Refining Cost to Charge Ratios for Calculating APC and DRG Relative Payment Weights

Interim Report

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RTI International

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1. INTRODUCTION

1.1 Purpose of the Project

In August 2006, RTI International was awarded a contract from the Centers for Medicare & Medicaid Services (CMS) to investigate charge compression and other possible sources of aggregation bias in setting the cost-based relative resource weights under the inpatient prospective payment system (IPPS) using charges from claims data and cost-to-charge ratios (CCRs) from cost report data. Aggregation bias can occur if services with systematically different markup rates are grouped together to compute a single CCR. When that average ratio is used to convert charges to cost, the cost estimates for component services with higher markup rates will be overstated, while the estimates for component services with lower markup rates will be understated. In the 2006 contract, RTI used inpatient claims and cost report data to identify sources of aggregation bias and develop ways to improve the accuracy and precision of the CCR component of the IPPS cost-based weight methodology. "Charge compression" is a particular form of aggregation bias where weights for high-cost cases are systematically understated and weights for low-cost cases are systematically overstated. The best known example of this comes from a hospital industry practice of applying lower markups to expensive medical devices and implantable items, but higher markups for routine medical supplies. RTI found strong evidence of charge compression as well as other forms of aggregation bias in the relative weights for diagnosis-related groups (DRGs) under the inpatient prospective payment system (IPPS), and considered both accounting and statistical methods to reduce this bias. Our findings and recommendations were submitted to CMS in a report to CMS dated January 2007 (downloadable from the CMS website at www.cms.hhs.gov/reports/downloads/Dalton.pdf). Recommendations included the following:

- Reducing the level of aggregation used by CMS in computing cost and charge groups for national aggregate CCRs. For example, where CMS had grouped Emergency Room and Blood and Blood Processing in with an "All Other" services category in computing aggregate national CCRs, we recommended separating them. This recommendation, which was adopted in the FY 2008 IPPS rules, increased the number of service groups used for DRG costing from 13 to 15.
- Where accounting data could not support further disaggregation, using statistical adjustment to estimate separate CCRs. For example, no data are currently available from the cost report that could be used to identify different cost-to-charge ratios for medical devices compared to other medical supplies. To address charge compression for device pricing, therefore, we used regression models to estimate disaggregated ratios based on the hospital-level association between CCRs for Supplies Sold and the relative importance of charges for devices and implants. These model-based approaches were also recommended to adjust CCRs for IV solutions as a category separate from other Drugs Sold; and for CT Scanning and MRI as categories separate from other Radiology.
- Taking a variety of steps to improve the Medicare claims and cost report data. These recommendations fell into three main categories: (1) Creating new cost centers that would create accounting data to support disaggregation (particularly, a subscripted

line for Devices under the main line for Supplies Sold); (2) Using more detailed data on charges by revenue code from the Medicare inpatient claims files; and (3) Encouraging providers to improve the consistency in their reporting of total charges and Medicare program charges from the cost report, compared with covered charges as they appear in the Medicare claims files.

In August 2007, RTI was awarded a second contract to expand the techniques for refining cost ratios to the outpatient prospective payment system (OPPS). Although total Medicare OPPS payments are much less than IPPS payments, aggregation bias is potentially a larger problem for ambulatory services than it is for DRGs when looked at from a per-payment-unit perspective. Weights for ambulatory patient classifications (APCs) are much more sensitive to distortion in cost computations because the payment units are constructed for very limited service groups. DRGs are episode-based and typically reflect a broad array of services, and RTI's modeling found that in many cases, correcting for multiple over-aggregated CCRs in the IPPS cost estimations created offsetting effects that reduced the impact on individual DRG weights. Under OPPS, single procedures are often the main or the only service contributing to the APC cost, and any distortion introduced by over-aggregated cost ratios is transmitted directly to relative weight. A given outpatient visit might generate several APC claims, and it is possible that there are also cost offsetting effects within an outpatient episode, but the payment units would not reflect this. At the provider level, it is possible if not probable that overpayments and underpayments across multiple APCs average themselves out, such that a facility's total OPPS payments might not be seriously distorted. Systematic differences in the profitability of specific product lines, however, are not desirable because they create incentives for providers to change service mix and treatment options. Distortion in payment weights can influence provider behavior and possibly affect beneficiary access.

Under the Scope of Work for this second task order, RTI first undertook a detailed review of the mechanics of the median cost computations that are used to establish payment weights under OPPS. This included an assessment of the original CCRs computed from the Medicare Cost Report (MCR) and the mechanics of mapping revenue codes from the outpatient claims to CCRs from the cost reports, in order to convert line item claims charges to claims costs. We then adapted the statistical techniques developed in the 2006 contract, to assess the effects of charge compression within ancillary cost centers that are important to either the inpatient or outpatient payment systems. We then estimated adjusted ratios and recomputed costs per inpatient and outpatient payment unit, after taking our suggested changes into account.

1.2 Technical Background

1.2.1 Statistical Model-based Approaches to Adjusting Cost-to-Charge Ratios

Relative resource weights for both APCs and acute care DRGs rely on service-specific CCRs derived from Medicare cost reports, but there are substantial differences between the two payment systems in the way that CCRs are computed and in the mechanics of how they are applied to charges. Where DRG cost-based weights use national average CCRs and compute cost estimates only after aggregating charge data up to the DRG level, APC weights are derived from claims-level costs that are estimated using much more detailed provider-level CCRs.

In the IPPS compression study, RTI computed statistically disaggregated CCRs by estimating the departmental CCR as a function of the provider's overall ancillary cost-to-charge ratio and the ratio of Medicare inpatient claims charges for the particular targeted service relative to Medicare inpatient claims charges for all charges in the group of services associated with that departmental CCR. Targeted services refer to the set of revenue charge codes within a given cost center that are suspected of having systematically different markup rates compared to other services in that cost center. As a matter of expediency, targeted services under the 2006 task order were identified from revenue code data in the inpatient standard analytic files (SAF); for this task order RTI was able to use combined inpatient and outpatient SAF charges.

The Statement of Work for this project requested an approach to adjusted CCRs that is consistent for both the IPPS and the OPPS, stating that "for services important to both the IPPS and the OPPS such as devices, it is appropriate to apply the same or consistent adjustments in both payment systems." As part of this second project RTI has re-estimated compression-adjusted weights for the new Medicare severity (MS) DRGs, using targeted percent variables derived from combined inpatient and outpatient SAF claims. As described in the following section and discussed in Section 5.4 of the Final Report, for some cost centers differences between the national CCR construction used for IPPS costs and the hospital-specific CCRs used for OPPS costs prevent us from using the same model specifications to develop compression-adjusted CCRs for constructing both DRG and APC weights

1.2.2 Differences Between Inpatient and Outpatient Prospective Payment System Use of CCRs

DRG cost-based weights are computed using national average rather than hospital-specific CCRs. For these averages to be valid charge converters, they must be based on a mix of cost centers that are commonly reported by most hospital providers. Under IPPS, the DRG weights are constructed from data in the Medicare Provider Analysis and Review (MedPAR) claims file, where charges have already been aggregated to roughly 30 groups that have an approximate correspondence to the CMS standard "roll up" of cost report line numbers (with some exceptions, and after combining a few standard lines). Although most hospitals provide all of the services associated with standard cost report line numbers, they do not necessarily use all cost report lines to separately identify their costs and charges. MedPAR charge groups are therefore collapsed to broader categories of services thought to be common across all providers, and these broader categories are mapped to groups of lines on the cost reports. National CCRs are computed from these grouped cost centers on the Medicare cost report. The FY 2007 rules used 13 charge groups; the FY 2008 rules expanded this to 15 charge groups based on one of RTI's recommendations (Final Rule 72 FR 47267, August 22, 2007).

In contrast to this approach, APC weights are constructed from hospitals' specific CCRs and detailed revenue code data appearing in the outpatient SAF (Final Rule 72 FR 66599, November 27, 2007). Weights for the majority of procedures, other than separately payable drugs and new technology APCs, are derived from median cost per claim within APC. Costs are first estimated at the individual claim level, using CCRs computed for each hospital, for each cost center where data appear on the hospital filed report. Because the CCRs are hospital specific, OPPS weights can make use of CCRs computed from standard as well as non-standard cost centers that appear on a specific hospital report, provided that the ratio passes edits for data

accuracy and reasonableness. An OPPS charge-mapping hierarchy is published each year (available at www.cms.hhs.gov/HospitalOutpatientPPS) that documents the process used in associating revenue codes on individual bills with possible cost ratios that might be used by a hospital. Revenue codes are matched first to the most detailed (meaning most narrowly defined) cost center that is found within the Hospital Cost Report Information System (HCRIS) national electronic file. The match moves to a secondary cost center if the ratio for the primary cost center is missing for that hospital, and in some cases to a tertiary cost center if ratios for both primary and secondary options are missing. If there are no usable CCRs for a given hospital for any of the cost centers associated with a given revenue code, then charges for that revenue code are converted to cost using that hospital's weighted average ancillary CCR for Medicare OPPS services.

The published OPPS charge-mapping hierarchy is called the "revenue code-to-cost center crosswalk." Throughout the remainder of this report, we refer to it as the "revenue crosswalk."

1.2.3 Differences Between Inpatient and Outpatient Prospective Payment System in Sources of Aggregation Bias

In our earlier work on charge compression in the DRG weights, RTI made a distinction between aggregation bias that may be the result of collapsing data from multiple lines on the cost report in order to limit the number of national CCRs (referred to as "cross-department bias"), and bias that is caused by systematically higher or lower markup rates being applied to services normally reported on a single cost center ("within-department bias"). Grouping Therapeutic Radiology with Diagnostic Radiology to compute an overall Radiology CCR for IPPS weights is an example of potential for cross-department bias because separate CCRs are already computed on the cost report. Including the costs and charges of CT scanning with other diagnostic radiology services is an example of within-department aggregation bias, because we know that markup rates are much higher for CT scanning services than for others. However, because there is no standard line on the cost report to separate costs and charges for CT scanning, the IPPS CCR for Radiology is biased downward, causing understatement of other radiology costs and overstatement of CT scanning costs.

Cross-department bias can generally be addressed by altering the mechanics of how CCRs are computed and applied (just as we did with our recommendation to separate the CRs for Emergency Room and Blood). Within-department bias cannot be fixed with the accounting data at hand, and this is why we try to address it in the short term through regression-based simulations of more detailed cost ratios.

In theory, cross-department aggregation bias is not an issue under OPPS because the APC median cost estimates are able to make use of the most detailed level of hospital-specific CCRs that appears on the filed cost report, matching them to line charge information on each claim through the revenue crosswalk. In practice, there is still potential for this type of aggregation bias to the extent that the revenue crosswalk is incompletely coded. Incomplete code mapping occurs if certain types of ancillary charges are converted to cost using the hospital's overall ancillary cost-to-charge ratio when there is a more appropriate departmental ratio available. With this possibility in mind, RTI performed an extensive review of the revenue crosswalk as part of this task order, and our findings are reported in *Section 4* of the Final Report.

Within-department bias can pose the same problem for APC weights as for DRG weights if there are common services with systematically different markup rates that are grouped together in a single cost center. The potential for this type of bias in the APC weights is mitigated, to the extent that hospitals use non-standard lines on the Medicare cost report to split the larger cost centers. As an example, the inpatient compression study found regression-based evidence of significantly higher markup for CT Scanning and MRI than for other diagnostic radiology services. But a substantial number of cost reports have computed separate CCRs for these three services anyway, reporting them on nonstandard lines, and the OPPS cost computations make use of these additional CCRs. The effects of within-department bias are therefore only present in the cost estimates for claims from providers that do *not* use the non-standard lines for these services. OPPS' use of provider-specific CCRs reduces, but cannot eliminate, within-department aggregation problems in APC weights.

Regression-based adjustments have the potential to address this remaining within-department bias in OPPS weights. Further, because no providers use non-standard lines to subscript types of Medical Supplies or Drugs Sold to Patients, regression-based models are the only short-term approach available for addressing charge compression related to pricing for medical devices, prosthetics, or certain types of outpatient administered drugs.

1.3 Treatment of Non-standard Cost Centers Within the Medicare Cost Report

Among providers that do make use of non-standard lines, there is a great deal of variation in how these lines are described, how they are defined and where they are placed within the cost report. In order to make CCRs from these lines usable in the revenue crosswalk, cost report software is programmed to ask preparers to assign special cost codes to each of their non-standard lines. The codes are designed to allow providers flexibility in tracking costs and charges in greater detail while following their own managerial accounting structure. The codes also allow CMS to group services consistently across providers, regardless of where they might have been originally placed on the cost report. Assigned HCRIS cost codes also allow non-standard lines to be rolled up to the appropriate standard line for purposes of computing the IPPS national average cost ratios. For OPPS cost estimates, the revenue crosswalk maps revenue codes to HCRIS cost codes rather than to the line numbers as originally assigned by providers. Thus, the validity of APC cost estimates depends heavily on the accuracy of the code assignments.

In the course of completing this task order, RTI encountered some inconsistencies in hospital use of these cost codes. Researching the inconsistencies led to an extensive review of hospitals' use of non-standard lines and how the HCRIS treats them. Our findings are summarized in *Section 3* of the Final Report (a synopsis is included with this extract) with additional search documentation and results tables included as *Attachment 1*. Because our recommendations to correct non-standard line assignments have a substantive effect on selected cost centers and selected APC payment rates, we produce two estimates of adjusted APC median costs: one to show the impact of the recommended line reassignments and revenue crosswalk changes (referred to as accounting, or non-model-based, changes); and one to show the additional impact of regression (i.e. model-based) changes.

2. WORKPLAN

The analysis plan for this project builds on last year's analysis of charge compression in the IPPS cost-based weights. To update this work RTI identified the set of most recent full-year cost reports for all hospitals subject to OPPS, to use as a "hospital finder file" in matching inpatient and outpatient claims. We began by reviewing and correcting the HCRIS cost report line assignments in this file, and re-computing CCRs from the reassigned cost and charge data. We conducted a detailed review of the revenue code matches from the OPPS revenue crosswalk, first on the HCRIS data as received and again on the data after the line reassignments. We adapted the CCR regression models used in the January 2007 report to identify potential aggregation bias in both inpatient and outpatient PPS applications, from which we computed regression-adjusted hospital CCRs and inpatient national aggregate CCRs. We then reconstructed APC median costs and MS-DRG weights to assess the impact of revised and/or regression-adjusted CCRs. Data sources, specific tasks and the organization of the remainder of this report are described in more detail in the following sections.

2.1 Data

Data needed to complete this project came from the Hospital Cost Report Information System (HCRIS); the Medicare Provider Analysis and Review (MedPAR) claims files for calendar years 2005 and 2006; inpatient and outpatient SAF for calendar years 2005 and 2006; and the "single bill" outpatient claims file used by CMS for computing the CY 2008 APC weights.

- HCRIS reports were downloaded from an update provided by CMS to RTI in August 2007. A hospital finder file was created that excludes the following: Critical Access Hospitals; providers in Puerto Rico or other territories; providers that did not have a full 12-month reporting period; and providers whose reporting period began before January 1, 2005. A limited number of hospitals were later excluded from the analysis file due to CCR edit criteria.
- All CCR regressions used data from claims with service dates that fell within the reporting period of the provider's cost report. Cost reports for all hospital providers covered under OPPS were included in the outpatient CCR models. Inpatient CCR models were run on samples restricted to IPPS providers.
- CMS created and made available to RTI a file of outpatient SAF charges by hospital and revenue code. Claims used for this file were limited to those matching the providers and service dates in the hospital finder file.
- RTI matched the finder-file-MedPAR claims with detailed inpatient revenue code data from the inpatient SAF. Inpatient and outpatient charges by revenue code by provider were integrated to create a file of all hospital Medicare charges for the model-based adjustments discussed in Chapter 5.
- CMS created a copy of the single-bill claims file and the drug and biological claims file that match what were used in the APC median cost computations for CY 2008.
 Data elements used from this file included the following: units and charges by

revenue code; CMS-computed cost by revenue code; HCPCS code; APC assignment; status indicator; claims modifier; and provider number.

Record counts for the RTI hospital finder file are shown in *Exhibit 2-1*. Most but not all providers in this file had matching data in the provider summary of outpatient SAF charges and/or in the OPPS "single bill file". In addition, approximately six percent of claims in the "single bill file" were for services delivered by providers that were not in our hospital finder file. *Exhibit 2-2* presents count data on the overlapping set of matched providers and claims. Acute short-stay hospitals accounted for 78 percent of providers in RTI's original hospital finder file, but 83 percent of those with matched OPPS claims. These facilities accounted for 98 percent of procedure-based APC claims and 95 percent of claims for separately payable drug APCs. Cancer hospitals accounted for another 4.5 percent of the drug APCs.

Exhibit 2-1 HCRIS Reports Included in Hospital Finder File

(Before Edits)

	Number of Cost Reports				
-	Federal	Federal			
Type of Facility	FY 2005	FY 2006	Total		
Acute short-stay	1,559	1,707	3,266		
Acute, ORD Demo	1	10	11		
Cancer	7	2	9		
Children's	30	24	54		
Long-term Acute	245	116	361		
Inpatient Psychiatric	150	136	286		
Inpatient Rehabilitation	80	118	198		
Religious, non-medical	6	10	16		
Total	2,078	2,123	4,201		

SOURCE: RTI Analysis of most recent HCRIS Reports with 12+ months in reporting period, from CMS files updated and released as of July 2007.

Exhibit 2-2 Claims Matched to HCRIS Hospital Finder File

	N	Procedures Files (all)		Drugs File	
Type of Facility	Number of Facilities	Number	Percent	Number	Percent
Acute short-stay	3,185	82,569,428	98.0%	4,131,606	95.2%
Acute, ORD Demo	11	30,731	0.0%	1,263	0.0%
Cancer	11	968,800	1.2%	196,804	4.5%
Children's	45	21,976	0.0%	2,191	0.1%
Long-term Acute	257	158,044	0.2%	2,936	0.1%
Inpatient Psychiatric	167	354,818	0.4%	354	0.0%
Inpatient Rehabilitation	142	136,053	0.2%	2,778	0.1%
Religious, non-medical	0				
Total Matched	3,818	84,239,850	100.0%	4,337,932	100.0%

SOURCE: RTI Analysis of HCRIS Reports and CMS "single bill files" for CY 2008 OPPS rates.

2.2 Task Descriptions

RTI's analysis was completed in the following sequence:

- Construction of Hospital Cost Report Information System (HCRIS) analytic files
 - Identified hospital "finder file" covering reporting periods in 2005 or 2006, following CMS exclusion criteria for OPPS
 - Constructed cost report files using both standard inpatient roll-up of cost centers (for revised IPPS costs) and detail reported cost centers (for OPPS costs)
 - Computed and edited detailed cost center CCRs for all hospitals paid under OPPS, and national aggregate CCRs for all hospitals paid under IPPS
 - Summarized providers' use of non-standard cost centers, as reported
 - Revised HCRIS line assignments based on detailed review of provider-input descriptions
 - Reconstructed cost report files for standard roll-up and detailed lines based on revised line assignments
 - Recomputed all CCRs based on revised line assignments
- Extraction and analysis of inpatient claims data
 - Matched inpatient SAF to MedPAR records and extracted charges by revenue code from SAF (all codes), to merge with MedPAR
 - Applied MS-DRG grouper logic to all MedPAR claims
 - Merged inpatient SAF with outpatient SAF charges at provider level and computed targeted revenue percents for regression modeling
- Review of outpatient program charge matching
 - Tested match of total outpatient SAF charges to HCRIS Worksheet D-Part V charges by provider
 - Tested CMS published revenue crosswalk using outpatient SAF claims summaries mapped against Worksheet D Part V data on original HCRIS data
 - Refined and expanded revenue crosswalk
 - Tested charge mapping from revised revenue crosswalk using outpatient SAF claims summaries mapped against Worksheet D Part V data
 - o Using original HCRIS lines
 - o Using reassigned HCRIS lines

- Regression modeling for compression adjustments IPPS
 - Expanded list of targeted services for compression diagnostics
 - Ran IPPS models for regression-adjusted CCRs using expanded list of targeted services and IPPS hospital sample
 - Computed regression-adjusted CCRs where indicated
 - Recomputed MS-DRG costs using regression-adjusted CCRs
 - o Using original HCRIS lines
 - o Using reassigned HCRIS lines
- MS-DRG impact assessment
 - Recomputed weights and provider average weights from revised MS-DRG costs
 - Assessed impact of HCRIS line reassignments by MS-DRG
 - Assessed impact of compression adjustments by MS-DRG
- Regression modeling for compression adjustments OPPS adaptations
 - Expanded list of targeted services for compression diagnostics
 - Modified regression models to account for variation in use of standard and nonstandard lines
 - Computed regression-adjusted OPPS CCRs where indicated (in consultation with project officers)
- APC median costs computations
 - Replicated construction of CMS' analysis sample for APC weights
 - Replicated CY 2008 APC median cost computations using costs from single-bill file
 - o from complete file (to verify baseline coding)
 - o from file restricted to claims matching the hospital "finder file"
 - Recomputed procedure-based claims costs, HCPCS medians and APC medians from finder file claims, using
 - Original CMS revenue crosswalk + CCRs from HCRIS current line assignments

- o Revised revenue crosswalk + CCRs from HCRIS with revised line assignments
- o Revised revenue crosswalk + compression-adjusted CCRs from HCRIS with revised line assignments
- Recomputed mean costs for separately payable (higher cost) drug HCPCS, for CMS to use in reviewing impact estimates of the pharmacy overhead component of APC drug payments

• APC impact assessment

- Analyzed percent change in median costs by APC
 - o Attributable to combination of revenue crosswalk and line changes
 - o Attributable to compression adjustments
- Reviewed APCs with >10% change
- Audited component charges and cost ratios for APCs with unexpected changes, for final review
- Computed HCPCS median costs by APC, for CMS review of violations of the "Two-Times Rule"

2.3 Organization of Remaining Report

The changes in APC costs that are associated with changes in HCRIS line assignments and the revenue crosswalk are not based on statistical modeling – they reflect only recommendations from RTI to improve the underlying cost accounting data and the mechanics of the cost computations. However, these appear to have as much or more of an impact on APC weights as changes associated with regression-based charge decompression. In Sections 3 and 4 we discuss RTI's recommendations on HCRIS line reassignments and on an expanded and refined revenue crosswalk. Section 5 reviews the regression models as developed to adjust MS-DRG weights and then adapted to accommodate the specifics of APC weight construction. In Section 6 of the Final Report (not included with this document) we analyze the impact of all of RTI's recommendations on APC cost computations, looking separately at accounting (nonmodel-based) and regression (model-based) changes. For procedure APCs, we compute three sets of median costs and analyze impact as the proportional changes on medians. For separately payable drugs, we compute mean cost per unit by HCPCS code. The final impact of our changes on drug APC payments would depend on a second calculation for pharmacy overhead that is made by CMS, which takes into account the aggregate difference between each separately paid HCPCS mean unit cost and per-unit average sales price (ASP). In Section 7 we review the impact of accounting and regression-based changes on the new severity-adjusted DRG weights, using corrected HCRIS data, original IPPS modeling and expanded modeling. Section 8 of the Final Report (not included with this document) provides a discussion to pull together each of these report results.

3. HCRIS LINE REASSIGNMENTS [SYNOPSIS ONLY]

3.1 Overview of HCRIS Line Reassignments as they affect IPPS Cost-to-Charge Ratios

In the course of investigating what appeared to be an unusual number of hospitals in the national data with costs and charges on a line that HCRIS identified as "Acupuncture," RTI found numerous discrepancies between non-standard line assignments in the national HCRIS files and line descriptions entered by providers in their cost reports as filed. In consultation with the project officer, we added a task to the project work plan to perform an organized review of this problem and develop a short-term correction, to be completed before continuing with our work for refining cost-to-charge ratios. A detailed interim report was provided to CMS that covered our review and recommendations. A synopsis appears below; further documentation is included within *Chapter 3* and also in the tables included as *Attachments 1a* through *1d*, of the complete Final Report for this project.

Hospitals enter their cost and charge data for patient care services using either standard or non-standard lines. There are 47 standard lines offered for patient care services and five non-standard lines where the word "specify" appears in the line description. Except where the word "specify" appears, standard lines have fixed descriptions and the approved software for cost report data input does not allow preparers to customize those line descriptions. Hospitals are also allowed to enter data on non-standard lines by subscripting the standard line numbers. In order for CMS to be able to group national data from any of the non-standard lines, the software asks hospitals to associate every non-standard line with a 4-digit code that best describes the type of service. HCRIS uses these codes *internally*, to over-write non-standard line descriptions and reassign line placement. All output produced for the national HCRIS files is based on the data as reassigned by these special HCRIS cost codes. An aggregation table is published each year on the CMS web site that shows how HCRIS cost codes are rolled up to specific non-standard lines, and how these non-standard lines are rolled up to the standard lines as they appear on cost report forms. The rolled up standard lines, in turn, govern how costs and charges are aggregated to compute the national CCRs used for IPPS weights.

Because the special HCRIS codes are used only internally within CMS, there is no feedback to cost report preparers to alert them that a given non-standard line may not be associated with the right cost code. RTI found that the erroneous assignments to Acupuncture and elsewhere were the result of providers' making incorrect assignments of these special cost codes. Such mistakes defeat the purpose of using the codes, create potential for distortion in all CCRs, and threaten the accuracy of the OPPS revenue code mapping. To correct the problem, RTI constructed a string search algorithm to identify probable misclassifications using a field in the HCRIS files that retains the providers' original descriptions and line assignments. We reviewed the most common misclassifications, identified those involving cost centers that were most likely to affect DRG or APC cost estimates, and constructed a hierarchy of corrected entries to move these to the most appropriate HCRIS cost code. Our approach targeted high-volume services with high misclassification rates (such as diagnostic imaging) and also services like oncology and cardiac rehabilitation that are lower in total volume, but still likely to dominate prices for APCs in a given product line.

Reassignments from our string searches affected 11 percent of the total of 106,029 ancillary or outpatient line assignments made across all cost reports in our file. Seventy-three percent of cost reports (3,040 out of 4,201) had at least one line reassigned. Line reassignments revealed that HCRIS cost codes had considerably understated the prevalence of these services: CT Scanning understated by 25 percent, MRI by 28 percent, Ultrasound by 23 percent, Cardiac Catheterization by 27 percent, Oncology by 66 percent, and Psychological Services by 71 percent.

All of these line reassignments have the potential to alter APC median costs, but DRG weights are less sensitive to this level of correction because the CCRs are national aggregates and because service groups are already highly aggregated. When costs and charges are rolled up to the level of the 15 service groups used for MS-DRG weights, HCRIS line reassignments lower the national CCR for Anesthesia (because this is where the Acupuncture line is aggregated) by about 6 percent, and raise it for Other Services (because this is where many other corrected lines were transferred from) by 14 percent (*Exhibit 3-1*).

Exhibit 3-1 National IPPS CCRs Before and After HCRIS Reassignments

				19 National
	15 National	15 National		CCRs
	CCRs computed	CCRs computed		possible from
IPPS DRG	from original	from reassigned	Percent	corrected
Service Groups	HCRIS lines	HCRIS lines	difference	HCRIS lines
1_Routine Nursing	0.530	0.530	0%	0.530
2_Critical Care Nursing	0.479	0.479	0%	0.479
3_Drugs	0.206	0.206	0%	0.206
4_Medical Supplies	0.340	0.340	0%	0.340
5_Rehab Therapies	0.422	0.423	0%	0.423
6_Inhalation (Respiratory) Therapy	0.195	0.197	1%	0.197
7_Operating Room	0.300	0.300	0%	0.300
8_Labor & Delivery	0.571	0.563	-1%	0.563
9_Anesthesia	0.143	0.134	-6%	0.134
10_Cardiology	0.193	0.192	-1%	
_Cardiology excl. Cardiac Cath.				0.185
_Cardiac Catheterization Lab				0.200
11_Laboratories	0.171	0.168	-2%	
12_Radiology	0.175	0.178	2%	
_Dx Radiology only				0.191
_CT Scanning				0.066
_MRI				0.138
_Therapeutic Radiology				0.277
_Nuclear Medicine	0.200	0.200	0.07	0.186
13_ Emergency Room	0.300	0.300	0%	0.300
14_Blood Products & Administration	0.444	0.444	0%	0.444
15_Other Services	0.321	0.366	14%	0.366

SOURCE: RTI Analysis of HCRIS files, from subset of hospitals paid under IPPS.

The code reassignments have little or no effect on the national CCRs for the most significant contributors to DRG costs, and as a result have little effect on the DRG weights if computed from 15 service groups. At the same time, our line reassignments identify many additional instances of reported cost centers for CT Scanning, MRI and Cardiac Catheterization, raising the possibility that bias from over-aggregation of radiology and cardiology services could be at least partially corrected by computing additional CCRs from this revised accounting data. This presents an alternative to regression-based adjustments for at least these two service areas. The right-most column in *Exhibit 3-1* shows national average CCRs for 19 service groups, based on newly disaggregated cost centers within radiology and Cardiology.

4. REVISIONS TO OPPS REVENUE CROSSWALK [TO BE INLCUDED IN FINAL REPORT]

5. REGRESSION-ADJUSTED COST-TO-CHARGE RATIOS

5.1 Modeling Approach

RTI tests for potential aggregation bias using a statistical model first described by Christopher Hogan in a June 2006 memo to CMS, and later adapted by RTI in its initial assessment of charge compression within the DRG weights. The model is described at length in the January 2007 Report (available at www.cms.hhs.gov/reports/downloads/Dalton.pdf). The following sections do not repeat that discussion, but offer a brief review of the model in order to provide context for the adaptations that are necessary to accommodate differences in the OPPS cost computations.

Departmental CCRs are modeled as a function of the hospital's underlying average CCR for ancillary services and the prevalence of services that are suspected of causing the bias (the "target services") within that department. The equations are estimated using weighted least squares regression. In the simplest application with only a single target service, the estimation would be

$$CCR_{j} = \alpha + \beta \bullet PC_{j}^{target} + \gamma \bullet CCRAVG_{j} + \varepsilon_{j}, \tag{1}$$

where CCR_j is the cost-to-charge ratio for hospital j; PC_j^{target} is the percent of Medicare charges for the target service to total charges within the CCR cost center(s) in hospital j; and $CCRAVG_j$ is the overall cost-to-charge ratio for all other ancillary services in hospital j (that is, all ancillary and outpatient services excluding those in the CCR under investigation). The analytic regression weights are the total claims charges for the group of revenue codes associated with that CCR. The terms α , β , and γ are coefficients to be estimated, and ε_j is an idiosyncratic regression error term representing unexplained differences in CCRs across hospitals (presumed to be uncorrelated with PC^{target}). Possible aggregation bias in this model is identified by β , the coefficient on PC^{target} , while γ is a scalar that identifies the expected difference between the ratio for the particular department under investigation and the ratios for all other ancillary services.

A statistically significant coefficient on PC^{target} is evidence of a systematic difference in hospital markup for the targeted service, which creates the *potential* for bias in the weights. Actual bias in the weights depends on the magnitude of the coefficient, on the distribution of the targeted services compared to other services that are included in that CCR, and on how that distribution varies across payment units (MS-DRGs or APCs). Bias can only be assessed by estimating costs using the statistically disaggregated CCRs, using these costs to compute new weights, and comparing the results. APC weights are expected to be more susceptible to bias than DRG weights because APCs are defined by such a narrow range of services, and there is little opportunity for over- and under-stated costs to offset each other within a given payment unit.¹

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Such offsets might occur within a care episode. For example, outpatient services received on a single day's visit could result in an APC being billed for a clinic visit, another for an EKG and another for an x-ray.

Assuming β is statistically significant, disaggregated CCRs can be computed in one of two approaches. These approaches are arithmetically equivalent in the aggregate (that is, if tested against predicted ratios for the sample as a whole), but they produce very different ratios at the hospital level.

The first approach makes use of the intercept and the parameter estimate on the overall ancillary ratio as well as the estimate on the variable for the targeted service. Disaggregated ratios for the targeted services and adjusted ratios for the remaining services are computed as follows:

$$CCR_{i}^{target} = \alpha + \beta + (\gamma \cdot CCRAVG_{i})$$
 (2)

$$CCR_i^{adjusted} = \alpha + (\gamma \bullet CCRAVG_i)$$
(3)

The ratio computed by Equation (2) can be interpreted as the predicted value of hospital *j*'s target service CCR if the target code accounted for 100 percent of charges for that department (in other words, it is a simulation for the target service CCR if the hospital had reported these services in separate cost centers). The ratio predicted by Equation (3) can be interpreted as the predicted value in hospital *j* of the departmental CCR (that is, the CCR for the cost center that had included charges for the target service) if that target code accounted for zero percent of charges for that department. Equations (2) and (3) were used in RTI's computations in the January 2007 Report to assess bias in the DRG weights.

The second approach makes use of the original departmental CCR and the parameter estimate on the variable for the targeted service(s), but not the rest of the equation. Adjusted and disaggregated ratios are computed as follows:

$$CCR_j^{adjusted} = CCR_j - (\beta \bullet PC^{target})$$
 (4)

$$CCR_i^{target} = CCR_i^{adjusted} + \beta$$
 (5)

This second approach enforces the condition that the weighted average of the revised CCRs will be equal to the original departmental CCR *for each hospital* (while the first approach enforces this only for the sample as a whole). Individual predicted ratio values can show extreme variation, and in some cases are even negative, but at the aggregate level corrections from the two approaches will be equivalent. We use Equations (4) and (5) to compute adjusted CCRs in this OPPS study because they have certain advantages of computational simplicity specific to the OPPS adaptations of the model (discussed in *Section 5.4.1* of the Final Report). Whichever approach is taken does not alter the findings at the APC or DRG level. It is important to keep in mind that we do not make a claim that regression-adjusted CCRs provide more accurate cost estimates at the individual hospital level; the improvement is only at the level of aggregate adjusted costs relative to charges by DRG or by APC.

5.2 Targeted Services

Targeted services are those services thought to have systematically different markup rates from others within their department or cost center. Targeted services were first identified from

the list of services investigated in the January 2007 report. The list was expanded to include additional outpatient services suggested in consultation with CMS staff and/or identified by analyzing revenue code distribution across total inpatient and outpatient Medicare claims charges. The percent-of-charges variables (PC^{target}) that are the key predictors in each of the CCR equations are computed from the revenue codes in a file that combines summarized data from the inpatient and outpatient SAF. The specific codes and service groups that we use to construct each of the variables in the CCR equations are identified in the next five exhibits. A complete table of inpatient and outpatient charges by revenue code, from the claims matching our hospital finder file, is included with this report as *Attachment 3*.

Exhibit 5-1 shows codes used for the Drugs CCR equation. The same computed percents are used in both the IPPS and OPPS applications because the Drugs Sold cost center is defined the same (without any subscripting) in both systems. There are two items targeted for separate CCRs within the Drugs Sold cost center: IV Solutions (carried over from last year's model) and "Additional detail coding," which is revenue code 0636. Code 0636 is for Part B administered drugs requiring additional HCPCS codes, and is used primarily for chemotherapy and other outpatient infusions. The code was not included in last year's models because it is rarely used on inpatient claims. It accounts for 74 percent of outpatient claims charges but only 16 percent of total claims charges within the Drugs Sold category. Even though the code is not used for inpatient claims, it is still capable of contributing to charge compression in MS-DRGs, provided the markup rates for these drugs are sufficiently different that they influence the overall drugs ratios.

Exhibit 5-1 Targeted Services Within Drugs Sold

Codes used as predictor variables in diagnostic and/or final modeling are shown in boldface.

Revenue		Outpatient S	<u>SAF</u>	Inpatient SAF		<u>Total</u>	
code	Description	Charges	Percent	Charges	Percent	Charges	Percent
0250	Drugs sold - General	2,388,635,946	17%	39,180,236,715	76%	41,568,872,661	63%
0251	Drugs sold - Generic	76,479,972	1%	995,287,335	2%	1,071,767,307	2%
0252	Drugs sold - Non-generic	67,740,062	0%	1,033,577,089	2%	1,101,317,152	2%
0253	Drugs sold - Take-home	32,438	0%	2,546,134	0%	2,578,572	0%
0254	Drugs sold - Incident to other dx	28,759,398	0%	72,538,564	0%	101,297,962	0%
0255	Drugs sold - Incident to radiology	370,984,015	3%	792,601,790	2%	1,163,585,805	2%
0256	Drugs sold - Experimental	193	0%	496	0%	689	0%
0257	Drugs sold - Non-Rx	481,962	0%	16,219,800	0%	16,701,762	0%
0258	Drugs sold - IV solutions	611,753,928	4%	6,266,730,351	12%	6,878,484,280	10%
0259	Drugs sold - Other	115,402,425	1%	2,630,988,296	5%	2,746,390,720	4%
0630	Drugs Sold - General	26,020	0%	351	0%	26,371	0%
0631	Drugs Sold - Single source	8,059	0%	14,601	0%	22,659	0%
0634	Drugs Sold - EPO<10k units	801,804	0%	27,749,232	0%	28,551,036	0%
0635	Drugs Sold - EPO>=10k units	1,539,212	0%	45,312,626	0%	46,851,838	0%
0636	Drugs Sold - Add'l detail coding	10,398,065,727	74%	236,605,699	0%	10,634,671,426	16%
0637	Drugs Sold - Self-administrable	10,176,034	0%	162,218,522	0%	172,394,556	0%
	Total Drugs Sold	14,070,887,195	100%	51,462,627,600	100%	65,533,514,795	100%

SOURCE: RTI analysis of Inpatient and Outpatient SAF.

Exhibit 5-2 shows codes used for the Supplies CCR equation. As with the Drugs variables, the same computed percents are used in both the IPPS and OPPS applications because the cost center is defined without any subscripting in both systems. Codes for devices and implants have been combined to a single percent-of-charges measure. We investigated a model that treated intraocular lens (IOL) as a separate category, but dropped it because IOLs account for only a small portion of total medical supplies charges for the great majority of facilities in the sample.

Exhibit 5-2
Targeted Services Within Supplies Sold

Codes used as predictor variables in diagnostic and/or final modeling are shown in boldface.

Revenue		Outpatient S	SAF	Inpatient SAF		Total	
code	Description	Charges	Percent	Charges	Percent	Charges	Percent
0271	Supplies sold - Non-sterile	182,415,889	2%	1,520,945,075	3%	1,703,360,964	3%
0272	Supplies sold - Sterile	3,382,591,874	31%	9,896,339,463	20%	13,278,931,337	22%
0273	Supplies sold - Take-home	22,702	0%	1,536,414	0%	1,559,115	0%
0274	Supplies sold - Prosthetics/orthotics	38,595,250	0%	346,767,275	1%	385,362,525	1%
0275	Supplies sold - Pacemaker	1,372,858,000	12%	4,604,302,347	9%	5,977,160,347	10%
0276	Supplies sold - Intraocular lens	372,396,833	3%	3,596,749	0%	375,993,582	1%
0278	Supplies sold - Implants/devices	3,015,281,968	<u>27%</u>	17,931,467,838	36%	20,946,749,806	35%
	Subtotal Devices = Targeted Services	4,799,132,051	43%	22,886,134,209	47%	27,685,266,260	46%
0279	Supplies sold - Other supplies/devices	131,650,156	1%	531,942,519	1%	663,592,675	1%
0621	Supplies sold - Incident to radiology	97,324,556	1%	104,964,084	0%	202,288,640	0%
0622	Supplies sold - Incident to other dx	43,240,664	0%	117,655,368	0%	160,896,033	0%
0623	Supplies sold - Surgical dressing	3,971,623	0%	2,880,185	0%	6,851,808	0%
0624	Supplies sold - Investigational devices	1,357,436	0%	39,361,976	0%	40,719,413	0%
•	Total Supplies Sold	11,066,751,549	100%	49,187,049,727	100%	60,253,801,276	100%

SOURCE: RTI analysis of Inpatient and Outpatient SAF charges.

Exhibit 5-3 shows the codes used to identify potential aggregation bias within the Radiology services group as it is broadly defined for the national CCRs used for creating MS-DRG weights. In last year's modeling for charge compression under IPPS we did not include charges for therapeutic radiology or nuclear medicine as targeted services, as these were less prevalent in the Medicare inpatient claims. They are potentially important components of the Radiology CCR, however, and to the extent that these services have systematically different markup rates, they can introduce aggregation bias to the MS-DRG weights simply by distorting the ratio for other diagnostic radiology services.

Percent-of-charge variables for each of these codes can also be included in the outpatient regressions, but in this case they are applicable only to the subset of providers that has combined costs and charges for any one of these services on line 41 of their cost report. Unfortunately, because there are several PC^{target} variables within the Radiology CCR equation, there are also several permutations of appropriate estimating samples for the OPPS models. This introduces a complication in the OPPS model specification that we address in *Section 5.4* of the Final Report.

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Exhibit 5-3
Targeted Services Within Radiology

Codes used as predictor variables in diagnostic and/or final modeling are shown in boldface.

Revenue		Outpatient	SAF	Inpatient S	AF	<u>Total</u>	
code	Description	Charges	Percent	Charges	Percent	Charges	Percent
0320	Radiology-Diagnostic - General	5,056,252,790	14%	5,125,817,330	19%	10,182,070,120	16%
0321	Radiology-Diag Angiocardiography	39,968,520	0%	45,695,071	0%	85,663,591	0%
0322	Radiology-Diagnostic - Arthrography	6,187,333	0%	1,307,653	0%	7,494,985	0%
0323	Radiology-Diagnostic - Arteriogram	448,991,678	1%	492,104,491	2%	941,096,169	2%
0324	Radiology-Diagnostic - Chest	1,120,506,814	3%	2,409,605,553	9%	3,530,112,367	6%
0325	Radiology-Diagnostic -	117	0%	0	0%	117	0%
0329	Radiology-Diagnostic - Other	107,469,581	0%	106,049,661	0%	213,519,242	0%
0400	Other Imaging – General	5,125,818	0%	12,675,869	0%	17,801,687	0%
0401	Other Imaging - Dx mammography	220,604,763	1%	2,315,131	0%	222,919,894	0%
0402	Other Imaging - Ultrasound	1,252,971,120	4%	1,089,368,914	4%	2,342,340,034	4%
0403	Other Imaging - Screening mammog.	608,023,148	2%	375,011	0%	608,398,159	1%
0405	Other Imaging -	716	0%	0	0%	716	0%
0409	Other Imaging – Other	3,473,349	0%	3,329,242	0%	6,802,591	0%
0350	CT Scanning – General	3,700,727,914	10%	3,362,885,201	13%	7,063,613,114	11%
0351	CT Scanning – Head	2,290,275,632	6%	2,748,293,424	10%	5,038,569,056	8%
0352	CT Scanning – Body	6,442,076,552	18%	5,146,258,772	19%	11,588,335,325	19%
0353	CT Scanning -	0	0%	141	0%	141	0%
0354	CT Scanning -	172	0%	0	0%	172	0%
0359	CT Scanning – Other	173,883,050	0%	136,763,897	<u>1%</u>	310,646,947	0%
	Subtotal CT Scanning	12,606,963,320	35%	11,394,201,435	43%	24,001,164,755	38%
0610	MRI/MRA – General	1,868,301,897	5%	1,299,469,411	5%	3,167,771,308	5%
0611	MRI/MRA – Brain	1,209,090,810	3%	1,200,569,470	4%	2,409,660,280	4%
0612	MRI/MRA - Spinal cord	1,401,690,384	4%	512,447,727	2%	1,914,138,111	3%
0614	MRI/MRA - MRI/other	90,329,071	0%	29,036,666	0%	119,365,737	0%
0615	MRI/MRA - MRA/head, neck	94,163,042	0%	164,049,657	1%	258,212,699	0%
0616	MRI/MRA – MRA/lower extremities	19,297,442	0%	9,775,633	0%	29,073,075	0%
0618	MRI/MRA - MRA/other	31,819,523	0%	24,658,872	0%	56,478,394	0%
0619	$\underline{MRI/MRA-MRA/other}$	51,388,934	0%	34,189,571	0%	85,578,504	0%
	Subtotal MRI	4,766,081,103	13%	3,274,197,005	12%	8,040,278,108	13%
0330	Radiology-therapeutic - General	6,933,827	0%	8,031,184	0%	14,965,011	0%
0331	Radiology-therapeutic - Chemo inj.	57,117,105	0%	6,065,973	0%	63,183,078	0%
0332	Radiology-therapeutic - Chemo oral	39,277	0%	223,084	0%	262,361	0%
0333	Radiology-therapeutic - Rad. therapy	5,251,577,757	15%	336,266,271	1%	5,587,844,028	9%
0334	Radiology-therapeutic -	0	0%	16	0%	16	0%
0335	Radiology-therapeutic - Chemo-IV	352,418,781	1%	16,705,152	0%	369,123,933	1%
0336	Radiology-therapeutic -	6,637	0%	0	0%	6,637	0%
0339	Radiology-therapeutic - Other	7,679,305	0%	747,537	0%	8,426,842	0%
	Subtotal Radiology-therapeutic	5,675,772,688	16%	368,039,217	1%	6,043,811,905	10%
0340	Nuclear med – General	545,457,665	2%	408,861,064	2%	954,318,729	2%
0341	Nuclear med – Diagnostic	2,185,418,852	6%	1,677,644,729	6%	3,863,063,581	6%
0342	Nuclear med – Treatment	40,880,731	0%	4,696,072	0%	45,576,803	0%
0343	Nuclear med - dx radiopharmaceuticals Nuclear med - rx	410,024,438	1%	263,835,126	1%	673,859,564	1%
0344	radiopharmaceuticals	33,171,283	0%	5,545,187	0%	38,716,469	0%
0349	Nuclear med – Other	16,072,670	0%	23,939,950	0%	40,012,620	0%
0404	Other Imaging - PET scan	649,183,758	2%	48,478,662	0%	697,662,420	1%
J.V.	Subtotal Nuclear Medicine	3,880,209,397	$\frac{270}{11\%}$	2,433,000,789	9%	6,313,210,186	10%
Tota ¹	Radiology & Imaging Services	35,798,602,255	100%	26,758,082,371	100%	62,556,684,626	100%

SOURCE: RTI analysis of Inpatient and Outpatient SAF charges.

In the January 2007 report, RTI ran several models to investigate differences in markup across Cardiology services, with respect to Cardiac Catheterization and to monitoring charges. We did not recommend any adjustments to the Cardiology CCR for a number of reasons, chief of which was that model results were very sensitive to small changes in the estimation sample. In addition, we had found very poor correlation between cardiology charges as appeared on Medicare claims and cardiology charges as identified by cost reports, making the link between cardiac catheterization as a percent of total billed cardiology charges and the computed cardiology CCR questionable.

Our findings on misclassified HCRIS lines, and our subsequent reassignment of several non-standard cost centers from other parts of the cost report back to a cardiac catheterization cost center, have helped to explain much of the program charge mismatching that we found last year. We re-estimated the CCR models with ratio data from the reassigned lines, to test again for systematic differences in the markup for the targeted service within charges associated with the IPPS Cardiology group (*Exhibit 5-4*). We also tested this in the OPPS models, using an estimation sample that included only the subset of hospitals with at least \$1,000 in total charges in code 0481 that did not already report costs and charges on a non-standard line for Cardiac Catheterization.

Exhibit 5-4
Targeted Services Within Cardiology

Codes used as predictor variables in diagnostic and/or final modeling are shown in boldface.

Revenue		Outpatient SAF		Inpatient SAF		<u>Total</u>	
code	Description	Charges	Percent	Charges	Percent	Charges	Percent
0480	Cardiology - General	1,988,348,166	27%	6,553,067,815	34%	8,541,415,981	32%
0481	Cardiology - Catheterization lab	3,313,480,809	45%	8,188,565,046	42%	11,502,045,855	43%
0482	Cardiology - Stress test	486,420,340	7%	307,669,907	2%	794,090,247	3%
0483	Cardiology – Echo	260,270,636	4%	713,259,433	4%	973,530,069	4%
0489	Cardiology – Other	5,626,773	0%	41,527,085	0%	47,153,858	0%
0730	EKG/ECG - General	1,143,711,236	16%	2,782,113,827	14%	3,925,825,063	15%
0731	EKG/ECG - Holter monitor	147,934,512	2%	263,240,524	1%	411,175,036	2%
0732	EKG/ECG - Telemetry	29,088,896	0%	697,561,742	4%	726,650,638	3%
0739	EKG/ECG – Other	852,199	0%	7,690,272	0%	8,542,470	0%
	Total Cardiology	7,375,733,565	100%	19,554,695,651	100%	26,930,429,216	100%

SOURCE: RTI analysis of Inpatient and Outpatient SAF charges.

For purposes of comparison, the IPPS models were run with all of the PCtarget variables described above and also run using only the PC^{target} variables that were included in the models for the January 2007 Final Report. Results from both are discussed in the next section.

For the OPPS models we also investigated aggregation issues within the Nuclear Medicine cost center. The target services of interest are radiopharmaceuticals and PET scans (*Exhibit 5-5*). Although the charge volumes and percentages shown in this exhibit are computed from all sample hospitals, the estimation sample for this CCR includes only the 1,626 hospitals

that offer one or another or both of the target services and report related costs and charges on the standard line 43.

Exhibit 5-5
Targeted Services Within Nuclear Medicine (OPPS Models Only)

Codes used as predictor variables in diagnostic and/or final modeling are shown in boldface.

D		Outpatient SAF		Inpatient SAF		<u>Total</u>	
Revenue code	Description	Charges	Perce nt	Charges	Percent	Charges	Percent
0340	Nuclear med – General	545,457,665	14%	408,861,064	17%	954,318,729	15%
0341	Nuclear med – Diagnostic	2,185,418,852	56%	1,677,644,729	69%	3,863,063,581	61%
0342	Nuclear med – Treatment	40,880,731	1%	4,696,072	0%	45,576,803	1%
0343	Nuclear med - dx radiopharmaceuticals	410,024,438	11%	263,835,126	11%	673,859,564	11%
0344	Nuclear med - rx radiopharmaceuticals	33,171,283	<1%	5,545,187	0%	38,716,469	<1%
	Subtotal Radiopharmaceuticals	443,195,721	11%	269,380,312	11%	712,576,033	11%
0349	Nuclear med – Other	16,072,670	0%	23,939,950	1%	40,012,620	1%
0404	Other Imaging - PET scan	649,183,758	17%	48,478,662	2%	697,662,420	11%
·	Total Nuclear Medicine	3,880,209,397	100%	2,433,000,789	100%	6,313,210,186	100%

SOURCE: RTI analysis of Inpatient and Outpatient SAF charges.

5.3 IPPS Application

5.3.1 Specification and Regression Results

Using cost ratios computed *after* having reassigned the HCRIS cost centers as described in Chapter 3, RTI first ran a set of regressions to reproduce the final models from the January 2007 report, and then ran our recommended set of expanded regressions. The expanded regressions add tests for systematic differences in the cost ratios for code 0636 drugs within the drugs CCR; for cardiac catheterization within the cardiology CCR; and for radiation therapy and nuclear medicine within the radiology CCR. We were able to add new targeted services to the drugs and radiology models because the combined inpatient and outpatient SAF files gave us better data for computing predictor variables (PC^{target}) for these services. We decided to revisit the models for cardiac catheterization because we felt more confident about matching claims charges for this revenue code to cost report charges for the Cardiology group after making the cost report line reassignments.

Sections 2 and 3 of the January 2007 Final Report included detailed descriptions of the model specifications, data edits, estimation samples and regression diagnostics used to develop this approach for statistically-adjusted CCRs. Discussion in the current report is therefore limited to defining each of the estimation equations and the inclusion criteria for their respective estimation samples. In all of the estimation equations appearing below, the variable *CCRAVG_j* refers to an aggregate average CCR for hospital *j* that has been recomputed after removing costs and charges contributing to the CCR that is being modeled. All estimations are implemented using weighted least squares regression, where the analytic weight is the sum of the claims charges for codes associated with the services contributing to the CCR. Note that each estimation

sample has excluded observations with extreme values in the dependent variable or in the overall CCR. Adjusted CCRs were still computed for those observations, using the coefficients from the model. The cut-points used to identify extreme values were developed in the prior year's contract work.

Drugs Sold:

$$CCR_j^{drugs} = \alpha + \beta_I \bullet PC_j^{\text{ivsol}} + \beta_2 \bullet PC_j^{\text{rxdetail}} + \gamma \bullet CCRAVG_j + \varepsilon_j, \tag{6}$$

The sample is restricted to IPPS hospitals where $0.05 \le CCR_i^{drugs} \le 1.5$ and

 $0.05 \le CCRAVG_j \le 1.5$. The analytic weight is the sum of charges for codes identified in Exhibit 5-1.

Supplies Sold:

$$CCR_j^{supplies} = \alpha + \beta_I \cdot PC_j^{devices} + \gamma \cdot CCRAVG_j + \varepsilon_j, \tag{7}$$

The sample is restricted to IPPS hospitals where $0.05 \le CCR_j^{supplies} \le 1.5$ and $0.05 \le CCRAVG_j \le 1.5$. The analytic weight is the sum of charges for codes identified in Exhibit 5-2.

Cardiology:

$$CCR_{i}^{card} = \alpha + \beta_{I} \cdot PC_{i}^{cardcath} + \gamma \cdot CCRAVG_{i} + \varepsilon_{i},$$
(8)

The sample is restricted to IPPS hospitals where $PC_j^{\text{cardcath}} > 0.01$, $0.05 <= CCR_j^{\text{cardiology}} <= 1.5$, and $0.05 <= CCRAVG_j <= 1.5$. The analytic weight is the sum of charges for codes identified in Exhibit 5-3.

Radiology:

$$CCR_j^{\ radiology} =$$

$$\alpha + \beta_1 \bullet PC_j^{ctscan} + \beta_2 \bullet PC_j^{mri} + \beta_3 \bullet PC_j^{radther} + \beta_4 \bullet PC_j^{nucmed} + \gamma \bullet CCRAVG_j + \varepsilon_j, \tag{9}$$

The sample is restricted to IPPS hospitals where $0.05 \le CCR_j^{\text{radiology}} \le 1.5$ and

 $0.05 \le CCRAVG_j \le 1.5$. The analytic weight is the sum of charges for codes identified in Exhibit 5-4.

Exhibit 5-6 shows regression output for each of these models. Standard errors are shown in square brackets beneath each coefficient. For comparison, the top of the table (5-6A) shows results from equations that duplicate the specifications used in the January 2007 Final Report while the lower half of the table (5-6B) shows results from the expanded IPPS models. All results are from models using use ratios from the reassigned HCRIS data, and using PC^{target} variables computed from the combined inpatient and outpatient claims data.

Exhibit 5-6 Regression Results from Inpatient Models

5-6A: Reproduced models from January 2007 F	Report							
		Dependent Variables						
Independent Variable	Drugs CCR	Supplies CCR	Cardiology CCR	Radiology CCR				
IV solutions as % all Drugs Charges	-0.199							
	[0.027]**							
Devices as % Medical Supplies Charges		0.221						
		[0.030]**						
CT Scanning as % all Radiology Charges				-0.21				
				[0.016]**				
MRI as % all Radiology Charges				-0.127				
				[0.021]**				
Overall ancillary CCR	0.841	0.744		0.583				
	[0.025]**	[0.047]**		[0.018]**				
Constant term	0.022	0.066		0.119				
	[0.008]**	[0.017]**		[0.009]**				
Observations	3138	2940	N/A	3110				
R-squared	0.52	0.17		0.65				

5-6B: Expanded Models to Incorporate Additional Targeted Services

	Dependent Variable					
Independent Variable	Drugs CCR	Supplies CCR	Cardiology CCR	Radiology CCR		
IV solutions as % all Drugs Charges	-0.169					
	[0.027]**					
Detail coded Rx as % all Drugs Charges	0.062					
	[0.019]**					
Devices as % Medical Supplies Charges		0.221				
		[0.030]**				
Cardiac Cath. as % Cardiology Charges			-0.059			
			[0.016]**			
CT Scanning as % all Radiology Charges				-0.251		
				[0.024]**		
MRI as % all Radiology Charges				-0.156		
				[0.025]**		
Rad. Therapy as % all Radiology Charges				-0.046		
.,				[0.019]*		
Nuclear Medicine as % all Radiology Charges				-0.091		
				[0.032]**		
Overall ancillary CCR	0.814	0.744	0.625	0.589		
	[0.026]**	[0.047]**	[0.035]**	[0.019]**		
Constant term	0.017	0.066	0.057	0.151		
Constant term	[0.008]*	[0.017]**	[0.011]**	[0.014]**		
Observations	3138	2940	1726	3142		
				0.65		
R-squared	0.53	0.17	0.30	0.03		
Weighted least squares estimation with robust standard		70 / 3 -3- • • • • • • • • • • • • • • • • • •	* 10/			
errors in brackets.	* significant at	5%: ** \$19n1	ficant at 1%			

Coefficients shown in **5-6A** are greater in absolute magnitude than those computed for last year's study, indicating a generally stronger impact (positive or negative) of the PC^{target} variables on their respective CCRs as compared to the impact found in the original IPPS models. This is particularly true for PC^{ivsol} (-0.199, s.e. = 0.027, as compared to -0.124).² Although we might expect to see differences from changes in the sample or changes in markup policies from year to year, it is more likely that stronger effects reflect the more accurate PC^{target} values computed from the combined inpatient and outpatient SAF.

R-squared values are slightly higher in this year's models in the estimations for Drugs (0.52 compared to 0.50) and Radiology (0.65 compared to 0.64). This could reflect differences in the sample or differences in the source data for the PC^{target} variables. R-squared for the Supplies CCR estimate is much closer (0.17) and is the same in both years. In this year's models, R-squared for the Drugs CCR model increases from 0.52 to 0.53 when the additional variable for $PC^{rxdetail}$ is added (I8B). Somewhat surprisingly, although adding $PC^{radther}$ and PC^{nucmed} to the Radiology CCR model alters the coefficients on PC^{ct} and PC^{mri} as well as the constant term, the R-squared is unchanged at 0.65.

Although the regressions explain substantially less of the variation in $CCR^{supplies}$ than in other CCRs, the coefficient on $PC^{devices}$ —our explanatory variable of interest—is estimated with similar and sometimes better precision than are the coefficients on our other PC^{target} variables. The sample mean value for $PC^{devices}$ is 0.36 (or 36 percent of supplies charges averaged across all hospitals), but the weighted mean is 0.47 (or 47 percent of all supplies charges in the sample). The coefficient in **5-6B** from the weighted regression is 0.221, and has a *t*-statistic of 7.31 (p<0.0001). This compares to a *t*-statistic for the coefficient on PC^{ivsol} of -6.32, on PC^{ct} of -0.69 (p<0.0001), on PC^{mri} of -6.21 (p<0.0001), on $PC^{radther}$ of -2.48 (p=0.013), and on PC^{nucmed} of -2.84 (p=0.005). (Note: a negative coefficient indicates that the cost ratio for the targeted service(s) is systematically *lower* than the ratio for the reference group, or non-targeted services within that CCR.) We do not conclude, therefore, that the statistical model for estimating charge compression due to device pricing is any less valid than the models for other targeted services.

In the model for the Cardiology CCR, which was not included in last year's report, the number of observations is only 1,726 because there are so many smaller hospitals that do not perform cardiac catheterization. The dependent variable is our overall ratio for 53_XX (computed from the sum of costs on all cardiology lines divided by charges on all cardiology lines). The R-squared for this estimation is 0.30. The conditional sample mean value for $PC^{cardcath}$ is 0.40 – indicating that cardiac catheterization charges average 40 percent of combined cardiology and monitoring charges across hospitals – and the weighted mean is 0.47. The coefficient on $PC^{cardcath}$ is -0.059 with a t-statistic -3.74 (p<0.0001). The negative coefficient on cardiac catheterization indicates that cost ratios for these services are significantly lower than ratios for other cardiology services.

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² Refer to Exhibit 28 on report page 67 in the January 2007 Final Report.

5.3.2 Adjusted National Aggregate CCRs

New national average CCRs for the targeted services within the 5 IPPS service groups are derived from adjusted departmental CCRs according to the formulas described in *Section 5.1*. Disaggregated or adjusted costs are estimated by applying the adjusted cost ratios to appropriate component charges, the new costs and charges are aggregated to the level of adjusted IPPS service groups by provider, then aggregated across providers to arrive at new national ratios. National aggregate results from these computations are presented as *Exhibit 5-7*. For reference purposes we have included a column showing the national CCRs derived from last year's CCR modeling, and another showing the CCRs derived from equivalent specifications run on our newer data.

Exhibit 5-7 Regression-Adjusted National Aggregate CCRs from Final IPPS Models

IPPS Service Groups	T4 X/2 -	This Year's Ratios		
Targeted for Statistical Adjustment	Last Year's Ratios	Using last	Expanded	
(original ratios shown in italics)	Ratios	year's model	model	
Original Drugs Group	0.21	0.21	0.206	
Adjusted Drugs after excluding targeted services	0.23	0.23	0.216	
Adjusted IV Solutions only	0.09	0.02	0.035	
Adjusted Detail Coded Drugs only			0.303	
Original Supplies Group	0.34	0.34	0.340	
Adjusted Supplies after excluding Devices	0.25	0.25	0.243	
Adjusted Devices and Implants only	0.43	0.47	0.467	
Original Cardiology Group	n/a	n/a	0.192	
Adjusted Cardiology after excluding Cardiac Catheterization	1		0.217	
Adjusted Cardiac Catheterization only			0.168	
Original Radiology Group	0.19	0.18	0.178	
Adjusted Radiology after excluding targeted services	0.28	0.28	0.308	
Adjusted CT Scanning only	0.11	0.06	0.054	
Adjusted MRI only	0.17	0.15	0.157	
Adjusted Radiation Therapy only			0.276	
Adjusted Nuclear Medicine (Radioisotopes) only			0.218	

SOURCE: RTI Analysis of HCRIS Reports and SAF charges.

5.3.3 Disaggregated National Ratios for Radiology and Cardiology: Regression-Adjusted Results Compared to National CCRs from Reassigned HCRIS Lines

The ratios appearing in the right-most columns of *Exhibits 3-1* and *5-7* offer alternatives for disaggregating key imaging and cardiology services. In Chapter 3 we recomputed national average CCRs using the corrected cost center data after reassigning all of the lines that we could locate for cardiac catheterization and several key radiology-related services. The corrected data offer better estimates of the national aggregate ratios for important ancillary services that are likely causes of aggregation bias, and we refer to these as "accounting-based" changes to the

national IPPS CCRs. Accounting-based changes appear to partially correct aggregation bias with the radiology services group, but the effect on cardiology and cardiac catheterization cost conversion is unclear.

Our national CCR for Radiology following CMS' approach is 0.178. It increases to 0.191 when cost and charge data are removed for CT Scanning, MRI, Therapeutic Radiology and Nuclear Medicine, for the subset of providers that have this data (Exhibit 5-8). But our regression-adjusted ratio for diagnostic radiology is 0.308, which is much higher. This is because the charges for CT Scanning and MRI services form a large part of total diagnostic radiology charges, and they are still not reported on separate lines in a large number of cost reports. If cost ratios for CT and MRI are truly much lower than the ratios for other radiology services, then continuing to group their cost and charge data with other radiology services in a substantial number of hospitals will continue to understate the national radiology CCR.

The national CCR computed from the subset of corrected, separately reported Cardiac Catheterization cost centers is 0.20. This is higher than the ratio for remaining cardiology and monitoring services (0.185). It is also considerably higher than the ratio estimated from the regression equation (0.138), but what is more worrisome is that the regression-based adjustment is actually negative, while the differential from the accounting data is positive. One explanation for this could be that the subset of hospitals with separate cardiac catheterization cost centers is not representative of other cardiac catheterization providers. Another could be that the non-standard cost center includes costs and charges for other diagnostic cardiology services in addition to catheterization. If we knew what these services were we could include the charges as another *PC*^{target} variable in the equation, but as yet we do not know services they are. Consequently the cardiology regression model, while better than last year's, may need further review. We do have more confidence in the accounting data for cardiac catheterization and other cardiology services in this year's analysis compared to last year's. National CCRs computed from the corrected non-standard lines may be valid adjustments to the IPPS ratios for cardiology services.

Exhibit 5-8
Disaggregated IPPS CCRs by Type of Adjustment

		Within	Radiolog	y Service Gro	<u>oup</u>	Within Ca	rdiology
	Diagnostic Radiology	CT Scanning	MRI	Therapeutic Radiation	Nuclear Medicine	Cardiology	Cardiac Cath.
Regression-adjusted CCRs	0.308	0.054	0.157	0.276	0.218	0.217	0.138
CCRs using better accounting data after reassigning HCRIS lines	0.191	0.066	0.138	0.277	0.186	0.185	0.200
Difference	0.117	-0.012	0.019	-0.001	0.032	0.032	-0.062
Percent Difference	38%	-22%	12%	0%	15%	15%	-45%
National average CCR without changes	0.178					0.185	

SOURCE: RTI analysis of HCRIS reports and SAF charges.

5.4 OPPS Application [To be included in Final Report]

6. IMPACT ON APC COSTS [TO BE INCLUDED IN FINAL REPORT]

7. IMPACT ON SEVERITY-ADJUSTED DRG RELATIVE WEIGHTS

7.1 Overview

In this section we present the results from four sets of reconstructed MS-DRG weights.

- The first set is our "baseline," which replicates CMS weights computed for the FY 2008 payment year. We use national CCRs computed from HCRIS files as originally received and following CMS' defined service groups, but derived from cost ratios and claims that match the RTI "finder file" for this study.
- The second set is derived from the same sample as the first, but uses our revised national CCRs computed after correcting the HCRIS line assignments. In addition, we include an accounting change discussed at length in the January 2007 report that is simply a reclassification of inpatient charges for intermediate care units from the critical care charge group to the routine care charge group.³
- The third set is similar to the second but takes advantage of the more common non-standard lines that we were able to identify in the corrected HCRIS line assignments. We match inpatient charges to the expanded set of CCRs using additional revenue code data from the inpatient SAF.
- The fourth set of weights is computed using our statistically disaggregated CCRs, as computed from the reassigned HCRIS lines. We use the expanded set of regressions that compute adjusted CCRs for targeted services consistent with those used for the OPPS regressions.

National CCRs used for the first three sets were shown in separate columns of *Exhibit 3-1*. The regression-adjusted CCRs used for the fourth set are those from the right-most column of *Exhibit 5-7*.

A complete list of our reconstructed DRG weights is included with this report as *Attachment 5*. Because the claims sample is slightly different from the sample used by CMS for FY 2008 payments, baseline weights are slightly different from those published in the Federal Register. Therefore the focus of attention for this study should be on the percent change in each weight that is attributable to the accounting and/or the regression-based changes, rather than the actual weights.

When we refer to "accounting-based' changes in the CCRs and weights, we are referring to the differences between either the second or the third set of weights compared to the first, before introducing any statistical modeling to disaggregate ratios within a cost center. "Regression-based changes" refer to differences in the fourth set only.

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This change corrects a mismatch between the classification of program charges and the classification of provider total costs and charges. Intermediate care units are grouped with routine care units on line 25 of the cost report, but intermediate care charges are grouped with critical care charges within the MedPAR files.

7.2 Accounting Changes Compared to Regression-adjusted CCRs

Percentile distributions of the impact on MS-DRG weights are shown in *Exhibit 7-1*. Data for the 25 highest volume MS-DRGs are shown in *Exhibit 7-2*, and data for the DRGs that showed the greatest proportional changes in weights in the third and fourth sets (relative to RTI's baseline set) are shown in *Exhibits 7-3* and *7-4*.

As expected, HCRIS line reassignments by themselves had almost no effect on the inpatient weights. The only exceptions are for two relatively low-volume DRGs for lithotripsy procedures that increased by 5 percent and 3 percent respectively, and one for Admit for Renal Dialysis that increased by 2 percent. Out of 737 MS-DRGs in the sample, weights for seventeen increased by 1 percent and weights for only nine decreased by 1 percent; these changes appear more likely to reflect the intermediate care charge reclassification than the HCRIS line reassignments.

The expanded reassigned lines added separate ratios for CT Scanning, MRI, Radiation Therapy, Nuclear Medicine and Cardiac Catheterization, based solely on the reported cost and charge data from the reassigned HCRIS lines. Weights for 30 percent of MS-DRGs were unchanged, 33 percent increased and 37 percent decreased. For the great majority of MS-DRGs, however, the impact on weights was very modest. Only fifteen had weights that decreased by 5 percent or more. The larger decreases were concentrated in cases related to head injury and coma, which is a reflection of lower CCRs for CT and MRI. Only ten MS-DRGs had weights that increased by 2 percent or more, and the largest of these were for cancer care, reflecting the improved costing for therapeutic radiology and chemotherapy services. The national CCR from reported cardiac catheterization increased in the expanded reassigned lines, and weights associated with many of the most common interventional cardiology procedures correspondingly increased, by 1 to 2 percent.

Exhibit 7-1
Distribution of Impact on MS-DRG Weights by Type of Adjustment

	Accountin	g Changes	
	Impact of	Impact of using	Impact of
	reassigning HCRIS	expanded	regression-
	lines only	ines only reassigned lines	
	ratio of re	ne weight	
Minimum value	0.99	0.91	0.88
5th percentile	1.00	0.97	0.94
25th percentile	1.00	0.99	0.96
Median	1.00	1.00	0.98
75th percentile	1.00	1.01	0.99
95th percentile	1.00	1.01	1.05
Maximum value	1.05	1.10	1.25

NOTE: For valid comparisons, baseline weights are reconstructed using CMS' ratios, from claims sample corresponding to RTI analysis files.

SOURCE: RTI analysis of HCRIS Reports and SAF charges.

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Exhibit 7-2 Reconstructed Weights for the 25 Most Common Severity-Adjusted DRGs

MS-		Raw Case	HCRIS lines, original (baseline)	HCRIS lines reassigned, with original roll-up	Reassigned lines w/ modified roll-up	Reassigned lines w/ expanded regression based adjustments	Impact of reassigned HCRIS lines only	Additional impact of expanded reassigned lines	Additional impact of regression adjustments	Total impact of regression adjustments over original
DRG	Description	Count	c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
				Reconstru	icted weights		Ratio	of new or adjus	sted weight to l	<u>paseline</u>
470	Major joint replacement or reattachment of lower extremity w/o MCC	378,430	2.0145	2.0171	2.0398	2.1635	1.00	1.01	1.06	1.07
885	Psychoses	301,318	1.2086	1.2019	1.2120	1.1943	0.99	1.01	0.99	0.99
392	Esophagitis, gastroent & misc digest disorders w/o MCC	276,462	0.6812	0.6806	0.6544	0.6432	1.00	0.96	0.98	0.94
194	Simple pneumonia & pleurisy w CC	260,833	1.0317	1.0295	1.0251	1.0039	1.00	1.00	0.98	0.97
292	Heart failure & shock w CC	226,910	1.0083	1.0059	1.0078	1.0136	1.00	1.00	1.01	1.01
313	Chest pain	202,329	0.5331	0.5335	0.5299	0.5458	1.00	0.99	1.03	1.02
287	Circulatory disorders except AMI, w card cath w/o MCC	196,580	1.2151	1.2156	1.2329	1.2161	1.00	1.01	0.99	1.00
293	Heart failure & shock w/o CC/MCC	195,665	0.7350	0.7325	0.7342	0.7427	1.00	1.00	1.01	1.01
247	Perc cardiovasc proc w drug-eluting stent w/o MCC	188,831	2.0371	2.0409	2.0753	2.1614	1.00	1.02	1.04	1.06
690	Kidney & urinary tract infections w/o MCC	188,398	0.7651	0.7631	0.7509	0.7360	1.00	0.98	0.98	0.96
192	Chronic obstructive pulmonary disease w/o CC/MCC	182,602	0.7449	0.7433	0.7435	0.7303	1.00	1.00	0.98	0.98
871	Septicemia w/o MV 96+ hours w MCC	181,259	1.8586	1.8569	1.8521	1.8030	1.00	1.00	0.97	0.97
945	Rehabilitation w CC/MCC	169,971	2.1216	2.1176	2.1380	2.0953	1.00	1.01	0.98	0.99
641	Nutritional & misc metabolic disorders w/o MCC	162,836	0.6882	0.6868	0.6770	0.6670	1.00	0.99	0.99	0.97
291	Heart failure & shock w MCC	159,935	1.4990	1.4989	1.5032	1.5014	1.00	1.00	1.00	1.00
312	Syncope & collapse	156,245	0.7150	0.7164	0.6949	0.7077	1.00	0.97	1.02	0.99
310	Cardiac arrhythmia & conduction disorders w/o CC/MCC	145,472	0.5977	0.5960	0.5952	0.6084	1.00	1.00	1.02	1.02
195	Simple pneumonia & pleurisy w/o CC/MCC	138,018	0.7506	0.7486	0.7450	0.7293	1.00	1.00	0.98	0.97
603	Cellulitis w/o MCC	120,777	0.8013	0.8004	0.8019	0.7834	1.00	1.00	0.98	0.98
191	Chronic obstructive pulmonary disease w CC	117,334	1.0022	1.0001	0.9986	0.9828	1.00	1.00	0.98	0.98
683	Renal failure w CC	116,266	1.1470	1.1467	1.1438	1.1358	1.00	1.00	0.99	0.99
378	G.I. hemorrhage w CC	110,754	1.0167	1.0141	1.0131	0.9941	1.00	1.00	0.98	0.98
065	Intracranial hemorrhage or cerebral infarction w CC	107,351	1.1906	1.1929	1.1546	1.1535	1.00	0.97	1.00	0.97
069	Transient ischemia	96,221	0.7147	0.7187	0.6852	0.6951	1.01	0.95	1.01	0.97
189	Pulmonary edema & respiratory failure	96,007	1.3522	1.3509	1.3539	1.3299	1.00	1.00	0.98	0.98
ALL I	MS-DRGs	11,232,979	1.5096	1.5096	1.5096	1.5096	1.00	1.00	1.00	1.00

SOURCE: RTI Analysis of HCRIS Reports and SAF claims charges.

Exhibit 7-3 Twenty MS-DRGs Most Sensitive to Accounting-based Changes in the CCRs

MS-		Case	HCRIS lines, original (baseline)	HCRIS lines reassigned, with original roll-up	Reassigned lines w/ modified roll-up	Reassigned lines w/ expanded regression based adjustments	Impact of reassigned HCRIS lines only	Additional impact of expanded reassigned lines	Additional impact of regression adjustments	Total impact of regression adjustments over original
DRG	Description	Count	c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
				Reconstru	cted weights		Ratio	of new or adjus	sted weight to b	<u>oaseline</u>
Ten	with biggest proportional decrease in relative weight									
086	Traumatic stupor & coma, coma <1 hr w CC	9,939	1.2338	1.2345	1.1713	1.1568	1.00	0.95	0.99	0.94
123	Neurological eye disorders	2,533	0.7060	0.7100	0.6719	0.6863	1.01	0.95	1.02	0.97
083	Traumatic stupor & coma, coma >1 hr w CC	1,833	1.3900	1.3941	1.3138	1.2951	1.00	0.94	0.99	0.93
964	Other multiple significant trauma w CC	2,161 17,65	1.5572	1.5632	1.4731	1.4516	1.00	0.94	0.99	0.93
694	Urinary stones w/o esw lithotripsy w/o MCC	0 10,74	0.6537	0.6547	0.6161	0.6013	1.00	0.94	0.98	0.92
087	Traumatic stupor & coma, coma <1 hr w/o CC/MCC	6	0.8322	0.8335	0.7781	0.7699	1.00	0.93	0.99	0.93
089	Concussion w CC	2,421	0.9068	0.9117	0.8496	0.8448	1.01	0.93	0.99	0.93
965	Other multiple significant trauma w/o CC/MCC	1,015	0.9975	1.0011	0.9316	0.9210	1.00	0.93	0.99	0.92
084	Traumatic stupor & coma, coma >1 hr w/o CC/MCC	2,268	0.8754	0.8804	0.8181	0.8042	1.01	0.93	0.98	0.92
090	Concussion w/o CC/MCC	2,891	0.6597	0.6648	0.6079	0.6060	1.01	0.91	1.00	0.92
Ten	with biggest proportional increase in relative weight									
716	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	1,323	0.9803	0.9851	1.0831	1.0878	1.00	1.10	1.00	1.11
849	Radiotherapy	1,210	1.2767	1.2757	1.3704	1.3447	1.00	1.07	0.98	1.05
745	D & C, conization, laparascopy & tubal interruption w/o CC/MCC	1,847	0.7277	0.7275	0.7562	0.7401	1.00	1.04	0.98	1.02
042	Periph/cranial nerve & other nerv syst proc w/o CC/MCC	4,713	1.7201	1.7269	1.7753	1.9049	1.00	1.03	1.07	1.11
848	Chemotherapy w/o acute leukemia as secondary diagnosis w/o CC/MCC	1,164	0.8103	0.8098	0.8287	0.8166	1.00	1.02	0.99	1.01
675	Other kidney & urinary tract procedures w/o CC/MCC	8,362 188,8	1.2630	1.2721	1.2943	1.3741	1.01	1.02	1.06	1.09
247	Perc cardiovasc proc w drug-eluting stent w/o MCC	31 22,52	2.0371	2.0409	2.0753	2.1614	1.00	1.02	1.04	1.06
249	Perc cardiovasc proc w non-drug-eluting stent w/o MCC	9 49,61	1.7269	1.7288	1.7562	1.7465	1.00	1.02	0.99	1.01
254	Other vascular procedures w/o CC/MCC	6	1.5376	1.5433	1.5675	1.5998	1.00	1.02	1.02	1.04
630	Other endocrine, nutrit & metab O.R. proc w/o CC/MCC	500	1.3807	1.3807	1.4019	1.3820	1.00	1.02	0.99	1.00

NOTE: Rows sorted for ranking indicated by boldface type.

SOURCE: RTI Analysis of HCRIS Reports and SAF charges.

Exhibit 7-4 Twenty MS-DRGs Most Sensitive to Regression-based Changes in the CCRs

MS-		Raw Case	HCRIS lines, original (baseline)	HCRIS lines reassigned, with original roll-up	Reassigne d lines w/ modified roll-up	Reassigned lines w/ expanded regression based adjustments	Impact of reassigned HCRIS lines only	Additional impact of expanded reassigned lines	Additional impact of regression adjustments	Total impact of regression adjustments over original
DRG	Description	Count	c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
				Reconstru	cted weights		Ratio	of new or adju	sted weight to	<u>baseline</u>
Ten w	vith biggest proportional decrease in weight									
089	Concussion w CC	2,421	0.9068	0.9117	0.8496	0.8448	1.01	0.93	0.99	0.93
087	Traumatic stupor & coma, coma <1 hr w/o CC/MCC	10,746	0.8322	0.8335	0.7781	0.7699	1.00	0.93	0.99	0.93
965	Other multiple significant trauma w/o CC/MCC	1,015	0.9975	1.0011	0.9316	0.9210	1.00	0.93	0.99	0.92
694	Urinary stones w/o esw lithotripsy w/o MCC	17,650	0.6537	0.6547	0.6161	0.6013	1.00	0.94	0.98	0.92
339	Appendectomy w complicated principal diag w CC	2,980	1.8947	1.8928	1.8475	1.7411	1.00	0.98	0.94	0.92
084	Traumatic stupor & coma >1 hr w/o CC/MCC	2,268	0.8754	0.8804	0.8181	0.8042	1.01	0.93	0.98	0.92
090	Concussion w/o CC/MCC	2,891	0.6597	0.6648	0.6079	0.6060	1.01	0.91	1.00	0.92
342	Appendectomy w/o complicated principal diag w CC	2,380	1.3381	1.3385	1.2970	1.2153	1.00	0.97	0.94	0.91
340	Appendectomy w complicated principal diag w/o CC/MCC	3,240	1.2584	1.2578	1.2193	1.1359	1.00	0.97	0.93	0.90
343	Appendectomy w/o complicated principal diag w/o CC/MCC	6,043	0.9246	0.9257	0.8868	0.8181	1.00	0.96	0.92	0.88
10 wi	th biggest proportional increase in weight									
227	Cardiac defibrillator implant w/o cardiac cath w/o MCC	46,455	5.1909	5.2118	5.2727	6.4638	1.00	1.01	1.23	1.25
245	AICD lead & generator procedures	5,831	3.2288	3.2399	3.2768	3.8709	1.00	1.01	1.18	1.20
223	Cardiac defib implant w cardiac cath w AMI/HF/shock w/o MCC	5,241	6.7305	6.7505	6.8356	8.0414	1.00	1.01	1.18	1.19
225	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w/o MCC	5,302	6.2698	6.2889	6.3656	7.4861	1.00	1.01	1.18	1.19
226	Cardiac defibrillator implant w/o cardiac cath w MCC	6,287	6.9126	6.9342	7.0048	8.1548	1.00	1.01	1.16	1.18
244	Permanent cardiac pacemaker implant w/o CC/MCC	61,965	2.0687	2.0744	2.0955	2.4208	1.00	1.01	1.16	1.17
458	Spinal fusion except cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	1,078	4.6256	4.6402	4.6909	5.3774	1.00	1.01	1.15	1.16
259	Cardiac pacemaker device replacement w/o MCC	6,879	1.6697	1.6746	1.6920	1.9373	1.00	1.01	1.14	1.16
455	Combined anterior/posterior spinal fusion w/o CC/MCC	1,482	5.0920	5.1057	5.1626	5.8894	1.00	1.01	1.14	1.16
224	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w MCC	1,654	8.2949	8.3169	8.4042	9.4577	1.00	1.01	1.13	1.14

NOTE: Rows sorted for ranking are indicated by boldface type.

SOURCE: RTI Analysis of HCRIS Reports and SAF charges.

Consistent with our findings on the former CMS DRGs in the January 2007 report, the most significant changes in MS-DRGs come from regression-based adjustments. Although we did not repeat the testing done in last year's study to identify which set of statistically adjusted ratios contributed to which changes in weights, it is evident from the types of MS-DRGs most affected that disaggregating the CCRs for medical supplies and devices continues to have the most impact on relative weights.

The biggest increase in weight is for MS-DRG 227 (cardiac defibrillator implantation without catheterization or complications) which increased by 25 percent, from 5.1909 to 6.6638. Cardiac implants accounted for nine of the ten MS-DRGs with the biggest increases due to regression-based adjustments, and the remaining one was for a spinal fusion procedure.

As in our previous findings, decreases in weights from regression-adjusted CCRs are spread out over many MS-DRGs. Last year we found that this was due largely to the offsetting reduction to the adjusted medical supplies CCR. Four of the ten MS-DRGs with the greatest proportional reductions in weights relate to appendectomies; this is also similar to findings from last year, where the reduced CCR for IV solutions and the lower ratio for non-device related supplies combined to have a disproportionately large impact on many surgical DRGs. Also consistent with last year's findings, the largest reductions in relative weights occur for MS-DRGs associated with traumatic head injury and concussion, which are high users of CT scanning or MRI services. This year's findings also include small reductions to several interventional cardiology DRGs, due to the adjusted CCR for cardiac catheterization.

7.3 Impact of CCR changes on hospital average weights

To assess the impact of revised cost estimations on hospital payments, we computed the average weight for each hospital for each set of reconstructed MS-DRG weights (equivalent to an estimate of revised hospital case-mix index (CMI) values). The reassignment of HCRIS lines has almost no impact on average weights, and the use of national CCRs from an expanded group of non-standard cost centers affects only a few providers by more than 1 percent in either direction (*Exhibit 7-5*).

Regression-adjusted CCRs, however, have a more widespread impact and also a somewhat lopsided impact, where a small number of hospitals would have much higher CMIs while most would have slightly lower. The 25th percentile in impact is a reduction of 1.5 percent while the 75th percentile is an increase of only 0.1 percent. Eleven percent of hospitals would have a reduction in CMI of two percent or greater, and these are distributed across small and large facilities, both teaching and non-teaching. Only three hospitals had reductions between 4 and 5 percent (all three were very low-volume surgical hospitals). In contrast, less than five percent of hospitals would have an increased CMI of two percent or greater, and 91 hospitals would see an increase in CMI of 4 percent or greater under the regression-adjusted weights. The vast majority of these are specialty orthopedic and cardiac surgery facilities.

Exhibit 7-6 shows mean, median and maximum changes in average weights across hospitals grouped by Medicare discharge volume. This table also illustrates how the impact of the accounting-based changes is spread relatively evenly across the sample, but the advantages gained by regression-based adjustments, primarily those from the disaggregation of devices from other medical supplies, is concentrated in the smaller hospitals.

Exhibit 7-5
Percentiles of Changes in Average Hospital Weights by Type of Adjustment

	Accounting-ba	ased changes	
	Impact of	Impact of using	Impact of
	reassigning	expanded	Regression-
	HCRIS lines only	reassigned lines	adjusted CCRs
Minimum value	-0.5%	-2.2%	-4.6%
5th percentile	-0.2%	-0.8%	-2.3%
25th percentile	-0.1%	-0.4%	-1.5%
Median	0.0%	-0.2%	-0.8%
75th percentile	0.0%	0.1%	0.1%
95th percentile	0.1%	0.6%	1.9%
Maximum value	0.4%	1.2%	11.2%

NOTE: impact on weights is computed relative to a baseline weight as reconstructed from RTI analysis files

SOURCE: RTI analysis of HCRIS Reports and SAF charges.

Exhibit 7-6 Change in Hospital Average Weight, by Hospital DRG Volume

	Accounting-based	changes onl	<u>y</u>	
	Number of		-	
Medicare discharge volume	hospitals	Mean	Median	Maximum
50 or fewer	44	0.4%	0.8%	1.2%
51 to 1,000	630	-0.3%	-0.5%	1.1%
1,001 to 5,000	1,811	-0.2%	-0.2%	1.2%
5,001 to 10,000	615	0.0%	0.0%	1.0%
more than 10,000	155	0.1%	0.2%	0.7%
Total	3,255	-0.2%	-0.2%	1.2%
	Regression-adjuste	ed CCRs		
	Number of			
Medicare discharge volume	hospitals	Mean	Median	Maximum
50 or fewer	44	0.2%	-1.3%	7.4%
51 to 1,000	630	-0.8%	-1.8%	11.2%
1,001 to 5,000	1,811	-0.7%	-0.9%	11.2%
5,001 to 10,000	615	0.1%	0.0%	4.3%
more than 10,000	155	0.5%	0.5%	3.5%
Total	3,255	-0.5%	-0.8%	11.2%

NOTES: Accounting changes reflect expanded use of reassigned HCRIS lines. Impact is computed relative to average of baseline weights as reconstructed from RTI analysis files.

SOURCE: RTI analysis of HCRIS Reports and SAF charges.

8. DISCUSSION [TO BE INCLUDED IN FINAL REPORT]

Attachment 3 Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

			Percent				Outpatient
		Outpatient	of outpatient			Percent	charges as
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total
revenue	5	Covered	excluding	total	SAF	ancillary	ancillary
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges
0250	Drugs sold - General	2,388,635,946	2.1%	1.9%	39,180,236,715	15.1%	5.7%
0251	Drugs sold - Generic	76,479,972	0.1%	0.1%	995,287,335	0.4%	7.1%
0252	Drugs sold - Non-generic	67,740,062	0.1%	0.1%	1,033,577,089	0.4%	6.2%
0253	Drugs sold - Take-home	32,438	0.0%	0.0%	2,546,134	0.0%	1.3%
0254	Drugs sold - Incident to other dx	28,759,398	0.0%	0.0%	72,538,564	0.0%	28.4%
0255	Drugs sold - Incident to radiology	370,984,015	0.3%	0.3%	792,601,790	0.3%	31.9%
0256	Drugs sold - Experimental	193	0.0%	0.0%	496	0.0%	28.0%
0257	Drugs sold - Non-Rx	481,962	0.0%	0.0%	16,219,800	0.0%	2.9%
0258	Drugs sold - IV solutions	611,753,928	0.5%	0.5%	6,266,730,351	2.4%	8.9%
0259	Drugs sold - Other	115,402,425	0.1%	0.1%	2,630,988,296	1.0%	4.2%
0260	IV therapy - General	850,381,534	0.8%	0.7%	763,258,502	0.3%	52.7%
0261	IV therapy - Infusion pump	3,406,845	0.0%	0.0%	11,785,574	0.0%	22.4%
0262	IV therapy - Pharm services	3,402,151	0.0%	0.0%	4,454,300	0.0%	43.3%
0263	IV therapy - Drug/supply deliv	1,423,157	0.0%	0.0%	355,862	0.0%	80.0%
0264	IV therapy - Supplies	2,876,742	0.0%	0.0%	11,550,085	0.0%	19.9%
0269	IV therapy - Other	10,264,293	0.0%	0.0%	14,740,132	0.0%	41.0%
0270	Supplies sold - General	2,425,044,597	2.2%	1.9%	14,085,290,433	5.4%	14.7%
0271	Supplies sold - Non-sterile	182,415,889	0.2%	0.1%	1,520,945,075	0.6%	10.7%
0272	Supplies sold - Sterile	3,382,591,874	3.0%	2.6%	9,896,339,463	3.8%	25.5%
0273	Supplies sold - Take-home	22,702	0.0%	0.0%	1,536,414	0.0%	1.5%
0274	Supplies sold - Prosthetics/orthot	38,595,250	0.0%	0.0%	346,767,275	0.1%	10.0%
0275	Supplies sold - Pacemaker	1,372,858,000	1.2%	1.1%	4,604,302,347	1.8%	23.0%
0276	Supplies sold - Intraocular lens	372,396,833	0.3%	0.3%	3,596,749	0.0%	99.0%
0278	Supplies sold - Implants/devices	3,015,281,968	2.7%	2.3%	17,931,467,838	6.9%	14.4%
0279	Supplies sold - Oth supplies/devices	131,650,156	0.1%	0.1%	531,942,519	0.2%	19.8%
0280	Oncology - General	36,988,108	0.0%	0.0%	2,912,479	0.0%	92.7%
0289	Oncology - Other	907,055	0.0%	0.0%	70,089	0.0%	92.8%

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

		Outpatient	Percent of outpatient	_		Percent	Outpatient charges as
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total
revenue	Description	Covered Charges	excluding Dx Lab	total outpatient	SAF	ancillary	ancillary
0300	Lab - clinical * - General	5,714,102,987	5.1%	4.4%	Charges 13,692,355,313	inpatient 5.3%	charges 29.4%
0301	Lab - clinical * - Chemistry	6,852,123,785	6.1%	5.3%	15,022,758,869	5.8%	31.3%
0302	Lab - clinical * - Immunology	426,112,330	0.4%	0.3%	1,020,375,640	0.4%	29.5%
0303	Lab - clinical * - Renal (home)	26,634	0.0%	0.0%	967	0.0%	96.5%
0304	Lab - clinical * - Nonroutine dialysis	186,937	0.0%	0.0%	840,065	0.0%	18.2%
0305	Lab - clinical * - Hematology	1,907,092,113	1.7%	1.5%	4,709,390,508	1.8%	28.8%
0306	Lab - clinical * - Bact/microbio	764,294,066	0.7%	0.6%	2,341,994,834	0.9%	24.6%
0307	Lab - clinical * - Urology	215,132,299	0.2%	0.2%	312,626,657	0.1%	40.8%
0308	Lab - clinical * -	212	0.0%	0.0%	0	0.0%	100.0%
0309	Lab - clinical * - Other	111,592,230	0.1%	0.1%	245,884,865	0.1%	31.2%
0310	Lab - path - General	739,069,950	0.7%	0.6%	568,872,201	0.2%	56.5%
0311	Lab - path - Cytology	168,488,197	0.1%	0.1%	88,077,173	0.0%	65.7%
0312	Lab - path - Histology	505,325,882	0.4%	0.4%	359,764,272	0.1%	58.4%
0314	Lab - path - Biopsy	20,594,406	0.0%	0.0%	8,848,804	0.0%	69.9%
0315	Lab - path -	1,425	0.0%	0.0%	0	0.0%	100.0%
0319	Lab - path - Other	9,974,461	0.0%	0.0%	6,750,596	0.0%	59.6%
0320	Radiology-Diagnostic - General	5,056,252,790	4.5%	3.9%	5,125,817,330	2.0%	49.7%
	Radiology-Diagnostic -						
0321	Angiocardiography	39,968,520	0.0%	0.0%	45,695,071	0.0%	46.7%
0322	Radiology-Diagnostic - Arthrography	6,187,333	0.0%	0.0%	1,307,653	0.0%	82.6%
0323	Radiology-Diagnostic - Arteriogram	448,991,678	0.4%	0.3%	492,104,491	0.2%	47.7%
0324	Radiology-Diagnostic - Chest	1,120,506,814	1.0%	0.9%	2,409,605,553	0.9%	31.7%
0325	Radiology-Diagnostic -	117	0.0%	0.0%	0	0.0%	100.0%
0329	Radiology-Diagnostic - Other	107,469,581	0.1%	0.1%	106,049,661	0.0%	50.3%
0330	Radiology-therapeutic - General	6,933,827	0.0%	0.0%	8,031,184	0.0%	46.3%
0331	Radiology-therapeutic - Chemo injected	57,117,105	0.1%	0.0%	6,065,973	0.0%	90.4%

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

			Percent				Outpatient
		Outpatient	of outpatient			Percent	charges as
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total
revenue		Covered	excluding	total	SAF	ancillary	ancillary
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges
0332	Radiology-therapeutic - Chemo oral	39,277	0.0%	0.0%	223,084	0.0%	15.0%
0333	Radiology-therapeutic - Radiation therapy	5,251,577,757	4.7%	4.1%	336,266,271	0.1%	94.0%
0334	Radiology-therapeutic -	0	0.0%	0.0%	16	0.0%	0.0%
0335	Radiology-therapeutic - Chemo-IV	352,418,781	0.3%	0.3%	16,705,152	0.0%	95.5%
0336	Radiology-therapeutic -	6,637	0.0%	0.0%	0	0.0%	100.0%
0339	Radiology-therapeutic - Other	7,679,305	0.0%	0.0%	747,537	0.0%	91.1%
0340	Nuclear med - General	545,457,665	0.5%	0.4%	408,861,064	0.2%	57.2%
0341	Nuclear med - Diagnostic	2,185,418,852	1.9%	1.7%	1,677,644,729	0.6%	56.6%
0342	Nuclear med - Treatment	40,880,731	0.0%	0.0%	4,696,072	0.0%	89.7%
0343	Nuclear med -	410,024,438	0.4%	0.3%	263,835,126	0.1%	60.8%
0344	Nuclear med -	33,171,283	0.0%	0.0%	5,545,187	0.0%	85.7%
0349	Nuclear med - Other	16,072,670	0.0%	0.0%	23,939,950	0.0%	40.2%
0350	CT Scanning - General	3,700,727,914	3.3%	2.9%	3,362,885,201	1.3%	52.4%
0351	CT Scanning - Head	2,290,275,632	2.0%	1.8%	2,748,293,424	1.1%	45.5%
0352	CT Scanning - Body	6,442,076,552	5.7%	5.0%	5,146,258,772	2.0%	55.6%
0353	CT Scanning -	0	0.0%	0.0%	141	0.0%	0.0%
0354	CT Scanning -	172	0.0%	0.0%	0	0.0%	100.0%
0359	CT Scanning - Other	173,883,050	0.2%	0.1%	136,763,897	0.1%	56.0%
0360	Oper Room - General	11,253,894,383	10.0%	8.8%	22,738,620,703	8.8%	33.1%
0361	Oper Room - Minor	1,913,577,829	1.7%	1.5%	2,036,641,166	0.8%	48.4%
0362	Oper Room - Other organ transplant	917,771	0.0%	0.0%	3,701,308	0.0%	19.9%
0363	Oper Room -	60	0.0%	0.0%	0	0.0%	100.0%
0364	Oper Room -	0	0.0%	0.0%	259	0.0%	0.0%
0367	Oper Room - Kidney transplant	484	0.0%	0.0%	7,029,507	0.0%	0.0%
0369	Oper Room - Other	115,298,957	0.1%	0.1%	344,625,019	0.1%	25.1%
0370	Anesthesia - General	2,017,776,234	1.8%	1.6%	4,139,506,528	1.6%	32.8%

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

			Percent				Outpatient
		Outpatient	of outpatient			Percent	charges as
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total
revenue		Covered	excluding	total	SAF	ancillary	ancillary
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges
0371	Anesthesia - Incident to radiology	13,565,756	0.0%	0.0%	12,101,560	0.0%	52.9%
0372	Anesthesia - Incid to other dx	17,145,075	0.0%	0.0%	16,715,290	0.0%	50.6%
0374	Anesthesia - Acupuncture	0	0.0%	0.0%	180	0.0%	0.0%
0379	Anesthesia - Other	62,548,259	0.1%	0.0%	52,068,918	0.0%	54.6%
0380	Blood - General	988,630	0.0%	0.0%	6,505,619	0.0%	13.2%
0381	Blood - Packed red cells	2,595,795	0.0%	0.0%	20,692,808	0.0%	11.1%
0382	Blood - Whole blood	51,622	0.0%	0.0%	774,408	0.0%	6.2%
0383	Blood - Plasma	269,552	0.0%	0.0%	7,302,879	0.0%	3.6%
0384	Blood - Platelets	1,337,363	0.0%	0.0%	11,553,514	0.0%	10.4%
0385	Blood - Leucocytes	2,310,857	0.0%	0.0%	12,969,043	0.0%	15.1%
0386	Blood - Other components	1,938,220	0.0%	0.0%	28,430,384	0.0%	6.4%
0387	Blood - Other derivatives	65,916	0.0%	0.0%	3,938,628	0.0%	1.6%
0389	Blood - Other	737,153	0.0%	0.0%	6,748,687	0.0%	9.8%
0390	Blood process - General	451,850,607	0.4%	0.4%	2,847,953,591	1.1%	13.7%
0391	Blood process - Blood admin	299,096,361	0.3%	0.2%	641,306,763	0.2%	31.8%
0399	Blood process - Other storage/process	5,756,401	0.0%	0.0%	32,032,160	0.0%	15.2%
0400	Other Imaging - General	5,125,818	0.0%	0.0%	12,675,869	0.0%	28.8%
0401	Other Imaging - Dx mammography	220,604,763	0.2%	0.2%	2,315,131	0.0%	99.0%
0402	Other Imaging - Ultrasound	1,252,971,120	1.1%	1.0%	1,089,368,914	0.4%	53.5%
0403	Other Imaging - Screening mammography	608,023,148	0.5%	0.5%	375,011	0.0%	99.9%
0404	Other Imaging - PET scan	649,183,758	0.6%	0.5%	48,478,662	0.0%	93.1%
0405	Other Imaging -	716	0.0%	0.0%	0	0.0%	100.0%
0409	Other Imaging - Other	3,473,349	0.0%	0.0%	3,329,242	0.0%	51.1%
0410	Resp Therapy - General	190,520,419	0.2%	0.1%	9,846,163,466	3.8%	1.9%
0412	Resp Therapy - Inhalation services	18,440,521	0.0%	0.0%	1,100,779,066	0.4%	1.6%
0413	Resp Therapy - Hyperbaric O2	461,862,409	0.4%	0.4%	57,843,074	0.0%	88.9%

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

		Percent							
		Outpatient	of outpatient			Percent	charges as		
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total		
revenue		Covered	excluding	total	SAF	ancillary	ancillary		
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges		
0419	Resp Therapy - Other	20,207,082	0.0%	0.0%	314,383,282	0.1%	6.0%		
0420	Physical Therapy - General	2,032,094,635	1.8%	1.6%	3,565,362,910	1.4%	36.3%		
0421	Physical Therapy - Visit charge	218,082,862	0.2%	0.2%	251,811,650	0.1%	46.4%		
0422	Physical Therapy - Hourly charge	6,104,021	0.0%	0.0%	7,036,552	0.0%	46.5%		
0423	Physical Therapy - Group rate	7,294,078	0.0%	0.0%	22,080,418	0.0%	24.8%		
0424	Physical Therapy - Evaluation/re-eval	183,638,994	0.2%	0.1%	675,043,794	0.3%	21.4%		
0429	Physical Therapy - Other	17,528,736	0.0%	0.0%	29,099,101	0.0%	37.6%		
0430	Occup Therapy - General	352,796,204	0.3%	0.3%	1,936,358,210	0.7%	15.4%		
0431	Occup Therapy - Visit charge	35,046,529	0.0%	0.0%	122,100,295	0.0%	22.3%		
0432	Occup Therapy - Hourly charge	427,017	0.0%	0.0%	3,979,083	0.0%	9.7%		
0433	Occup Therapy - Group rate	1,728,091	0.0%	0.0%	24,888,460	0.0%	6.5%		
0434	Occup Therapy - Evaluation/re-eval	35,459,362	0.0%	0.0%	324,733,054	0.1%	9.8%		
0439	Occup Therapy - Other	3,370,056	0.0%	0.0%	7,202,313	0.0%	31.9%		
0440	Speech Therapy - General	132,430,397	0.1%	0.1%	650,237,809	0.3%	16.9%		
0441	Speech Therapy - Visit charge	13,334,230	0.0%	0.0%	31,318,797	0.0%	29.9%		
0442	Speech Therapy - Hourly charge	707,050	0.0%	0.0%	2,908,668	0.0%	19.6%		
0443	Speech Therapy - Group rate	943,031	0.0%	0.0%	2,614,321	0.0%	26.5%		
0444	Speech Therapy - Evaluation/re-eval	25,131,050	0.0%	0.0%	161,521,119	0.1%	13.5%		
0449	Speech Therapy - Other	988,996	0.0%	0.0%	3,987,434	0.0%	19.9%		
0450	Emerg Room - General	6,802,263,921	6.0%	5.3%	7,619,170,535	2.9%	47.2%		
0451	Emerg Room - EMTALA screening	26,589,859	0.0%	0.0%	20,295,700	0.0%	56.7%		
0452	Emerg Room - ER beyond EMTALA	41,029,250	0.0%	0.0%	54,240,107	0.0%	43.1%		
0456	Emerg Room - Urgent care	24,239,095	0.0%	0.0%	7,148,171	0.0%	77.2%		
0459	Emerg Room - Other	15,501,020	0.0%	0.0%	21,378,114	0.0%	42.0%		
0460	Pulm Function - General	514,520,770	0.5%	0.4%	2,064,965,872	0.8%	19.9%		
0462	Pulm Function -	0	0.0%	0.0%	276	0.0%	0.0%		

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

			Percent				Outpatient
		Outpatient	of outpatient			Percent	charges as
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total
revenue		Covered	excluding	total	SAF	ancillary	ancillary
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges
0469	Pulm Function - Other	6,694,735	0.0%	0.0%	19,658,719	0.0%	25.4%
0470	Audiology - General	2,342,899	0.0%	0.0%	1,123,240	0.0%	67.6%
0471	Audiology - Diagnostic	35,775,887	0.0%	0.0%	5,843,864	0.0%	86.0%
0472	Audiology - Treatment	95,119	0.0%	0.0%	536,841	0.0%	15.1%
0479	Audiology - Other	188,482	0.0%	0.0%	24,910	0.0%	88.3%
0480	Cardiology - General	1,988,348,166	1.8%	1.5%	6,553,067,815	2.5%	23.3%
0481	Cardiology - Catheterization lab	3,313,480,809	2.9%	2.6%	8,188,565,046	3.2%	28.8%
0482	Cardiology - Stress test	486,420,340	0.4%	0.4%	307,669,907	0.1%	61.3%
0483	Cardiology - Echo	260,270,636	0.2%	0.2%	713,259,433	0.3%	26.7%
0489	Cardiology - Other	5,626,773	0.0%	0.0%	41,527,085	0.0%	11.9%
0490	Ambul Surg - General	761,515,555	0.7%	0.6%	225,053,733	0.1%	77.2%
0499	Ambul Surg - Other	84,937,918	0.1%	0.1%	6,207,685	0.0%	93.2%
0500	Outpatient Services - General	653	0.0%	0.0%	41,823,341	0.0%	0.0%
0510	Hospital clinics - General	1,640,716,633	1.5%	1.3%	44,329,143	0.0%	97.4%
0511	Hospital clinics - Chronic pain	59,082,363	0.1%	0.0%	551,050	0.0%	99.1%
0512	Hospital clinics - Dental	99,303	0.0%	0.0%	107,987	0.0%	47.9%
0513	Hospital clinics - Psychiatric	25,217,639	0.0%	0.0%	214,145	0.0%	99.2%
0514	Hospital clinics - Ob-gyn	2,560,978	0.0%	0.0%	46,701	0.0%	98.2%
0515	Hospital clinics - Pediatrics	340,776	0.0%	0.0%	2,715	0.0%	99.2%
0516	Hospital clinics - Urgent care	10,138,045	0.0%	0.0%	675,082	0.0%	93.8%
0517	Hospital clinics - Family practice	5,816,229	0.0%	0.0%	9,244	0.0%	99.8%
0519	Hospital clinics - Other	79,757,932	0.1%	0.1%	1,778,025	0.0%	97.8%
0520	Freestanding clinics - General	132,923	0.0%	0.0%	2,400	0.0%	98.2%
0521	Freestanding clinics - RHC	468,566	0.0%	0.0%	0	0.0%	100.0%
0522	Freestanding clinics - RHC-home visit	2,495	0.0%	0.0%	0	0.0%	100.0%
0523	Freestanding clinics - Family clinic	8,595	0.0%	0.0%	0	0.0%	100.0%

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

			Percent				Outpatient
		Outpatient	of outpatient			Percent	charges as
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total
revenue		Covered	excluding	total	SAF	ancillary	ancillary
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges
0525	Freestanding clinics -	42	0.0%	0.0%	0	0.0%	100.0%
0526	Freestanding clinics - Urgent care	366	0.0%	0.0%	0	0.0%	100.0%
0530	Osteopathic services - General	177,973	0.0%	0.0%	463	0.0%	99.7%
0531	Osteopathic services - Therapy	26,921	0.0%	0.0%	5,632	0.0%	82.7%
0539	Osteopathic services - Other	660	0.0%	0.0%	4,902	0.0%	11.9%
0610	MRI/MRA - General	1,868,301,897	1.7%	1.5%	1,299,469,411	0.5%	59.0%
0611	MRI/MRA - Brain	1,209,090,810	1.1%	0.9%	1,200,569,470	0.5%	50.2%
0612	MRI/MRA - Spinal cord	1,401,690,384	1.2%	1.1%	512,447,727	0.2%	73.2%
0614	MRI/MRA - MRI/other	90,329,071	0.1%	0.1%	29,036,666	0.0%	75.7%
0615	MRI/MRA - MRA/head, neck	94,163,042	0.1%	0.1%	164,049,657	0.1%	36.5%
0616	MRI/MRA - MRA/lower extremities	19,297,442	0.0%	0.0%	9,775,633	0.0%	66.4%
0618	MRI/MRA - MRA/other	31,819,523	0.0%	0.0%	24,658,872	0.0%	56.3%
0619	MRI/MRA - MRA/other	51,388,934	0.0%	0.0%	34,189,571	0.0%	60.0%
0621	Supplies sold - Incident to radiology	97,324,556	0.1%	0.1%	104,964,084	0.0%	48.1%
0622	Supplies sold - Incident to other dx	43,240,664	0.0%	0.0%	117,655,368	0.0%	26.9%
0623	Supplies sold - Surgical dressing	3,971,623	0.0%	0.0%	2,880,185	0.0%	58.0%
0624	Supplies sold - Investigational devices	1,357,436	0.0%	0.0%	39,361,976	0.0%	3.3%
0630	Drugs Sold - General	26,020	0.0%	0.0%	351	0.0%	98.7%
0631	Drugs Sold - Single source	8,059	0.0%	0.0%	14,601	0.0%	35.6%
0634	Drugs Sold - EPO<10k units	801,804	0.0%	0.0%	27,749,232	0.0%	2.8%
0635	Drugs Sold - EPO>=10k units	1,539,212	0.0%	0.0%	45,312,626	0.0%	3.3%
0636	Drugs Sold - Addl detail coding	10,398,065,727	9.2%	8.1%	236,605,699	0.1%	97.8%
0637	Drugs Sold - Self-administrable	10,176,034	0.0%	0.0%	162,218,522	0.1%	5.9%
0681	Trauma response - Level 1	7,084,088	0.0%	0.0%	35,091,601	0.0%	16.8%
0682	Trauma response - Level 2	6,884,555	0.0%	0.0%	24,850,293	0.0%	21.7%
0683	Trauma response - Level 3	1,879,472	0.0%	0.0%	4,388,948	0.0%	30.0%

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

		Percent							
		Outpatient	of outpatient			Percent	charges as		
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total		
revenue		Covered	excluding	total	SAF	ancillary	ancillary		
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges		
0684	Trauma response - Level 4	172,586	0.0%	0.0%	298,698	0.0%	36.6%		
0689	Trauma response - Other	30,804	0.0%	0.0%	181,876	0.0%	14.5%		
0700	Cast Room - General	3,764,334	0.0%	0.0%	1,404,384	0.0%	72.8%		
0709	Cast Room - Other	65,518	0.0%	0.0%	122,438	0.0%	34.9%		
0710	Recovery Rm - General	2,489,570,867	2.2%	1.9%	3,068,113,760	1.2%	44.8%		
0719	Recovery Rm - Other	92,656,800	0.1%	0.1%	46,567,662	0.0%	66.6%		
0720	Labor & Del - General	1,199,138	0.0%	0.0%	15,481,792	0.0%	7.2%		
0721	Labor & Del - Labor	796,717	0.0%	0.0%	4,108,596	0.0%	16.2%		
0722	Labor & Del - Delivery	32,111	0.0%	0.0%	7,072,630	0.0%	0.5%		
0723	Labor & Del - Circumcision	0	0.0%	0.0%	3,718	0.0%	0.0%		
0724	Labor & Del - Birthing room	9,265	0.0%	0.0%	271,123	0.0%	3.3%		
0729	Labor & Del - Other	182,666	0.0%	0.0%	797,972	0.0%	18.6%		
0730	EKG/ECG - General	1,143,711,236	1.0%	0.9%	2,782,113,827	1.1%	29.1%		
0731	EKG/ECG - Holter monitor	147,934,512	0.1%	0.1%	263,240,524	0.1%	36.0%		
0732	EKG/ECG - Telemetry	29,088,896	0.0%	0.0%	697,561,742	0.3%	4.0%		
0739	EKG/ECG - Other	852,199	0.0%	0.0%	7,690,272	0.0%	10.0%		
0740	EEG - General	564,333,424	0.5%	0.4%	388,601,341	0.1%	59.2%		
0749	EEG - Other	26,996,852	0.0%	0.0%	8,142,124	0.0%	76.8%		
0750	GI Services - General	2,484,212,883	2.2%	1.9%	1,348,990,372	0.5%	64.8%		
0759	GI Services - Other	29,199,221	0.0%	0.0%	21,752,413	0.0%	57.3%		
0760	Observation - General	28,186,361	0.0%	0.0%	20,218,179	0.0%	58.2%		
0761	Observation - Treatment room	778,923,823	0.7%	0.6%	388,895,022	0.1%	66.7%		
0762	Observation - Observ room	1,202,317,892	1.1%	0.9%	303,238,239	0.1%	79.9%		
0764	Observation -	1,625	0.0%	0.0%	0	0.0%	100.0%		
0765	Observation -	196	0.0%	0.0%	0	0.0%	100.0%		
0769	Observation - Other	2,761,748	0.0%	0.0%	1,270,306	0.0%	68.5%		

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

			Percent				Outpatient
		Outpatient	of outpatient			Percent	charges as
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total
revenue		Covered	excluding	total	SAF	ancillary	ancillary
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges
0770	Preventive Care - General	1,808,748	0.0%	0.0%	43,343	0.0%	97.7%
0771	Preventive Care - Vaccine admin	24,773,684	0.0%	0.0%	592,427	0.0%	97.7%
0780	Telemedicine - General	0	0.0%	0.0%	1,014	0.0%	0.0%
0782	Telemedicine -	0	0.0%	0.0%	126	0.0%	0.0%
0790	Lithotripsy - General	278,071,705	0.2%	0.2%	18,974,221	0.0%	93.6%
0791	Lithotripsy -	0	0.0%	0.0%	3,023	0.0%	0.0%
0794	Lithotripsy -	0	0.0%	0.0%	93	0.0%	0.0%
0797	Lithotripsy -	0	0.0%	0.0%	373	0.0%	0.0%
0798	Lithotripsy -	0	0.0%	0.0%	2,957	0.0%	0.0%
0799	Lithotripsy - Other	2,758,554	0.0%	0.0%	63,467	0.0%	97.8%
0800	I/P Dialysis - General	1,200,875	0.0%	0.0%	226,962,005	0.1%	0.5%
0801	I/P Dialysis - Hemo	24,403,651	0.0%	0.0%	2,065,120,796	0.8%	1.2%
0802	I/P Dialysis - Peritoneal	207,471	0.0%	0.0%	30,144,770	0.0%	0.7%
0803	I/P Dialysis - CAPD	26,873	0.0%	0.0%	14,938,969	0.0%	0.2%
0804	I/P Dialysis - CCPD	19,309	0.0%	0.0%	16,070,181	0.0%	0.1%
0809	I/P Dialysis - Other	9,300	0.0%	0.0%	18,913,916	0.0%	0.0%
0820	HemoO/P or Home - General	5,026,883	0.0%	0.0%	9,442	0.0%	99.8%
0821	HemoO/P or Home - Composite rate	14,671,202	0.0%	0.0%	1,940,589	0.0%	88.3%
0822	HemoO/P or Home - Supplies	16,497	0.0%	0.0%	8,669	0.0%	65.6%
0824	HemoO/P or Home - Maintenance	15	0.0%	0.0%	0	0.0%	100.0%
0825	HemoO/P or Home - Support	3,281	0.0%	0.0%	494	0.0%	86.9%
0829	HemoO/P or Home - Other	7,602,811	0.0%	0.0%	1,013,112	0.0%	88.2%
0830	Perit DialysisO/P - General	3,895	0.0%	0.0%	610	0.0%	86.5%
0839	Perit DialysisO/P - Other	1,092	0.0%	0.0%	0	0.0%	100.0%
0840	CAPDO/P or Home - General	7,793	0.0%	0.0%	0	0.0%	100.0%
0842	CAPDO/P or Home - Home supplies	100	0.0%	0.0%	0	0.0%	100.0%

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

		Percent							
		Outpatient	of outpatient			Percent	charges as		
UB 92		SAF	total	Percent of	Inpatient	of total	percent of total		
revenue		Covered	excluding	total	SAF	ancillary	ancillary		
code	Description	Charges	Dx Lab	outpatient	Charges	inpatient	charges		
0845	CAPDO/P or Home - Support services	5,169	0.0%	0.0%	0	0.0%	100.0%		
0849	CAPDO/P or Home - Other	1,393	0.0%	0.0%	0	0.0%	100.0%		
0850	CCPDO/P or Home - General	13,866	0.0%	0.0%	0	0.0%	100.0%		
0859	CCPDO/P or Home - Other	1,795	0.0%	0.0%	0	0.0%	100.0%		
0880	Miscellaneous Dialysis - General	1,875,444	0.0%	0.0%	5,438,575	0.0%	25.6%		
0881	Miscellaneous Dialysis - Ultrafiltration	298,826	0.0%	0.0%	6,596,187	0.0%	4.3%		
0888	Miscellaneous Dialysis -	0	0.0%	0.0%	1,105	0.0%	0.0%		
0889	Miscellaneous Dialysis - Other	1,954,327	0.0%	0.0%	3,447,228	0.0%	36.2%		
0900	Psych treatment - General	34,578,544	0.0%	0.0%	55,136,863	0.0%	38.5%		
0901	Psych treatment - Electro convulsive tx	52,808,712	0.0%	0.0%	42,376,891	0.0%	55.5%		
0902	Psych treatment - Milieu therapy	3,755	0.0%	0.0%	3,917,742	0.0%	0.1%		
0903	Psych treatment - Play therapy	3,627	0.0%	0.0%	79,645	0.0%	4.4%		
0904	Psych treatment - Activity therapy	22,615,509	0.0%	0.0%	3,990,109	0.0%	85.0%		
0905	Psych treatment - Intensive O/P-psych	3,470	0.0%	0.0%	0	0.0%	100.0%		
0906	Psych treatment - Intensive O/P-chem dep	25,639	0.0%	0.0%	0	0.0%	100.0%		
0907	Psych treatment - Community behav hlth	907	0.0%	0.0%	0	0.0%	100.0%		
0909	Psych treatment - Other	18,351	0.0%	0.0%	913,177	0.0%	2.0%		
0910	Psychol services - General	0	0.0%	0.0%	3,149	0.0%	0.0%		
0911	Psychol services - Rehab	1,049,607	0.0%	0.0%	2,907,256	0.0%	26.5%		
0912	Psychol services - Partial hosp/routine	1,207,135	0.0%	0.0%	44,227	0.0%	96.5%		
0913	Psychol services - Partial hosp/intensive	188,073	0.0%	0.0%	13,269	0.0%	93.4%		
0914	Psychol services - Indiv therapy	133,256,202	0.1%	0.1%	25,646,641	0.0%	83.9%		
0915	Psychol services - Group therapy	616,874,434	0.5%	0.5%	117,439,412	0.0%	84.0%		
0916	Psychol services - Family therapy	3,133,928	0.0%	0.0%	2,870,303	0.0%	52.2%		
0917	Psychol services - Bio feedback	1,046,477	0.0%	0.0%	126,606	0.0%	89.2%		
0918	Psychol services - Testing	9,216,379	0.0%	0.0%	7,367,130	0.0%	55.6%		

Attachment 3 (cont'd)
Inpatient and Outpatient Ancillary Charges by UB-92 Revenue Code

UB 92 revenue code	Description	Outpatient SAF Covered Charges	Percent of outpatient total excluding Dx Lab	Percent of total outpatient	Inpatient SAF Charges	Percent of total ancillary inpatient	Outpatient charges as percent of total ancillary charges
0919	Psychol services - Other	3,820,433	0.0%	0.0%	7,531,389	0.0%	33.7%
0920	Other Diagnostic - General	351,661,021	0.3%	0.3%	90,498,470	0.0%	79.5%
0920	Other Diagnostic - Peripheral vasc lab	1,443,302,230	1.3%	1.1%	1,626,800,690	0.6%	47.0%
0921	Other Diagnostic - EMG	129,119,957	0.1%	0.1%	59,583,655	0.0%	68.4%
0922	Other Diagnostic - Pap smear	1,565,988	0.1%	0.1%	28,441	0.0%	98.2%
0923	Other Diagnostic - Fap shear Other Diagnostic - Allergy testing	4,306,187	0.0%	0.0%	232,423	0.0%	94.9%
0924	Other Diagnostic - Pregnancy test	4,300,187	0.0%	0.0%	12,457	0.0%	28.3%
0923	Other Diagnostic - Other Other Diagnostic - Other	3,950,742	0.0%	0.0%	4,302,958	0.0%	47.9%
0929	•	1 1	0.0%	0.0%	384,998,225	0.0%	47.9%
	Other Therapeutic - General	353,739,029		0.12 / 0	1 ' '		
0941	Other Therapeutic - Recreation therapy	15,894	0.0%	0.0%	16,569,272	0.0%	0.1%
0942	Other Therapeutic - Education/ training	128,989,218	0.1%	0.1%	49,655,623	0.0%	72.2%
0943	Other Therapeutic - Cardiac rehab	329,954,149	0.3%	0.3%	49,532,057	0.0%	86.9%
0944	Other Therapeutic - Drug rehab	3,798,345	0.0%	0.0%	2,958,816	0.0%	56.2%
0945	Other Therapeutic - Alcohol rehab Other Therapeutic - Complex med eqt-	7,399,180	0.0%	0.0%	1,537,129	0.0%	82.8%
0946	rout	19,888	0.0%	0.0%	107,336,330	0.0%	0.0%
	Other Therapeutic - Complex med eqt-		0.0	0.0	0.5.05.4.5.4		
0947	ancill	2,554	0.0%	0.0%	85,935,134	0.0%	0.0%
0948	Other Therapeutic -	0	0.0%	0.0%	6,123	0.0%	0.0%
0949	Other Therapeutic - Other	16,090,070	0.0%	0.0%	17,970,507	0.0%	47.2%
0950	Other Therapeutic - Reserved	0	0.0%	0.0%	2,982	0.0%	0.0%
Total		128,455,643,064	114.2%	100.0%	259,266,469,808	100.0%	33.1%
* Total ex	xcluding Clinical Lab from OPSAF	112,464,979,472	100.0%	87.6%			

SOURCE: RTI Analysis of Outpatient and Inpatient Standard Analytic Files, for claims matched to the CCR project hospital finder file.

Attachment 5
Reconstructed MS-DRG Weights by Model

			tion	4	Accounting chan	nges:	Regression Adjusted HCRIS		ased changes	Impact: regression- based changes	
		Raw	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
MS- DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
001	Heart transplant or implant of heart assist system w MCC	467	0.99	20.6873	20.7026	20.9142	20.6372	0.1%	1.0%	-1.3%	-0.2%
002	Heart transplant or implant of heart assist system w/o MCC	272	1.00	12.2045	12.1959	12.3328	12.0365	-0.1%	1.1%	-2.4%	-1.4%
003	ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	20,582	0.89	17.7681	17.7861	17.8778	17.3849	0.1%	0.5%	-2.8%	-2.2%
004	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	19,639	0.89	11.4290	11.4246	11.4934	11.1849	0.0%	0.6%	-2.7%	-2.1%
005	Liver transplant w MCC or intestinal transplant	750	1.00	10.0285	10.0503	10.1395	9.8454	0.2%	0.9%	-2.9%	-1.8%
006	Liver transplant w/o MCC	457	1.00	4.9859	4.9861	5.0401	4.8888	0.0%	1.1%	-3.0%	-1.9%
007	Lung transplant	332	1.00	8.4183	8.4125	8.5057	8.2668	-0.1%	1.1%	-2.8%	-1.8%
800	Simultaneous pancreas/kidney transplant	405	1.00	5.3300	5.3289	5.3755	5.2040	0.0%	0.9%	-3.2%	-2.4%
009	Bone marrow transplant	1,049	1.00	6.3527	6.3334	6.4142	6.3148	-0.3%	1.3%	-1.5%	-0.6%
010	Pancreas transplant	149	1.00	3.6473	3.6461	3.6750	3.5812	0.0%	0.8%	-2.6%	-1.8%
011	Tracheostomy for face, mouth & neck diagnoses w MCC	1,071	0.99	4.6847	4.6780	4.7131	4.5717	-0.1%	0.7%	-3.0%	-2.4%
012	Tracheostomy for face, mouth & neck diagnoses w CC	1,741	0.99	3.1020	3.0956	3.1237	3.0140	-0.2%	0.9%	-3.5%	-2.8%
013	Tracheostomy for face, mouth & neck diagnoses w/o CC/MCC	1,276	1.00	2.0248	2.0195	2.0402	1.9644	-0.3%	1.0%	-3.7%	-3.0%
020	Intracranial vascular procedures w PDX hemorrhage w MCC	774	1.00	8.4183	8.4393	8.4209	8.4581	0.2%	-0.2%	0.4%	0.5%
021	Intracranial vascular procedures w PDX hemorrhage w CC	486	1.00	6.5391	6.5556	6.5446	6.6060	0.3%	-0.2%	0.9%	1.0%
022	Intracranial vascular procedures w PDX hemorrhage w/o CC/MCC	218	0.99	4.2723	4.2843	4.2883	4.3823	0.3%	0.1%	2.2%	2.6%
023	Cranio w major dev impl/acute complex CNS PDX w MCC or chemo implant	3,087	0.99	5.0203	5.0217	4.9702	4.8723	0.0%	-1.0%	-2.0%	-2.9%
024	Cranio w major dev impl/acute complex CNS PDX w/o MCC	1,855	0.99	3.4782	3.4807	3.4357	3.4422	0.1%	-1.3%	0.2%	-1.0%
025	Craniotomy & endovascular intracranial procedures w MCC	7,254	0.95	5.0486	5.0497	4.9961	4.8911	0.0%	-1.1%	-2.1%	-3.1%
026	Craniotomy & endovascular intracranial procedures w CC	10,646	0.97	3.0092	3.0084	2.9710	2.9268	0.0%	-1.2%	-1.5%	-2.7%
027	Craniotomy & endovascular intracranial procedures w/o CC/MCC	12,327	0.99	2.1083	2.1091	2.0927	2.1024	0.0%	-0.8%	0.5%	-0.3%
028	Spinal procedures w MCC	1,357	0.96	5.1877	5.1976	5.1801	5.2099	0.2%	-0.3%	0.6%	0.4%
029	Spinal procedures w CC or spinal neurostimulators	2,663	0.99	2.7155	2.7180	2.7130	2.7826	0.1%	-0.2%	2.6%	2.5%
030	Spinal procedures w/o CC/MCC	3,072	1.00	1.5233	1.5247	1.5321	1.5654	0.1%	0.5%	2.2%	2.8%
031	Ventricular shunt procedures w MCC	886	0.91	4.2129	4.2134	4.1741	4.1084	0.0%	-0.9%	-1.6%	-2.5%
032	Ventricular shunt procedures w CC	2,641	0.97	1.8566	1.8561	1.8403	1.8451	0.0%	-0.9%	0.3%	-0.6%
033	Ventricular shunt procedures w/o CC/MCC	3,931	0.99	1.3100	1.3104	1.3084	1.3349	0.0%	-0.2%	2.0%	1.9%
034	Carotid artery stent procedure w MCC	609	1.00	3.3382	3.3520	3.3584	3.3880	0.4%	0.2%	0.9%	1.5%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting chan	nges:	Regression Adjusted HCRIS		pact: pased changes	Impact: regression- based changes	
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
035	Carotid artery stent procedure w CC	2,174	1.00	1.9861	1.9971	2.0175	2.0541	0.6%	1.0%	1.8%	3.4%
036	Carotid artery stent procedure w/o CC/MCC	6,073	1.00	1.6059	1.6154	1.6394	1.6678	0.6%	1.5%	1.7%	3.9%
037	Extracranial procedures w MCC	4,158	1.00	3.1237	3.1303	3.1333	3.0971	0.2%	0.1%	-1.2%	-0.9%
038	Extracranial procedures w CC	15,218	1.00	1.5230	1.5239	1.5303	1.5037	0.1%	0.4%	-1.7%	-1.3%
039	Extracranial procedures w/o CC/MCC	50,214	1.00	1.0022	1.0024	1.0117	0.9795	0.0%	0.9%	-3.2%	-2.3%
040	Periph/cranial nerve & other nerv syst proc w MCC	3,985	0.96	3.9443	3.9515	3.9399	3.9646	0.2%	-0.3%	0.6%	0.5%
041	Periph/cranial nerve & other nerv syst proc w CC or periph neurostim	7,424	0.98	2.2105	2.2141	2.2216	2.2935	0.2%	0.3%	3.2%	3.8%
042	Periph/cranial nerve & other nerv syst proc w/o CC/MCC	4,713	1.00	1.7201	1.7269	1.7753	1.9049	0.4%	2.8%	7.3%	10.7%
052	Spinal disorders & injuries w CC/MCC	1,111	0.98	1.6895	1.6917	1.6461	1.6294	0.1%	-2.7%	-1.0%	-3.6%
053	Spinal disorders & injuries w/o CC/MCC	519	0.99	1.0139	1.0163	0.9676	0.9681	0.2%	-4.8%	0.1%	-4.5%
054	Nervous system neoplasms w MCC	4,102	0.96	1.6331	1.6325	1.6075	1.5793	0.0%	-1.5%	-1.8%	-3.3%
055	Nervous system neoplasms w/o MCC	15,643	0.98	1.0885	1.0885	1.0617	1.0472	0.0%	-2.5%	-1.4%	-3.8%
056	Degenerative nervous system disorders w MCC	9,391	0.94	1.6656	1.6618	1.6516	1.6271	-0.2%	-0.6%	-1.5%	-2.3%
057	Degenerative nervous system disorders w/o MCC	71,365	0.98	1.0959	1.0914	1.0830	1.0718	-0.4%	-0.8%	-1.0%	-2.2%
058	Multiple sclerosis & cerebellar ataxia w MCC	652	0.99	1.6699	1.6700	1.6575	1.6330	0.0%	-0.7%	-1.5%	-2.2%
059	Multiple sclerosis & cerebellar ataxia w CC	2,313	1.00	0.9659	0.9655	0.9493	0.9423	0.0%	-1.7%	-0.7%	-2.4%
060	Multiple sclerosis & cerebellar ataxia w/o CC/MCC	3,645	1.00	0.7311	0.7307	0.7171	0.7144	0.0%	-1.9%	-0.4%	-2.3%
061	Acute ischemic stroke w use of thrombolytic agent w MCC	1,146	0.99	2.8988	2.9025	2.8491	2.8296	0.1%	-1.8%	-0.7%	-2.4%
062	Acute ischemic stroke w use of thrombolytic agent w CC	1,944	1.00	2.0171	2.0200	1.9662	1.9628	0.1%	-2.7%	-0.2%	-2.7%
063	Acute ischemic stroke w use of thrombolytic agent w/o CC/MCC	957	1.00	1.5783	1.5817	1.5297	1.5322	0.2%	-3.3%	0.2%	-2.9%
064	Intracranial hemorrhage or cerebral infarction w MCC	50,416	0.96	1.8989	1.9009	1.8645	1.8390	0.1%	-1.9%	-1.4%	-3.2%
065	Intracranial hemorrhage or cerebral infarction w CC	107,351	0.97	1.1906	1.1929	1.1546	1.1535	0.2%	-3.2%	-0.1%	-3.1%
066	Intracranial hemorrhage or cerebral infarction w/o CC/MCC	85,426	0.99	0.8581	0.8613	0.8238	0.8303	0.4%	-4.3%	0.8%	-3.2%
067	Nonspecific cva & precerebral occlusion w/o infarct w MCC	1,283	0.99	1.5695	1.5725	1.5451	1.5605	0.2%	-1.7%	1.0%	-0.6%
068	Nonspecific cva & precerebral occlusion w/o infarct w/o MCC	11,873	1.00	0.8836	0.8877	0.8616	0.8876	0.5%	-2.9%	3.0%	0.5%
069	Transient ischemia	96,221	1.00	0.7147	0.7187	0.6852	0.6951	0.6%	-4.7%	1.4%	-2.7%
070	Nonspecific cerebrovascular disorders w MCC	6,159	0.95	1.8772	1.8806	1.8530	1.8265	0.2%	-1.5%	-1.4%	-2.7%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

		Accounting changes:		Accounting changes:		Regression Adjusted HCRIS		pact: pased changes	Impact: re based o		
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
071	Nonspecific cerebrovascular disorders w CC	10,389	0.97	1.2058	1.2049	1.1764	1.1679	-0.1%	-2.4%	-0.7%	-3.1%
072	Nonspecific cerebrovascular disorders w/o CC/MCC	5,437	0.99	0.8074	0.8083	0.7760	0.7771	0.1%	-4.0%	0.1%	-3.8%
073	Cranial & peripheral nerve disorders w MCC	6,767	1.00	1.3147	1.3224	1.3125	1.2985	0.6%	-0.8%	-1.1%	-1.2%
074	Cranial & peripheral nerve disorders w/o MCC	30,444	1.00	0.8414	0.8427	0.8267	0.8230	0.1%	-1.9%	-0.4%	-2.2%
075	Viral meningitis w CC/MCC	1,103	0.99	1.6573	1.6569	1.6226	1.5922	0.0%	-2.1%	-1.9%	-3.9%
076	Viral meningitis w/o CC/MCC	779	1.00	0.8779	0.8775	0.8495	0.8325	0.0%	-3.2%	-2.0%	-5.2%
077	Hypertensive encephalopathy w MCC	898	0.99	1.8397	1.8492	1.8225	1.8041	0.5%	-1.4%	-1.0%	-1.9%
078	Hypertensive encephalopathy w CC	1,300	1.00	1.0652	1.0675	1.0382	1.0412	0.2%	-2.7%	0.3%	-2.3%
079	Hypertensive encephalopathy w/o CC/MCC	798	1.00	0.7648	0.7662	0.7349	0.7418	0.2%	-4.1%	1.0%	-3.0%
080	Nontraumatic stupor & coma w MCC	1,894	0.99	1.0716	1.0743	1.0533	1.0380	0.2%	-2.0%	-1.4%	-3.1%
081	Nontraumatic stupor & coma w/o MCC	7,959	1.00	0.7051	0.7049	0.6834	0.6768	0.0%	-3.1%	-1.0%	-4.0%
082	Traumatic stupor & coma, coma >1 hr w MCC	1,405	1.00	2.0337	2.0389	1.9685	1.9238	0.3%	-3.5%	-2.3%	-5.4%
083	Traumatic stupor & coma, coma >1 hr w CC	1,833	1.00	1.3900	1.3941	1.3138	1.2951	0.3%	-5.8%	-1.4%	-6.8%
084	Traumatic stupor & coma, coma >1 hr w/o CC/MCC	2,268	1.00	0.8754	0.8804	0.8181	0.8042	0.6%	-7.1%	-1.7%	-8.1%
085	Traumatic stupor & coma, coma <1 hr w MCC	4,523	0.96	2.1244	2.1260	2.0620	2.0290	0.1%	-3.0%	-1.6%	-4.5%
086	Traumatic stupor & coma, coma <1 hr w CC	9,939	0.98	1.2338	1.2345	1.1713	1.1568	0.1%	-5.1%	-1.2%	-6.2%
087	Traumatic stupor & coma, coma <1 hr w/o CC/MCC	10,746	0.99	0.8322	0.8335	0.7781	0.7699	0.2%	-6.6%	-1.0%	-7.5%
088	Concussion w MCC	614	1.00	1.5689	1.5739	1.5102	1.4892	0.3%	-4.0%	-1.4%	-5.1%
089	Concussion w CC	2,421	1.00	0.9068	0.9117	0.8496	0.8448	0.5%	-6.8%	-0.6%	-6.8%
090	Concussion w/o CC/MCC	2,891	1.00	0.6597	0.6648	0.6079	0.6060	0.8%	-8.6%	-0.3%	-8.1%
091	Other disorders of nervous system w MCC	5,863	0.97	1.6667	1.6685	1.6465	1.6292	0.1%	-1.3%	-1.0%	-2.2%
092	Other disorders of nervous system w CC	14,253	0.98	0.9425	0.9426	0.9156	0.9163	0.0%	-2.9%	0.1%	-2.8%
093	Other disorders of nervous system w/o CC/MCC	13,927	0.99	0.6932	0.6944	0.6679	0.6742	0.2%	-3.8%	0.9%	-2.7%
094	Bacterial & tuberculous infections of nervous system w MCC	1,317	0.97	3.6037	3.6108	3.5743	3.5103	0.2%	-1.0%	-1.8%	-2.6%
095	Bacterial & tuberculous infections of nervous system w CC	1,048	0.96	2.3685	2.3720	2.3428	2.3203	0.1%	-1.2%	-1.0%	-2.0%
096	Bacterial & tuberculous infections of nervous system w/o CC/MCC	692	0.97	1.8461	1.8506	1.8316	1.8283	0.2%	-1.0%	-0.2%	-1.0%
097	Non-bacterial infect of nervous sys exc viral meningitis w MCC	1,032	0.98	3.1815	3.1821	3.1447	3.0801	0.0%	-1.2%	-2.1%	-3.2%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			Accounting changes:			Regression Adjusted HCRIS		pact: pased changes	Impact: re based o	egression- hanges	
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
098	Non-bacterial infect of nervous sys exc viral meningitis w CC	885	0.98	1.9187	1.9177	1.8800	1.8504	0.0%	-2.0%	-1.6%	-3.6%
099	Non-bacterial infect of nervous sys exc viral meningitis w/o CC/MCC	547	0.99	1.4019	1.4006	1.3676	1.3537	-0.1%	-2.4%	-1.0%	-3.4%
100	Seizures w MCC	13,703	0.97	1.5311	1.5313	1.5106	1.4872	0.0%	-1.4%	-1.5%	-2.9%
101	Seizures w/o MCC	52,724	0.99	0.7664	0.7653	0.7437	0.7403	-0.1%	-2.8%	-0.5%	-3.4%
102	Headaches w MCC	1,059	1.00	1.0384	1.0419	1.0083	1.0014	0.3%	-3.2%	-0.7%	-3.6%
103	Headaches w/o MCC	13,454	1.00	0.6354	0.6370	0.6071	0.6065	0.2%	-4.7%	-0.1%	-4.6%
113	Orbital procedures w CC/MCC	500	1.00	1.6132	1.6146	1.5934	1.5672	0.1%	-1.3%	-1.6%	-2.8%
114	Orbital procedures w/o CC/MCC	548	1.00	0.8240	0.8237	0.8184	0.7999	0.0%	-0.6%	-2.3%	-2.9%
115	Extraocular procedures except orbit	1,025	1.00	1.1472	1.1455	1.1494	1.1320	-0.2%	0.3%	-1.5%	-1.3%
116	Intraocular procedures w CC/MCC	629	1.00	0.9699	0.9702	0.9716	0.9460	0.0%	0.1%	-2.6%	-2.5%
117	Intraocular procedures w/o CC/MCC	1,459	1.00	0.6598	0.6592	0.6649	0.6399	-0.1%	0.9%	-3.8%	-3.0%
121	Acute major eye infections w CC/MCC	524	0.99	0.9003	0.8984	0.8820	0.8592	-0.2%	-1.8%	-2.6%	-4.6%
122	Acute major eye infections w/o CC/MCC	580	0.99	0.6105	0.6076	0.5927	0.5751	-0.5%	-2.4%	-3.0%	-5.8%
123	Neurological eye disorders	2,533	1.00	0.7060	0.7100	0.6719	0.6863	0.6%	-5.4%	2.1%	-2.8%
124	Other disorders of the eye w MCC	570	1.00	1.0692	1.0728	1.0516	1.0404	0.3%	-2.0%	-1.1%	-2.7%
125	Other disorders of the eye w/o MCC	4,404	1.00	0.6828	0.6829	0.6584	0.6519	0.0%	-3.6%	-1.0%	-4.5%
129	Major head & neck procedures w CC/MCC or major device	1,221	1.00	2.0143	2.0122	2.0313	2.0379	-0.1%	0.9%	0.3%	1.2%
130	Major head & neck procedures w/o CC/MCC	910	1.00	1.1749	1.1728	1.1852	1.1385	-0.2%	1.1%	-3.9%	-3.1%
131	Cranial/facial procedures w CC/MCC	758	1.00	1.9510	1.9527	1.9317	1.9213	0.1%	-1.1%	-0.5%	-1.5%
132	Cranial/facial procedures w/o CC/MCC	778	1.00	1.1025	1.1025	1.1003	1.0853	0.0%	-0.2%	-1.4%	-1.6%
133	Other ear, nose, mouth & throat O.R. procedures w CC/MCC	1,778	1.00	1.5673	1.5663	1.5681	1.5319	-0.1%	0.1%	-2.3%	-2.3%
134	Other ear, nose, mouth & throat O.R. procedures w/o CC/MCC	3,341	1.00	0.8219	0.8214	0.8279	0.8006	-0.1%	0.8%	-3.3%	-2.6%
135	Sinus & mastoid procedures w CC/MCC	362	1.00	1.9287	1.9275	1.9174	1.8546	-0.1%	-0.5%	-3.3%	-3.8%
136	Sinus & mastoid procedures w/o CC/MCC	437	1.00	0.8940	0.8932	0.8929	0.8549	-0.1%	0.0%	-4.3%	-4.4%
137	Mouth procedures w CC/MCC	671	1.00	1.3273	1.3254	1.3167	1.2746	-0.1%	-0.7%	-3.2%	-4.0%
138	Mouth procedures w/o CC/MCC	803	1.00	0.7338	0.7321	0.7344	0.7083	-0.2%	0.3%	-3.6%	-3.5%
139	Salivary gland procedures	1,510	1.00	0.8137	0.8134	0.8212	0.7834	0.0%	1.0%	-4.6%	-3.7%

Attachment 5 (cont'd)
Reconstructed MS-DRG Weights by Model

			tion	-	Accounting chan		Regression Adjusted HCRIS		pact: pased changes		egression- changes
MC		Raw	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
MS- DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
146	Ear, nose, mouth & throat malignancy w MCC	564	0.99	2.3014	2.2966	2.3140	2.2543	-0.2%	0.8%	-2.6%	-2.0%
147	Ear, nose, mouth & throat malignancy w CC	1,309	1.00	1.1413	1.1397	1.1419	1.1103	-0.1%	0.2%	-2.8%	-2.7%
148	Ear, nose, mouth & throat malignancy w/o CC/MCC	830	1.00	0.8100	0.8093	0.8139	0.7914	-0.1%	0.6%	-2.8%	-2.3%
149	Dysequilibrium	36,738	1.00	0.6132	0.6154	0.5880	0.5956	0.4%	-4.4%	1.3%	-2.9%
150	Epistaxis w MCC	753	1.00	1.3444	1.3437	1.3493	1.3323	0.0%	0.4%	-1.3%	-0.9%
151	Epistaxis w/o MCC	6,467	1.00	0.6075	0.6060	0.6086	0.6003	-0.2%	0.4%	-1.4%	-1.2%
152	Otitis media & URI w MCC	1,957	1.00	0.9605	0.9626	0.9517	0.9380	0.2%	-1.1%	-1.4%	-2.3%
153	Otitis media & URI w/o MCC	15,614	1.00	0.6105	0.6096	0.6001	0.5900	-0.1%	-1.6%	-1.7%	-3.4%
154	Nasal trauma & deformity w MCC	1,563	1.00	1.3902	1.3902	1.3735	1.3452	0.0%	-1.2%	-2.1%	-3.2%
155	Nasal trauma & deformity w CC	3,916	1.00	0.8838	0.8829	0.8623	0.8460	-0.1%	-2.3%	-1.9%	-4.3%
156	Nasal trauma & deformity w/o CC/MCC	4,396	1.00	0.6350	0.6347	0.6156	0.6065	0.0%	-3.0%	-1.5%	-4.5%
157	Dental & Oral Diseases w MCC	657	1.00	1.3447	1.3462	1.3270	1.2964	0.1%	-1.4%	-2.3%	-3.6%
158	Dental & Oral Diseases w CC	2,419	1.00	0.8363	0.8358	0.8125	0.7952	-0.1%	-2.8%	-2.1%	-4.9%
159	Dental & Oral Diseases w/o CC/MCC	1,985	1.00	0.6009	0.6003	0.5830	0.5727	-0.1%	-2.9%	-1.8%	-4.7%
163	Major chest procedures w MCC	9,231	0.96	5.2158	5.2112	5.2313	5.0803	-0.1%	0.4%	-2.9%	-2.6%
164	Major chest procedures w CC	10,297	0.98	2.6622	2.6575	2.6740	2.5858	-0.2%	0.6%	-3.3%	-2.9%
165	Major chest procedures w/o CC/MCC	8,062	0.99	1.7129	1.7102	1.7276	1.6491	-0.2%	1.0%	-4.5%	-3.7%
166	Other resp system O.R. procedures w MCC	20,072	0.95	3.7940	3.7953	3.7940	3.7400	0.0%	0.0%	-1.4%	-1.4%
167	Other resp system O.R. procedures w CC	23,985	0.98	2.1805	2.1803	2.1709	2.1493	0.0%	-0.4%	-1.0%	-1.4%
168	Other resp system O.R. procedures w/o CC/MCC	7,901	0.99	1.6388	1.6374	1.6383	1.5965	-0.1%	0.1%	-2.6%	-2.6%
175	Pulmonary embolism w MCC	10,643	0.97	1.6229	1.6248	1.5987	1.5818	0.1%	-1.6%	-1.1%	-2.5%
176	Pulmonary embolism w/o MCC	36,851	0.98	1.1062	1.1074	1.0799	1.0753	0.1%	-2.5%	-0.4%	-2.8%
177	Respiratory infections & inflammations w MCC	52,242	0.95	2.0746	2.0713	2.0726	2.0180	-0.2%	0.1%	-2.6%	-2.7%
178	Respiratory infections & inflammations w CC	68,338	0.96	1.5284	1.5249	1.5247	1.4818	-0.2%	0.0%	-2.8%	-3.1%
179	Respiratory infections & inflammations w/o CC/MCC	25,220	0.97	1.0751	1.0722	1.0721	1.0416	-0.3%	0.0%	-2.8%	-3.1%
180	Respiratory neoplasms w MCC	20,847	1.00	1.7914	1.7901	1.7711	1.7327	-0.1%	-1.1%	-2.2%	-3.3%
181	Respiratory neoplasms w CC	31,967	1.00	1.3338	1.3326	1.3115	1.2864	-0.1%	-1.6%	-1.9%	-3.6%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			ction	<u>.</u>	Accounting char	iges: HCRIS	Regression Adjusted HCRIS	Impact: accounting-based changes		Impact: regression- based changes	
MC		Raw	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
MS- DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
182	Respiratory neoplasms w/o CC/MCC	7,322	1.00	1.1474	1.1460	1.1339	1.0991	-0.1%	-1.1%	-3.1%	-4.2%
183	Major chest trauma w MCC	1,416	1.00	1.5433	1.5438	1.5036	1.4856	0.0%	-2.6%	-1.2%	-3.7%
184	Major chest trauma w CC	3,680	1.00	0.9089	0.9101	0.8705	0.8651	0.1%	-4.4%	-0.6%	-4.8%
185	Major chest trauma w/o CC/MCC	2,303	1.00	0.6392	0.6396	0.6107	0.6101	0.1%	-4.5%	-0.1%	-4.6%
186	Pleural effusion w MCC	7,298	0.97	1.6267	1.6290	1.6118	1.5983	0.1%	-1.1%	-0.8%	-1.7%
187	Pleural effusion w CC	9,577	0.98	1.1446	1.1437	1.1264	1.1247	-0.1%	-1.5%	-0.2%	-1.7%
188	Pleural effusion w/o CC/MCC	4,728	0.99	0.8506	0.8491	0.8342	0.8354	-0.2%	-1.8%	0.1%	-1.8%
189	Pulmonary edema & respiratory failure	96,007	1.00	1.3522	1.3509	1.3539	1.3299	-0.1%	0.2%	-1.8%	-1.7%
190	Chronic obstructive pulmonary disease w MCC	51,430	0.98	1.3572	1.3550	1.3560	1.3350	-0.2%	0.1%	-1.5%	-1.6%
191	Chronic obstructive pulmonary disease w CC	117,334	0.98	1.0022	1.0001	0.9986	0.9828	-0.2%	-0.2%	-1.6%	-1.9%
192	Chronic obstructive pulmonary disease w/o CC/MCC	182,602	0.99	0.7449	0.7433	0.7435	0.7303	-0.2%	0.0%	-1.8%	-2.0%
193	Simple pneumonia & pleurisy w MCC	77,122	0.97	1.4989	1.4981	1.4954	1.4673	0.0%	-0.2%	-1.9%	-2.1%
194	Simple pneumonia & pleurisy w CC	260,833	0.98	1.0317	1.0295	1.0251	1.0039	-0.2%	-0.4%	-2.1%	-2.7%
195	Simple pneumonia & pleurisy w/o CC/MCC	138,018	0.99	0.7506	0.7486	0.7450	0.7293	-0.3%	-0.5%	-2.1%	-2.8%
196	Interstitial lung disease w MCC	4,640	0.97	1.5893	1.5866	1.5778	1.5549	-0.2%	-0.6%	-1.5%	-2.2%
197	Interstitial lung disease w CC	6,660	0.98	1.1325	1.1304	1.1181	1.1048	-0.2%	-1.1%	-1.2%	-2.4%
198	Interstitial lung disease w/o CC/MCC	4,575	0.99	0.8587	0.8572	0.8458	0.8349	-0.2%	-1.3%	-1.3%	-2.8%
199	Pneumothorax w MCC	2,839	0.99	1.7496	1.7487	1.7304	1.7081	0.0%	-1.0%	-1.3%	-2.4%
200	Pneumothorax w CC	7,573	1.00	1.0308	1.0309	1.0091	1.0063	0.0%	-2.1%	-0.3%	-2.4%
201	Pneumothorax w/o CC/MCC	3,176	1.00	0.7220	0.7214	0.7124	0.7150	-0.1%	-1.2%	0.4%	-1.0%
202	Bronchitis & asthma w CC/MCC	28,596	1.00	0.8273	0.8262	0.8242	0.8123	-0.1%	-0.2%	-1.4%	-1.8%
203	Bronchitis & asthma w/o CC/MCC	36,899	1.00	0.6090	0.6075	0.6070	0.5980	-0.2%	-0.1%	-1.5%	-1.8%
204	Respiratory signs & symptoms	23,977	1.00	0.6527	0.6533	0.6414	0.6440	0.1%	-1.8%	0.4%	-1.3%
205	Other respiratory system diagnoses w MCC	4,883	0.97	1.2041	1.2054	1.1925	1.1788	0.1%	-1.1%	-1.1%	-2.1%
206	Other respiratory system diagnoses w/o MCC	20,034	0.99	0.7349	0.7349	0.7191	0.7173	0.0%	-2.2%	-0.2%	-2.4%
207	Respiratory system diagnosis w ventilator support 96+ hours	41,771	0.96	5.1375	5.1337	5.1618	5.0317	-0.1%	0.5%	-2.5%	-2.1%
208	Respiratory system diagnosis w ventilator support <96 hours	71,927	0.99	2.2463	2.2456	2.2497	2.1989	0.0%	0.2%	-2.3%	-2.1%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion	<u> 1</u>	Accounting chan	nges:	Regression Adjusted HCRIS	Impact: accounting-based changes		Impact: regression- based changes	
MS-		Raw	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
215	Other heart assist system implant	133	0.98	11.3884	11.4332	11.5604	11.5038	0.4%	1.1%	-0.5%	1.0%
216	Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	7,646	0.94	10.4013	10.4172	10.5250	10.4250	0.2%	1.0%	-0.9%	0.2%
217	Cardiac valve & oth maj cardiothoracic proc w card cath w CC	7,297	0.95	6.9823	6.9861	7.0681	7.0298	0.1%	1.2%	-0.5%	0.7%
218	Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	2,760	0.97	5.5353	5.5371	5.6070	5.5481	0.0%	1.3%	-1.1%	0.2%
219	Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	8,801	0.97	8.3110	8.3220	8.4043	8.3514	0.1%	1.0%	-0.6%	0.5%
220	Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	12,818	0.98	5.3477	5.3520	5.4115	5.4122	0.1%	1.1%	0.0%	1.2%
221	Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	7,098	0.99	4.4196	4.4234	4.4747	4.4527	0.1%	1.2%	-0.5%	0.7%
222	Cardiac defib implant w cardiac cath w AMI/HF/shock w MCC	2,504	1.00	8.9034	8.9243	9.0248	10.1441	0.2%	1.1%	12.4%	13.9%
223	Cardiac defib implant w cardiac cath w AMI/HF/shock w/o MCC	5,241	1.00	6.7305	6.7505	6.8356	8.0414	0.3%	1.3%	17.6%	19.5%
224	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w MCC	1,654	1.00	8.2949	8.3169	8.4042	9.4577	0.3%	1.0%	12.5%	14.0%
225	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w/o MCC	5,302	1.00	6.2698	6.2889	6.3656	7.4861	0.3%	1.2%	17.6%	19.4%
226	Cardiac defibrillator implant w/o cardiac cath w MCC	6,287	1.00	6.9126	6.9342	7.0048	8.1548	0.3%	1.0%	16.4%	18.0%
227	Cardiac defibrillator implant w/o cardiac cath w/o MCC	46,455	1.00	5.1909	5.2118	5.2727	6.4638	0.4%	1.2%	22.6%	24.5%
228	Other cardiothoracic procedures w MCC	2,687	0.95	7.8948	7.9040	7.9788	7.6304	0.1%	0.9%	-4.4%	-3.3%
229	Other cardiothoracic procedures w CC	3,819	0.97	4.9632	4.9667	5.0242	4.7350	0.1%	1.2%	-5.8%	-4.6%
230	Other cardiothoracic procedures w/o CC/MCC	1,602	0.98	3.9853	3.9887	4.0359	3.7674	0.1%	1.2%	-6.7%	-5.5%
231	Coronary bypass w PTCA w MCC	1,062	1.00	7.9592	7.9722	8.0650	7.7354	0.2%	1.2%	-4.1%	-2.8%
232	Coronary bypass w PTCA w/o MCC	1,286	1.00	5.6342	5.6417	5.7165	5.4451	0.1%	1.3%	-4.7%	-3.4%
233	Coronary bypass w cardiac cath w MCC	15,137	0.94	7.1083	7.1185	7.1947	6.8591	0.1%	1.1%	-4.7%	-3.5%
234	Coronary bypass w cardiac cath w/o MCC	36,265	0.97	4.6426	4.6467	4.7062	4.4299	0.1%	1.3%	-5.9%	-4.6%
235	Coronary bypass w/o cardiac cath w MCC	8,538	0.94	5.8566	5.8625	5.9204	5.6524	0.1%	1.0%	-4.5%	-3.5%
236	Coronary bypass w/o cardiac cath w/o MCC	30,174	0.98	3.6101	3.6123	3.6540	3.4381	0.1%	1.2%	-5.9%	-4.8%
237	Major cardiovasc procedures w MCC or thoracic aortic anuerysm repair	19,969	0.99	5.2269	5.2340	5.2705	5.2221	0.1%	0.7%	-0.9%	-0.1%
238	Major cardiovasc procedures w/o MCC	40,081	1.00	2.8948	2.8994	2.9283	3.0466	0.2%	1.0%	4.0%	5.2%
239	Amputation for circ sys disorders exc upper limb & toe w MCC	11,744	0.88	4.5380	4.5554	4.5963	4.4887	0.4%	0.9%	-2.3%	-1.1%
240	Amputation for circ sys disorders exc upper limb & toe w CC	13,361	0.89	2.6983	2.6984	2.7262	2.6583	0.0%	1.0%	-2.5%	-1.5%
241	Amputation for circ sys disorders exc upper limb & toe w/o CC/MCC	2,767	0.91	1.5582	1.5559	1.5735	1.5252	-0.2%	1.1%	-3.1%	-2.1%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting chan	nges:	Regression Adjusted HCRIS		pact: pased changes		egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
242	Permanent cardiac pacemaker implant w MCC	15,043	0.97	3.8070	3.8130	3.8392	4.1661	0.2%	0.7%	8.5%	9.4%
243	Permanent cardiac pacemaker implant w CC	37,118	0.99	2.6880	2.6930	2.7159	3.0531	0.2%	0.8%	12.4%	13.6%
244	Permanent cardiac pacemaker implant w/o CC/MCC	61,965	1.00	2.0687	2.0744	2.0955	2.4208	0.3%	1.0%	15.5%	17.0%
245	AICD lead & generator procedures	5,831	1.00	3.2288	3.2399	3.2768	3.8709	0.3%	1.1%	18.1%	19.9%
246	Perc cardiovasc proc w drug-eluting stent w MCC or 4+ vessels/stents	28,552	1.00	3.3304	3.3380	3.3799	3.5251	0.2%	1.3%	4.3%	5.8%
247	Perc cardiovasc proc w drug-eluting stent w/o MCC	188,831	1.00	2.0371	2.0409	2.0753	2.1614	0.2%	1.7%	4.2%	6.1%
248	Perc cardiovasc proc w non-drug-eluting stent w MCC or 4+ ves/stents	4,219	1.00	2.8759	2.8811	2.9131	2.9094	0.2%	1.1%	-0.1%	1.2%
249	Perc cardiovasc proc w non-drug-eluting stent w/o MCC	22,529	1.00	1.7269	1.7288	1.7562	1.7465	0.1%	1.6%	-0.6%	1.1%
250	Perc cardiovasc proc w/o coronary artery stent or AMI w MCC	4,519	1.00	2.8926	2.8966	2.9157	2.8456	0.1%	0.7%	-2.4%	-1.6%
251	Perc cardiovasc proc w/o coronary artery stent or AMI w/o MCC	32,790	1.00	1.6353	1.6358	1.6491	1.5807	0.0%	0.8%	-4.1%	-3.3%
252	Other vascular procedures w MCC	36,135	1.00	3.0230	3.0407	3.0647	3.0640	0.6%	0.8%	0.0%	1.4%
253	Other vascular procedures w CC	50,674	1.00	2.2262	2.2333	2.2592	2.2784	0.3%	1.2%	0.8%	2.3%
254	Other vascular procedures w/o CC/MCC	49,616	1.00	1.5376	1.5433	1.5675	1.5998	0.4%	1.6%	2.1%	4.0%
255	Upper limb & toe amputation for circ system disorders w MCC	2,015	0.93	2.5974	2.6145	2.6364	2.5845	0.7%	0.8%	-2.0%	-0.5%
256	Upper limb & toe amputation for circ system disorders w CC	3,823	0.94	1.6272	1.6270	1.6427	1.6026	0.0%	1.0%	-2.4%	-1.5%
257	Upper limb & toe amputation for circ system disorders w/o CC/MCC	655	0.95	0.9766	0.9760	0.9865	0.9592	-0.1%	1.1%	-2.8%	-1.8%
258	Cardiac pacemaker device replacement w MCC	529	1.00	2.9298	2.9337	2.9559	3.2009	0.1%	0.8%	8.3%	9.3%
259	Cardiac pacemaker device replacement w/o MCC	6,879	1.00	1.6697	1.6746	1.6920	1.9373	0.3%	1.0%	14.5%	16.0%
260	Cardiac pacemaker revision except device replacement w MCC	780	0.99	3.2510	3.2565	3.2718	3.2655	0.2%	0.5%	-0.2%	0.4%
261	Cardiac pacemaker revision except device replacement w CC	2,535	1.00	1.3701	1.3707	1.3827	1.4266	0.0%	0.9%	3.2%	4.1%
262	Cardiac pacemaker revision except device replacement w/o CC/MCC	2,895	1.00	0.9195	0.9211	0.9297	0.9642	0.2%	0.9%	3.7%	4.9%
263	Vein ligation & stripping	718	1.00	1.5843	1.5860	1.5984	1.5547	0.1%	0.8%	-2.7%	-1.9%
264	Other circulatory system O.R. procedures	27,332	0.97	2.4494	2.4625	2.4779	2.4372	0.5%	0.6%	-1.6%	-0.5%
280	Acute myocardial infarction, discharged alive w MCC	57,459	0.95	2.0874	2.0850	2.0923	2.0773	-0.1%	0.4%	-0.7%	-0.5%
281	Acute myocardial infarction, discharged alive w CC	62,089	0.96	1.4016	1.3988	1.4072	1.4054	-0.2%	0.6%	-0.1%	0.3%
282	Acute myocardia infarction, discharged alive w/o CC/MCC	58,651	0.97	1.1089	1.1069	1.1176	1.1203	-0.2%	1.0%	0.2%	1.0%
283	Acute myocardial infarction, expired w MCC	14,874	1.00	1.7584	1.7581	1.7599	1.7245	0.0%	0.1%	-2.0%	-1.9%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting char	nges:	Regression Adjusted HCRIS		pact: pased changes		egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
284	Acute myocardial infarction, expired w CC	4,872	1.00	0.9945	0.9931	0.9937	0.9768	-0.1%	0.1%	-1.7%	-1.8%
285	Acute myocardial infarction, expired w/o CC/MCC	2,886	1.00	0.6956	0.6942	0.6959	0.6835	-0.2%	0.2%	-1.8%	-1.7%
286	Circulatory disorders except AMI, w card cath w MCC	21,062	0.99	2.1164	2.1194	2.1361	2.1033	0.1%	0.8%	-1.5%	-0.6%
287	Circulatory disorders except AMI, w card cath w/o MCC	196,580	1.00	1.2151	1.2156	1.2329	1.2161	0.0%	1.4%	-1.4%	0.1%
288	Acute & subacute endocarditis w MCC	2,818	0.93	3.2721	3.2752	3.2642	3.2259	0.1%	-0.3%	-1.2%	-1.4%
289	Acute & subacute endocarditis w CC	1,368	0.94	2.0629	2.0588	2.0477	2.0327	-0.2%	-0.5%	-0.7%	-1.5%
290	Acute & subacute endocarditis w/o CC/MCC	429	0.94	1.3201	1.3164	1.3078	1.3010	-0.3%	-0.7%	-0.5%	-1.4%
291	Heart failure & shock w MCC	159,935	0.97	1.4990	1.4989	1.5032	1.5014	0.0%	0.3%	-0.1%	0.2%
292	Heart failure & shock w CC	226,910	0.98	1.0083	1.0059	1.0078	1.0136	-0.2%	0.2%	0.6%	0.5%
293	Heart failure & shock w/o CC/MCC	195,665	0.99	0.7350	0.7325	0.7342	0.7427	-0.3%	0.2%	1.2%	1.0%
294	Deep vein thrombophlebitis w CC/MCC	1,576	1.00	0.9413	0.9422	0.9351	0.9225	0.1%	-0.8%	-1.3%	-2.0%
295	Deep vein thrombophlebitis w/o CC/MCC	1,572	1.00	0.6366	0.6370	0.6349	0.6279	0.1%	-0.3%	-1.1%	-1.4%
296	Cardiac arrest, unexplained w MCC	1,634	1.00	1.1772	1.1792	1.1706	1.1383	0.2%	-0.7%	-2.8%	-3.3%
297	Cardiac arrest, unexplained w CC	818	1.00	0.6845	0.6854	0.6775	0.6585	0.1%	-1.1%	-2.8%	-3.8%
298	Cardiac arrest, unexplained w/o CC/MCC	498	1.00	0.4583	0.4584	0.4538	0.4422	0.0%	-1.0%	-2.6%	-3.5%
299	Peripheral vascular disorders w MCC	14,824	0.96	1.4883	1.4929	1.4864	1.4711	0.3%	-0.4%	-1.0%	-1.2%
300	Peripheral vascular disorders w CC	46,112	0.97	0.9388	0.9398	0.9360	0.9287	0.1%	-0.4%	-0.8%	-1.1%
301	Peripheral vascular disorders w/o CC/MCC	35,283	0.98	0.6654	0.6666	0.6614	0.6608	0.2%	-0.8%	-0.1%	-0.7%
302	Atherosclerosis w MCC	6,502	0.99	1.1159	1.1177	1.1200	1.1358	0.2%	0.2%	1.4%	1.8%
303	Atherosclerosis w/o MCC	83,296	1.00	0.7004	0.6998	0.7031	0.7284	-0.1%	0.5%	3.6%	4.0%
304	Hypertension w MCC	1,841	1.00	1.0923	1.0915	1.0722	1.0765	-0.1%	-1.8%	0.4%	-1.4%
305	Hypertension w/o MCC	32,934	1.00	0.5931	0.5931	0.5788	0.5873	0.0%	-2.4%	1.5%	-1.0%
306	Cardiac congenital & valvular disorders w MCC	1,193	0.98	1.4304	1.4310	1.4266	1.4260	0.0%	-0.3%	0.0%	-0.3%
307	Cardiac congenital & valvular disorders w/o MCC	6,087	0.99	0.7813	0.7802	0.7726	0.7831	-0.2%	-1.0%	1.4%	0.2%
308	Cardiac arrhythmia & conduction disorders w MCC	28,638	0.99	1.3671	1.3667	1.3643	1.3662	0.0%	-0.2%	0.1%	-0.1%
309	Cardiac arrhythmia & conduction disorders w CC	77,680	0.99	0.8407	0.8388	0.8350	0.8464	-0.2%	-0.5%	1.4%	0.7%
310	Cardiac arrhythmia & conduction disorders w/o CC/MCC	145,472	1.00	0.5977	0.5960	0.5952	0.6084	-0.3%	-0.1%	2.2%	1.8%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion	1	Accounting char		Regression Adjusted HCRIS	Impact: accounting-based changes			egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
311	Angina pectoris	21,161	1.00	0.5174	0.5166	0.5171	0.5277	-0.1%	0.1%	2.0%	2.0%
312	Syncope & collapse	156,245	1.00	0.7150	0.7164	0.6949	0.7077	0.2%	-3.0%	1.8%	-1.0%
313	Chest pain	202,329	1.00	0.5331	0.5335	0.5299	0.5458	0.1%	-0.7%	3.0%	2.4%
314	Other circulatory system diagnoses w MCC	49,166	0.97	1.7795	1.7911	1.7931	1.7671	0.6%	0.1%	-1.4%	-0.7%
315	Other circulatory system diagnoses w CC	32,991	0.98	1.0055	1.0068	1.0020	0.9988	0.1%	-0.5%	-0.3%	-0.7%
316	Other circulatory system diagnoses w/o CC/MCC	17,194	0.99	0.6573	0.6569	0.6488	0.6538	-0.1%	-1.2%	0.8%	-0.5%
326	Stomach, esophageal & duodenal proc w MCC	10,255	0.95	5.8777	5.8742	5.8831	5.6217	-0.1%	0.2%	-4.4%	-4.4%
327	Stomach, esophageal & duodenal proc w CC	10,214	0.98	2.9219	2.9167	2.9286	2.7831	-0.2%	0.4%	-5.0%	-4.7%
328	Stomach, esophageal & duodenal proc w/o CC/MCC	8,080	1.00	1.4502	1.4484	1.4606	1.3647	-0.1%	0.8%	-6.6%	-5.9%
329	Major small & large bowel procedures w MCC	43,217	0.95	5.1938	5.1905	5.1802	4.9302	-0.1%	-0.2%	-4.8%	-5.1%
330	Major small & large bowel procedures w CC	63,162	0.98	2.5957	2.5909	2.5922	2.4449	-0.2%	0.1%	-5.7%	-5.8%
331	Major small & large bowel procedures w/o CC/MCC	27,177	0.99	1.6611	1.6579	1.6674	1.5509	-0.2%	0.6%	-7.0%	-6.6%
332	Rectal resection w MCC	1,711	0.95	4.8387	4.8338	4.8427	4.6118	-0.1%	0.2%	-4.8%	-4.7%
333	Rectal resection w CC	6,030	0.98	2.4550	2.4495	2.4648	2.3173	-0.2%	0.6%	-6.0%	-5.6%
334	Rectal resection w/o CC/MCC	3,455	0.99	1.6530	1.6493	1.6654	1.5506	-0.2%	1.0%	-6.9%	-6.2%
335	Peritoneal adhesiolysis w MCC	6,487	0.96	4.1904	4.1879	4.1713	4.0030	-0.1%	-0.4%	-4.0%	-4.5%
336	Peritoneal adhesiolysis w CC	11,356	0.98	2.2950	2.2913	2.2780	2.1784	-0.2%	-0.6%	-4.4%	-5.1%
337	Peritoneal adhesiolysis w/o CC/MCC	7,921	0.99	1.4971	1.4951	1.4864	1.4199	-0.1%	-0.6%	-4.5%	-5.2%
338	Appendectomy w complicated principal diag w MCC	1,356	1.00	3.2219	3.2220	3.1758	3.0375	0.0%	-1.4%	-4.4%	-5.7%
339	Appendectomy w complicated principal diag w CC	2,980	1.00	1.8947	1.8928	1.8475	1.7411	-0.1%	-2.4%	-5.8%	-8.1%
340	Appendectomy w complicated principal diag w/o CC/MCC	3,240	1.00	1.2584	1.2578	1.2193	1.1359	0.0%	-3.1%	-6.8%	-9.7%
341	Appendectomy w/o complicated principal diag w MCC	718	1.00	2.3201	2.3203	2.2736	2.1698	0.0%	-2.0%	-4.6%	-6.5%
342	Appendectomy w/o complicated principal diag w CC	2,380	1.00	1.3381	1.3385	1.2970	1.2153	0.0%	-3.1%	-6.3%	-9.2%
343	Appendectomy w/o complicated principal diag w/o CC/MCC	6,043	1.00	0.9246	0.9257	0.8868	0.8181	0.1%	-4.2%	-7.8%	-11.5%
344	Minor small & large bowel procedures w MCC	746	1.00	3.3405	3.3383	3.3406	3.2067	-0.1%	0.1%	-4.0%	-4.0%
345	Minor small & large bowel procedures w CC	2,773	1.00	1.6585	1.6547	1.6640	1.5752	-0.2%	0.6%	-5.3%	-5.0%
346	Minor small & large bowel procedures w/o CC/MCC	2,524	1.00	1.2028	1.1998	1.2106	1.1422	-0.2%	0.9%	-5.7%	-5.0%

Attachment 5 (cont'd)
Reconstructed MS-DRG Weights by Model

			ction	Accounting changes: HCRIS			Regression Adjusted HCRIS HCRIS HCRIS HCRIS HIMPACT: accounting-based changes			Impact: regression- based changes	
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
347	Anal & stomal procedures w MCC	1,316	1.00	2.2159	2.2159	2.2162	2.1439	0.0%	0.0%	-3.3%	-3.2%
348	Anal & stomal procedures w CC	3,963	1.00	1.2831	1.2810	1.2797	1.2354	-0.2%	-0.1%	-3.5%	-3.7%
349	Anal & stomal procedures w/o CC/MCC	5,107	1.00	0.7569	0.7555	0.7580	0.7232	-0.2%	0.3%	-4.6%	-4.5%
350	Inguinal & femoral hernia procedures w MCC	1,529	1.00	2.4210	2.4195	2.4087	2.3471	-0.1%	-0.4%	-2.6%	-3.1%
351	Inguinal & femoral hernia procedures w CC	4,236	1.00	1.2548	1.2532	1.2441	1.2125	-0.1%	-0.7%	-2.5%	-3.4%
352	Inguinal & femoral hernia procedures w/o CC/MCC	8,226	1.00	0.8155	0.8148	0.8123	0.7862	-0.1%	-0.3%	-3.2%	-3.6%
353	Hernia procedures except inguinal & femoral w MCC	2,596	1.00	2.6030	2.6038	2.6020	2.5313	0.0%	-0.1%	-2.7%	-2.8%
354	Hernia procedures except inguinal & femoral w CC	7,967	1.00	1.3905	1.3895	1.3896	1.3518	-0.1%	0.0%	-2.7%	-2.8%
355	Hernia procedures except inguinal & femoral w/o CC/MCC	15,123	1.00	0.9581	0.9579	0.9616	0.9340	0.0%	0.4%	-2.9%	-2.5%
356	Other digestive system O.R. procedures w MCC	7,168	0.95	3.8627	3.8698	3.8645	3.7937	0.2%	-0.1%	-1.8%	-1.8%
357	Other digestive system O.R. procedures w CC	7,626	0.98	2.1786	2.1798	2.1743	2.1404	0.1%	-0.3%	-1.6%	-1.8%
358	Other digestive system O.R. procedures w/o CC/MCC	2,291	0.99	1.3800	1.3805	1.3762	1.3447	0.0%	-0.3%	-2.3%	-2.6%
368	Major esophageal disorders w MCC	2,549	1.00	1.6506	1.6502	1.6511	1.6109	0.0%	0.1%	-2.4%	-2.4%
369	Major esophageal disorders w CC	4,512	1.00	1.0474	1.0452	1.0417	1.0167	-0.2%	-0.3%	-2.4%	-2.9%
370	Major esophageal disorders w/o CC/MCC	2,982	1.00	0.7772	0.7751	0.7723	0.7570	-0.3%	-0.4%	-2.0%	-2.6%
371	Major gastrointestinal disorders & peritoneal infections w MCC	14,135	0.96	1.9610	1.9604	1.9431	1.8990	0.0%	-0.9%	-2.3%	-3.2%
372	Major gastrointestinal disorders & peritoneal infections w CC	21,851	0.97	1.2976	1.2941	1.2736	1.2428	-0.3%	-1.6%	-2.4%	-4.2%
373	Major gastrointestinal disorders & peritoneal infections w/o CC/MCC	13,619	0.98	0.8997	0.8962	0.8784	0.8578	-0.4%	-2.0%	-2.3%	-4.7%
374	Digestive malignancy w MCC	8,173	0.97	2.0438	2.0400	2.0202	1.9716	-0.2%	-1.0%	-2.4%	-3.5%
375	Digestive malignancy w CC	18,497	0.98	1.2608	1.2584	1.2323	1.2037	-0.2%	-2.1%	-2.3%	-4.5%
376	Digestive malignancy w/o CC/MCC	4,375	0.99	0.9090	0.9072	0.8848	0.8647	-0.2%	-2.5%	-2.3%	-4.9%
377	G.I. hemorrhage w MCC	42,534	0.98	1.6423	1.6413	1.6434	1.6117	-0.1%	0.1%	-1.9%	-1.9%
378	G.I. hemorrhage w CC	110,754	0.99	1.0167	1.0141	1.0131	0.9941	-0.3%	-0.1%	-1.9%	-2.2%
379	G.I. hemorrhage w/o CC/MCC	91,215	1.00	0.7689	0.7663	0.7652	0.7507	-0.3%	-0.1%	-1.9%	-2.4%
380	Complicated peptic ulcer w MCC	2,596	0.97	1.7221	1.7212	1.7116	1.6663	-0.1%	-0.6%	-2.6%	-3.2%
381	Complicated peptic ulcer w CC	5,315	0.98	1.1088	1.1064	1.0961	1.0709	-0.2%	-0.9%	-2.3%	-3.4%
382	Complicated peptic ulcer w/o CC/MCC	4,407	1.00	0.8117	0.8098	0.7993	0.7837	-0.2%	-1.3%	-2.0%	-3.5%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion	Accounting changes: HCRIS			Regression Adjusted HCRIS	Adjusted accounting-based changes HCRIS		Impact: regression- based changes	
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
383	Uncomplicated peptic ulcer w MCC	1,060	1.00	1.1674	1.1704	1.1510	1.1286	0.3%	-1.7%	-1.9%	-3.3%
384	Uncomplicated peptic ulcer w/o MCC	8,146	1.00	0.8026	0.8017	0.7789	0.7665	-0.1%	-2.9%	-1.6%	-4.5%
385	Inflammatory bowel disease w MCC	1,773	1.00	1.9012	1.8977	1.8734	1.8281	-0.2%	-1.3%	-2.4%	-3.8%
386	Inflammatory bowel disease w CC	6,751	1.00	1.0459	1.0433	1.0194	0.9930	-0.2%	-2.3%	-2.6%	-5.1%
387	Inflammatory bowel disease w/o CC/MCC	4,578	1.00	0.8151	0.8128	0.7875	0.7662	-0.3%	-3.1%	-2.7%	-6.0%
388	G.I. obstruction w MCC	16,201	0.97	1.5622	1.5611	1.5314	1.4937	-0.1%	-1.9%	-2.5%	-4.4%
389	G.I. obstruction w CC	44,150	0.99	0.9282	0.9266	0.8972	0.8782	-0.2%	-3.2%	-2.1%	-5.4%
390	G.I. obstruction w/o CC/MCC	44,004	1.00	0.6439	0.6430	0.6124	0.6015	-0.1%	-4.8%	-1.8%	-6.6%
391	Esophagitis, gastroent & misc digest disorders w MCC	37,143	1.00	1.0958	1.0975	1.0749	1.0546	0.2%	-2.1%	-1.9%	-3.8%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	276,462	1.00	0.6812	0.6806	0.6544	0.6432	-0.1%	-3.9%	-1.7%	-5.6%
393	Other digestive system diagnoses w MCC	20,958	1.00	1.5262	1.5254	1.5077	1.4672	-0.1%	-1.2%	-2.7%	-3.9%
394	Other digestive system diagnoses w CC	44,147	1.00	0.9718	0.9699	0.9500	0.9258	-0.2%	-2.0%	-2.5%	-4.7%
395	Other digestive system diagnoses w/o CC/MCC	22,903	1.00	0.6909	0.6893	0.6691	0.6538	-0.2%	-2.9%	-2.3%	-5.4%
405	Pancreas, liver & shunt procedures w MCC	3,430	0.96	5.8100	5.8104	5.8080	5.5998	0.0%	0.0%	-3.6%	-3.6%
406	Pancreas, liver & shunt procedures w CC	4,613	0.99	2.8954	2.8910	2.9017	2.7759	-0.2%	0.4%	-4.3%	-4.1%
407	Pancreas, liver & shunt procedures w/o CC/MCC	2,063	0.99	1.7850	1.7822	1.7930	1.7060	-0.2%	0.6%	-4.9%	-4.4%
408	Biliary tract proc except only cholecyst w or w/o c.d.e. w MCC	1,424	0.99	4.3935	4.3883	4.3858	4.2227	-0.1%	-0.1%	-3.7%	-3.9%
409	Biliary tract proc except only cholecyst w or w/o c.d.e. w CC	1,587	1.00	2.5538	2.5488	2.5516	2.4461	-0.2%	0.1%	-4.1%	-4.2%
410	Biliary tract proc except only cholecyst w or w/o c.d.e. w/o CC/MCC	627	1.00	1.7694	1.7658	1.7711	1.6973	-0.2%	0.3%	-4.2%	-4.1%
411	Cholecystectomy w c.d.e. w MCC	904	0.99	3.8373	3.8325	3.8322	3.6808	-0.1%	0.0%	-4.0%	-4.1%
412	Cholecystectomy w c.d.e. w CC	1,038	1.00	2.4517	2.4479	2.4490	2.3476	-0.2%	0.0%	-4.1%	-4.2%
413	Cholecystectomy w c.d.e. w/o CC/MCC	781	1.00	1.7343	1.7323	1.7394	1.6537	-0.1%	0.4%	-4.9%	-4.6%
414	Cholecystectomy except by laparoscope w/o c.d.e. w MCC	4,952	0.97	3.6535	3.6513	3.6417	3.4982	-0.1%	-0.3%	-3.9%	-4.3%
415	Cholecystectomy except by laparoscope w/o c.d.e. w CC	6,468	0.99	2.0814	2.0786	2.0746	1.9811	-0.1%	-0.2%	-4.5%	-4.8%
416	Cholecystectomy except by laparoscope w/o c.d.e. w/o CC/MCC	5,434	1.00	1.3634	1.3617	1.3627	1.2912	-0.1%	0.1%	-5.2%	-5.3%
417	Laparoscopic cholecystectomy w/o c.d.e. w MCC	14,874	1.00	2.4568	2.4572	2.4450	2.3433	0.0%	-0.5%	-4.2%	-4.6%
418	Laparoscopic cholecystectomy w/o c.d.e. w CC	26,378	1.00	1.6618	1.6611	1.6508	1.5716	0.0%	-0.6%	-4.8%	-5.4%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion	<u>.</u>	Accounting char	nges:	Regression Adjusted HCRIS		oact: oased changes		egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
419	Laparoscopic cholecystectomy w/o c.d.e. w/o CC/MCC	34,613	1.00	1.1326	1.1327	1.1300	1.0628	0.0%	-0.2%	-6.0%	-6.2%
420	Hepatobiliary diagnostic procedures w MCC	623	0.99	3.9886	3.9845	3.9717	3.8354	-0.1%	-0.3%	-3.4%	-3.8%
421	Hepatobiliary diagnostic procedures w CC	950	1.00	1.8266	1.8240	1.8157	1.7430	-0.1%	-0.5%	-4.0%	-4.6%
422	Hepatobiliary diagnostic procedures w/o CC/MCC	368	1.00	1.2367	1.2349	1.2345	1.1698	-0.1%	0.0%	-5.2%	-5.4%
423	Other hepatobiliary or pancreas O.R. procedures w MCC	1,282	0.99	4.2011	4.2107	4.1909	4.1159	0.2%	-0.5%	-1.8%	-2.0%
424	Other hepatobiliary or pancreas O.R. procedures w CC	887	1.00	2.6116	2.6112	2.5956	2.5442	0.0%	-0.6%	-2.0%	-2.6%
425	Other hepatobiliary or pancreas O.R. procedures w/o CC/MCC	141	1.00	1.7490	1.7487	1.7460	1.7267	0.0%	-0.2%	-1.1%	-1.3%
432	Cirrhosis & alcoholic hepatitis w MCC	13,493	0.99	1.6371	1.6352	1.6308	1.6015	-0.1%	-0.3%	-1.8%	-2.2%
433	Cirrhosis & alcoholic hepatitis w CC	7,427	1.00	0.9879	0.9862	0.9700	0.9627	-0.2%	-1.6%	-0.8%	-2.6%
434	Cirrhosis & alcoholic hepatitis w/o CC/MCC	2,725	1.00	0.7063	0.7050	0.6900	0.6867	-0.2%	-2.1%	-0.5%	-2.8%
435	Malignancy of hepatobiliary system or pancreas w MCC	10,590	0.99	1.7339	1.7320	1.7022	1.6746	-0.1%	-1.7%	-1.6%	-3.4%
436	Malignancy of hepatobiliary system or pancreas w CC	12,862	1.00	1.2140	1.2125	1.1749	1.1544	-0.1%	-3.1%	-1.7%	-4.9%
437	Malignancy of hepatobiliary system or pancreas w/o CC/MCC	4,352	1.00	0.9531	0.9525	0.9204	0.9150	-0.1%	-3.4%	-0.6%	-4.0%
438	Disorders of pancreas except malignancy w MCC	11,978	0.99	1.7641	1.7656	1.7314	1.6841	0.1%	-1.9%	-2.7%	-4.5%
439	Disorders of pancreas except malignancy w CC	23,817	0.99	1.0372	1.0360	1.0014	0.9776	-0.1%	-3.3%	-2.4%	-5.8%
440	Disorders of pancreas except malignancy w/o CC/MCC	24,318	1.00	0.7160	0.7149	0.6834	0.6685	-0.2%	-4.4%	-2.2%	-6.6%
441	Disorders of liver except malig,cirr,alc hepa w MCC	10,781	0.97	1.6543	1.6538	1.6403	1.6125	0.0%	-0.8%	-1.7%	-2.5%
442	Disorders of liver except malig,cirr,alc hepa w CC	11,815	0.98	1.0140	1.0122	0.9918	0.9787	-0.2%	-2.0%	-1.3%	-3.5%
443	Disorders of liver except malig,cirr,alc hepa w/o CC/MCC	7,338	0.99	0.7293	0.7276	0.7069	0.7002	-0.2%	-2.9%	-1.0%	-4.0%
444	Disorders of the biliary tract w MCC	11,005	0.98	1.5522	1.5513	1.5271	1.4992	-0.1%	-1.6%	-1.8%	-3.4%
445	Disorders of the biliary tract w CC	15,818	0.99	1.0385	1.0376	1.0129	0.9985	-0.1%	-2.4%	-1.4%	-3.9%
446	Disorders of the biliary tract w/o CC/MCC	15,405	0.99	0.7500	0.7495	0.7284	0.7208	-0.1%	-2.8%	-1.1%	-3.9%
453	Combined anterior/posterior spinal fusion w MCC	739	1.00	10.5249	10.5462	10.6171	11.5712	0.2%	0.7%	9.0%	9.9%
454	Combined anterior/posterior spinal fusion w CC	1,434	1.00	6.9362	6.9514	7.0146	7.8259	0.2%	0.9%	11.6%	12.8%
455	Combined anterior/posterior spinal fusion w/o CC/MCC	1,482	1.00	5.0920	5.1057	5.1626	5.8894	0.3%	1.1%	14.1%	15.7%
456	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w MCC	647	1.00	8.5932	8.6116	8.6593	9.3671	0.2%	0.6%	8.2%	9.0%
457	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w CC	1,774	1.00	5.7523	5.7675	5.8148	6.5432	0.3%	0.8%	12.5%	13.7%

Attachment 5 (cont'd)
Reconstructed MS-DRG Weights by Model

			ction	<u>!</u>	Accounting chan		Regression Adjusted HCRIS Impact: accounting-based changes			Impact: regression based changes	
		Raw	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
MS- DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
458	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	1,078	1.00	4.6256	4.6402	4.6909	5.3774	0.3%	1.1%	14.6%	16.3%
459	Spinal fusion except cervical w MCC	2,812	0.94	5.9206	5.9335	5.9687	6.4729	0.2%	0.6%	8.4%	9.3%
460	Spinal fusion except cervical w/o MCC	44,933	0.99	3.5387	3.5480	3.5868	4.0161	0.3%	1.1%	12.0%	13.5%
461	Bilateral or multiple major joint procs of lower extremity w MCC	975	0.99	4.3880	4.3947	4.4271	4.6989	0.2%	0.7%	6.1%	7.1%
462	Bilateral or multiple major joint procs of lower extremity w/o MCC	12,902	1.00	3.1453	3.1512	3.1880	3.4767	0.2%	1.2%	9.1%	10.5%
463	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w MCC	4,557	0.87	4.7987	4.8023	4.8348	4.7148	0.1%	0.7%	-2.5%	-1.7%
464	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w CC	6,024	0.92	2.6626	2.6605	2.6813	2.6228	-0.1%	0.8%	-2.2%	-1.5%
465	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w/o CC/MCC	2,430	0.97	1.5651	1.5631	1.5757	1.5403	-0.1%	0.8%	-2.2%	-1.6%
466	Revision of hip or knee replacement w MCC	3,119	0.90	4.5672	4.5730	4.6161	4.8569	0.1%	0.9%	5.2%	6.3%
467	Revision of hip or knee replacement w CC	11,239	0.96	3.0477	3.0515	3.0861	3.3180	0.1%	1.1%	7.5%	8.9%
468	Revision of hip or knee replacement w/o CC/MCC	16,731	0.99	2.4460	2.4495	2.4792	2.6757	0.1%	1.2%	7.9%	9.4%
469	Major joint replacement or reattachment of lower extremity w MCC	26,506	0.92	3.2995	3.3026	3.3227	3.4181	0.1%	0.6%	2.9%	3.6%
470	Major joint replacement or reattachment of lower extremity w/o MCC	378,430	0.99	2.0145	2.0171	2.0398	2.1635	0.1%	1.1%	6.1%	7.4%
471	Cervical spinal fusion w MCC	1,873	1.00	4.3751	4.3838	4.3968	4.5935	0.2%	0.3%	4.5%	5.0%
472	Cervical spinal fusion w CC	5,627	1.00	2.5996	2.6063	2.6228	2.8286	0.3%	0.6%	7.8%	8.8%
473	Cervical spinal fusion w/o CC/MCC	19,672	1.00	1.8857	1.8913	1.9119	2.0950	0.3%	1.1%	9.6%	11.1%
474	Amputation for musculoskeletal sys & conn tissue dis w MCC	2,353	0.89	3.5600	3.5752	3.6045	3.4993	0.4%	0.8%	-2.9%	-1.7%
475	Amputation for musculoskeletal sys & conn tissue dis w CC	3,525	0.92	1.9835	1.9821	2.0014	1.9357	-0.1%	1.0%	-3.3%	-2.4%
476	Amputation for musculoskeletal sys & conn tissue dis w/o CC/MCC	1,442	0.97	1.1213	1.1187	1.1304	1.0862	-0.2%	1.0%	-3.9%	-3.1%
477	Biopsies of musculoskeletal system & connective tissue w MCC	1,961	0.96	3.3707	3.3791	3.3571	3.2669	0.3%	-0.7%	-2.7%	-3.1%
478	Biopsies of musculoskeletal system & connective tissue w CC	6,869	0.98	2.1280	2.1304	2.1160	2.0364	0.1%	-0.7%	-3.8%	-4.3%
479	Biopsies of musculoskeletal system & connective tissue w/o CC/MCC	9,895	1.00	1.4737	1.4770	1.4816	1.3808	0.2%	0.3%	-6.8%	-6.3%
480	Hip & femur procedures except major joint w MCC	22,958	0.96	2.8778	2.8789	2.8933	2.8949	0.0%	0.5%	0.1%	0.6%
481	Hip & femur procedures except major joint w CC	68,942	0.98	1.7992	1.7987	1.8118	1.8296	0.0%	0.7%	1.0%	1.7%
482	Hip & femur procedures except major joint w/o CC/MCC	46,825	0.99	1.4874	1.4866	1.4991	1.5157	-0.1%	0.8%	1.1%	1.9%
483	Major joint & limb reattachment proc of upper extremity w CC/MCC	5,758	0.99	2.2221	2.2251	2.2434	2.3907	0.1%	0.8%	6.6%	7.6%
484	Major joint & limb reattachment proc of upper extremity w/o CC/MCC	16,147	1.00	1.7317	1.7347	1.7545	1.8997	0.2%	1.1%	8.3%	9.7%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting chan	nges:	Regression Adjusted HCRIS		pact: pased changes	Impact: regression- based changes	
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
485	Knee procedures w pdx of infection w MCC	934	1.00	3.2375	3.2418	3.2627	3.1897	0.1%	0.6%	-2.2%	-1.5%
486	Knee procedures w pdx of infection w CC	1,822	1.00	2.1508	2.1493	2.1688	2.1239	-0.1%	0.9%	-2.1%	-1.2%
487	Knee procedures w pdx of infection w/o CC/MCC	1,191	1.00	1.5538	1.5525	1.5689	1.5231	-0.1%	1.1%	-2.9%	-2.0%
488	Knee procedures w/o pdx of infection w CC/MCC	2,154	0.97	1.6896	1.6902	1.7022	1.6936	0.0%	0.7%	-0.5%	0.2%
489	Knee procedures w/o pdx of infection w/o CC/MCC	5,218	0.99	1.1820	1.1824	1.1952	1.1879	0.0%	1.1%	-0.6%	0.5%
490	Back & neck proc exc spinal fusion w CC/MCC or disc device/neurostim	18,120	1.00	1.6414	1.6419	1.6501	1.6200	0.0%	0.5%	-1.8%	-1.3%
491	Back & neck proc exc spinal fusion w/o CC/MCC	52,535	1.00	0.9519	0.9518	0.9620	0.9274	0.0%	1.1%	-3.6%	-2.6%
492	Lower extrem & humer proc except hip,foot,femur w MCC	4,016	0.96	2.6862	2.6912	2.6977	2.7060	0.2%	0.2%	0.3%	0.7%
493	Lower extrem & humer proc except hip,foot,femur w CC	15,004	0.98	1.7456	1.7463	1.7533	1.7777	0.0%	0.4%	1.4%	1.8%
494	Lower extrem & humer proc except hip,foot,femur w/o CC/MCC	26,688	0.99	1.2139	1.2143	1.2252	1.2411	0.0%	0.9%	1.3%	2.2%
495	Local excision & removal int fix devices exc hip & femur w MCC	1,581	0.92	3.1593	3.1606	3.1797	3.1062	0.0%	0.6%	-2.3%	-1.7%
496	Local excision & removal int fix devices exc hip & femur w CC	4,855	0.97	1.7710	1.7697	1.7866	1.7528	-0.1%	1.0%	-1.9%	-1.0%
497	Local excision & removal int fix devices exc hip & femur w/o CC/MCC	6,334	1.00	1.1424	1.1421	1.1547	1.1295	0.0%	1.1%	-2.2%	-1.1%
498	Local excision & removal int fix devices of hip & femur w CC/MCC	1,052	1.00	1.9814	1.9797	1.9941	1.9376	-0.1%	0.7%	-2.8%	-2.2%
499	Local excision & removal int fix devices of hip & femur w/o CC/MCC	1,065	1.00	0.9052	0.9045	0.9150	0.8881	-0.1%	1.2%	-2.9%	-1.9%
500	Soft tissue procedures w MCC	1,148	0.96	3.0676	3.0721	3.0721	3.0045	0.1%	0.0%	-2.2%	-2.1%
501	Soft tissue procedures w CC	3,574	0.98	1.4804	1.4793	1.4806	1.4428	-0.1%	0.1%	-2.6%	-2.5%
502	Soft tissue procedures w/o CC/MCC	5,975	1.00	0.9533	0.9530	0.9605	0.9360	0.0%	0.8%	-2.5%	-1.8%
503	Foot procedures w MCC	563	1.00	2.2816	2.2863	2.3011	2.2560	0.2%	0.6%	-2.0%	-1.1%
504	Foot procedures w CC	2,054	1.00	1.5458	1.5448	1.5548	1.5263	-0.1%	0.7%	-1.8%	-1.3%
505	Foot procedures w/o CC/MCC	2,833	1.00	1.0062	1.0060	1.0160	1.0046	0.0%	1.0%	-1.1%	-0.2%
506	Major thumb or joint procedures	741	1.00	1.0254	1.0250	1.0343	1.0324	0.0%	0.9%	-0.2%	0.7%
507	Major shoulder or elbow joint procedures w CC/MCC	754	1.00	1.5924	1.5939	1.6045	1.6042	0.1%	0.7%	0.0%	0.7%
508	Major shoulder or elbow joint procedures w/o CC/MCC	2,577	1.00	1.0578	1.0588	1.0707	1.0749	0.1%	1.1%	0.4%	1.6%
509	Arthroscopy	637	1.00	1.0330	1.0335	1.0435	1.0026	0.1%	1.0%	-3.9%	-2.9%
510	Shoulder,elbow or forearm proc,exc major joint proc w MCC	804	0.96	2.0058	2.0085	2.0012	1.9970	0.1%	-0.4%	-0.2%	-0.4%
511	Shoulder, elbow or forearm proc, exc major joint proc w CC	3,679	0.99	1.3192	1.3202	1.3189	1.3245	0.1%	-0.1%	0.4%	0.4%

Attachment 5 (cont'd)
Reconstructed MS-DRG Weights by Model

			ction	Accounting changes: HCRIS lines HCRIS reassigned lines, lines and			Regression Adjusted HCRIS	Adjusted accounting-based changes		Impact: regression based changes	
		Raw	transfer fra	HCRIS lines, original	HCRIS lines reassigned	lines	reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
MS- DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
512	Shoulder,elbow or forearm proc,exc major joint proc w/o CC/MCC	11,227	1.00	0.9363	0.9369	0.9451	0.9420	0.1%	0.9%	-0.3%	0.6%
513	Hand or wrist proc, except major thumb or joint proc w CC/MCC	998	1.00	1.2247	1.2267	1.2286	1.1968	0.2%	0.2%	-2.6%	-2.3%
514	Hand or wrist proc, except major thumb or joint proc w/o CC/MCC	1,015	1.00	0.7737	0.7736	0.7798	0.7620	0.0%	0.8%	-2.3%	-1.5%
515	Other musculoskelet sys & conn tiss O.R. proc w MCC	3,072	0.97	3.1011	3.1083	3.0943	3.0514	0.2%	-0.5%	-1.4%	-1.6%
516	Other musculoskelet sys & conn tiss O.R. proc w CC	10,273	0.99	1.8555	1.8598	1.8475	1.8144	0.2%	-0.7%	-1.8%	-2.2%
517	Other musculoskelet sys & conn tiss O.R. proc w/o CC/MCC	16,167	1.00	1.3506	1.3545	1.3566	1.3218	0.3%	0.2%	-2.6%	-2.1%
533	Fractures of femur w MCC	738	0.94	1.4398	1.4403	1.4413	1.4235	0.0%	0.1%	-1.2%	-1.1%
534	Fractures of femur w/o MCC	3,382	0.96	0.7216	0.7203	0.7182	0.7129	-0.2%	-0.3%	-0.8%	-1.2%
535	Fractures of hip & pelvis w MCC	6,321	0.95	1.4111	1.4114	1.3961	1.3775	0.0%	-1.1%	-1.3%	-2.4%
536	Fractures of hip & pelvis w/o MCC	33,341	0.97	0.7436	0.7422	0.7292	0.7249	-0.2%	-1.8%	-0.6%	-2.5%
537	Sprains, strains, & dislocations of hip, pelvis & thigh w CC/MCC	635	1.00	0.8524	0.8532	0.8357	0.8340	0.1%	-2.1%	-0.2%	-2.2%
538	Sprains, strains, & dislocations of hip, pelvis & thigh w/o CC/MCC	1,041	1.00	0.5720	0.5721	0.5593	0.5622	0.0%	-2.2%	0.5%	-1.7%
539	Osteomyelitis w MCC	2,836	0.91	2.0068	2.0076	2.0039	1.9646	0.0%	-0.2%	-2.0%	-2.1%
540	Osteomyelitis w CC	3,978	0.94	1.3519	1.3510	1.3509	1.3300	-0.1%	0.0%	-1.6%	-1.6%
541	Osteomyelitis w/o CC/MCC	1,659	0.96	0.9613	0.9599	0.9600	0.9470	-0.2%	0.0%	-1.3%	-1.5%
542	Pathological fractures & musculoskelet & conn tiss malig w MCC	5,202	0.95	1.9174	1.9177	1.9052	1.8765	0.0%	-0.7%	-1.5%	-2.1%
543	Pathological fractures & musculoskelet & conn tiss malig w CC	17,734	0.96	1.1410	1.1403	1.1255	1.1151	-0.1%	-1.3%	-0.9%	-2.3%
544	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC	11,721	0.98	0.7840	0.7831	0.7667	0.7645	-0.1%	-2.1%	-0.3%	-2.5%
545	Connective tissue disorders w MCC	3,019	0.96	2.2627	2.2740	2.2662	2.2330	0.5%	-0.3%	-1.5%	-1.3%
546	Connective tissue disorders w CC	5,429	0.98	1.0562	1.0557	1.0428	1.0360	0.0%	-1.2%	-0.7%	-1.9%
547	Connective tissue disorders w/o CC/MCC	4,499	0.99	0.7472	0.7465	0.7369	0.7351	-0.1%	-1.3%	-0.3%	-1.6%
548	Septic arthritis w MCC	482	0.97	1.8502	1.8518	1.8506	1.8180	0.1%	-0.1%	-1.8%	-1.7%
549	Septic arthritis w CC	1,047	0.98	1.1549	1.1531	1.1534	1.1346	-0.2%	0.0%	-1.6%	-1.8%
550	Septic arthritis w/o CC/MCC	812	0.99	0.7573	0.7552	0.7574	0.7444	-0.3%	0.3%	-1.7%	-1.7%
551	Medical back problems w MCC	8,316	0.95	1.5535	1.5571	1.5224	1.5094	0.2%	-2.2%	-0.9%	-2.8%
552	Medical back problems w/o MCC	83,117	0.99	0.7767	0.7774	0.7515	0.7545	0.1%	-3.3%	0.4%	-2.9%
553	Bone diseases & arthropathies w MCC	2,579	1.00	1.1784	1.1788	1.1768	1.1693	0.0%	-0.2%	-0.6%	-0.8%

Attachment 5 (cont'd)
Reconstructed MS-DRG Weights by Model

			ction	Accounting changes:			Regression Adjusted HCRIS	Adjusted accounting-based changes			egression- hanges
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned		reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Case		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
554	Bone diseases & arthropathies w/o MCC	21,121	1.00	0.7020	0.7011	0.6988	0.6966	-0.1%	-0.3%	-0.3%	-0.8%
555	Signs & symptoms of musculoskeletal system & conn tissue w MCC	1,559	1.00	0.9269	0.9313	0.9135	0.9093	0.5%	-1.9%	-0.5%	-1.9%
556	Signs & symptoms of musculoskeletal system & conn tissue w/o MCC	17,744	1.00	0.5875	0.5887	0.5736	0.5766	0.2%	-2.6%	0.5%	-1.9%
557	Tendonitis, myositis & bursitis w MCC	2,785	0.95	1.5274	1.5273	1.5085	1.4941	0.0%	-1.2%	-1.0%	-2.2%
558	Tendonitis, myositis & bursitis w/o MCC	13,212	0.99	0.8167	0.8157	0.8008	0.7986	-0.1%	-1.8%	-0.3%	-2.2%
559	Aftercare, musculoskeletal system & connective tissue w MCC	1,485	0.94	1.7729	1.7734	1.7774	1.7437	0.0%	0.2%	-1.9%	-1.6%
560	Aftercare, musculoskeletal system & connective tissue w CC	4,027	0.97	1.0285	1.0265	1.0321	1.0164	-0.2%	0.5%	-1.5%	-1.2%
561	Aftercare, musculoskeletal system & connective tissue w/o CC/MCC	6,224	1.00	0.6242	0.6232	0.6278	0.6226	-0.2%	0.7%	-0.8%	-0.3%
562	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w MCC	4,211	0.94	1.4326	1.4346	1.4207	1.4096	0.1%	-1.0%	-0.8%	-1.6%
563	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w/o MCC	33,212	0.98	0.6793	0.6788	0.6680	0.6689	-0.1%	-1.6%	0.1%	-1.5%
564	Other musculoskeletal sys & connective tissue diagnoses w MCC	1,287	0.99	1.4580	1.4640	1.4607	1.4301	0.4%	-0.2%	-2.1%	-1.9%
565	Other musculoskeletal sys & connective tissue diagnoses w CC	3,022	1.00	0.9081	0.9074	0.8982	0.8850	-0.1%	-1.0%	-1.5%	-2.5%
566	Other musculoskeletal sys & connective tissue diagnoses w/o CC/MCC	2,512	1.00	0.6686	0.6683	0.6570	0.6516	0.0%	-1.7%	-0.8%	-2.5%
573	Skin graft & /or debrid for skn ulcer or cellulitis w MCC	4,822	0.89	3.3067	3.3091	3.3333	3.2163	0.1%	0.7%	-3.5%	-2.7%
574	Skin graft & /or debrid for skn ulcer or cellulitis w CC	11,258	0.92	1.9634	1.9596	1.9751	1.9040	-0.2%	0.8%	-3.6%	-3.0%
575	Skin graft & /or debrid for skn ulcer or cellulitis w/o CC/MCC	5,481	0.95	1.1577	1.1547	1.1632	1.1170	-0.3%	0.7%	-4.0%	-3.5%
576	Skin graft & /or debrid exc for skin ulcer or cellulitis w MCC	444	1.00	3.2560	3.2574	3.2766	3.1921	0.0%	0.6%	-2.6%	-2.0%
577	Skin graft & /or debrid exc for skin ulcer or cellulitis w CC	2,127	1.00	1.5459	1.5436	1.5522	1.4988	-0.1%	0.6%	-3.4%	-3.0%
578	Skin graft & /or debrid exc for skin ulcer or cellulitis w/o CC/MCC	2,861	1.00	0.9749	0.9728	0.9812	0.9441	-0.2%	0.9%	-3.8%	-3.2%
579	Other skin, subcut tiss & breast proc w MCC	2,703	0.93	2.8251	2.8312	2.8432	2.7657	0.2%	0.4%	-2.7%	-2.1%
580	Other skin, subcut tiss & breast proc w CC	10,005	0.97	1.3584	1.3573	1.3632	1.3202	-0.1%	0.4%	-3.2%	-2.8%
581	Other skin, subcut tiss & breast proc w/o CC/MCC	11,102	1.00	0.8341	0.8335	0.8405	0.8087	-0.1%	0.8%	-3.8%	-3.0%
582	Mastectomy for malignancy w CC/MCC	5,371	1.00	0.9425	0.9416	0.9477	0.9065	-0.1%	0.7%	-4.3%	-3.8%
583	Mastectomy for malignancy w/o CC/MCC	8,860	1.00	0.7194	0.7188	0.7259	0.6897	-0.1%	1.0%	-5.0%	-4.1%
584	Breast biopsy, local excision & other breast procedures w CC/MCC	677	1.00	1.4575	1.4577	1.4523	1.4175	0.0%	-0.4%	-2.4%	-2.7%
585	Breast biopsy, local excision & other breast procedures w/o CC/MCC	1,585	1.00	0.8391	0.8383	0.8465	0.8164	-0.1%	1.0%	-3.6%	-2.7%
592	Skin ulcers w MCC	3,434	0.93	1.7896	1.7912	1.7995	1.7497	0.1%	0.5%	-2.8%	-2.2%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting chan	nges:	Regression Adjusted HCRIS		pact: pased changes		egression- changes
MS-		Raw	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
593	Skin ulcers w CC	12,029	0.95	1.0893	1.0871	1.0929	1.0628	-0.2%	0.5%	-2.8%	-2.4%
594	Skin ulcers w/o CC/MCC	2,541	0.97	0.7310	0.7295	0.7330	0.7141	-0.2%	0.5%	-2.6%	-2.3%
595	Major skin disorders w MCC	852	0.99	1.8541	1.8536	1.8568	1.8194	0.0%	0.2%	-2.0%	-1.9%
596	Major skin disorders w/o MCC	5,334	1.00	0.8393	0.8372	0.8314	0.8151	-0.2%	-0.7%	-2.0%	-2.9%
597	Malignant breast disorders w MCC	448	1.00	1.7459	1.7439	1.7253	1.6833	-0.1%	-1.1%	-2.4%	-3.6%
598	Malignant breast disorders w CC	1,411	1.00	1.0315	1.0301	1.0092	0.9909	-0.1%	-2.0%	-1.8%	-3.9%
599	Malignant breast disorders w/o CC/MCC	299	1.00	0.6880	0.6864	0.6745	0.6627	-0.2%	-1.7%	-1.8%	-3.7%
600	Non-malignant breast disorders w CC/MCC	513	1.00	0.9639	0.9636	0.9670	0.9445	0.0%	0.4%	-2.3%	-2.0%
601	Non-malignant breast disorders w/o CC/MCC	748	1.00	0.6327	0.6304	0.6327	0.6174	-0.4%	0.4%	-2.4%	-2.4%
602	Cellulitis w MCC	17,169	0.96	1.4132	1.4148	1.4167	1.3882	0.1%	0.1%	-2.0%	-1.8%
603	Cellulitis w/o MCC	120,777	0.99	0.8013	0.8004	0.8019	0.7834	-0.1%	0.2%	-2.3%	-2.2%
604	Trauma to the skin, subcut tiss & breast w MCC	2,181	1.00	1.1953	1.1981	1.1696	1.1578	0.2%	-2.4%	-1.0%	-3.1%
605	Trauma to the skin, subcut tiss & breast w/o MCC	20,789	1.00	0.6711	0.6716	0.6478	0.6455	0.1%	-3.5%	-0.4%	-3.8%
606	Minor skin disorders w MCC	1,047	1.00	1.0549	1.0566	1.0540	1.0369	0.2%	-0.2%	-1.6%	-1.7%
607	Minor skin disorders w/o MCC	6,844	1.00	0.6245	0.6233	0.6192	0.6091	-0.2%	-0.7%	-1.6%	-2.5%
614	Adrenal & pituitary procedures w CC/MCC	1,222	1.00	2.4016	2.3980	2.3996	2.3155	-0.1%	0.1%	-3.5%	-3.6%
615	Adrenal & pituitary procedures w/o CC/MCC	1,367	1.00	1.4077	1.4063	1.4129	1.3445	-0.1%	0.5%	-4.8%	-4.5%
616	Amputat of lower limb for endocrine, nutrit, & metabol dis w MCC	962	0.89	4.1912	4.1995	4.2293	4.1289	0.2%	0.7%	-2.4%	-1.5%
617	Amputat of lower limb for endocrine, nutrit, & metabol dis w CC	6,076	0.93	2.0784	2.0812	2.0998	2.0522	0.1%	0.9%	-2.3%	-1.3%
618	Amputat of lower limb for endocrine, nutrit, & metabol dis w/o CC/MCC	256	0.96	1.2923	1.2925	1.3038	1.2621	0.0%	0.9%	-3.2%	-2.3%
619	O.R. procedures for obesity w MCC	579	1.00	3.7187	3.7221	3.7465	3.5042	0.1%	0.7%	-6.5%	-5.8%
620	O.R. procedures for obesity w CC	1,869	1.00	2.0896	2.0912	2.1125	1.9478	0.1%	1.0%	-7.8%	-6.8%
621	O.R. procedures for obesity w/o CC/MCC	5,800	1.00	1.6273	1.6291	1.6488	1.5216	0.1%	1.2%	-7.7%	-6.5%
622	Skin grafts & wound debrid for endoc, nutrit & metab dis w MCC	1,047	0.89	3.1656	3.1623	3.1829	3.1080	-0.1%	0.7%	-2.4%	-1.8%
623	Skin grafts & wound debrid for endoc, nutrit & metab dis w CC	3,058	0.94	1.8839	1.8844	1.8983	1.8550	0.0%	0.7%	-2.3%	-1.5%
624	Skin grafts & wound debrid for endoc, nutrit & metab dis w/o CC/MCC	357	0.97	1.1726	1.1700	1.1790	1.1444	-0.2%	0.8%	-2.9%	-2.4%
625	Thyroid, parathyroid & thyroglossal procedures w MCC	891	1.00	2.2449	2.2505	2.2652	2.2031	0.2%	0.7%	-2.7%	-1.9%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion	Accounting changes: HCRIS lines			Regression Adjusted HCRIS	accounting-based changes		Impact: re based c	
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned		lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
626	Thyroid, parathyroid & thyroglossal procedures w CC	2,441	1.00	1.1319	1.1311	1.1404	1.0958	-0.1%	0.8%	-3.9%	-3.2%
627	Thyroid, parathyroid & thyroglossal procedures w/o CC/MCC	12,839	1.00	0.7376	0.7368	0.7451	0.7050	-0.1%	1.1%	-5.4%	-4.4%
628	Other endocrine, nutrit & metab O.R. proc w MCC	2,597	0.96	3.3340	3.3491	3.3623	3.3283	0.5%	0.4%	-1.0%	-0.2%
629	Other endocrine, nutrit & metab O.R. proc w CC	3,787	0.95	2.2627	2.2685	2.2829	2.2578	0.3%	0.6%	-1.1%	-0.2%
630	Other endocrine, nutrit & metab O.R. proc w/o CC/MCC	500	0.99	1.3807	1.3807	1.4019	1.3820	0.0%	1.5%	-1.4%	0.1%
637	Diabetes w MCC	13,871	0.97	1.3847	1.3839	1.3817	1.3576	-0.1%	-0.2%	-1.7%	-2.0%
638	Diabetes w CC	41,793	0.98	0.8163	0.8157	0.8123	0.8026	-0.1%	-0.4%	-1.2%	-1.7%
639	Diabetes w/o CC/MCC	34,205	0.99	0.5614	0.5598	0.5547	0.5489	-0.3%	-0.9%	-1.0%	-2.2%
640	Nutritional & misc metabolic disorders w MCC	43,733	0.98	1.1340	1.1349	1.1285	1.1085	0.1%	-0.6%	-1.8%	-2.2%
641	Nutritional & misc metabolic disorders w/o MCC	162,836	0.99	0.6882	0.6868	0.6770	0.6670	-0.2%	-1.4%	-1.5%	-3.1%
642	Inborn errors of metabolism	1,377	1.00	1.0185	1.0187	1.0130	0.9979	0.0%	-0.6%	-1.5%	-2.0%
643	Endocrine disorders w MCC	3,736	0.96	1.7142	1.7113	1.6919	1.6695	-0.2%	-1.1%	-1.3%	-2.6%
644	Endocrine disorders w CC	9,716	0.98	1.0796	1.0768	1.0587	1.0524	-0.3%	-1.7%	-0.6%	-2.5%
645	Endocrine disorders w/o CC/MCC	7,256	0.99	0.7561	0.7543	0.7394	0.7402	-0.2%	-2.0%	0.1%	-2.1%
652	Kidney transplant	7,781	1.00	2.9897	2.9922	3.0256	2.9614	0.1%	1.1%	-2.1%	-0.9%
653	Major bladder procedures w MCC	1,378	0.93	5.7381	5.7332	5.7562	5.5185	-0.1%	0.4%	-4.1%	-3.8%
654	Major bladder procedures w CC	3,064	0.96	3.0176	3.0121	3.0359	2.8748	-0.2%	0.8%	-5.3%	-4.7%
655	Major bladder procedures w/o CC/MCC	1,310	0.98	2.1164	2.1118	2.1342	2.0083	-0.2%	1.1%	-5.9%	-5.1%
656	Kidney & ureter procedures for neoplasm w MCC	3,309	1.00	3.3793	3.3808	3.3930	3.2669	0.0%	0.4%	-3.7%	-3.3%
657	Kidney & ureter procedures for neoplasm w CC	7,174	1.00	1.8876	1.8855	1.8976	1.7945	-0.1%	0.6%	-5.4%	-4.9%
658	Kidney & ureter procedures for neoplasm w/o CC/MCC	7,214	1.00	1.3986	1.3969	1.4107	1.3083	-0.1%	1.0%	-7.3%	-6.5%
659	Kidney & ureter procedures for non-neoplasm w MCC	3,612	0.96	3.3382	3.3455	3.3474	3.2869	0.2%	0.1%	-1.8%	-1.5%
660	Kidney & ureter procedures for non-neoplasm w CC	7,179	0.98	1.9125	1.9156	1.9181	1.8691	0.2%	0.1%	-2.6%	-2.3%
661	Kidney & ureter procedures for non-neoplasm w/o CC/MCC	3,758	1.00	1.2517	1.2533	1.2613	1.1993	0.1%	0.6%	-4.9%	-4.2%
662	Minor bladder procedures w MCC	910	1.00	2.7406	2.7370	2.7380	2.6581	-0.1%	0.0%	-2.9%	-3.0%
663	Minor bladder procedures w CC	2,074	1.00	1.3928	1.3907	1.3950	1.3601	-0.1%	0.3%	-2.5%	-2.3%
664	Minor bladder procedures w/o CC/MCC	4,138	1.00	0.9740	0.9743	0.9831	0.9999	0.0%	0.9%	1.7%	2.7%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting chan	nges:	Regression Adjusted HCRIS		pact: pased changes		egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Case		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
665	Prostatectomy w MCC	602	0.99	2.8332	2.8276	2.8311	2.7531	-0.2%	0.1%	-2.8%	-2.8%
666	Prostatectomy w CC	2,272	1.00	1.5294	1.5266	1.5283	1.4752	-0.2%	0.1%	-3.5%	-3.5%
667	Prostatectomy w/o CC/MCC	3,499	1.00	0.7873	0.7861	0.7901	0.7432	-0.2%	0.5%	-5.9%	-5.6%
668	Transurethral procedures w MCC	3,303	1.00	2.1963	2.1955	2.1801	2.1228	0.0%	-0.7%	-2.6%	-3.3%
669	Transurethral procedures w CC	12,099	1.00	1.1922	1.1923	1.1721	1.1287	0.0%	-1.7%	-3.7%	-5.3%
670	Transurethral procedures w/o CC/MCC	11,930	1.00	0.7575	0.7573	0.7516	0.7156	0.0%	-0.8%	-4.8%	-5.5%
671	Urethral procedures w CC/MCC	824	1.00	1.3799	1.3779	1.3768	1.3343	-0.1%	-0.1%	-3.1%	-3.3%
672	Urethral procedures w/o CC/MCC	887	1.00	0.7608	0.7593	0.7649	0.7379	-0.2%	0.7%	-3.5%	-3.0%
673	Other kidney & urinary tract procedures w MCC	10,156	1.00	2.8828	2.9006	2.9162	2.8883	0.6%	0.5%	-1.0%	0.2%
674	Other kidney & urinary tract procedures w CC	12,645	1.00	2.0399	2.0549	2.0724	2.0892	0.7%	0.9%	0.8%	2.4%
675	Other kidney & urinary tract procedures w/o CC/MCC	8,362	1.00	1.2630	1.2721	1.2943	1.3741	0.7%	1.7%	6.2%	8.8%
682	Renal failure w MCC	63,765	0.98	1.6981	1.7028	1.7008	1.6777	0.3%	-0.1%	-1.4%	-1.2%
683	Renal failure w CC	116,266	0.98	1.1470	1.1467	1.1438	1.1358	0.0%	-0.3%	-0.7%	-1.0%
684	Renal failure w/o CC/MCC	28,867	0.99	0.7412	0.7414	0.7374	0.7355	0.0%	-0.5%	-0.3%	-0.8%
685	Admit for renal dialysis	2,277	1.00	0.8059	0.8229	0.8297	0.8194	2.1%	0.8%	-1.2%	1.7%
686	Kidney & urinary tract neoplasms w MCC	1,386	0.99	1.7873	1.7867	1.7612	1.7291	0.0%	-1.4%	-1.8%	-3.3%
687	Kidney & urinary tract neoplasms w CC	3,168	0.99	1.0562	1.0556	1.0245	1.0036	-0.1%	-2.9%	-2.0%	-5.0%
688	Kidney & urinary tract neoplasms w/o CC/MCC	1,059	1.00	0.7020	0.7012	0.6781	0.6651	-0.1%	-3.3%	-1.9%	-5.3%
689	Kidney & urinary tract infections w MCC	49,462	0.96	1.2445	1.2417	1.2331	1.2056	-0.2%	-0.7%	-2.2%	-3.1%
690	Kidney & urinary tract infections w/o MCC	188,398	0.98	0.7651	0.7631	0.7509	0.7360	-0.3%	-1.6%	-2.0%	-3.8%
691	Urinary stones w esw lithotripsy w CC/MCC	834	1.00	1.3680	1.4117	1.3907	1.3519	3.2%	-1.5%	-2.8%	-1.2%
692	Urinary stones w esw lithotripsy w/o CC/MCC	588	1.00	0.9922	1.0417	1.0323	1.0042	5.0%	-0.9%	-2.7%	1.2%
693	Urinary stones w/o esw lithotripsy w MCC	1,891	0.99	1.2960	1.2961	1.2586	1.2336	0.0%	-2.9%	-2.0%	-4.8%
694	Urinary stones w/o esw lithotripsy w/o MCC	17,650	1.00	0.6537	0.6547	0.6161	0.6013	0.2%	-5.9%	-2.4%	-8.0%
695	Kidney & urinary tract signs & symptoms w MCC	829	1.00	1.2060	1.2027	1.1911	1.1692	-0.3%	-1.0%	-1.8%	-3.1%
696	Kidney & urinary tract signs & symptoms w/o MCC	9,856	1.00	0.6263	0.6249	0.6097	0.5968	-0.2%	-2.4%	-2.1%	-4.7%
697	Urethral stricture	547	1.00	0.7362	0.7349	0.7314	0.7116	-0.2%	-0.5%	-2.7%	-3.3%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting char		Regression Adjusted HCRIS		pact: pased changes	Impact: re based o	egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
698	Other kidney & urinary tract diagnoses w MCC	17,790	0.96	1.4550	1.4561	1.4533	1.4282	0.1%	-0.2%	-1.7%	-1.8%
699	Other kidney & urinary tract diagnoses w CC	24,592	0.98	0.9719	0.9737	0.9660	0.9535	0.2%	-0.8%	-1.3%	-1.9%
700	Other kidney & urinary tract diagnoses w/o CC/MCC	10,675	0.99	0.6768	0.6762	0.6675	0.6574	-0.1%	-1.3%	-1.5%	-2.9%
707	Major male pelvic procedures w CC/MCC	5,261	1.00	1.5556	1.5534	1.5670	1.4741	-0.1%	0.9%	-5.9%	-5.2%
708	Major male pelvic procedures w/o CC/MCC	13,587	1.00	1.1833	1.1823	1.1960	1.1055	-0.1%	1.2%	-7.6%	-6.6%
709	Penis procedures w CC/MCC	720	1.00	1.7447	1.7467	1.7528	1.7549	0.1%	0.4%	0.1%	0.6%
710	Penis procedures w/o CC/MCC	1,874	1.00	1.2509	1.2524	1.2660	1.3750	0.1%	1.1%	8.6%	9.9%
711	Testes procedures w CC/MCC	809	1.00	1.7718	1.7710	1.7679	1.7096	0.0%	-0.2%	-3.3%	-3.5%
712	Testes procedures w/o CC/MCC	745	1.00	0.7658	0.7652	0.7699	0.7342	-0.1%	0.6%	-4.6%	-4.1%
713	Transurethral prostatectomy w CC/MCC	10,966	1.00	1.0795	1.0776	1.0828	1.0303	-0.2%	0.5%	-4.8%	-4.6%
714	Transurethral prostatectomy w/o CC/MCC	30,011	1.00	0.6384	0.6375	0.6439	0.6009	-0.1%	1.0%	-6.7%	-5.9%
715	Other male reproductive system O.R. proc for malignancy w CC/MCC	638	1.00	1.6918	1.6916	1.7120	1.6906	0.0%	1.2%	-1.3%	-0.1%
716	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	1,323	1.00	0.9803	0.9851	1.0831	1.0878	0.5%	9.9%	0.4%	11.0%
717	Other male reproductive system O.R. proc exc malignancy w CC/MCC	590	1.00	1.7928	1.7907	1.7868	1.7266	-0.1%	-0.2%	-3.4%	-3.7%
718	Other male reproductive system O.R. proc exc malignancy w/o CC/MCC	548	1.00	0.7798	0.7784	0.7762	0.7369	-0.2%	-0.3%	-5.1%	-5.5%
722	Malignancy, male reproductive system w MCC	728	1.00	1.5108	1.5087	1.4951	1.4639	-0.1%	-0.9%	-2.1%	-3.1%
723	Malignancy, male reproductive system w CC	2,045	1.00	1.0435	1.0414	1.0254	1.0068	-0.2%	-1.5%	-1.8%	-3.5%
724	Malignancy, male reproductive system w/o CC/MCC	599	1.00	0.6130	0.6119	0.6126	0.5978	-0.2%	0.1%	-2.4%	-2.5%
725	Benign prostatic hypertrophy w MCC	739	1.00	1.0390	1.0370	1.0251	1.0140	-0.2%	-1.1%	-1.1%	-2.4%
726	Benign prostatic hypertrophy w/o MCC	3,701	1.00	0.6649	0.6632	0.6484	0.6358	-0.3%	-2.2%	-1.9%	-4.4%
727	Inflammation of the male reproductive system w MCC	917	1.00	1.2544	1.2543	1.2494	1.2194	0.0%	-0.4%	-2.4%	-2.8%
728	Inflammation of the male reproductive system w/o MCC	5,615	1.00	0.6913	0.6898	0.6818	0.6661	-0.2%	-1.2%	-2.3%	-3.6%
729	Other male reproductive system diagnoses w CC/MCC	537	0.99	1.0174	1.0170	1.0084	0.9876	0.0%	-0.9%	-2.1%	-2.9%
730	Other male reproductive system diagnoses w/o CC/MCC	504	1.00	0.6043	0.6035	0.5914	0.5766	-0.1%	-2.0%	-2.5%	-4.6%
734	Pelvic evisceration, rad hysterectomy & rad vulvectomy w CC/MCC	997	1.00	2.2134	2.2080	2.2233	2.1301	-0.2%	0.7%	-4.2%	-3.8%
735	Pelvic evisceration, rad hysterectomy & rad vulvectomy w/o CC/MCC	898	1.00	1.0030	1.0003	1.0109	0.9629	-0.3%	1.1%	-4.7%	-4.0%
736	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC	741	1.00	4.2953	4.2887	4.2972	4.1295	-0.2%	0.2%	-3.9%	-3.9%

Attachment 5 (cont'd)
Reconstructed MS-DRG Weights by Model

			ction	Accounting changes: HCRIS lines			Regression Adjusted HCRIS	Adjusted accounting-based changes HCRIS lines			egression- hanges
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned		reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
737	Uterine & adnexa proc for ovarian or adnexal malignancy w CC	3,188	1.00	2.0541	2.0492	2.0610	1.9662	-0.2%	0.6%	-4.6%	-4.3%
738	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC	905	1.00	1.1984	1.1952	1.2048	1.1424	-0.3%	0.8%	-5.2%	-4.7%
739	Uterine,adnexa proc for non-ovarian/adnexal malig w MCC	877	1.00	2.8765	2.8726	2.8803	2.7944	-0.1%	0.3%	-3.0%	-2.9%
740	Uterine,adnexa proc for non-ovarian/adnexal malig w CC	4,290	1.00	1.4197	1.4160	1.4258	1.3651	-0.3%	0.7%	-4.3%	-3.8%
741	Uterine,adnexa proc for non-ovarian/adnexal malig w/o CC/MCC	5,913	1.00	0.9879	0.9855	0.9952	0.9408	-0.2%	1.0%	-5.5%	-4.8%
742	Uterine & adnexa proc for non-malignancy w CC/MCC	9,829	1.00	1.2933	1.2919	1.2971	1.2401	-0.1%	0.4%	-4.4%	-4.1%
743	Uterine & adnexa proc for non-malignancy w/o CC/MCC	29,809	1.00	0.8538	0.8528	0.8619	0.8184	-0.1%	1.1%	-5.0%	-4.1%
744	D & C, conization, laparascopy & tubal interruption w CC/MCC	1,478	1.00	1.4362	1.4348	1.4492	1.4234	-0.1%	1.0%	-1.8%	-0.9%
745	D & C, conization, laparascopy & tubal interruption w/o CC/MCC	1,847	1.00	0.7277	0.7275	0.7562	0.7401	0.0%	4.0%	-2.1%	1.7%
746	Vagina, cervix & vulva procedures w CC/MCC	2,304	1.00	1.2039	1.2030	1.2079	1.1796	-0.1%	0.4%	-2.3%	-2.0%
747	Vagina, cervix & vulva procedures w/o CC/MCC	9,681	1.00	0.8305	0.8301	0.8391	0.8279	0.0%	1.1%	-1.3%	-0.3%
748	Female reproductive system reconstructive procedures	19,087	1.00	0.7914	0.7913	0.8000	0.7897	0.0%	1.1%	-1.3%	-0.2%
749	Other female reproductive system O.R. procedures w CC/MCC	1,093	1.00	2.5002	2.4980	2.4971	2.4024	-0.1%	0.0%	-3.8%	-3.9%
750	Other female reproductive system O.R. procedures w/o CC/MCC	606	1.00	0.9509	0.9492	0.9551	0.9035	-0.2%	0.6%	-5.4%	-5.0%
754	Malignancy, female reproductive system w MCC	953	0.99	1.9253	1.9219	1.9022	1.8599	-0.2%	-1.0%	-2.2%	-3.4%
755	Malignancy, female reproductive system w CC	2,772	0.99	1.1274	1.1260	1.1021	1.0791	-0.1%	-2.1%	-2.1%	-4.3%
756	Malignancy, female reproductive system w/o CC/MCC	983	1.00	0.6863	0.6856	0.6735	0.6607	-0.1%	-1.8%	-1.9%	-3.7%
757	Infections, female reproductive system w MCC	1,087	1.00	1.6152	1.6141	1.6034	1.5636	-0.1%	-0.7%	-2.5%	-3.2%
758	Infections, female reproductive system w CC	1,535	1.00	1.0601	1.0579	1.0386	1.0131	-0.2%	-1.8%	-2.5%	-4.4%
759	Infections, female reproductive system w/o CC/MCC	992	1.00	0.7639	0.7621	0.7425	0.7232	-0.2%	-2.6%	-2.6%	-5.3%
760	Menstrual & other female reproductive system disorders w CC/MCC	1,813	1.00	0.7971	0.7971	0.7814	0.7701	0.0%	-2.0%	-1.5%	-3.4%
761	Menstrual & other female reproductive system disorders w/o CC/MCC	2,422	1.00	0.5822	0.5819	0.5715	0.5559	-0.1%	-1.8%	-2.7%	-4.5%
765	Cesarean section w CC/MCC	2,183	1.00	1.0534	1.0474	1.0588	1.0231	-0.6%	1.1%	-3.4%	-2.9%
766	Cesarean section w/o CC/MCC	2,288	1.00	0.8337	0.8278	0.8376	0.8023	-0.7%	1.2%	-4.2%	-3.8%
767	Vaginal delivery w sterilization & /or D & C	98	1.00	0.8625	0.8571	0.8670	0.8338	-0.6%	1.2%	-3.8%	-3.3%
768	Vaginal delivery w O.R. proc except steril & /or D & C	9	1.00	1.4406	1.4329	1.4352	1.3684	-0.5%	0.2%	-4.7%	-5.0%
769	Postpartum & post abortion diagnoses w O.R. procedure	83	1.00	1.7675	1.7614	1.7650	1.8028	-0.3%	0.2%	2.1%	2.0%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			Accounting changes: HCRIS lines				Regression Adjusted HCRIS	ed accounting-based changes		Impact: re based o	egression- hanges
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned		lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
770	Abortion w D & C, aspiration curettage or hysterotomy	137	1.00	0.7106	0.7074	0.7164	0.7020	-0.5%	1.3%	-2.0%	-1.2%
774	Vaginal delivery w complicating diagnoses	1,222	1.00	0.6384	0.6354	0.6426	0.6211	-0.5%	1.1%	-3.3%	-2.7%
775	Vaginal delivery w/o complicating diagnoses	4,820	1.00	0.5087	0.5057	0.5118	0.4935	-0.6%	1.2%	-3.6%	-3.0%
776	Postpartum & post abortion diagnoses w/o O.R. procedure	493	1.00	0.6914	0.6901	0.6827	0.6676	-0.2%	-1.1%	-2.2%	-3.4%
777	Ectopic pregnancy	157	1.00	0.9367	0.9314	0.9406	0.9037	-0.6%	1.0%	-3.9%	-3.5%
778	Threatened abortion	398	1.00	0.4355	0.4365	0.4425	0.4372	0.2%	1.4%	-1.2%	0.4%
779	Abortion w/o D & C	85	1.00	0.5471	0.5452	0.5506	0.5468	-0.3%	1.0%	-0.7%	0.0%
780	False labor	39	1.00	0.2337	0.2335	0.2366	0.2318	-0.1%	1.3%	-2.1%	-0.8%
781	Other antepartum diagnoses w medical complications	2,846	1.00	0.6337	0.6331	0.6396	0.6311	-0.1%	1.0%	-1.3%	-0.4%
782	Other antepartum diagnoses w/o medical complications	98	1.00	0.3650	0.3640	0.3684	0.3660	-0.3%	1.2%	-0.7%	0.3%
799	Splenectomy w MCC	496	1.00	5.1477	5.1531	5.1360	4.9417	0.1%	-0.3%	-3.8%	-4.0%
800	Splenectomy w CC	608	1.00	2.4691	2.4677	2.4720	2.3515	-0.1%	0.2%	-4.9%	-4.8%
801	Splenectomy w/o CC/MCC	469	1.00	1.5857	1.5845	1.5920	1.4845	-0.1%	0.5%	-6.7%	-6.4%
802	Other O.R. proc of the blood & blood forming organs w MCC	560	1.00	3.7236	3.7301	3.7297	3.6912	0.2%	0.0%	-1.0%	-0.9%
803	Other O.R. proc of the blood & blood forming organs w CC	909	1.00	1.7240	1.7233	1.7173	1.6929	0.0%	-0.4%	-1.4%	-1.8%
804	Other O.R. proc of the blood & blood forming organs w/o CC/MCC	877	1.00	0.9934	0.9921	0.9927	0.9616	-0.1%	0.1%	-3.1%	-3.2%
808	Major hematol/immun diag exc sickle cell crisis & coagul w MCC	731	0.99	2.3144	2.3129	2.3131	2.2763	-0.1%	0.0%	-1.6%	-1.6%
809	Major hematol/immun diag exc sickle cell crisis & coagul w CC	1,951	1.00	1.2927	1.2898	1.2882	1.2696	-0.2%	-0.1%	-1.4%	-1.8%
810	Major hematol/immun diag exc sickle cell crisis & coagul w/o CC/MCC	1,125	1.00	0.9538	0.9513	0.9442	0.9325	-0.3%	-0.7%	-1.2%	-2.2%
811	Red blood cell disorders w MCC	15,896	1.00	1.1783	1.1775	1.1761	1.1557	-0.1%	-0.1%	-1.7%	-1.9%
812	Red blood cell disorders w/o MCC	74,286	1.00	0.7421	0.7404	0.7375	0.7254	-0.2%	-0.4%	-1.6%	-2.3%
813	Coagulation disorders	13,019	1.00	1.2806	1.2803	1.2760	1.2744	0.0%	-0.3%	-0.1%	-0.5%
814	Reticuloendothelial & immunity disorders w MCC	1,382	0.99	1.5152	1.5169	1.4892	1.4608	0.1%	-1.8%	-1.9%	-3.6%
815	Reticuloendothelial & immunity disorders w CC	3,204	1.00	0.9883	0.9877	0.9599	0.9438	-0.1%	-2.8%	-1.7%	-4.5%
816	Reticuloendothelial & immunity disorders w/o CC/MCC	2,199	1.00	0.7191	0.7182	0.6948	0.6853	-0.1%	-3.2%	-1.4%	-4.7%
820	Lymphoma & leukemia w major O.R. procedure w MCC	1,136	0.99	5.7955	5.7924	5.7808	5.6067	-0.1%	-0.2%	-3.0%	-3.3%
821	Lymphoma & leukemia w major O.R. procedure w CC	2,330	1.00	2.3147	2.3116	2.3082	2.2321	-0.1%	-0.1%	-3.3%	-3.6%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting chan	nges:	Regression Adjusted HCRIS		pact: pased changes		egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Case		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
822	Lymphoma & leukemia w major O.R. procedure w/o CC/MCC	1,903	1.00	1.2439	1.2420	1.2440	1.1888	-0.2%	0.2%	-4.4%	-4.4%
823	Lymphoma & non-acute leukemia w other O.R. proc w MCC	1,904	0.99	4.1986	4.1988	4.1745	4.1168	0.0%	-0.6%	-1.4%	-1.9%
824	Lymphoma & non-acute leukemia w other O.R. proc w CC	2,923	1.00	2.1915	2.1906	2.1575	2.1274	0.0%	-1.5%	-1.4%	-2.9%
825	Lymphoma & non-acute leukemia w other O.R. proc w/o CC/MCC	1,837	1.00	1.3357	1.3343	1.3096	1.2787	-0.1%	-1.9%	-2.4%	-4.3%
826	Myeloprolif disord or poorly diff neopl w maj O.R. proc w MCC	471	0.99	5.0650	5.0587	5.0680	4.9077	-0.1%	0.2%	-3.2%	-3.1%
827	Myeloprolif disord or poorly diff neopl w maj O.R. proc w CC	1,196	1.00	2.1738	2.1697	2.1773	2.0916	-0.2%	0.4%	-3.9%	-3.8%
828	Myeloprolif disord or poorly diff neopl w maj O.R. proc w/o CC/MCC	758	1.00	1.2768	1.2742	1.2845	1.2284	-0.2%	0.8%	-4.4%	-3.8%
829	Myeloprolif disord or poorly diff neopl w other O.R. proc w CC/MCC	1,171	1.00	2.6048	2.6041	2.5987	2.5536	0.0%	-0.2%	-1.7%	-2.0%
830	Myeloprolif disord or poorly diff neopl w other O.R. proc w/o CC/MCC	504	1.00	1.0977	1.0974	1.1065	1.0775	0.0%	0.8%	-2.6%	-1.8%
834	Acute leukemia w/o major O.R. procedure w MCC	3,387	0.98	4.5251	4.5210	4.5395	4.4277	-0.1%	0.4%	-2.5%	-2.2%
835	Acute leukemia w/o major O.R. procedure w CC	2,165	0.98	2.7211	2.7160	2.7250	2.6587	-0.2%	0.3%	-2.4%	-2.3%
836	Acute leukemia w/o major O.R. procedure w/o CC/MCC	2,065	0.98	1.4475	1.4436	1.4478	1.4178	-0.3%	0.3%	-2.1%	-2.1%
837	Chemo w acute leukemia as sdx or w high dose chemo agent w MCC	571	1.00	7.1514	7.1442	7.2028	7.0293	-0.1%	0.8%	-2.4%	-1.7%
838	Chemo w acute leukemia as sdx w CC or high dose chemo agent	887	1.00	3.4301	3.4279	3.4675	3.3982	-0.1%	1.2%	-2.0%	-0.9%
839	Chemo w acute leukemia as sdx w/o CC/MCC	1,045	1.00	1.6927	1.6891	1.7137	1.6786	-0.2%	1.5%	-2.0%	-0.8%
840	Lymphoma & non-acute leukemia w MCC	8,075	0.98	2.6874	2.6874	2.6786	2.6290	0.0%	-0.3%	-1.9%	-2.2%
841	Lymphoma & non-acute leukemia w CC	9,447	0.98	1.5849	1.5836	1.5662	1.5420	-0.1%	-1.1%	-1.5%	-2.7%
842	Lymphoma & non-acute leukemia w/o CC/MCC	5,692	0.99	1.0879	1.0872	1.0730	1.0560	-0.1%	-1.3%	-1.6%	-2.9%
843	Other myeloprolif dis or poorly diff neopl diag w MCC	1,306	0.99	1.8567	1.8542	1.8337	1.7888	-0.1%	-1.1%	-2.4%	-3.7%
844	Other myeloprolif dis or poorly diff neopl diag w CC	2,726	0.99	1.1784	1.1772	1.1534	1.1279	-0.1%	-2.0%	-2.2%	-4.3%
845	Other myeloprolif dis or poorly diff neopl diag w/o CC/MCC	983	1.00	0.8274	0.8267	0.8010	0.7856	-0.1%	-3.1%	-1.9%	-5.1%
846	Chemotherapy w/o acute leukemia as secondary diagnosis w MCC	1,216	1.00	2.3158	2.3170	2.3397	2.2909	0.1%	1.0%	-2.1%	-1.1%
847	Chemotherapy w/o acute leukemia as secondary diagnosis w CC	16,706	1.00	0.9942	0.9940	1.0087	1.0015	0.0%	1.5%	-0.7%	0.7%
848	Chemotherapy w/o acute leukemia as secondary diagnosis w/o CC/MCC	1,164	1.00	0.8103	0.8098	0.8287	0.8166	-0.1%	2.3%	-1.5%	0.8%
849	Radiotherapy	1,210	1.00	1.2767	1.2757	1.3704	1.3447	-0.1%	7.4%	-1.9%	5.3%
853	Infectious & parasitic diseases w O.R. procedure w MCC	27,565	0.93	5.3706	5.3767	5.3843	5.2288	0.1%	0.1%	-2.9%	-2.6%
854	Infectious & parasitic diseases w O.R. procedure w CC	6,728	0.95	2.9147	2.9145	2.9073	2.8350	0.0%	-0.2%	-2.5%	-2.7%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting char	nges:	Regression Adjusted HCRIS	Imp accounting-b	oact: oased changes	Impact: re based o	egression- changes
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
855	Infectious & parasitic diseases w O.R. procedure w/o CC/MCC	423	0.99	1.8754	1.8723	1.8551	1.8354	-0.2%	-0.9%	-1.1%	-2.1%
856	Postoperative or post-traumatic infections w O.R. proc w MCC	5,003	0.90	5.0649	5.0690	5.0771	4.9219	0.1%	0.2%	-3.1%	-2.8%
857	Postoperative or post-traumatic infections w O.R. proc w CC	9,209	0.93	2.1498	2.1462	2.1563	2.0889	-0.2%	0.5%	-3.1%	-2.8%
858	Postoperative or post-traumatic infections w O.R. proc w/o CC/MCC	3,016	0.96	1.3506	1.3476	1.3565	1.3057	-0.2%	0.7%	-3.7%	-3.3%
862	Postoperative & post-traumatic infections w MCC	6,075	0.95	1.9053	1.9061	1.8755	1.8272	0.0%	-1.6%	-2.6%	-4.1%
863	Postoperative & post-traumatic infections w/o MCC	20,346	0.97	0.9519	0.9500	0.9422	0.9157	-0.2%	-0.8%	-2.8%	-3.8%
864	Fever of unknown origin	18,093	1.00	0.8093	0.8095	0.7924	0.7810	0.0%	-2.1%	-1.4%	-3.5%
865	Viral illness w MCC	1,477	1.00	1.6290	1.6291	1.6176	1.5855	0.0%	-0.7%	-2.0%	-2.7%
866	Viral illness w/o MCC	8,956	1.00	0.6575	0.6565	0.6426	0.6345	-0.2%	-2.1%	-1.3%	-3.5%
867	Other infectious & parasitic diseases diagnoses w MCC	3,361	0.97	2.9553	2.9550	2.9473	2.8790	0.0%	-0.3%	-2.3%	-2.6%
868	Other infectious & parasitic diseases diagnoses w CC	1,880	0.98	1.2933	1.2909	1.2783	1.2530	-0.2%	-1.0%	-2.0%	-3.1%
869	Other infectious & parasitic diseases diagnoses w/o CC/MCC	1,111	0.99	0.8367	0.8342	0.8208	0.8070	-0.3%	-1.6%	-1.7%	-3.5%
870	Septicemia w MV 96+ hours	12,312	0.95	5.7697	5.7707	5.7953	5.6251	0.0%	0.4%	-2.9%	-2.5%
871	Septicemia w/o MV 96+ hours w MCC	181,259	0.98	1.8586	1.8569	1.8521	1.8030	-0.1%	-0.3%	-2.6%	-3.0%
872	Septicemia w/o MV 96+ hours w/o MCC	89,249	0.98	1.1481	1.1455	1.1354	1.1096	-0.2%	-0.9%	-2.3%	-3.3%
876	O.R. procedure w principal diagnoses of mental illness	1,679	0.99	2.4993	2.4959	2.5038	2.5117	-0.1%	0.3%	0.3%	0.5%
880	Acute adjustment reaction & psychosocial dysfunction	12,480	1.00	0.6758	0.6750	0.6642	0.6604	-0.1%	-1.6%	-0.6%	-2.3%
881	Depressive neuroses	15,080	1.00	0.7510	0.7474	0.7510	0.7405	-0.5%	0.5%	-1.4%	-1.4%
882	Neuroses except depressive	5,023	1.00	0.6751	0.6720	0.6752	0.6661	-0.5%	0.5%	-1.4%	-1.3%
883	Disorders of personality & impulse control	2,263	1.00	1.0033	0.9996	1.0077	0.9927	-0.4%	0.8%	-1.5%	-1.1%
884	Organic disturbances & mental retardation	42,920	0.98	1.1834	1.1778	1.1735	1.1581	-0.5%	-0.4%	-1.3%	-2.1%
885	Psychoses	301,318	0.99	1.2086	1.2019	1.2120	1.1943	-0.6%	0.8%	-1.5%	-1.2%
886	Behavioral & developmental disorders	1,489	1.00	1.1901	1.1819	1.1917	1.1740	-0.7%	0.8%	-1.5%	-1.4%
887	Other mental disorder diagnoses	457	1.00	0.8712	0.8680	0.8597	0.8518	-0.4%	-1.0%	-0.9%	-2.2%
894	Alcohol/drug abuse or dependence, left ama	4,970	1.00	0.3684	0.3664	0.3665	0.3618	-0.5%	0.0%	-1.3%	-1.8%
895	Alcohol/drug abuse or dependence w rehabilitation therapy	11,260	1.00	0.7728	0.7698	0.7782	0.7664	-0.4%	1.1%	-1.5%	-0.8%
896	Alcohol/drug abuse or dependence w/o rehabilitation therapy w MCC	5,050	0.97	1.2825	1.2807	1.2688	1.2473	-0.1%	-0.9%	-1.7%	-2.7%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			tion		Accounting chan	-	Regression Adjusted HCRIS		pact: pased changes		egression- changes
MS-		Raw	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	43,420	0.99	0.6119	0.6095	0.6054	0.5978	-0.4%	-0.7%	-1.3%	-2.3%
901	Wound debridements for injuries w MCC	766	1.00	3.9464	3.9526	3.9737	3.8308	0.2%	0.5%	-3.6%	-2.9%
902	Wound debridements for injuries w CC	2,043	1.00	1.7161	1.7137	1.7257	1.6640	-0.1%	0.7%	-3.6%	-3.0%
903	Wound debridements for injuries w/o CC/MCC	1,526	1.00	1.0342	1.0319	1.0406	1.0000	-0.2%	0.8%	-3.9%	-3.3%
904	Skin grafts for injuries w CC/MCC	821	1.00	2.5803	2.5774	2.5986	2.5202	-0.1%	0.8%	-3.0%	-2.3%
905	Skin grafts for injuries w/o CC/MCC	670	1.00	1.1476	1.1453	1.1575	1.1161	-0.2%	1.1%	-3.6%	-2.8%
906	Hand procedures for injuries	630	1.00	0.9360	0.9355	0.9435	0.9117	-0.1%	0.9%	-3.4%	-2.6%
907	Other O.R. procedures for injuries w MCC	6,607	0.96	3.6881	3.7011	3.7043	3.5927	0.4%	0.1%	-3.0%	-2.6%
908	Other O.R. procedures for injuries w CC	8,175	0.97	1.8916	1.8922	1.8990	1.8504	0.0%	0.4%	-2.6%	-2.2%
909	Other O.R. procedures for injuries w/o CC/MCC	4,957	0.99	1.1146	1.1144	1.1215	1.0961	0.0%	0.6%	-2.3%	-1.7%
913	Traumatic injury w MCC	708	0.99	1.2383	1.2417	1.2141	1.1987	0.3%	-2.2%	-1.3%	-3.2%
914	Traumatic injury w/o MCC	6,359	1.00	0.6547	0.6554	0.6292	0.6252	0.1%	-4.0%	-0.6%	-4.5%
915	Allergic reactions w MCC	817	1.00	1.2288	1.2301	1.2331	1.2117	0.1%	0.2%	-1.7%	-1.4%
916	Allergic reactions w/o MCC	4,916	1.00	0.4484	0.4475	0.4473	0.4427	-0.2%	0.0%	-1.0%	-1.3%
917	Poisoning & toxic effects of drugs w MCC	12,423	0.97	1.4535	1.4527	1.4451	1.4154	-0.1%	-0.5%	-2.1%	-2.6%
918	Poisoning & toxic effects of drugs w/o MCC	30,329	0.99	0.5912	0.5899	0.5830	0.5755	-0.2%	-1.2%	-1.3%	-2.7%
919	Complications of treatment w MCC	8,556	0.99	1.5129	1.5181	1.5085	1.4751	0.3%	-0.6%	-2.2%	-2.5%
920	Complications of treatment w CC	13,536	1.00	0.9237	0.9234	0.9150	0.8927	0.0%	-0.9%	-2.4%	-3.3%
921	Complications of treatment w/o CC/MCC	8,929	1.00	0.5992	0.5986	0.5919	0.5758	-0.1%	-1.1%	-2.7%	-3.9%
922	Other injury, poisoning & toxic effect diag w MCC	894	1.00	1.4724	1.4719	1.4580	1.4338	0.0%	-0.9%	-1.7%	-2.6%
923	Other injury, poisoning & toxic effect diag w/o MCC	3,808	1.00	0.6258	0.6261	0.6093	0.6039	0.0%	-2.7%	-0.9%	-3.5%
927	Extensive burns or full thickness burns w MV 96+ hrs w skin graft	156	1.00	12.1572	12.1486	12.2770	11.7774	-0.1%	1.1%	-4.1%	-3.1%
928	Full thickness burn w skin graft or inhal inj w CC/MCC	707	1.00	4.9183	4.9103	4.9600	4.8033	-0.2%	1.0%	-3.2%	-2.3%
929	Full thickness burn w skin graft or inhal inj w/o CC/MCC	388	1.00	1.9496	1.9477	1.9700	1.8937	-0.1%	1.1%	-3.9%	-2.9%
933	Extensive burns or full thickness burns w MV 96+ hrs w/o skin graft	146	1.00	1.9311	1.9345	1.9490	1.8779	0.2%	0.7%	-3.7%	-2.8%
934	Full thickness burn w/o skin grft or inhal inj	606	0.98	1.2910	1.2874	1.2978	1.2622	-0.3%	0.8%	-2.7%	-2.2%
935	Non-extensive burns	1,940	1.00	1.0504	1.0480	1.0563	1.0226	-0.2%	0.8%	-3.2%	-2.6%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			ction	<u></u>	Accounting char	-	Regression Adjusted HCRIS		pact: pased changes	Impact: re based o	
MS-		Raw Case	transfer fraction	HCRIS lines, original	HCRIS lines reassigned	HCRIS lines reassigned and expanded	lines reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
DRG	Description	Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
939	O.R. proc w diagnoses of other contact w health services w MCC	1,722	0.99	3.4706	3.4812	3.5073	3.4554	0.3%	0.7%	-1.5%	-0.4%
940	O.R. proc w diagnoses of other contact w health services w CC	2,045	1.00	2.8554	2.8557	2.8771	2.8476	0.0%	0.7%	-1.0%	-0.3%
941	O.R. proc w diagnoses of other contact w health services w/o CC/MCC	1,125	1.00	1.3568	1.3559	1.3676	1.3592	-0.1%	0.9%	-0.6%	0.2%
945	Rehabilitation w CC/MCC	169,971	0.97	2.1216	2.1176	2.1380	2.0953	-0.2%	1.0%	-2.0%	-1.2%
946	Rehabilitation w/o CC/MCC	65,424	0.98	1.5163	1.5109	1.5270	1.4980	-0.4%	1.1%	-1.9%	-1.2%
947	Signs & symptoms w MCC	5,345	0.97	1.0979	1.1003	1.0845	1.0722	0.2%	-1.4%	-1.1%	-2.3%
948	Signs & symptoms w/o MCC	31,916	0.99	0.6475	0.6473	0.6310	0.6278	0.0%	-2.5%	-0.5%	-3.1%
949	Aftercare w CC/MCC	1,263	1.00	1.3123	1.3096	1.3208	1.2996	-0.2%	0.9%	-1.6%	-1.0%
950	Aftercare w/o CC/MCC	1,194	1.00	0.9769	0.9726	0.9823	0.9652	-0.4%	1.0%	-1.7%	-1.2%
951	Other factors influencing health status	960	1.00	0.5709	0.5698	0.5665	0.5606	-0.2%	-0.6%	-1.0%	-1.8%
955	Craniotomy for multiple significant trauma	414	1.00	5.2020	5.2118	5.1146	5.0348	0.2%	-1.9%	-1.6%	-3.2%
956	Limb reattachment, hip & femur proc for multiple significant trauma	3,416	0.95	3.3043	3.3100	3.2876	3.3120	0.2%	-0.7%	0.7%	0.2%
957	Other O.R. procedures for multiple significant trauma w MCC	1,078	0.99	6.0729	6.0935	6.0008	5.9077	0.3%	-1.5%	-1.6%	-2.7%
958	Other O.R. procedures for multiple significant trauma w CC	953	0.99	3.7673	3.7820	3.6911	3.6787	0.4%	-2.4%	-0.3%	-2.4%
959	Other O.R. procedures for multiple significant trauma w/o CC/MCC	259	0.99	2.2295	2.2399	2.1883	2.1744	0.5%	-2.3%	-0.6%	-2.5%
963	Other multiple significant trauma w MCC	1,274	0.99	2.8371	2.8460	2.7486	2.6897	0.3%	-3.4%	-2.1%	-5.2%
964	Other multiple significant trauma w CC	2,161	0.99	1.5572	1.5632	1.4731	1.4516	0.4%	-5.8%	-1.5%	-6.8%
965	Other multiple significant trauma w/o CC/MCC	1,015	0.99	0.9975	1.0011	0.9316	0.9210	0.4%	-6.9%	-1.1%	-7.7%
969	HIV w extensive O.R. procedure w MCC	519	1.00	5.6298	5.6389	5.6483	5.5076	0.2%	0.2%	-2.5%	-2.2%
970	HIV w extensive O.R. procedure w/o MCC	173	1.00	2.6765	2.6769	2.6746	2.6561	0.0%	-0.1%	-0.7%	-0.8%
974	HIV w major related condition w MCC	4,762	1.00	2.6556	2.6567	2.6502	2.5869	0.0%	-0.2%	-2.4%	-2.6%
975	HIV w major related condition w CC	4,654	1.00	1.5196	1.5154	1.5043	1.4717	-0.3%	-0.7%	-2.2%	-3.2%
976	HIV w major related condition w/o CC/MCC	2,748	1.00	0.9570	0.9539	0.9444	0.9239	-0.3%	-1.0%	-2.2%	-3.5%
977	HIV w or w/o other related condition	4,280	1.00	1.0382	1.0380	1.0251	1.0090	0.0%	-1.2%	-1.6%	-2.8%
981	Extensive O.R. procedure unrelated to principal diagnosis w MCC	22,473	0.94	5.1162	5.1235	5.1360	5.1071	0.1%	0.2%	-0.6%	-0.2%
982	Extensive O.R. procedure unrelated to principal diagnosis w CC	17,897	0.96	3.1956	3.1969	3.2017	3.2623	0.0%	0.2%	1.9%	2.1%
983	Extensive O.R. procedure unrelated to principal diagnosis w/o CC/MCC	5,580	0.99	2.0573	2.0581	2.0668	2.1406	0.0%	0.4%	3.6%	4.0%

Attachment 5 (cont'd) Reconstructed MS-DRG Weights by Model

			fraction	Accounting changes: HCRIS			Regression Adjusted HCRIS lines	Impact: accounting-based changes		Impact: regression- based changes	
		Raw	transfer fra	HCRIS lines, original	HCRIS lines reassigned	lines reassigned and expanded	reassigned with adjusted CCRs	Reassigned HCRIS lines over original	Expanded reassigned HCRIS lines	Adjusted CCRs	Adjusted CCRs over original
MS- DRG	Description	Case Count		c1	c2	c3	c4	c2/c1	c3/c2	c4/c3	c4/c1
984	Prostatic O.R. procedure unrelated to principal diagnosis w MCC	606	1.00	3.5789	3.5703	3.5734	3.4990	-0.2%	0.1%	-2.1%	-2.2%
985	Prostatic O.R. procedure unrelated to principal diagnosis w CC	1,056	1.00	2.1460	2.1405	2.1373	2.0812	-0.3%	-0.2%	-2.6%	-3.0%
986	Prostatic O.R. procedure unrelated to principal diagnosis w/o CC/MCC	774	1.00	1.3150	1.3125	1.3117	1.2629	-0.2%	-0.1%	-3.7%	-4.0%
987	Non-extensive O.R. proc unrelated to principal diagnosis w MCC	6,899	0.95	3.4934	3.4960	3.4874	3.4091	0.1%	-0.2%	-2.2%	-2.4%
988	Non-extensive O.R. proc unrelated to principal diagnosis w CC	11,339	0.97	1.8808	1.8790	1.8668	1.8258	-0.1%	-0.7%	-2.2%	-2.9%
989	Non-extensive O.R. proc unrelated to principal diagnosis w/o CC/MCC	5,825	0.99	1.1179	1.1173	1.1124	1.0970	-0.1%	-0.4%	-1.4%	-1.9%
999	Ungroupable	92,292	1.00	1.2199	1.2185	1.2180	1.2119	-0.1%	0.0%	-0.5%	-0.7%
	TOTAL	11,232,979	0.99	1.5096	1.5096	1.5096	1.5096	0.0%	0.0%	0.0%	0.0%