072	1,553,117	1,072	1,865,914	20.1%
Medicare Payments ²	1,072	2,329,556	1,072	2,876,100	23.5%
Coinsurance as % of Net Charges	1,072	15.0%	1,072	14.9%	-0.7%
Coinsurance as % of Net Estimated Costs	1,072	33.4%	1,072	35.0%	4.9%
Medicare Payment as % of Covered Charges	1,072	45.8%	1,072	43.7%	-4.6%
Coinsurance+Deduc as % of Medicare Payments	1,072	33.3%	1,072	35.1%	5.4%
Medicare Prgm Amt as % of Net Charges	1,072	30.6%	1,072	28.5%	-7.0%
Medicare Prgm Amt as % of Medicare Payments	1,072	66.7%	1,072	64.9%	-2.7%
			All Period 3 CAHs		
			Period 3 (2008/2009)		
Provider-level Distribution of Claims Data			Obs	Mean	
Claims			1,274	8,625	
Covered Charges			1,274	6,864,810	
Estimated Covered Costs ¹			1,274	2,907,000	
Deductibles			1,274	31,738	
Charges Net of Deductibles			1,274	6,833,072	
Estimated Costs Net of Deductibles			1,274	2,875,262	
Coinsurance			1,274	1,026,051	
Primary Payer Amount			1,274	19	
Medicare Program Amount			1,274	1,898,066	
Medicare Payments ²			1,274	2,955,875	
Coinsurance as % of Net Charges			1,274	15.0%	
Coinsurance as % of Net Estimated Costs			1,274	35.7%	
Medicare Payment as % of Covered Charges			1,274	43.1%	
Coinsurance+Deductible as % of Medicare Payments			1,274	35.8%	
Medicare Program Amount as % of Net Charges			1,274	27.8%	
Medicare Program Amount as % of Medicare Payments			1,274	64.2%	
NOTES:					
1. Data in this table are from the SAF claims file except for <i>Estimated Covered Costs</i> . RTI calculated estimated costs by multiplying the service-specific cost-to-charge ratios from the Medicare Cost Reports by covered charges.					
2. Medicare Payment equals the sum of Deductibles, Coinsurance, Primary Payer Amount, and the Medicare Program Amount.					
SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF) and Medicare Cost Reports (MCR), FY2005-FY2009.					

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**Table 3-5B. Outpatient Claims, Charges, Costs, and Payments per Provider—
Annualized Data—Annualized and Inflation-Adjusted Data (2006
dollars) (continued)**

	CAH Status in Both Period 2 and Period 3				
	Period 2 (2005/2006)		Period 3 (2008/2009)		3-year Percent Change
Provider-level Distribution of Claims Data	Obs	Mean	Obs	Mean	
Claims	1,072	8,279	1,072	8,415	1.6%
Covered Charges	1,072	5,030,474	1,072	5,919,823	17.7%
Estimated Covered Costs ¹	1,072	2,275,215	1,072	2,542,288	11.7%
Deductibles	1,072	12,569	1,072	27,549	119.2%
Charges Net of Deductibles	1,072	5,017,905	1,072	5,892,274	17.4%
Estimated Costs Net of Deductibles	1,072	2,262,646	1,072	2,514,739	11.1%
Coinsurance	1,072	755,028	1,072	880,686	16.6%
Primary Payer Amount	1,072	4	1,072	10	154.9%
Medicare Program Amount	1,072	1,535,955	1,072	1,677,938	9.2%
Medicare Payments ²	1,072	2,303,556	1,072	2,586,182	12.3%
Coinsurance as % of Net Charges	1,072	15.0%	1,072	14.9%	-0.7%
Coinsurance as % of Net Estimated Costs	1,072	33.4%	1,072	35.0%	4.9%
Medicare Payment as % of Covered Charges	1,072	45.8%	1,072	43.7%	-4.6%
Coinsurance+Deduc as % of Medicare Payments	1,072	33.3%	1,072	35.1%	5.4%
M'care Program Amt as % of Net Charges	1,072	30.6%	1,072	28.5%	-7.0%
M'care Program Amt as % of Medicare Payments	1,072	66.7%	1,072	64.9%	-2.7%
All Period 3 CAHs					
			Period 3 (2008/2009)		
Provider-level Distribution of Claims Data			Obs	Mean	
Claims			1,274	8,625	
Covered Charges			1,274	6,174,243	
Estimated Covered Costs ¹			1,274	2,614,755	
Deductibles			1,274	28,558	
Charges Net of Deductibles			1,274	6,145,685	
Estimated Costs Net of Deductibles			1,274	2,586,197	
Coinsurance			1,274	1,026,051	
Primary Payer Amount			1,274	19	
Medicare Program Amount			1,274	1,898,066	
Medicare Payments ²			1,274	2,955,875	
Coinsurance as % of Net Charges			1,274	16.7%	
Coinsurance as % of Net Estimated Costs			1,274	39.7%	
Medicare Payment as % of Covered Charges			1,274	47.9%	
Coinsurance+Deductible as % of Medicare Payments			1,274	35.7%	
Medicare Program Amount as % of Net Charges			1,274	30.9%	
Medicare Program Amount as % of Medicare Payments			1,274	64.2%	
NOTES:					
1. Data in this table are from the SAF claims file except for <i>Estimated Covered Costs</i> . RTI calculated estimated costs by multiplying the service-specific cost-to-charge ratios from the Medicare Cost Reports by covered charges.					
2. Medicare Payment equals the sum of Deductibles, Coinsurance, Primary Payer Amount, and the Medicare Program Amount.					
3. Data were inflation-adjusted to 2006 dollars using the Medicare PPS Hospital Input Price Index, based on the quarter end date of the hospital cost report.					
SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF) and Medicare Cost Reports (MCR), FY2005-FY2009.					

Among the matched-pair CAHs, the mean number of Medicare traditional fee-for-service outpatient claims per provider increased slightly (1.6%) from Period 2 to Period 3. This result contrasts with the 12.6 percent increase in claims observed in the previous analysis, comparing Period 1 with Period 2. It is likely related to the continued growth in MA enrollment from 2006 to 2009 referenced earlier in *Section 2.2* of this report.¹⁴ There was a larger increase of 29.4 percent in nominal Medicare charges and 17.7 percent in inflation-adjusted charges per provider.

Inflation-adjusted coinsurance amounts per CAH increased commensurate with charges (16.6%). In the same period, inflation-adjusted costs per provider grew 11.7 percent, indicating that only part of the increase in real charges per claim is a reflection of increased numbers of services per visit or a more expensive mix of services. The rest is attributable to increasing mark-up rates. Medicare's cost-based payments did not increase commensurate with the increase in costs, because beneficiary liabilities for coinsurance accounted for an increasing share. Mean Medicare program payments per CAH rose only 9.2 percent in the 3-year span. Beneficiaries' share of total payments rose from 33 to 35 percent, whereas the Medicare program's share of total payments decreased correspondingly from 67 to 65 percent. Increases over time in beneficiary liability as a share of total CAH outpatient payments are strictly a function of increased mark-up.

Although the growth in charges from Period 2 to Period 3 has slowed compared with the Period 1 to Period 2 analysis, it still outpaces the growth rate for costs, leading to the increasing coinsurance burden for beneficiaries.

For a small group of CAHs, beneficiary payments make up more than 50 percent of the total payments for Medicare outpatient services (*Table 3-6*). As reported in our previous analysis, in Period 1 only 1.1 percent of the 621 CAHs in the sample had these high beneficiary liability ratios. Our current matched-pair CAH results show that the figure was 2.3 percent of CAHs in Period 2 and 5.1 percent of CAHs in Period 3. Furthermore, the full sample Period 3 results show that 6.3 percent of CAHs have beneficiaries paying more than 50 percent of the total Medicare payments. *Table 3-6* also shows that the ratio of beneficiary liabilities to total payments for Medicare outpatient services is increasing across all CAHs.

¹⁴In a 2011 study for CMS evaluating the Medicare Part D Program, RTI conducted a plan-switching enrollment analysis, comparing characteristics of beneficiaries who switch from fee for service (FFS) to MA or the reverse. Beneficiaries who switched into MA plans had lower risk scores (fewer diseases predicting costs), lower Part A and B spending, and lower Part D drug spending than the beneficiaries who remained in FFS. Those who switched from MA plans to FFS had higher risk scores (indicating more diseases) and higher spending than the beneficiaries who remained in MA plans. The net effect was that as MA plan enrollment grew, the FFS population on average became sicker and more costly. [*Medicare Part D Program Evaluation: Analysis of the Impact of Medicare Part D on the FFS Program and Issues Related to Medication Adherence for Six Chronic Conditions—2008*, Ingber, Freeman, et. Al., 2011.]

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Table 3-6. Distribution of Beneficiary Liabilities as Proportion of Total Medicare Payment

Provider-level Distribution	Beneficiary Liability Ratio (Coinsurance+Deductibles)/Total Payments for Medicare Services		
	Matched Pair CAHs		Full Period 3 Sample
	Period 2 (2005/2006) CAHs	Period 3 (2008/2009) CAHs	Period 3 (2008/2009) CAHs
Number of observations	<u>1,072</u>	<u>1,072</u>	<u>1,274</u>
Mean ratio	0.30	0.32	0.33
Minimum	0.07	0.08	0.08
10th percentile	0.19	0.21	0.21
25th percentile	0.24	0.26	0.26
Median	0.30	0.31	0.32
75th percentile	0.36	0.38	0.39
90th percentile	0.41	0.45	0.46
Maximum	0.72	0.77	0.77
Percent of CAHs with ratios above 0.50	2.3%	5.1%	6.3%

SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF), FY2005-FY2006, CY2008-CY2009.

Tables 3-7, 3-8, and 3-9 show per-hospital changes in the volume of claims, charges, and costs, by key service groups. Volume figures are based on the number of *line items* rather than whole claims. We have identified the percentage of hospitals in the subgroup that have *at least one* claim with a line item with this type of service, as a way to indicate the scope of services offered across CAHs. In each table, the 16 service groups are listed in rank order on the basis of their respective Period 3 data. For all three tables, the Diagnostic Laboratory Testing service group is ranked first, having the greatest number of claims per provider, the greatest total covered charges, and the greatest total covered costs. The second-ranked service group varies by table—Pharmacy is second in terms of claims per provider, CAT Scan in terms of covered charges, and Emergency Room in terms of total covered costs. Each table’s rankings have changed slightly from the Period 2 results. Additional detail on changes in outpatient CAH charges by revenue code is provided in *Appendix Table A-3*.

Compared with the previous analysis, there is limited evidence of increasing complexity in the service mix of CAHs. From Period 1 to Period 2, there was double-digit percent growth in 13 of 16 service groups in terms of the mean number of claims per provider. In contrast, changes from Period 2 to Period 3 show double-digit percent growth in six service groups and single-digit percent growth in another six service groups (*Table 3-7*). Four service groups—Cardiology, Surgery, Anesthesia, and Gastrointestinal Services—had decreases in the mean number of claims per provider.

By Period 2, most CAHs had at least some claims with CAT Scanning charges. There was a small increase between Period 2 and Period 3 in the number of providers for that service group (1.3%), but there

was a much larger increase in the mean number of CAH claims with CAT Scanning charges (16%). This pattern was reversed in the MRI service group; there was a 7.6 percent increase in the number of CAHs with MRI claims, but only a 1.9 percent increase in the mean number of MRI claims per CAH. The low number of MRI claims per CAH suggests that many of the facilities may be contracting with mobile MRI service providers.

The use of Clinic services grew for both the percentage of providers with these claims (8.6%) and the mean number of claims per provider (37.9%). These figures may reflect increased participation in hospital-based primary and specialty care.¹⁵

CAH service mix is captured in *Table 3-8*, measured as each service group's percent contribution to total covered charges. Changes in CAH service mix could be a function of many factors—an increased number of CAHs providing the service, changes in the relative frequency of one service compared with another, or simply a differential rate of increase in mark-up rates. Diagnostic Laboratory Testing services continue to dominate the outpatient business for all of these providers. Charges for CAT Scan and Emergency Room services, however, increased as a percentage of total charges.

To eliminate the mark-up factor in assessing service mix, an alternative measure can be obtained by computing the percentage of estimated costs (*Table 3-9*). This measure shows rankings slightly different from those of the charge-based measure. Emergency Room, for example, ranks 4th in charges, but 2nd in costs; whereas CAT Scan ranks 2nd in charges, but 6th in costs. On the basis of costs, clinic services ranked 10th in Period 2 but rose to 8th in Period 3, suggesting a real increase in the relative importance of this service to total outpatient CAH services.

¹⁵ Professional fees for Clinic services were not assigned to this service group.

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Table 3-7. Claims Volume by Service Group

Service Group (Ranked by Period 3 Claims per Provider)	Matched Pair CAHs Period 2 and Period 3					
	Period 2 (2005/2006) 1,072 CAHs		Period 3 (2008/2009) 1,072 CAHs		3-Year Percent Change	
	% of Providers with Claims	Mean Number of Claims per Provider*	% of Providers with Claims	Mean Number of Claims per Provider*	% of Providers with Claims	Mean Number of Claims per Provider*
Lab	100.0%	19,059	100.0%	20,182	0.0%	5.9%
Pharmacy	100.0%	2,816	100.0%	3,329	0.0%	18.2%
Rehab Therapy	95.1%	2,614	95.7%	2,692	0.6%	3.0%
Radiology Dx	100.0%	2,106	100.0%	2,159	0.0%	2.5%
Emergency Room	100.0%	1,533	100.0%	1,742	0.0%	13.7%
Clinics	79.2%	1,248	86.0%	1,722	8.6%	37.9%
Medical Supplies	100.0%	1,485	99.9%	1,519	-0.1%	2.3%
Cardiology	100.0%	892	100.0%	842	0.0%	-5.6%
CAT Scan	93.1%	526	94.3%	610	1.3%	15.9%
Observation	98.9%	424	99.3%	491	0.4%	16.0%
Respiratory Therapy	93.8%	430	93.3%	458	-0.5%	6.5%
Surgery	86.6%	442	86.8%	418	0.2%	-5.6%
Anesthesia	76.8%	175	74.2%	161	-3.4%	-7.9%
MRI	71.4%	135	76.8%	137	7.6%	1.9%
GI Services	32.9%	131	35.6%	119	8.2%	-9.4%
Blood	95.5%	67	95.1%	77	-0.4%	14.1%
	Full Period 3 Sample					
	Period 3 (2008/2009) 1,274 CAHs					
Service Group (Ranked by Period 3 Claims per Provider)			% of Providers with Claims	Mean Number of Claims per Provider*		
Lab			100.0%	20,725		
Pharmacy			100.0%	3,455		
Rehab Therapy			95.6%	2,724		
Radiology Dx			100.0%	2,247		
Emergency Room			100.0%	1,818		
Clinics			86.3%	1,745		
Medical Supplies			99.9%	1,568		
Cardiology			100.0%	873		
CAT Scan			94.7%	637		
Observation			99.2%	494		
Respiratory Therapy			93.5%	469		
Surgery			86.9%	449		
Anesthesia			74.1%	166		
MRI			76.7%	145		
GI Services			35.8%	122		
Blood			95.4%	81		

NOTES:

* Conditional on claims having charges > 0. These are line-item-level claims. A single patient claim may have multiple line items of the same service group (e.g. three different labs w ithin the same patient claim). Claims figures have been annualized. The 3-year percent change in mean number of claims per provider w as calculated using means before they w ere rounded to the nearest w hole dollar for presentation purposes.

SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF), FY2005-FY2006, CY2008-CY2009.

Table 3-8. Charges by Service Group

Service Group (Ranked by Period 3 Total Covered Charges)	Matched Pair CAHs Period 2 and Period 3							
	Period 2 (2005/2006) 1,072 CAHs			Period 3 (2008/2009) 1,072 CAHs			3-Year Percent Change	
	Total Covered Charges	Service Group Charges as Percent of Total	Mean Charge per Claim Line*	Total Covered Charges	Service Group Charges as Percent of Total	Mean Charge per Claim Line*	Total Covered Charges	Mean Charge per Claim Line*
Lab	1,217,003,008	22.6%	60	1,396,642,336	22.0%	64	14.8%	6.8%
CAT Scan	548,568,564	10.2%	1,022	698,972,543	11.0%	1,097	27.4%	7.3%
Pharmacy	594,550,496	11.0%	187	646,313,517	10.2%	174	8.7%	-7.1%
Emergency Room	404,236,728	7.5%	236	529,654,618	8.3%	275	31.0%	16.4%
Surgery	431,258,861	8.0%	989	474,858,250	7.5%	1,109	10.1%	12.1%
Radiology Dx	398,794,720	7.4%	168	450,921,899	7.1%	183	13.1%	8.8%
Rehab Therapy	228,688,590	4.2%	90	264,630,537	4.2%	99	15.7%	9.7%
Medical Supplies	236,315,754	4.4%	144	244,793,436	3.9%	149	3.6%	3.4%
Cardiology	207,788,762	3.9%	199	210,022,702	3.3%	212	1.1%	6.1%
MRI	172,856,570	3.2%	1,624	200,659,498	3.2%	1,709	16.1%	5.3%
Observation	117,551,012	2.2%	351	148,941,274	2.3%	412	26.7%	17.5%
Clinics	79,677,733	1.5%	83	136,486,748	2.2%	97	71.3%	17.2%
Anesthesia	70,730,322	1.3%	525	64,500,133	1.0%	517	-8.8%	-1.7%
GI Services	50,589,030	0.9%	999	57,095,403	0.9%	1,155	12.9%	15.6%
Respiratory Therapy	40,083,812	0.7%	94	47,676,416	0.8%	104	18.9%	11.1%
Blood	32,566,405	0.6%	508	38,184,904	0.6%	524	17.3%	3.2%
All Period 3 CAHs								
				Period 3 (2008/2009) 1,274 CAHs				
Service Group (Ranked by Period 3 Total Covered Charges)				Total Covered Charges	Service Group Charges as Percent of Total	Mean Charge per Claim Line*		
Lab				1,700,057,450	21.6%	64		
CAT Scan				877,129,468	11.2%	1,100		
Pharmacy				799,334,227	10.2%	173		
Emergency Room				661,393,660	8.4%	277		
Surgery				603,066,794	7.7%	1,109		
Radiology Dx				560,207,739	7.1%	184		
Rehab Therapy				319,819,882	4.1%	100		
Medical Supplies				309,758,708	3.9%	154		
Cardiology				259,176,954	3.3%	213		
MRI				251,620,683	3.2%	1,714		
Observation				179,389,408	2.3%	420		
Clinics				164,416,383	2.1%	97		
Anesthesia				80,911,198	1.0%	528		
GI Services				69,510,578	0.9%	1,165		
Respiratory Therapy				58,263,699	0.7%	106		
Blood				48,289,519	0.6%	529		

NOTES:
* Conditional on claims having charges > 0. These are line-item-level claims. A single patient claim may have multiple line items of the same service group (e.g. three different labs within the same patient claim, each with its own charge).
Charges have been annualized and were inflation-adjusted to 2006 dollars using the Medicare PPS Hospital Input Price Index, based on the quarter end date of the hospital cost report.
SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF), FY2005-FY2006, CY2008-CY2009.

As covered charges rose over the 3-year study period because of increased mark-up, beneficiary coinsurance associated with each service also increased. *Table 3-10* presents data from Period 3 on coinsurance as a percentage of charges and as a percentage of costs for each of the 16 service groups. (Similar data by state and region are included as *Appendix Table A-4*.) Differences across types of service in coinsurance relative to cost are central to the issue of how the burden of excess coinsurance in CAH settings is distributed across beneficiaries. This table reflects the impact of the variation in CCRs by cost center (noted in *Section 3.1*) as these ratios are applied to individual claims charges. For example, Cardiology and CAT Scan cost centers tend to have the lowest CCRs; consequently, claims with these services have the highest values for coinsurance relative to claims cost. As was observed in Period 2, a number of providers in our hospital sample continue to report extremely low Cardiology CCRs (below 0.050), and these account for the very high mean value of coinsurance as a percentage of costs for that one service group.

In Period 2, 7 of the 16 service groups had median coinsurance as a percentage of covered costs greater than 40 percent. By Period 3, the number of service groups with these high median percentages increased to 9 of 16. CAT Scan replaced Cardiology in terms of having the highest median coinsurance as a percentage of covered costs, 60.6 percent. Looking at regional variation (*Appendix Table A-4*), four states—Florida, Kentucky, Massachusetts, and Virginia—had median values for both CAT Scan and MRI above 100 percent. This represented a marked increase from our Period 2 results. For Florida, the increases were more than 60 percentage points (e.g., Period 2, 9 CAHs, CAT Scan median 68.3%; Period 3, 11 CAHs, CAT Scan median 129.4%).

Table 3-10. Distribution of Coinsurance Relative to Costs, by Service Group

	Matched Pair CAHs Period 2 and Period 3												Percent Change from Period 2 to Period 3 in Coinsurance as % of Estimated Covered Costs			
	Period 2 (2005/2006) 1,072 CAHs						Period 3 (2008/2009) 1,072 CAHs									
	Coinsurance as % of Covered Charges		Coinsurance as % of Estimated Covered Costs				Coinsurance as % of Covered Charges		Coinsurance as % of Estimated Covered Costs				Mean	25th percentile	50th percentile	75th percentile
Obs	Mean	Mean	25th percentile	50th percentile	75th percentile	Obs	Mean	Mean	25th percentile	50th percentile	75th percentile	Mean	25th percentile	50th percentile	75th percentile	
Pharmacy	1,072	19.8	51.6	38.8	48.2	61.2	1,072	19.8	53.1	38.1	48.0	63.0	3%	-2%	0%	3%
Lab	1,058	1.3	3.4	1.6	2.9	4.5	989	1.1	3.2	1.6	2.7	4.0	-5%	-1%	-7%	-11%
Medical Supplies	1,072	19.9	58.7	31.8	47.5	69.0	1,071	19.9	56.1	31.1	46.0	65.4	-4%	-2%	-3%	-5%
Radiology Dx	1,072	18.9	50.1	34.4	46.8	61.5	1,072	18.5	56.6	36.7	51.5	69.8	13%	7%	10%	14%
CAT Scan	998	20.0	63.1	42.1	54.7	70.5	1,011	19.9	71.7	46.1	60.6	81.8	14%	10%	11%	16%
MRI	765	20.0	61.6	43.5	56.7	70.0	823	20.0	66.3	45.7	59.5	78.6	8%	5%	5%	12%
Respiratory Therapy	1,005	19.9	60.6	30.8	44.3	65.1	998	19.8	54.2	29.7	42.2	62.2	-11%	-4%	-5%	-5%
Rehab Therapy	1,020	19.9	30.9	22.7	28.6	37.3	1,025	19.9	31.9	23.6	29.5	37.7	3%	4%	3%	1%
Cardiology	1,072	19.9	103.8	38.7	56.9	105.4	1,072	19.8	97.2	39.9	57.2	106.7	-6%	3%	0%	1%
Emergency Room	1,072	19.9	26.0	15.5	22.9	33.1	1,072	19.8	28.4	16.6	24.4	35.9	9%	7%	7%	9%
Surgery	928	20.0	39.6	26.7	36.3	49.1	928	20.1	39.9	27.3	36.5	49.1	1%	2%	0%	0%
GI Services	353	20.0	43.1	27.5	36.8	52.9	381	20.4	42.9	28.8	40.5	52.6	0%	5%	10%	-1%
Blood	1,023	19.3	38.4	30.2	37.6	46.3	1,020	20.0	42.3	32.3	39.6	50.0	10%	7%	5%	8%
Anesthesia	822	20.0	77.6	23.4	34.4	58.7	791	20.0	76.2	26.1	40.1	69.9	-2%	12%	16%	19%
Clinic	773	18.1	22.0	9.2	16.2	29.4	836	17.8	21.1	8.9	15.2	27.9	-4%	-2%	-7%	-5%
Observation	1,059	19.9	13.4	9.4	12.8	16.4	1,064	19.9	13.8	9.3	12.3	16.8	3%	-1%	-4%	3%

NOTES:

1. Coinsurance is not applicable to diagnostic laboratory testing charges included within other claims.
2. Estimated costs were calculated by multiplying the service-specific cost-to-charge ratios from the Medicare Cost Reports by covered charges.

SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF) FY2005-FY2006, CY2008-CY2009, and Medicare Cost Reports, FY2005-FY2009.

Estimates of Program Payments Under Cost-Based Coinsurance

In this section, we estimate the costs to the Medicare program of shifting CAH outpatient copayments from 20 percent of charges to 20 percent of costs.

4.1 Cost to the Medicare Program of Converting to Cost-Based Coinsurance

4.1.1 Estimations Using Summary Cost Report Data

Repeating the methods from our previous analysis, we first estimated the cost to Medicare of the policy change to cost-based coinsurance using existing cost report data from Worksheet E Part B (*Table 4-1*). Actual coinsurance amounts reported for 1,271 CAHs¹⁶ in Period 3 total about \$1.26 billion, implying that approximately \$6.3 billion in charges were subject to coinsurance ($\$1.26 \div 0.20 = 6.3$). (From this we can infer that roughly 20 percent of charges reported on Worksheet D Part V must have been for diagnostic laboratory tests or other items not subject to coinsurance.) The aggregate ratio of covered costs to charges on Worksheet D Part V across all 1,271 CAHs is 0.43, so coinsurance based on 20 percent of costs rather than charges would be approximately \$536 million. Medicare's share of allowable program costs would increase by \$724 million, to offset the providers' loss in coinsurance collected from Medicaid, secondary payers, and beneficiaries.

Worksheet E Part B also shows that the Medicare program paid \$115 million to these CAH providers for allowable bad debts attributable to outpatient coinsurance and deductibles. It is reasonable to assume that if a policy change reduces the amount of coinsurance owed by 57 percent, it should reduce the amount of Medicare bad debt incurred as a result of unpaid coinsurance by a similar amount. The reduction in bad debt would offset some of the estimated increase in Medicare interim payments. We computed the ratio of coinsurance to total beneficiary liabilities on the Part B claims file; using this ratio, we estimated that about \$112 million of the total Part B bad debts claimed by the CAHs was applicable to coinsurance. Table 4-1 therefore includes an offset of \$64 million (or 57% of what was reported) to the estimated increase in Medicare interim payments, leaving a net additional Medicare program outlay estimate of \$660 million. From Worksheet E Part B, we also find that a large part of the Part B bad debt is attributable to balances unpaid by state Medicaid programs for dually eligible beneficiaries. Depending on the specific state policies for recognizing allowable coinsurance amounts, the reduction in Medicaid-related Medicare bad debt could be greater than 57 percent. We discuss this further in *Section 4.2*.

¹⁶Three of the 1,274 CAHs in the full Period 3 sample did not report coinsurance on their cost reports and were omitted from the Table 4-1 calculations.

**Table 4-1. Estimated Cost to the Medicare Program of Implementing
Coinsurance Based on 20 Percent of Part B Costs**

Recomputed Aggregate Coinsurance Amounts from Medicare Cost Report Worksheets E Part B and D Part V Period 3 (2008/2009) — 1,271 CAHs ¹			
Line	Description	Source or Calculation	Medicare Cost Report Data and Computations (Dollars are annualized but not adjusted for inflation)
1	Total charges	[Wksht D Part V, Col 5, Line 101]	\$7,863,220,711
2	Estimated charges subject to coinsurance	<i>line 5 / 0.2</i>	\$6,300,716,226
3	Total Part B costs	[Wksht E Part B, Line 1]	\$3,344,553,885
4	Estimated costs subject to coinsurance	<i>line 2 * (line 3 / line 1)</i>	\$2,679,955,925
5	Actual coinsurance paid	[Wksht E Part B, Line 18.1] ¹	\$1,260,143,245
6	Actual coinsurance paid as a percent of costs subject to coinsurance	<i>line 5 / line 4</i>	47%
7	Estimated coinsurance, based on 20% of costs	<i>0.2 * (line 4)</i>	\$535,991,185
8	Dollar reduction in coinsurance payments	<i>line 7 – line 5</i>	-\$724,152,060
9	Percent reduction in coinsurance payments	<i>line 8 / line 5</i>	-57%
10	Total allowable bad debts claimed for reimbursement	[Wksht E Part B, Line 27]	\$114,906,072
11	Coinsurance portion of total allowable bad debts claimed for reimbursement	[Wksht E Part B, Line 27] * [coinsurance / (coinsurance + deductible)] ²	\$111,617,310
12	Possible reduction in reimbursed bad debts	<i>line 9 * line 11</i>	-\$64,141,839
13	Net cost to Medicare Program	<i>–(line 8 – line 12)</i>	\$660,010,221
	Estimated cost to Medicare Program grossed up for 2011 total of 1,327 CAHs	<i>line 13 * (1,327/1,271)</i>	\$689,090,137
NOTE:			
1. Three of the 1,274 CAHs in the Period 3 sample did not report coinsurance on line 18.1 as instructed and are omitted from this table.			
2. The ratio of coinsurance to (coinsurance + deductible) was derived for each CAH from Period 3 outpatient SAF claims data.			
SOURCE: RTI International analysis of Medicare Cost Reports, Worksheets E Part B and D Part V, FY2008-2009, and Medicare outpatient standard analytic file (SAF) CY2008-CY2009.			

The net additional Medicare program outlay estimate of \$660 million represents a substantial proportional increase in the Medicare program’s share of payments to CAHs and an increase of 2.4 percent in Medicare’s total hospital Part B payments, which were \$27.6 billion.¹⁷ Furthermore, the net additional program outlay is computed for 1,271 CAHs in our sample, but there are 1,327 certified CAHs

¹⁷MedPAC Data Book, June 2011, Chart 7-11, p. 105.

as of March 2011.¹⁸ Under an assumption that these additional CAHs resemble those in the analysis sample, the addition to program outlay should be grossed up proportionally, to roughly \$689 million, or 2.5 percent of hospital Part B payments.

4.1.2 Estimations From Claims Data

RTI also estimated the cost to the Medicare program of the proposed policy change using claims rather than cost report summary data. We recomputed cost-based coinsurance for each claim by applying the CAH’s overall ancillary CCR to the coinsurance amount appearing on the claim. We stratified claims by size to identify differences in impact across low-, medium-, and high-charge claims. **Table 4-2** shows the impact on a per-claim basis to provide an estimate of the effects from the beneficiaries’ perspective. **Table 4-3** shows the total estimated impact on Medicare interim payments.

Table 4-2. Estimated Impact on Coinsurance per Claim From Policy Change

Period 3 (2008/2009)— 1,274 CAHs					
Outpatient Claims by Claim Size ¹	Number of Claims	Percent Distribution of Claims	Charge per Claim Subject to Coinsurance ²	Coinsurance per Claim	
				Actual (20% of charges)	Policy Change (20% of costs) ³
<= \$100	633,479	10.4%	\$51	\$10	\$5
\$100 to \$1,000	3,326,652	54.6%	\$303	\$61	\$28
\$1,000 to \$10,000	2,090,907	34.3%	\$2,302	\$461	\$195
>\$10,000	46,374	0.8%	\$14,568	\$2,914	\$1,148
Total	6,097,412	100.0%	\$1,071	\$214	\$91
NOTES:					
1. Outpatient SAF claims with total costs >= \$1 and total coinsurance > \$1.					
2. Covered charges net of deductibles and diagnostic laboratory testing.					
3. Cost-based coinsurance was calculated by multiplying the ancillary services cost-to-charge ratio derived from Worksheet D Part V of Medicare Cost Reports by the actual coinsurance.					
SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF), CY2008-CY2009.					

¹⁸Rural Assistance Center, http://www.raconline.org/info_guides/hospitals/cahfaq.php.

Table 4-3. Estimated Impact on Total Coinsurance Amounts From Policy Change

Period 3 (2008/2009)— 1,274 CAHs				
Outpatient Claims by Claim Size ¹	Actual Period 3 Coinsurance (20% of charges)	Percent Distribution of Actual Period 3 Coinsurance	Dollar Reduction in Coinsurance From Policy Change (20% of costs) ²	Mean Percent Reduction From Policy Change
<= \$100	\$6,470,355	0.5%	-\$3,218,073	-50%
\$100 to \$1,000	\$201,731,504	15.4%	-\$109,144,125	-54%
\$1,000 to \$10,000	\$963,502,491	73.7%	-\$555,133,718	-58%
>\$10,000	\$135,118,254	10.3%	-\$81,896,299	-61%
Total	\$1,306,822,604	100.0%	-\$749,392,215	-57%
Total (annualized) ³	\$1,306,719,234		-\$749,332,938	
Reduction grossed up for 2011 total of 1,327 CAHs			-\$780,506,129	
NOTES:				
1. Outpatient SAF claims with total costs >= \$1 and total coinsurance > \$1.				
2. Cost-based coinsurance was calculated by multiplying the ancillary services cost-to-charge ratio derived from Worksheet D Part V of Medicare Cost Reports by the actual coinsurance.				
3. Annualized totals are slightly less than actual because 0.32% of Period 3 CAHs had reporting periods longer than one year.				
SOURCE: RTI International analysis of Medicare outpatient standard analytic file (SAF), CY2008-CY2009.				

The cost of implementing cost-based coinsurance as estimated from the claims files is approximately \$749 million. If we gross up the charges to account for 1,327 CAHs in operation in 2011 (compared with 1,274 in our Period 3 sample), the estimated increase in Medicare interim payments is \$781 million, before taking into account any reduction in Medicare bad debt.¹⁹

In doing the claim-level analysis, we noted that among claims below \$100, the mean coinsurance based on 20 percent of costs is about half that of charge-based coinsurance, but the differences are greater for the higher charge claims. For this table the cost-based figures are derived from aggregate CCRs for each CAH. Consequently, the difference between low- and high-cost claims must reflect something about the mark-up practices and overall service mix of CAHs that have larger claims. Claims over \$10,000 represent less than 1 percent of all claims, although they account for 10 percent of charges and therefore of coinsurance owed.

4.2 Medicaid and Part B Bad Debt

CAHs are allowed to claim reimbursement from the Medicare program for all bad debts incurred from Medicare beneficiaries for coinsurance or deductibles. The CAHs must document that they either

¹⁹ From Table 4-1, the dollar reduction in coinsurance estimated from Worksheet E Part B data is \$724 million. The difference between claims-file totals and covered program charges on the cost report is likely attributable to timing.

made reasonable attempts to collect the debt if it was due from a patient directly (or wrote the amounts off to charity according to their existing charity guidelines) or that the amounts claimed represent unpaid balances after Medicaid has paid its allowed amount, if the beneficiary was eligible for Medicaid coverage.

Medicaid benefits for Medicare patient liabilities vary by state. In many state programs, Medicaid does not pay the full amount of the coinsurance.²⁰ When this occurs, CAHs can claim the unpaid amounts as “Medicaid bad debt.”

Medicaid bad debt makes up a sizeable and growing percentage of the total bad debt claimed by CAHs, as is shown in *Appendix Table A-5*. In the matched sample of CAHs, the share of CAH Medicare Part B bad debt that was attributable to dually eligible beneficiaries increased dramatically, from 36.7 percent in Period 2 to 63.0 percent in Period 3. The value of the Medicaid-related Medicare bad debt for all 1,274 Period 3 CAHs was \$66.1 million.

Table 4-4 walks through the effects on Medicaid bad debt of a Medicare policy change to cost-based coinsurance, showing various state Medicaid policies for paying coinsurance amounts.²¹ The upper portion of the table identifies payments under Medicare current policy, the lower part identifies what happens under cost-based CAH coinsurance, and each section presents relevant coinsurance and allowable bad debt figures for multiple Medicaid scenarios as follows:

- a) Medicaid pays 20 percent of charges;
- b) Medicaid pays 20 percent of estimated costs (based on the Medicare interim CCR);
- c) Medicaid pays based on full allowable payment [Medicare + Medicaid] set at 85 percent of a fee schedule amount (the pre-capped fee schedule amount is equal to the estimated costs); and
- d) Medicaid pays based on full allowable payment set at 85 percent of a fee schedule amount (the pre-capped fee schedule amount is about 5 percent below the estimated costs).

We use a sample charge of \$1,000 for a provider with an aggregate CCR of 0.60, reflecting allowable cost for the service of \$600 and an interim payment of \$406 (computed as 101 percent of \$600 minus coinsurance).

²⁰An April 2010 brief from the North Carolina Rural Health Research & Policy Analysis Center, *States’ Use of Cost-Based Reimbursement for Medicaid Services at Critical Access Hospitals*, summarizes CAH outpatient reimbursement policies for *Medicaid* services as this: (Cost-based) 14 states greater than cost, 9 states at cost, 4 states less than cost; (Not cost-based; usually reimbursed at rates comparable to PPS hospitals) 18 states (http://www.shepscenter.unc.edu/rural/pubs/finding_brief/FB94.pdf). Identifying the *Medicare* cost-sharing design of state Medicaid programs is beyond the scope of this project, but one might infer that similar methods (cost-based or PPS-based) would carry over to Medicaid coverage of Medicare copayments.

²¹Tennessee’s Medicaid program, known as TennCare, is an example of a state Medicaid program that sets the maximum amount considered for reimbursement for a Medicare service at 85 percent of the Medicare fee schedule. (<http://www.tn.gov/sos/rules/1200/1200-13/1200-13-17.20100825.pdf>) A design such as this reduces the Medicaid program’s cost-sharing liability, thereby increasing Medicaid bad debt, which can be seen in Appendix Table A-5. In Period 3, 93.8 percent of Tennessee’s CAHs had Medicaid bad debt and 77.7 percent of the total bad debt was attributable to Medicaid bad debt.

Table 4-4. Examples of the Effect of a Change to Cost-Based Coinsurance on Total Medicare Outlays, for a Service Where Medicaid Is the Secondary Payer

	Cov- ered Char- ges	Allow- able Cost (100%)	Coinsu- rance	Interim Payment (101% costs – coinsu- rance)	Change in Interim Payment	Medi- caid Pay- ment	Allow- able Bad Debt	Total Medi- care Outlay	Change in Total Medi- care Outlay	Change in Medi- caid Outlay
Medicare Coinsurance Set at 20% of Charges:										
a) If Medicaid pays 20% of charges	\$1,000	\$600	\$200	\$406		\$200	\$0	\$406		
b) If Medicaid caps payment at 20% of allowable cost	\$1,000	\$600	\$200	\$406		\$120	\$80	\$486		
c, d) If Medicaid caps full payment (Medicare + Medicaid) at 85% of a fee schedule amount and pre-capped fee schedule amount is ...										
c) equal to cost, \$600 (85% is \$510)	\$1,000	\$600	\$200	\$406		\$104	\$96	\$502		
d) about 5% below cost, \$571.76 (85% is \$486)	\$1,000	\$600	\$200	\$406		\$80	\$120	\$526		
Medicare Coinsurance Changes to 20% of Costs:										
a) Medicaid would now pay 20% of costs	\$1,000	\$600	\$120	\$486	\$80	\$120	\$0	\$486	\$80	-\$80
b) Medicaid would still pay 20% of allowable cost	\$1,000	\$600	\$120	\$486	\$80	\$120	\$0	\$486	\$0	\$0
c, d) Medicaid would still cap full payment at 85% of a fee schedule amount and pre-capped amount would still be ...										
c) equal to cost, \$600 (85% is \$510)	\$1,000	\$600	\$120	\$486	\$80	\$24	\$96	\$582	\$80	-\$80
d) about 5% below cost, \$571.76 (85% is \$486)	\$1,000	\$600	\$120	\$486	\$80	\$0	\$120	\$606	\$80	-\$80

SOURCE: RTI International.

Under the current charge-based coinsurance system, for scenario (a), the state Medicaid program pays the full coinsurance of \$200 and there is no additional Medicare outlay for bad debt. For scenarios

(b), (c), and (d), where state Medicaid programs cap the coinsurance at less than full payment, the difference between coinsurance owed and Medicaid payment is claimed as a reimbursable bad debt and increases Medicare's total outlays.

Changing to cost-based reimbursement would increase Medicare's interim payments by \$80 under all scenarios. At the same time the potential for allowable bad debt is eliminated in scenario (b), but unchanged in the fee schedule examples [scenarios (c) and (d)]. Medicaid programs that already paid at 20 percent of costs [scenario (b)] would see no change in their payments. State Medicaid programs that previously paid coinsurance above 20 percent of costs [scenario (a)] as well as Medicaid programs that under a fee schedule paid coinsurance below 20 percent of costs [scenarios (c) and (d)] would see their payments decrease. The latter examples illustrate how a Medicaid program might be designed to eliminate or greatly reduce the coinsurance liability. Under scenario (c) where the pre-capped fee schedule amount happens to be equal to costs, the Medicaid coinsurance payment of \$24 is equivalent to 4 percent of costs. If the pre-capped fee schedule amount is 5 percent below costs [scenario (d)], the Medicaid coinsurance payment is reduced to \$0 as the Medicare interim payment has paid in full the maximum allowable amount (85% of fee schedule).

When we estimated the cost to the Medicare program of a change to cost-based CAH coinsurance in Table 4-1, we estimated a 57 percent reduction in allowable bad debt, proportional to the reduction in coinsurance owed. Based on Table 4-4, an argument could be made that the increase in Medicare interim payments should be offset by 57 percent of the privately-owed allowable Medicare bad debts; however, the offset for Medicaid allowable bad debt could range from 0 percent up to 100 percent, depending on each state's Medicaid program design.

4.3 Summary

In this section we estimated the cost of the policy change and examined the role of bad debt. The cost of the policy change arises from the beneficiary copayment being brought down from the level they pay in the CAH (about 47 percent of estimated covered costs) to the level they would pay in a PPS hospital (probably no more than 20 percent). Policymakers would have to decide how to finance this cost. Obviously the Medicare program could absorb the entire cost of the policy change. Alternatively, the program cost could be fully or partially offset with other changes within CAH hospital payments or with more broadly targeted Medicare payment changes.

Policy Changes to Reduce the Critical Access Hospital Coinsurance Burden

5.1 Three Options

This study has documented that a disproportionate coinsurance burden for beneficiaries at CAHs exists and is increasing, as growth rates in charges continue to outpace those of costs for many services. In this final section we examine options for policy changes that could provide relief for the CAH beneficiary. The first two are based on costs, and the third is based on parity with OPSS.

5.1.1 Option 1

The simplest method of implementing cost-based coinsurance would be to have the Medicare Administrative Contractor extend its application of each hospital's outpatient interim rate (which is already derived from the hospital's expected average ancillary CCR) so that it applies to coinsurance amounts as well as to program payments. This approach can clearly reduce the burden of overpayment from charge-based coinsurance in total, but it does not address inequities that arise from different levels of mark-up across services. We illustrate this with *Table 5-1*, which presents hypothetical charge data for four separate services—CAT Scan, Clinic, Pharmacy, and Emergency Room—using CCRs roughly based on a Period 3 CAH in the Midwest. With an overall ancillary CCR of 0.554, the impact on beneficiaries of implementing cost-based coinsurance would be a reduction of 45 percent in their coinsurance. If copayments were computed on the basis of the estimated cost of each service, there would be no difference in aggregate (and therefore no difference in cost to the Medicare program). However, individual beneficiaries could experience considerable differences by service. For CAT Scan, for example, coinsurance would be reduced by 83 percent; whereas for clinic visits, coinsurance would increase by 17 percent.

5.1.2 Option 2

To address inequities in coinsurance at the service level, cost-based coinsurance could be implemented using service-specific CCRs for each CAH to discount charges to cost before computing coinsurance. The greater the number of service-specific CCRs applied, the closer the policy option gets to achieving the goal of having beneficiaries pay coinsurance based on costs, but also the less feasible the option becomes because of administrative complexity. A more modest and potentially more feasible approach would be to use a limited set (3–5) of service-specific CCRs. As an example, for a minimum set of three service-specific CCRs, the groupings could be based on underlying CCR ranges, such as these:

- Clinic, Observation, and possibly Emergency Services (generally the highest CCRs);
- Cardiology, Radiology, and other Imaging (generally the lowest CCRs); and
- all other outpatient services (mixed range).

Adding to the administrative complexity of this option, however, is the problem of the difficulty of implementing this approach without also implementing the same service-specific CCRs for purposes of computing interim payments. This would constitute a major change in outpatient payment procedures for CAHs.

Table 5-1 illustrates that Option 2, while administratively complex, would have the same effect on Medicare program outlays as Option 1. In aggregate, beneficiaries at a CAH would owe the same coinsurance amounts as in Option 1, but at the level of the individual beneficiary receiving the individual service, the coinsurance burden under Option 2 would be much more equitably distributed.

Table 5-1. Hypothetical Burden Shifts From a Change to Cost-Based Coinsurance in Critical Access Hospital, per \$100 in Charges

Option 1 — If computed at 20 percent of cost estimates based on overall ancillary CCR:										
Service	Charge	Current co-insurance burden at 20% of charges	Overall ancillary CCR	Estimated costs based on ancillary CCR	Current Medicare program payment at (101% costs – co-insurance)	Modified co-insurance at 20% of estimated costs	Difference in co-insurance	Revised Medicare program payment	Percent reduction to beneficiary	Percent increase to Medicare
CAT Scan	\$100.00	\$20.00	0.554	\$55.40	\$35.95	\$11.08	-\$8.92	\$44.87	-45%	25%
Clinic	\$100.00	\$20.00	0.554	\$55.40	\$35.95	\$11.08	-\$8.92	\$44.87	-45%	25%
Pharmacy	\$100.00	\$20.00	0.554	\$55.40	\$35.95	\$11.08	-\$8.92	\$44.87	-45%	25%
Emergency Room	\$100.00	\$20.00	0.554	\$55.40	\$35.95	\$11.08	-\$8.92	\$44.87	-45%	25%
All Services	\$400.00	\$80.00	0.554	\$221.60	\$143.82	\$44.32	-\$35.68	\$179.50	-45%	25%
Option 2 — If computed at 20 percent of cost estimates based on service-specific CCRs:										
Service	Charge	Current co-insurance burden at 20% of charges	Service-specific CCRs	Estimated costs based on service-specific CCRs	Current Medicare program payment	Modified co-insurance at 20% of estimated costs	Difference in co-insurance	Revised Medicare program payment (based on revised coinsurance and revised interim)	Percent reduction to beneficiary	Percent increase to Medicare
CAT Scan	\$100.00	\$20.00	0.175	\$17.50	\$35.95	\$3.50	-\$16.50	\$14.18	-83%	-61%
Clinic	\$100.00	\$20.00	1.168	\$116.80	\$35.95	\$23.36	\$3.36	\$94.61	17%	163%
Pharmacy	\$100.00	\$20.00	0.301	\$30.10	\$35.95	\$6.02	-\$13.98	\$24.38	-70%	-32%
Emergency Room	\$100.00	\$20.00	0.572	\$57.20	\$35.95	\$11.44	-\$8.56	\$46.33	-43%	29%
All Services	\$400.00	\$80.00	0.554	\$221.60	\$143.82	\$44.32	-\$35.68	\$179.50	-45%	25%

SOURCE: RTI International analysis of Medicare Cost Reports, FY2008-FY2009.

5.1.3 Option 3

Although changing to cost-based coinsurance alleviates much of the burden faced by CAH beneficiaries, it does not address the inequity caused by different payment systems across hospitals. In many cases, coinsurance based on 20 percent of costs is still higher than the comparable OPSS copayment for the same service. An alternative to cost-based coinsurance would be to require CAHs to process their

Part B claims as though they are paid under OPSS in order to compute OPSS-equivalent coinsurance. This option has lower administrative costs now than at the time it was discussed in RTI's previous report because CAHs currently submit Healthcare Common Procedure Coding System (HCPCS) codes (needed for APC assignments) for many services. The further reduction in coinsurance would, of course, translate to an increase in costs to the Medicare program. Although RTI did not estimate the cost of this option, it could be done by running CAH claims through the OPSS grouper to determine comparable coinsurance.

5.2 Discussion

If Medicare wants to avoid penalizing beneficiaries with high rates of coinsurance when CAHs set their charges well above cost, then there is a need to adjust the CAH coinsurance policy. Choosing between a change to cost-based coinsurance and a change to OPSS-equivalent payments may be a philosophical policy decision in addition to a financial one. If the Medicare program believes that beneficiaries benefit from using a local (though more expensive) CAH, and that they should therefore share in its support, then coinsurance based on 20 percent of costs is a fair and more equitable solution. On the other hand, if the belief is that beneficiaries should be held harmless with respect to their local hospital's choice of Medicare reimbursement, then a change to OPSS-equivalent payment may be a better solution.

