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Revisions to the Sixth Update of the Geographic Practice Cost Index: Final Report

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EXECUTIVE SUMMARY

As mandated under Section 1848(e) of the Social Security Act, the Centers for Medicare and Medicaid Services (CMS) must establish geographic indices as part of the Resource-Based Relative Value Scale (RBRVS) method for paying physicians. Whereas the Medicare hospital wage index adjusts hospital, home health agency, skilled nursing facility, and other provider payments for regional variation in the cost of labor, the Geographic Practice Cost Index (GPCI) accounts for geographic variation in the price of a wider range of inputs. CMS first implemented the GPCI as part of the Medicare physician fee schedule in 1992, and federal statute requires CMS to update the GPCI at least every three years. In addition to these mandated tri-annual updates, Section 3102(b) of the Affordable Care Act of 2010 (ACA) requires the Secretary to "evaluate data that fairly and reliably establishes distinctions in the cost of operating a medical practice in different fee schedule areas" for the purpose of the practice expense GPCI.

After both evaluating the current data and methods CMS uses to calculate the GPCIs, including an evaluation of long-standing public comments surrounding the current specifications, Acumen recommends four modifications to the data sources used and the methodology CMS uses to calculate locality GPCIs for CY 2012. These changes include:

- Updating the GPCI cost share weights to coincide with 2006-based Medicare Economic Index (MEI) cost share weights
- Using American Community Survey (ACS) data to calculate the office rent index
- Creating a purchased services category and corresponding index within the practice expense (PE) GPCI
- Expanding the occupations included in the non-physician employee wage index

These proposed modifications ensure that: i) the data used reflects the most current information available, ii) the GPCI methodology accounts for regional variation in physician costs in as comprehensive a manner as possible, iii) all GPCI calculations are methodologically sound, and iv) stakeholder concerns are addressed. Because a previous Acumen study had already addressed this issue, this report did not consider changes to locality definitions.[1]

The remainder of the Executive Summary contains five parts. The first section briefly reviews how Medicare uses GPCIs within the physician fee schedule. Next, the second section

[1] O'Brien-Strain, Margaret, West Addison, Elizabeth Coombs, Nicole Hinnebusch, Marika Johansson, and Sean McClellan. "Review of Alternative GPCI Payment Locality Structures." July 2008.

compares the data sources used in the Final Revisions to the Sixth Update against prior updates. The third section discusses each of the four changes included in this GPCI update in more detail and the fourth section presents highlights from an empirical impact analysis. Finally, the fifth final section briefly concludes the Executive Summary.

How GPCIs Affect Physician Payments

Physician payments are based on three components: relative value units (RVUs), GPCIs, and a conversion factor (CF). The RVUs estimate the quantity of physician work, practice expense (PE), and professional liability (i.e., malpractice) inputs required to provide a specific service. The GPCIs adjust these three RVUs for regional variation in the price of each of the three input categories. In essence, the GPCIs scale up the adjusted RVU values for high cost areas and scale down the adjusted RVU values for low-cost areas. Finally, the conversion factor translates the sum of the GPCI-adjusted RVUs into a payment amount. More specifically, the equation below shows how CMS determines physician payments for any service *K* in locality *L:*

$$(1)\quad Payment_{K,L} = \{[GPCI_{W,L} * RVU_{W,K}] + [GPCI_{PE,L} * RVU_{PE,K}] + [GPCI_{MP,L} * RVU_{MP,K}]\} * CF$$

Physician Work | Practice Expense | Malpractice Insurance

Policymakers often rely on the Geographic Adjustment Factor (GAF) to summarize the combined impact of the three GPCIs on physician reimbursement levels by locality. The GAF is calculated as the weighted average of the three GPCIs, where the cost share weights are determined by the Medicare Economic Index (MEI) 2006 base year weights as follows:

$$(2)\quad GAF_L = \{[GPCI_{W,L} * 0.48266] + [GPCI_{PE,L} * 0.47439] + [GPCI_{MP,L} * 0.04295]\}.$$

Data Sources Used in the Sixth Update Final Revisions

Of the four proposed modifications to the GPCI mentioned above, three include changes to the data sources used to calculate the GPCIs. First, the revised GPCI methodology proposes to update the cost share weights using the 2006-based rather than the 2000-based MEI weights. Second, the utilization of residential rent data from the ACS replaces the U.S. Department of Housing and Urban Development (HUD) Fair Market Rent (FMR) data. Third, the proposed purchased services index—which had not been used in any previous update—utilizes two new data sources. The Bureau of Labor Statistics (BLS) Occupational Employment Statistics (OES) data identify the regional variation in the labor cost of purchased services and CMS's labor-related classification methodology is used as the basis to determine the fraction of purchased

services inputs deemed to vary with the local labor market. In addition, in cases where county-level or MSA-level data are aggregated to the locality level to create the component GPCI indices (e.g., office rent index, employee wage index, purchased services index), 2009 RVU weights are used in the Final Revisions to the Sixth Update rather than 2008 RVUs. Table 1 summarizes these changes.

Table 1: Data Sources Used for Recent GPCI Updates

Component	Fifth Update 2009	Sixth Update 2012 (Current Regulation)	Revisions to the Sixth Update 2012 (Final)
Physician Work GPCI	2000 Census	2006-2008 BLS Occupational Employment Statistics	2006-2008 BLS Occupational Employment Statistics
Practice Expense GPCI			
Employee Wage	2000 Census	2006-2008 BLS Occupational Employment Statistics	2006-2008 BLS Occupational Employment Statistics
Office Rent	FY2007 HUD 50th Percentile Rents	FY2010 HUD 50th Percentile Rents	2006-2008 American Community Survey
Purchased Services (Labor Cost)	*N/A*	*N/A*	2006-2008 BLS Occupational Employment Statistics
Purchased Services (Labor Related Shares)	*N/A*	*N/A*	CMS Labor-Related Classification
Equipment, Supplies, Other	1.00 for all counties	1.00 for all counties	1.00 for all counties
Malpractice GPCI	2004-2006 Malpractice Premiums	2006-2007 Malpractice Premiums	2006-2007 Malpractice Premiums
Cost Share Weights	2000 MEI weights	2000 MEI weights	2006 MEI weights
County RVU Weights	2005 RVUs	2008 RVUs	2009 RVUs

Four Modifications Included in the Final Revisions to the Sixth Update

To better reflect the current distribution of physician practice expenses across cost categories, the first modification updates the GPCI cost share weights. These weights determine the relative importance for each type of practice expense calculated as part of the GPCI methodology. In the Final Revisions to the Sixth Update, the 2006 MEI base weights replace the previously used 2000 MEI base weights. Updating the GPCI cost shares increases the influence of PE and malpractice costs; thus, localities with more expensive practice expenses or malpractice cost relative to their physician work GPCI receive a larger GAF as a result of this change.

When calculating the office rent index, the second change to the PE GPCI methodology is the use of data from the ACS to estimate regional variation in the cost of office space rather

than relying on HUD's FMR data. Although the HUD FMR and ACS data have many similarities, CMS decided to use the ACS rent data for two reasons. First, the ACS data rely on more recent survey data. Through 2011, HUD based its FMR estimates partially on rental information from 2000 Census long form data, which are no longer being collected. Although HUD updates these figures annually based on the ACS's own rental estimates and the Consumer Price Index (CPI), using the 2006-2008 ACS data better reflects current regional variation in the cost of office space. Second, unlike the HUD data, ACS rental information varies by county. Although HUD does report rental information at the county level, these rental estimates are identical for all counties within the same "fair market rent area" which is typically the MSA. Further, HUD has proposed a new FMR methodology for 2012 that abandons the use of Census long form data and instead relies exclusively on ACS data.

To take into account regional variation in the physician expenses for contracted services, the third modification implements a new purchased services index that accounts for this variation. Using the same wage data used to calculate the employee wage index, the purchased services index adjusts for regional variation in the costs of services physicians' offices typically outsource to other firms. The creation of the purchased services index addresses stakeholder comments that the current PE GPCI does not account for regional variation in the cost of services purchased from businesses such as legal and accounting firms.

Finally, this report uses a more objective approach for selecting the occupations to be included in the employee wage index. More specifically, this methodology relies on two criteria to identify the occupations to include in the employee wage index. The first criterion excludes all physician-related occupations. This restriction—which has been included in all previous GPCI updates—ensures that the GPCI methodology does not double-count physician-related occupations since the physician work GPCI already accounts for regional variation in physician-related occupations. Once the physician-related occupations have been excluded from consideration, the second criterion selects occupations based on their cost share within the offices of physicians industry. Occupations which make up a larger share of physician's office wage bill have more influence on the employee wage index than occupations that physician offices hire less frequently. This methodology mirrors the one Acumen recommended to CMS in its Revision of the Medicare Wage Index Final Report[2] and builds upon a previous methodology used by MedPAC.[3]

[2] MaCurdy, Thomas, Thomas DeLeire, Karla López de Nava, Paulette Kamenecka, Yang Tan, Sean McClellan. Revision of the Medicare Wage Index: Final Report Part I. April 2009, http://www.acumenllc.com/reports/cms/MWI_Report_5_1_09.pdf

[3] Please see RTI International Report, "Potential Refinements to Medicare's Wage Indexes for Hospitals and Other Sectors," prepared for MedPAC, June 2007.

Predicted Impact of Four Modifications on Locality GAFs

Instituting all four of the proposed modifications mentioned above results in changes in locality GPCI values. As shown in Table 2, the average locality experiences a change (positive or negative) of 1.9 percentage points in its PE GPCI and a change of 0.7 percentage points in its GAF. Almost ninety percent of localities experience a change in their GAF of less than one percentage point. The changes incorporated as part of the Final Revisions to the Sixth Update do change GAF values more significantly for some localities. Of the four changes included in the Final Revisions to the Sixth Update, using the 2006 MEI base weights rather than the 2000 weights to estimate physician cost shares had the largest impact on GPCI and GAF values. The most significant methodological change—the creation of a purchased services index—resulted in much smaller changes to the GPCI and GAF values.

Table 2: Revised Sixth Update Impact Analysis

Statistic		PE GPCI	GAF
Absolute Mean		0.019	0.007
Min		-0.076	-0.029
Max		0.042	0.018
Distribution	> 0.10	0.0%	0.0%
	0.05 to 0.10	0.0%	0.0%
	0.01 to 0.05	42.7%	6.7%
	0.00 to 0.01	**23.6%**	**55.1%**
	-0.01 to 0.00	**7.9%**	**23.6%**
	-0.05 to -0.01	20.2%	14.6%
	-0.10 to -0.05	5.6%	0.0%
	< -0.10	0.0%	0.0%

Summary of Findings

The Final Revision to the Sixth Update includes four significant changes that offer improvements in the data quality or methodology used to calculate the GPCI values. Using the 2006 rather than 2000 MEI base weights to calculate GPCI cost shares better reflects the latest physician practice cost structure. By relying on ACS rather than HUD FMR data to measure rental costs, the proposed methodology not only responds to Affordable Care Act mandates to explore incorporating ACS data in the PE GPCI, but also allows the CMS to move away from data sources which rely in part on 2000 Census information. The creation of a purchased services index incorporates regional variation in the cost of labor for workers not employed directly by physicians, such as lawyers, accountants, and other professionals. Finally, by leveraging data on the share of labor expenses physician offices' dedicate to different

occupations, the Final Revisions to the Sixth Update offers a more objective process for choosing the occupations within the employee wage index. By implementing the four changes included in the Final Revisions to the Sixth Update, policymakers will have updated a number of the data sources, expanded the scope of the physician costs included in the GPCI calculations, refined the methodologies to calculate regional variation in purchased services and employee wages, and addressed a variety of stakeholder comments.

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1 INTRODUCTION

As mandated under Section 1848(e) of the Social Security Act, the Centers for Medicare and Medicaid Services (CMS) must establish geographic indices as part of the Resource-Based Relative Value Scale (RBRVS) method for paying physicians. Whereas the Medicare hospital wage index adjusts hospital, home health agency, skilled nursing facility and other provider payments for regional variation in the cost of labor, the Geographic Practice Cost Index (GPCI) accounts for geographic variation in the price of a wider range of inputs. The GPCI was first implemented as part of the Medicare physician fee schedule in 1992 and is required to be updated at least every three years. In addition to these mandated tri-annual updates, Section 3102(b) of the Affordable Care Act of 2010 (ACA) requires the Secretary to "evaluate data that fairly and reliably establishes distinctions in the cost of operating a medical practice in different fee schedule areas" for the purpose of the practice expense GPCI. To meet this requirement, this report outlines a number of proposed changes to the data sources used and methodology applied to calculate locality GPCIs for CY 2012.

Acumen and CMS used four general principles to guide the proposed changes made to the Sixth Update. First, the data used should reflect the most current information available. Secondly, the data used to estimate practice cost should be as comprehensive as possible. Third, all GPCI calculations must be methodologically sound and defensible. Although the Government Accountability Office (GAO) noted that the "geographic adjustment indices are valid in design," this report explores areas where incremental improvements can be made to the GPCI methodology.[4] Fourth, revisions to the GPCI methodology should consider stakeholder comments that are feasible and consistent with the statute.

Using these guiding principles, this report describes four changes to the GPCI framework outlined in the Sixth Update.[5] Specifically, these proposals include: i) updating the GPCI cost share weights to coincide with the 2006-based Medicare Economic Index (MEI) cost shares, ii) using ACS data to calculate the office rent index, iii) creating a purchased services PE GPCI category and corresponding index to account for variation in the cost of contracted services, and iv) expanding the number of occupations included in the employee wage index. Table 1.1 below outlines which guiding principles motivate the proposed implementation of each of the four GPCI modifications included in this report.

[4] United States Government Accountability Office. Medicare Physician Fees: Geographic Adjustment Indices are Valid in Design, but Data and Methods Need Refinement. GAO-06-119, March 2005.
[5] O'Brien-Strain, Margaret, West Addison, and Nick Theobald. Final Report on the Sixth Update of the Geographic Practice Cost Index for the Medicare Physician Fee Schedule. November 2010.

Table 1.1: Principles Guiding GPCI Four Changes in the Revision to the Sixth Update

Revisions to the Sixth Update	Use recent data	Expand data comprehensiveness	Improve methodology	Address stakeholder concerns
Update the GPCI cost share weights to correspond with 2006-based MEI data	X	X		X
Use ACS data to calculate office rent index	X	X		X
Create purchased services PE GPCI category and index		X	X	X
Expand occupations included in the employee wage index		X	X	X

The remainder of this report not only describes these four changes in detail, but also calculates the impact of these changes for locality GPCI values. Specifically, this report details how these four methodological changes affect the calculations of the GPCIs *before final adjustments.* As described in the CY 2011 proposed rule for the physician fee schedule, CMS implements a number of required adjustments after completing its the core calculations. These adjustments include: a permanent 1.5 floor for the physician work GPCI in Alaska; a permanent 1.0 floor for the practice expense GPCI for frontier states[6], and adjustments to the physician work GPCIs so that only the figures only include one-quarter of the relative cost differences compared to the national average. These modifications, as well as the methodology for transitioning from the existing GPCIs to the updated GPCIs, are described in the final rule. None of the figures presented in this report, however, include these final adjustments.

This report explains the changes to the GPCI data sources, methodology and locality GPCI values in nine sections. After this introduction concludes, Section 2 provides a brief overview of how CMS uses GPCIs to adjust provider payment and also compares the data sources used in the proposed and revised Sixth Update. Section 3 describes the first recommended methodological change, updating the GPCI cost shares by using 2006-based Medicare Economic Index (MEI) base weights. In Section 4, the report describes how the proposal to utilize American Community Survey (ACS) data helps CMS move away from using data sources which partially rely on 2000 Census information and also addresses existing stakeholder concerns. Section 5 explains a new mechanism to take into account geographic variation in the cost of services that physician practices frequently contract out. Next a data-driven framework to identify the occupation categories to be included in the employee wage

[6] As of 2012, the states which qualified as frontier states were: Montana, Nevada, North Dakota, South Dakota, and Wyoming.

index is described in Section 6. Then, Section 7 presents an empirical analysis of the cumulative impact of these four changes on locality GPCI values and Geographic Adjustment Factors (GAF). Finally, Section 8 concludes with a summary of the findings of this report.

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2 BRIEF OVERVIEW OF THE GPCI METHODOLOGY

One factor affecting physician expenses is where the physician decides to locate their practice. For instance, skilled workers—such as physicians—receive a higher wage in Manhattan than in Montana; the cost of operating a physicians practice is much higher in San Francisco than in West Virginia; and purchasing professional liability (i.e., malpractice) insurance is more expensive for a doctor in Miami than one located in Minnesota. To account for these regional differences in the inputs required to provide medical services, CMS uses the GPCIs to adjust the physician payment under the physician fee schedule.[7] The three GPCIs (physician work, practice expense, and malpractice) adjust the relative value units (RVUs) assigned to certain services under the RBRVS.

The remainder of this section provides additional background information on how CMS uses the GPCIs to adjust physician reimbursement levels. Specifically, Section 2.1 briefly reviews how CMS uses the GPCIs in collaboration with the three types of RVUs and a conversion factor to determine the fee schedule for each physician service.[8] Although CMS calculates the physician work and malpractice GPCIs based on a single data source for each of these components, the PE GPCI is more complex. Section 2.2 describes the practice expense (PE) GPCI components (i.e., the employee wage; office rent; purchased services; and equipment, supplies and other) in more detail. Next, Section 2.3 provides a brief overview of the data sets used to calculate each of the GPCI components. This section compares this revision's data sources against the data sources used in earlier updates.

2.1 How GPCIs Affect Physician Payments

CMS bases its payments to physicians on three components: RVUs, GPCIs, and the conversion factor. The first component, the RVUs, is itself subdivided into three categories: physician work, practice expense, and malpractice insurance. For any service provided under the physician fee schedule, these three RVUs respectively estimate the quantity of physician work, PE and malpractice inputs required to provide the specific service. Higher RVU levels indicate that the service requires more inputs.

The GPCIs adjust these three RVUs for regional variation in the price of each of the three input categories. Paralleling the RVU structure, the GPCI is split into three parts: physician work, practice expense and malpractice insurance. The GPCIs increase the RVU values for high

[7] CMS posts updates concerning the Medicare physician fee schedule at the following website: https://www.cms.gov/PhysicianFeeSched/

[8] For an overview of the physician services payment system, see: Medicare Payment Advisory Commission (MedPAC), "Physician Services Payment System" October 2010: http://www.medpac.gov/documents/MedPAC_Payment_Basics_10_Physician.pdf.

cost areas and reduce the RVU values for low-cost areas. The unadjusted GPCIs do not change aggregate payment levels; instead, they reallocate payment rates by locality to reflect regional variation in relative input prices. The three GPCIs are calculated for 89 localities. The localities are defined by state boundaries (e.g., Wisconsin), metropolitan statistical areas (MSAs) (e.g., Metropolitan St. Louis, MO), portions of an MSA (e.g., Manhattan), or rest-of-state area which exclude metropolitan areas (e.g., Rest of Missouri).

The conversion factor translates the sum of the GPCI-adjusted RVUs into a payment amount. CMS updates the conversion factor every year according to the Sustainable Growth Rate (SGR).[9] Although the SGR is projected to decrease physician compensation over the upcoming years, Congress has reversed the reductions in most years since the SGR was implemented in 2002.[10]

Using these three factors, one can calculate the physician payment for any service in any locality. Equation 1 below demonstrates how the physician work, practice expense and malpractice insurance GPCIs combine with the three RVUs and a conversion factor (CF) to establish a Medicare physician payment for any service *K* in locality *L*:

$$(1)\quad Payment_{K,L} = \{[GPCI_{W,L} * RVU_{W,K}] + [GPCI_{PE,L} * RVU_{PE,K}] + [GPCI_{MP,L} * RVU_{MP,K}]\} * CF$$

Physician Work | Practice Expense | Malpractice Insurance

To summarize the combined impact of the three GPCI components on a locality's physician reimbursement levels, policymakers often rely on the Geographic Adjustment Factor (GAF). The GAF is a weighted average of the three GPCIs for each locality, where the cost share weights are determined by the Medicare Economic Index (MEI) base year weights. Using the 2006 MEI base weights, one can calculate the GAF as follows in Equation 2:

$$(2)\quad GAF_L = \{[GPCI_{W,L} * 0.48266] + [GPCI_{PE,L} * 0.47439] + [GPCI_{MP,L} * 0.04295]\}.$$

2.2 Practice Expense GPCI Components

Whereas CMS calculates the physician work and malpractices GPCIs as a single figure, to estimate regional variation in practice expenses, the PE GPCI divides the physician practices expenses into four component parts. These include the following categories:

[9] For more information, see: Centers for Medicare and Medicaid Services (CMS) "Estimated Sustainable Growth Rate and Conversion Factor, for Medicare Payments to Physicians in 2012," Accessed May 31, 2011: http://www.cms.gov/SustainableGRatesConFact/Downloads/sgr2012p.pdf

[10] Hahn, Jim. "Medicare Physician Payment Updates and the Sustainable Growth Rate (SGR) System." Congressional Research Service. August 2010. http://aging.senate.gov/crs/medicare15.pdf

- Employee wage index
- Office rent index
- Equipment, supplies, and other
- Purchased services index (*finalized in CY 2012 final rule with comment period*)

CMS already calculates the first three components of the PE GPCI listed above. The first component, the employee wage index, measures regional variation in the cost of hiring skilled and unskilled labor. Practice expenses for employee wages account for the largest share of the PE GPCI. The second component, the office rent index, measures regional variation in the cost of typical physician office rents. For example, renting an office in San Francisco is more expensive than renting an office in Wyoming, and the office rent index measures these cost differentials. The "equipment, supplies and other" category measures practice expenses associated with a wide range of costs from chemicals and rubber, to telephone and postage costs. Because most of these good are sold through a national market, CMS does not adjust for regional variation in practice costs within the equipment, supplies and other category.

This report also recommends introducing a fourth component into the PE GPCI, the purchased service index. Although the employee wage index discussed above adjusts for regional variation in the cost of labor employed directly by the physician's office, this PE GPCI component does not account for regional variation of the costs in the case where a physician practice outsourced the work to a different firm. Such cases occur when physician hire law firms, accounting firms, building service firms or even hire workers through a temporary employment agency. The new purchased services index accounts for the regional cost variation within contracted services that physicians typically buy.

The PE GPCI is a weighted average of these four components. Each of the components is normalized to have an average index value of 1.000 and thus the average PE GPCI value will be 1.000 as well.[11] In this report, Acumen recommends using the 2006 MEI base weights to calculate the PE cost shares.

2.3 Data Sources Used in the Sixth Update Final Revisions

The Revision to the Sixth Update relies on a number of new data sources to calculate GPCI values by locality. Table 2.1 compares the data sources under the Fifth Update, the Sixth Update under current regulation, and the Final Revisions to the Sixth Update. The changes

[11] Although the locality weighted average is 1.000 (where the weights are the locality RVUs), the unweighted locality can be higher or lower than 1.000.

proposed in the Sixth Update Final Revisions build upon data sources originally introduced in the Sixth Update under current regulation.

As shown in this table, the Final Revisions to the Sixth Update makes four key changes to the data sources compared to the Sixth Update under current regulation. First, the Revision updates the cost share weights using the 2006-based MEI rather than the 2000-based MEI. Second, residential rent data from the ACS are used in place of U.S. Department of Housing and Urban Development (HUD) Fair Market Rent (FMR) data. Using ACS rental data not only helps CMS move away from using rental information partially estimated from 2000 Census information, but also addresses existing stakeholder concerns. Third, the purchased services index—which had not been used in any previous update—utilizes two new data sources. The Bureau of Labor Statistics (BLS) Occupational Employment Statistics (OES) data identify the regional variation in the labor cost of purchased services and CMS's labor-related share classifications determine the fraction of the purchased services inputs which are in fact deemed labor-related. Finally, in cases where county-level or MSA-level data are aggregated to the locality level to create the component GPCI indices (e.g., office rent index, employee wage index, purchased services index), 2009 RVU weights are used in the Revised Update rather than 2008 RVUs. The first three changes to the data source, as well as the methodological changes to the employee wage index, are discussed in more detail in the following sections.

Table 2.1: Data Sources Used for Recent GPCI Updates

Component	Fifth Update 2009	Sixth Update 2012 (Current Regulation)	Revisions to the Sixth Update 2012 (Final)
Physician Work GPCI	2000 Census	2006-2008 BLS Occupational Employment Statistics	2006-2008 BLS Occupational Employment Statistics
Practice Expense GPCI			
Employee Wage	2000 Census	2006-2008 BLS Occupational Employment Statistics	2006-2008 BLS Occupational Employment Statistics
Office Rent	FY2007 HUD 50th Percentile Rents	FY2010 HUD 50th Percentile Rents	2006-2008 American Community Survey
Purchased Services (Labor Cost)	*N/A*	*N/A*	2006-2008 BLS Occupational Employment Statistics
Purchased Services (Labor Related Shares)	*N/A*	*N/A*	CMS Labor-Related Classification
Equipment, Supplies, Other	1.000 for all counties	1.000 for all counties	1.000 for all counties
Malpractice GPCI	2004-2006 Malpractice Premiums	2006-2007 Malpractice Premiums	2006-2007 Malpractice Premiums
Cost Share Weights	2000 MEI weights	2000 MEI weights	2006 MEI weights
County RVU Weights	2005 RVUs	2008 RVUs	2009 RVUs

3 UPDATING THE PE GPCI COST SHARE WEIGHTS

To better estimate the current distribution of physician practice expenses across cost categories, this report recommends calculating the GPCI cost shares using the 2006-based Medicare Economic Index (MEI) weights. There are two advantages of using the 2006-based MEI weights. First, using these updated weights allows CMS to rely on a more current data source. Second, the 2006-based MEI also contains a more detailed breakdown of the PE GPCI cost categories than was previously available in the 2000-based MEI. These more detailed breakdowns are useful for a number of purposes, including the creation of the purchased services index.

The remainder of this section provides additional information describing the motivation for updating the GPCI cost share weights using the 2006-based MEI and the associated impact. Section 3.1 provides a brief overview of how CMS calculates the MEI cost share weights. Next Section 3.2 compares the change in the GPCI cost share using 2006 rather than 2000 MEI base weights. Finally, Section 3.3 describes how using 2006-based MEI cost shares impact locality GPCIs and GAFs values.

3.1 Current Mechanisms for Determining Cost Share Weights

To determine the relative importance for each type of practice expense, the GPCI methodology relies on MEI base year weights. The MEI weights estimate the share of physician expenses broken down into the physician work, PE (i.e., non-physician employee compensation; office rent; purchased services; and equipment, supplies and other categories) and malpractice insurance categories for the average American self-employed physician. To calculate the PE GPCI, one first calculates a separate index for each of the four practice expense categories and then weights each of these indices by its PE cost share weight which are derived from the MEI cost share weights. Similarly, CMS also uses the MEI cost shares to calculate the GAF. To calculate the GAF, CMS assigns a weight to each GPCI based on its corresponding MEI cost share.

In CY 2011, CMS calculated the GPCI cost shares from 2000-based MEI data whereas the Final Revisions to the Sixth Update recommend using 2006-based MEI data. CMS calculated the 2006-based MEI cost shares using data primarily from the American Medical Association (AMA) Physician Practice Information Survey (PPIS). This data file contains practice cost information collected from self-employed physicians and selected self-employed non-medical doctor specialties.[12] In addition to both the PE GPCI and the GAFs, CMS uses

[12] "Medicare Program; Payment Policies Under the Physician Fee Schedule and Other Revisions to Part B for CY 2011." *Federal Register* 75 (13 July 2010): 40040. http://federalregister.gov/a/2010-15900

these base year weights to estimate the inflation in input prices over time as part of the annual MEI update.

3.2 Updating Cost Share Weights Using 2006-Based MEI Data

The proposal to revise the GPCI cost shares increases the weight placed on both the PE and malpractice GPCIs. Table 3.1 compares the cost share using the MEI based on both 2006 and 2000 data. While the physician work GPCI's cost share decreases by over four percentage points, the cost share weights applied to the PE and malpractice GPCIs increase. An increase in the cost share attributed to employee compensation as well as the new purchased services index lead to a rise in the overall PE GPCI cost share.

Table 3.1: Cost Share Weights Used in the 2000-Based and 2006-Based MEI

Expense Category	Cost Share Weights %		Geographically Adjusted Cost Share Weights (%)	
	CY 2011	CY2012	CY 2011	CY2012
Physician Work	**52.466**	**48.266**	**13.117**	**12.067**
Practice Expense	**43.669**	**47.439**	**30.863**	**34.387**
Employee Compensation	*18.654*	*19.153*	*18.654*	*19.153*
Office Rent	*12.209*	*10.223*	*12.209*	*10.223*
Purchased Services	*N/A*	*8.095*	*N/A*	*5.011*
Equipment, Supplies, and Other	*12.806*	*9.968*	*0*	*0*
Malpractice Insurance	**3.865**	**4.295**	**3.865**	**4.295**
Total	**100.000**	**100.000**	**47.845**	**50.749**

This report dedicates just over eight percentage points of physician costs to a previously non-existent cost category: purchased services. The purchased services index accounts for expenses physician practices incur from contracted services such as accounting, legal and building maintenance services. In the proposed GPCI methodology, the purchased services category includes industries which the 2006-based MEI places within the "Other Practice Expenses" and "Other Professional Expenses" categories. Section 5 describes a mechanism by which CMS can create the purchased services index in more detail.

Note that CMS does not fully adjust all the GPCI components for regional variation in input costs. As shown in the last two columns of Table 3.1, CMS only adjusted 48 percent of physician costs for geographic variation in input costs in CY 2011 and—under the proposed methodology—would only adjust 51 percent of physician costs for geographic variation in CY 2012. Specifically, CMS does not account for regional variation in the 'equipment, supplies and other' index and assigns all localities a value of 1.000 for this portion of the PE GPCI. Further,

the purchased services index only accounts for geographic variation in the labor-related input costs. Thus, CMS adjusts about 62 percent of the purchased services index (i.e., 5.011 percentage points) for regional variation in contracted services. Although this report only empirically analyzes changes to the GPCIs before final adjustments, it is important to note that CMS uses one-quarter of the regional variation in skilled labor cost as part of the physician work GPCI (i.e., a 12.067 cost share).

3.3 2006-Based MEI Cost Share Impact Analysis

Updating the GPCIs using the 2006-based MEI cost shares results in the largest changes in the GPCI values of any of the four revisions outlined in this report. To demonstrate, Table 3.2 describes the impact of the change on the 89 locality PE GPCI values and Table 3.3 summarizes the impact of this change on the GAFs.[13,14] Updating the GPCI cost shares using the 2006-based MEI base weights causes a large change in the PE GPCI for certain localities. Although about 30 percent of localities experience a change to their PE GPCI of less than one percentage point, the average (unweighted) absolute change is 0.018. Because the updated cost shares places more weight on the employee wage index and less on the office rent index, localities with high office rent costs receive lower PE GPCIs under the 2006-based MEI compared to the baseline.

Updating the cost share weights also affects the values of the GAFs, but to a lesser degree than the PE GPCIs. The average absolute change in the GAF is 0.5 percentage points and over 85 percent of localities experience a change in GAF value of less than 1 percent. Because the 2006-based MEI puts relatively more weight on the PE and malpractice GPCI relative to the physician work GPCI, localities with higher practice expenses relative to skilled labor cost gained.

[13] Note that although there are 91 localities, the localities of Guam and the Pacific Islands are grouped within the same GPCI value as Hawaii since reliable data is not available.

[14] All impact analyses in this report compare the GPCI values to the original proposed Sixth Update using 2009 RVU values rather than the original 2008 RVU values. Thus, the baseline figures used in this report do not match the original figures from the original Sixth Update Report (O'Brien-Strain et al. 2010). Appendix A describes how the baseline GPCI figures change when the 2009 rather than 2008 RVU figures are used to construct the component indices.

Table 3.2: Impact Analysis, Updating Cost Share Weights Using 2006-Based MEI (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	38	42.7%
0.00 to 0.01	**14**	**15.7%**
-0.01 to 0.00	**13**	**14.6%**
-0.05 to -0.01	22	24.7%
-0.10 to -0.05	2	2.2%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	-0.001
Abs. Mean	0.018
Min	-0.062
P10	-0.038
P25	-0.012
P50 (Median)	**0.005**
P75	0.019
P90	0.022
Max	0.040

Table 3.3: Impact Analysis, Updating Cost Share Weights Using 2006-Based MEI (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**53**	**59.6%**
-0.01 to 0.00	**23**	**25.8%**
-0.05 to -0.01	13	14.6%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.005
Min	-0.020
P10	-0.012
P25	-0.003
P50 (Median)	**0.001**
P75	0.005
P90	0.006
Max	0.008

4 CREATING AN OFFICE RENT INDEX FROM ACS DATA

Adequately measuring regional variation in a physician's cost to rent office space depends on the accuracy of the underlying data. A number of organizations such as the Institute of Medicine (IOM)[15,16] and the Government Accountability Office (GAO)[17] have recommend calculating the office rent index using a data measuring commercial rents on a per-square-foot basis. Identifying this sort of data in practice, however, has proved elusive. Acumen's previous research explored a number of sources of commercial rents (e.g., a commercial property data set by Reis Inc., the possibility of collecting data from the Medical Group Management Association), but found these data either incomplete or not publicly available.[18] Similarly, IOM's own report also concludes that reliable regional commercial rent data are not currently available. Thus, the PE GPCI office rent index in recent years has relied on residential Fair Market Rent (FMR) data from the U.S. Department of Housing and Urban Development (HUD) to serve as a proxy for regional variation in physician costs for office space.

Due to this lack of suitable commercial office rent data, this report continues to rely on residential rent data, but recommends replacing HUD FMR data with residential rent information from the American Community Survey (ACS). Although the HUD FMR and ACS data have many similarities, CMS decided to use the ACS rent data for two reasons. First, the ACS data rely on more recent survey data. Through 2011, HUD based its FMR estimates partially on rental information from 2000 Census long form data, which are no longer being collected. Although HUD updates these figures annually based on the ACS's own rental estimates and the Consumer Price Index (CPI), using the 2006-2008 ACS data better reflects current regional variation in the cost of office space.[19] Second, unlike the HUD data, ACS rental information varies by county. Although HUD does report rental information at the county level, these rental estimates are identical for all counties within the same "fair market rent area" which is typically the MSA.[20] Further, HUD has proposed a new FMR methodology for 2012 that abandons the use of Census long form data and instead relies exclusively on ACS data.

[15] Edmunds, Margaret, ed. and Frank A. Sloan, ed. "Geographic Adjustment in Medicare Payment: Phase I: Improving Accuracy." Board on Health Care Services, Institute of Medicine, 2011.
[16] Edmunds, Margaret, ed. and Frank A. Sloan, ed. "Geographic Adjustment in Medicare Payment: Phase I: Improving Accuracy, Second Edition." Board on Health Care Services, Institute of Medicine, 2011.
[17] United States Government Accountability Office. Medicare Physician Fees: Geographic Adjustment Indices are Valid in Design, but Data and Methods Need Refinement. GAO-06-119, March 2005.
[18] See: Margaret O'Brien-Strain et al. 2010, p. 7-8.
[19] For CY 2012, the HUD itself may move its FMR methodology towards one that relies almost exclusively on ACS data; the proposed FMR methodology will use five-year 2005-2009 ACS data to measure 2-bedroom rents. "Final Fair Market Rents for the Housing Choice Voucher Program and Moderate Rehabilitation Single Room Occupancy Program Fiscal Year 2012." *Federal Register* 76 (30 September 2011): 60968-60972.
[20] According to the HUD website, "HUD defines FMR areas as metropolitan areas and non-metropolitan counties. With a few exceptions, the most current Office of Management and Budget (OMB) definitions of metropolitan areas

The remainder of this section provides an overview of the impact of relying on ACS rental data rather than HUD FMRs. First, Section 4.1 briefly compares the ACS and HUD FMR data files. Next, Section 4.2 depicts the methodology for calculating the PE GPCI office rent index. Although the data source is novel, the methodology for calculating the office rent index has not changed. Section 4.3 provides an impact analysis demonstrating how replacing the HUD data with ACS information affects locality PE GPCI values. For the average locality, the change in the PE GPCI value is about one percentage point and the change in the GAF is only half a percentage point. Finally, Sections 4.4 and 4.5 discuss two alternative specifications: one calculating average housing rents using data from housing units with 1, 2, 3, and 4 bedrooms and the other allowing the office rent index cost share weight to vary by locality. CMS chose not to adopt the first alternative due to data reliability issues and a desire to maintain a consistent framework over time; the second alternative is not feasibly implementable using existing data sources.

4.1 Comparing ACS Rental Data with HUD Fair Market Rents

In previous GPCI calculations of the office rent index, CMS used HUD FMR data. The primary use of the HUD FMR is to determine payment standards for HUD programs such as Section 8 contracts and the Housing Choice Voucher program. The FY 2011 FMR estimates are based partially on 2000 Census data.[21] To arrive at the final FMR estimates, HUD adjusts the 2000 Census data using 2008 ACS rent estimates and then further adjusted using CPI rent and utilities price indices.[22] Although HUD data is displayed at the county level, it is derived from MSA estimates; thus the HUD data allocates the FMR estimate to each county in the MSA.[23] Since the Fifth Update, the GPCI methodology has relied on HUD estimates of the 50th percentile FMR in each MSA.

To estimate prevailing residential rental costs, the Final Revisions to the Sixth Update relies on 2-bedroom rental data from the 2006-2008 American Community Survey.[24] Acumen

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are used… Exceptions include a small number of metropolitan areas whose revised OMB definitions encompass areas that are larger than HUD's definitions of housing market areas." For more detail see: http://www.huduser.org/datasets/fmr/fmrover.doc

[21] "Final Fair Market Rents for Fiscal year 2011 for the Housing Choice Voucher Program and Moderate Rehabilitation Single Room Occupancy Program" *Federal Register* 75 (4 October 2010): 61254-61319. http://edocket.access.gpo.gov/2010/pdf/2010-24465.pdf

[22] In essence, HUD inflates the 2000 Census data with the CPI, but replaces this imputed figure with more recent ACS data if the ACS value is outside the 90 percent confidence interval of the imputed rent. For more information, see: http://www.huduser.org/portal/datasets/fmr/fmrs/FY2011_code/acstypesumm.odn?fmrtype=Final&data=2011

[23] See the Fair Market Rent User Guide for more detail: http://www.huduser.org/portal/datasets/50per.html

[24] Acumen has also analyzed using 5-year ACS rental data from 2005-2009 and found that using the 5-year data instead of the 3-year data from the ACS has a small impact on localities' office rent index values; only about one in ten localities experiences a change in its office rent index value by more than one percentage point when using the 5-year rather than the 3-year data. Because the 3-year data have a larger sample size than the one year ACS release and relies less on outdated rent information (i.e., 2005 data) than the 5 year release, Acumen recommends using the

obtained a customized extract of the ACS data from the U.S. Census Bureau to use in the PE office rent methodology. Unlike the HUD data which assign all counties within the same MSA the same rental cost estimate, the 3-year ACS data contain distinct rent information by county. In cases where the county contains less than 20,000 individuals, ACS does not report rental rates for any bedroom sizes. To impute rents for counties with fewer than 20,000 people without rental data, Acumen estimates its rent based on the weighted average rents of counties with more than 20,000 people in their same MSA. Like the HUD data, rental information also includes utilities cost.[25]

4.2 Methodological Overview for Creating the Office Rent Index

Although this report recommends using ACS rather than HUD data to measure county rents, the methodology for calculating locality office rent indices has not changed from the original Sixth Update. Calculating the office rent index requires three steps:

1. Calculating an RVU-weighted national median rent,
2. Indexing the median rent in each county to the national median, and
3. Creating Medicare locality measures that are RVU-weighted averages of the county index.

Further information on how to calculate the office rent index can be found in a previous report.[26]

4.3 ACS Rental Data Impact Analysis

Relying on data from the ACS rather than information from the HUD FMR has a non-trivial impact on the office rent index values, but a smaller effect on locality PE GPCI or GAF values. Table 4.1 below demonstrates the impact of using ACS rather than HUD rental data to serve as a proxy for physicians' office rents. As shown in this table, about 17 percent of localities experience a gain or loss in their office rent index value of less than one percent when ACS data are used. Twenty six percent of localities experience a change in their office rent index greater than five percent.

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most recent 3-year ACS rent data going forward. Appendix B presents the impacts of using 5-year instead of the 3-year ACS data to calculate the office rent index.

[25] Utilities cannot be analyzed separately since some individual's monthly rent covers the cost of utilities. Thus the 2006-2008 ACS data can only accurately measure gross (i.e., including utilities) rents rather than net rents. In the ACS survey, individuals report whether electricity, gas, water/sewer and oil/coal/kerosene/wood costs (i.e., questions 11a, 11b, 11c, and 11d on the survey) charges were included in their rent and—if not—they report what their utility cost was during the past 12 months. See: http://www.census.gov/acs/www/Downloads/questionnaires/2011/Quest11.pdf

[26] O'Brien-Strain et al. 2010.

At the PE GPCI and GAF levels, however, the change in the index values is much smaller. Table 4.2 displays the impact of using ACS data on the PE GPCI and Table 4.3 describes the effect of these same changes on the GAF. Whereas fewer than one in five localities experience a change in their office rent index of less than one percentage point, over half of the localities' PE GPCIs change less than 1 percentage point and almost 9 out of 10 localities see a change in their GAF of less than 1 percent. In fact, the average (unweighted) absolute change in a locality's PE GPCI value is 0.012 and in the GAF is only 0.005. Because this impact analysis only takes into account changes in the data used to measure office rents, the impact of these modifications is diluted as one moves to more aggregated statistics (i.e., PE GPCI or GAF) since the physician work GPCI, malpractice GPCI and the PE GPCI components unrelated to the office rent index do not change.

Table 4.1: Impact Analysis, Using ACS Data to Measure Office Rents (Office Rent Index)

Office Rent Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	2	2.2%
0.05 to 0.10	11	12.4%
0.01 to 0.05	41	46.1%
0.00 to 0.01	**8**	**9.0%**
-0.01 to 0.00	**7**	**7.9%**
-0.05 to -0.01	10	11.2%
-0.10 to -0.05	4	4.5%
< -0.10	6	6.7%

Percentile	Office Rent Difference
Mean	0.008
Abs. Mean	0.043
Min	-0.276
P10	-0.061
P25	-0.007
P50 (Median)	**0.017**
P75	0.043
P90	0.071
Max	0.117

Table 4.2: Impact Analysis, Using ACS Data to Measure Office Rents (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	26	29.2%
0.00 to 0.01	**36**	**40.4%**
-0.01 to 0.00	**14**	**15.7%**
-0.05 to -0.01	12	13.5%
-0.10 to -0.05	1	1.1%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	0.002
Abs. Mean	0.012
Min	-0.077
P10	-0.017
P25	-0.002
P50 (Median)	**0.005**
P75	0.012
P90	0.020
Max	0.033

Table 4.3: Impact Analysis, Using ACS Data to Measure Office Rents (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	4	4.5%
0.00 to 0.01	**58**	**65.2%**
-0.01 to 0.00	**21**	**23.6%**
-0.05 to -0.01	6	6.7%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.001
Abs. Mean	0.005
Min	-0.034
P10	-0.008
P25	-0.001
P50 (Median)	**0.002**
P75	0.005
P90	0.009
Max	0.014

4.4 Alternative Specification: Office Rent Index Using Multiple-Bedroom Rents

Acumen and CMS explored creating a "composite" office rent index using rental data from multiple bedrooms sizes. Under the composite framework, CMS would compute area rents as a weighted average of rents for each bedroom size where the weights are the proportion of residences of each size at the national level.[27] Using the composite rent index increases the number of rent observations per locality. In addition, including more bedroom sizes in the index could serve as an alternative to establish the relative cost differences in physician office rents if 3, 4, or 5+ bedroom sizes are a more appropriate proxy for locality office rents.

After careful consideration, however, CMS elected to base the office rent index on 2-bedroom residential rent from the ACS. A number of factors drove this decision. First, data from 2 and 3 bedroom sizes was more reliable than rental data for other bedroom sizes; the ACS data were more likely to contain missing rental values for housing units with 0, 1, 4 or 5+ bedrooms. Second, calculating the office rent index is simpler and easier to explain to stakeholders than an office rent index created from a 'composite' bedroom rents. Third, the previously-used HUD FMR data rely exclusively on information from 2-bedroom rents. Thus, continuing to use 2-bedroom rents after adopting the ACS data means that CMS's methods used will be more consistent across years. Additionally, introducing the composite rent index creates significant changes in locality's office rent index values compared to the standard 2-bedroom specification.[28]

[27] By using the frequency of bedroom present at the national level, the composite index would not account for regional variation in the choice of housing size and would focus on regional variation in the price of housing.
[28] The average change in a locality's office rent index when switching from the 2-bedroom to the 'composite-bedroom' index was 3.6 percentage points; the change in their PE GPCI was 1.0 percentage points.

4.5 Alternative Specification: Allowing Office Rent Weights to Vary Regionally

Section 3102(b) of the Affordable Care Act requires CMS to study "basing the office rents component and its weight on office expenses that vary among fee schedule areas." Under this alteration to the GPCI methodology, localities with high rents would receive a larger cost share weight placed on the office rent component within the PE GPCI; localities with lower rents would have a lower cost share weight placed on their office rent index. Performing these adjustments, however, requires office expense data from physician practices that varies at the locality level. These data must contain a sufficient number of observations and also must be collected from a representative population of physicians across all localities.

Using weights that vary by locality cannot be feasibly implemented, since reliable data permitting the accurate measurement of office rent weights across physician fee areas does not exist. This modification requires physician practice expenditure data broken down at the by geographic regions (e.g., locality, MSA, county). The MEI weights currently used are only available at the national level. In a previous report, Acumen explored the use of Medical Group Management Association (MGMA) data to calculate office rent indices and found that it was not appropriate. The data represent only 2,250 practices and sample sizes indicate that physician response rates vary dramatically by state.[29] Even if the MGMA sample size was sufficient, the mapping of MGMA expenses to the MEI categories is imperfect. As already mentioned, since acquiring a reliable source of commercial rental data has not yet been successful adjusting the office rent cost weight for regional variation in office expenses is not currently feasible.

[29] O'Brien-Strain et al. 2010.

5 ACCOUNTING FOR VARIATION IN PURCAHSED SERVICES COST

Even though physician practices often purchase accounting, legal, advertising, consulting, landscaping, and other services from a variety of outside contractors, CMS has not previously included regional variation in the cost of purchased services within the current employee wage index. Specifically, the current methodology only measures regional variation in wages for workers that physician practices employ directly. Although certain contractors may offer a single national price for their services regardless of location, firms that rely heavily on labor inputs price their services differently depending on the prevailing cost of labor in their market.

To account for the regional labor cost variation within contracted services, this report develops a "purchased services index" that CMS has decided to include in the CY 2012 PE GPCI. The purchased services index adjusts for the regional cost variation in the MEI expense categories "All Other Services." and "Other Professional Expenses." The purchased services index assumes that the cost of capital for these contracted firms is constant across the nation. Thus, each GPCI's purchased services index value includes a labor cost component that varies regionally and a capital component which is normalized to 1.000 for all areas.

Although adjusting for regional variation in purchased service cost is a new component of the PE GPCI, the methodology for constructing the index follows existing precedent. Specifically, the industry wage data come from the BLS OES—just like the employee wage index. The methodology is consistent with CMS's labor-related classification methodology used as the basis for demining various market baskets labor-related shares. CMS defines a cost category as labor-related if the cost category is defined as being both labor intensive and its costs vary with, or are influenced by, the local labor market.[30] Introducing the purchased services index not only allows for a more comprehensive depiction of regional variation in labor costs beyond direct employees, but also addresses stakeholder comments that the current PE GPCI does not account for regional variation in services purchased from contracted businesses such as law and accounting firms.

The remainder of this section describes the purchased services index in more detail. Section 5.1 describes the data used to calculate the purchased services index. Section 5.2 next provides step-by-step description of how CMS can calculate the purchased services index. Finally, Section 5.3 presents the impact of incorporating the purchased services index into the PE GPCI. This analysis reveals that despite its conceptual appeal, the impact of incorporating the

[30] "Medicare Program; Changes to the Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and Fiscal Year 2010 Rates; and Changes to the Long-Term Care Hospital Prospective Payment System and Rate Years 2010 and 2009 Rates." Federal Register 74 (27 August 2009): 43845. http://frwebgate.access.gpo.gov/cgi-bin/getpage.cgi?position=all&page=43845&dbname=2009_register.

contracted services into the GPCI methodology has a fairly small effect on locality PE GPCI and GAF values.

5.1 Using BLS Data to Estimate the Purchased Service Cost Variation

To adjust for regional variation in the labor inputs of purchased services requires four key elements. These elements include: wages by occupation, industry employment levels, labor related classifications by industry, and the share of physician practice expense. Table 5.1 summarizes these four elements and the data source from which each is derived.

Regional variation in the price of contracted labor comes from the first purchased services element: wages by occupation. The second element identifies the occupation employment share within each relevant industry. Both of these data elements come from the 2008 BLS OES data. For its OES survey, BLS collects information from approximately 200,000 establishments, and provides employment and wage estimates for about 800 occupations.[31] The OES data contain occupation wage information by MSA for the entire nation.[32] Additionally, the OES provides occupation cost share estimates for over 450 industry classifications (using the 3, 4 and 5 digit North American Industry Classification System). Thus, one can determine each occupation's employment or cost share within any industry in the "All Other Services" and "Other Professional Expenses" MEI cost categories.

Table 5.1: Data Elements Required to Calculate the Purchased Services Index

Purchased Service Index Element	Data Source
Wage Data by Occupation	BLS OES
Industry Employment Levels	BLS OES
Industry Labor-Related Classifications	CMS Estimates
Share of Physician Practice Expense	Medicare Economic Index (MEI)

For instance, consider the case where physicians' offices purchase legal services from a law firm. To compute the first two elements of the purchased services index, Acumen examines the wage data for all occupations listed in legal services industry (NAICS 541100). These occupations include lawyers and paralegals, as well as receptionists, operations managers, and others.[33] The OES data provide wage data for each of these occupations. This occupation wage

[31] The BLS OES data can be downloaded at: http://www.bls.gov/oes/oes_dl.htm
[32] Note that the BLS OES occupation wage data by region are only publicly available across all industries. One cannot measure regional variation in average wages for workers in a given occupation within a specific industry.
[33] For more information see: http://www.bls.gov/oes/current/naics4_541100.htm

data, however, is cross-industry, meaning that the wage estimates include both lawyers working in law firms as well as in other industries (e.g., government, finance). The OES data also contain information on employment levels. Thus, one can calculate lawyer's employment share and also estimate relative occupational cost shares within the legal services industry.[34]

The third data element identifies whether an industry is classified as labor-related as determined by CMS. Under CMS labor-related classification, CMS defines a cost category as labor-related if the cost category is defined as being both labor intensive and its costs vary with, or are influenced by, the local labor market. The labor related share (LRS) CMS calculated for legal services, for instance, was 67 percent. Because most tangible, non-labor related products can be sold on a nation-wide market, CMS generally does not use geographic adjustments for goods-related products. Following that precedent, the proposed methodology only adjusts physician purchased service cost for regional variation in labor costs. By using these LRS assumptions from CMS, the GPCI methodology is consistent with CMS's labor-related classification methodology used in other provider settings.[35]

To estimate a cost share weight for the purchased services PE GPCI, one combines the cost weights from the MEI for the two categories "all other services" and "other professional expenses", or 8.095 percent for the 2006-based MEI. Previously, the costs for these services were included in the MEI cost category "all other." Under the rebased and revised 2006-based MEI, one can break out the expenses for these costs into much more detail and assign them to two separate cost categories: "all other services" and "other professional expenses". CMS further disaggregated the costs included in each of these two categories using data from the U.S. Bureau of Economic Analysis (BEA) I-O tables for NAICS 621A00, Offices of physicians, dentists, and other health practitioners. CMS assigned an industry to one of these two categories based on the AMA PPIS survey questions and then estimated the costs paid to each of the specific industries underlying these two categories.

To determine if an industry was labor-related, CMS followed the same method it employs for its other market baskets; in particular, a category is determined to be labor-related if the cost category is defined as being both labor intensive and its costs vary with, or are influenced by the local labor market. For the majority of the underlying industries, the associated costs were determined to be entirely labor-related or entirely non labor-related. For certain components within other professional expenses, CMS was able to determine a portion of the costs within that industry that were labor-related. CMS conducted a survey of hospitals to empirically determine

[34] Because BLS only contains information on employment and hourly wages, one could estimate occupation cost shares assuming that workers in all occupations work the same number of hours.
[35] The LRS CMS uses for legal services is based on the results of a professional services survey for hospital facilities.

the proportion of contracted professional services purchased by the industry that are attributable to local firms and the proportion that are purchased from national firms. CMS applied each of these percentages to its respective Benchmark I–O cost category underlying the other professional expenses cost category.

Rather than using CMS's labor-related classification, Acumen also explored estimating LRS using industry labor cost data from the BEA Gross-Domestic-Product-(GDP)-by-Industry Data.[36] The BEA calculated the share of employee compensation relative to the total industry gross domestic product. Acumen conducted an impact analysis which determined that using either the BEA or CMS labor-related classification produced similar PE GPCIs values.[37] Because the LRS produces quantitatively similar impacts to the BEA data and to maintain a consistent method of classifying costs across provider settings, CMS decided that proposing a purchased services index using the existing CMS labor-related classification was preferred.

The fourth data element, the 2006-based MEI, determines the share of contracted services that physician practices purchase from specific industries. Occupations in industries which make up a larger share of the physician's indirect expenses will receive more weight in the purchased services index than wages from occupations in industries from which physicians rarely purchase goods or services. The MEI cost weight for legal services, for instance, was 0.323 percent of overall physician expenses or 4 percent of the purchased services index; for comparison, the MEI cost weight for services to buildings and dwellings was 0.694 percent of overall physician expenses or 8 percent of the purchased services index.

5.2 Methodology for Creating a Purchased Services Index

Adjusting for regional variation in the labor-related component of purchased services requires a seven step methodology. These steps include the following:

1. Determine MEI cost weight of each purchased services industry,
2. Calculate wage level by area for each industry,
3. Determine the national wage level for each industry,
4. Create *industry-level* purchased services indices,
5. Adjust *industry-level* purchased services indices for labor costs,
6. Calculate county-level purchased services indices, and
7. Calculate the final industry-level purchased service indices.

[36] See http://www.bea.gov/industry/gdpbyind_data.htm

[37] Appendix C provides a detailed breakdown of the industries included in the purchased services index, as well as their MEI cost share and LRS.

The remainder of this section discusses each of these steps in turn.

5.2.1 Step 1: Determine MEI cost weight of each purchased services industry

To determine each purchased service's share of physician practice expenses, the purchased services index relies on the 2006-based MEI cost weights. Each service included in the 'All Other Services' and 'Other Professional Expenses' components of the MEI maps to an industry, based on its North American Industry Classification System (NAICS) code. These industries are then mapped to four-digit NAICS whenever possible. In cases where an industry was already aggregated beyond the four-digit level, one must rely on either the three-digit or sector (two-digit) NAICS codes.

5.2.2 Step 2: Calculate wage level by county for each industry

Once the cost weights have been established, the second step determines a single industry-level wage for each county. The industry wage for a given county is a weighted average of occupation wages in each purchased services industry. Specifically,

$$wage_{ic} = \sum_{o} S_{io} w_{oc}$$

In this equation, the wage in industry *i* in area *c* is a weighted average of the occupation wages. The wages for each occupation, *o*, cannot be calculated at a sub-national level for specific industries; occupation-specific wage by MSA is only available across all industry. Although the wage data are only available at the MSA level, this report calculates county-level wages by assigning each county to its MSA or NECTA wage. Thus the parameter w_{oc} measures wages for workers in occupation *o* in county *c* across all industries. In cases where wage data were missing for occupation within an area, Acumen used the national median wage.

The variable S_{io} describes the proportion of workers from any occupation who work within each purchased services industry. [38] Specifically, the variable measures the share of employment for that industry. For instance, consider the case where there are two types of workers (A, B) within a given industry. Assume that this industry hires 20 percent of its worker from occupation A and 80 percent of its workers from occupation B. In this case, the industry-specific wage in each county would be based one fifth on the wage of workers of type A and four-fifths on the wage of workers of type B.

[38] A handful of industries (such as 11140 – Greenhouse, nursery, and floriculture production) did not have industry specific information. Therefore, they were not adjusted and every county received a value of 1.0.

5.2.3 Step 3: Determine the national wage level for each industry

The third step estimates the national purchased service industry wage as a weighted average of the industry wages calculated for each county where the weights are determine by county level total RVUs. Specifically,

$$WAGE_i = \frac{\sum_c wage_{ic} RVU_c}{\sum_c RVU_c}$$

where the variable $WAGE_i$ indicates the average wage for industry i.

5.2.4 Step 4: Determine the national level wage for each industry

The industry-specific, unadjusted purchased services index is calculated as the ratio of the output from Steps 2 and Step 3. Mathematically,

$$\omega_{ic}^{raw} = \frac{wage_{ic}}{WAGE_i}$$

where ω_{ic}^{raw} is the purchased services index for a specific industry i in a county c.

5.2.5 Step 5: Adjust industry-level purchased services index for LRS

Because the proposed methodology adjusts regional variation in the price of purchased services labor inputs, Acumen's approach applies wage adjustments only to those industry's output which was determined to be labor-related based on the CMS definition, also known as labor related shares (LRS). To identify each industry's LRS, the purchased services index method uses the CMS labor-related classification methodology described above. The adjusted industry-level purchased services index is simply a weighted average of the unadjusted industry level purchased services index and 1, where the weights (LRS_i) are CMS's labor-related classifications for industry i. This adjustment is then applied to each purchased services industry index as follows:

$$\omega_{ic}^{adj} = LRS_i(\omega_{ic}^{raw}) + (1 - LRS_i)$$

In essence, this formula shrinks the purchased services adjustment towards 1.0 based on each industries labor-related share. If the industry is classified as labor-related and there is no additional data regarding the percentage of services purchased within the local labor market, (i.e., $LRS_i = 1$) then the raw and adjusted purchased services indices for each industry will be identical. On the other hand, if the industry is not classified as labor-related (i.e., $LRS_i = 0$) then the industry will have no impact on the PE GPCI value (i.e., $\omega_{ic}^{adj} = 1$). Under the CMS

assumptions, for instance, the LRS value of the "Advertising and related services" industry is 1.0, but the LRS value of "Air transportation" industry is 0.0. The 1 indicates that "Advertising and related services" industry costs are classified as labor-related because CMS believes these costs are labor intensive and they vary with, or are influenced by, the local labor market where as CMS does not believe this is the case for costs associated with "Air transportation." As stated above, based on survey results, some industries (such as legal services) are classified as being partially labor-related.

5.2.6 Step 6: Calculate the county-level purchased services indices

The final, cross-industry purchased services index for a given county is the weighted average of the industry-level purchased services indices. To calculate the purchased services index for a given county (i.e., PS_c), one uses each industry's share of the physician practice labor-related costs as the weights. Information on physician practice labor-related costs comes from the 2006-based MEI data. Mathematically, one can calculate the final purchased services index for each area as follows:

$$PS_c = \frac{\sum_i \omega_{ic}^{adj} MEI_i}{\sum_i MEI_i}$$

Where MEI_i is the cost share weight for purchased services industry i.

5.2.7 Step 7: Calculate the final locality-level purchased services indices

In the final step, one aggregates the county level purchased services index into a locality-level purchased services index using county-level RVUs.

$$PS_l = \frac{\sum_c PS_c RVU_c}{\sum_c RVU_c}$$

5.3 Purchased Services Index Implementation Impact Analysis

The effect of implementing the purchased services index within the PE GPCI is relatively small in magnitude. Specifically, over 75 percent of localities see a change in their PE GPCI of less than one percentage point. Only one locality out of 89 saw a change to their GAF of more than 1 percentage point. The localities that benefit from the purchased services are those with expensive labor cost in the occupations included in the purchased services index and inexpensive office rents. Although accounting for the fact that purchased services often significantly affect a physician practice's bottom line, implementing the purchased services index in practice has a relatively small effect on the resulting PE GPCI or GAF values.

The remainder of the impact analysis contains two parts. Section 5.3.1 briefly describes the methodology used to conduct the impact analysis. This revision to the Sixth Update uses 2006-based MEI weights; however, because the Sixth Update under current regulation uses 2000-based MEI weights, this impact analysis relies on the 2000-based MEI weights in order to make a fair comparison to the current regulation. Section 5.3.2 discusses the results of this impact analysis in more detail.

5.3.1 Impact Analysis Methodology

Although the final GPCIs proposed in the revision to the Sixth Update use the 2006-based MEI data, to isolate the effect of incorporating purchased services into the PE GPCI, this impact analysis relies on 2000-based MEI cost weights used in the Sixth Update under current regulation. Therefore, the impact analysis using 2000-based MEI cost weights requires as two-part methodology since the breakdown of the purchased services industries' share of physician practice expenses is only available from the 2006-based MEI data.[39, 40]

In the first stage of the impact analysis, this report uses the 2006-based MEI to determine which GPCI component (i.e., employee wage; office rent; or equipment, supplies and other) includes the "All Other Services" and "Other Professional Expenses" categories. Because CMS could only identify these cost categories after the 2006-based MEI was made available, the next stage of the impact analysis weights each of the purchased service categories based on the '2006-Based MEI Cost Share of Group' but within the 2000-based MEI GPCI components. Thus, the total share of the GPCI attributed to purchased services in this impact analysis is 9.18 percent, and the office rent and equipment/supplies components were decreased accordingly. Note that when the Revised Sixth Update is fully implemented and CMS switches to using the 2006-based MEI for GPCI weights, purchased services make up 8.095 percent of physician practice expenses. Below, Table 5.2 and Table 5.3 demonstrate how Acumen performed these preliminary calculations for the impact analysis.

Table 5.2: Purchased Services Cost Share, 2006-Based MEI

Category	2006-Based MEI Weight	2006-Based MEI Group	2006-Based MEI Group Weight	2006-Based MEI Share of Group
All Other Services	0.0358	Office Rent	0.2004	0.1787
Other Professional Expenses	0.0451	Equipment & Supplies	0.0825	0.5466

[39] "Medicare Program; Payment Policies Under the Physician Fee Schedule and Other Revisions to Part B for CY 2011." Federal Register 75 (29 November 2010. 73195. http://edocket.access.gpo.gov/2010/pdf/2010-27969.pdf

[40] As mentioned above, one of the benefits from using the 2006-based MEI data is the additional level of detail provided.

Table 5.3: Applying 2006-Based MEI Purchased Services Cost Share to 2000-Based MEI

Category	2006 MEI Group	2000 MEI Group Weight	Category Weight in 2000 MEI	Category Weight in 2000 MEI
All Other Services	Office Rent	0.1221	=.1221*.1787	0.0218
Other Professional Expenses	Equipment & Supplies	0.1281	=.1281*.5466	0.0700
Total Purchased Services				**0.0918**

5.3.2 Impact Analysis Results

Implementing the purchased services adjustment does affect the PE GPCI values. Table 5.4 outlines the impact on the PE GPCI values and Table 5.5 summarizes a parallel impact analysis at the GAF level. Based on these analyses, the median change in the PE GPCI values is 0.6 percent. No locality experiences a change in PE GPCI of more than 4 percent and three out of every four localities experience a change in their PE GPCI value of less than one percentage point. The impact at the GAF level is even smaller.

The impact analysis also reveals that the localities that benefit from implementing the purchased services index have expensive labor cost and relatively inexpensive office rents. Because the purchased services index measures regional variation in the LRS of contracted services, areas with higher wages experience an increase in their PE GPCI. Although an increase in the PE GPCI is more likely for localities with an above-average employee wage index, this correlation is fairly weak since the occupations included in the purchased services index differ from those included in the employee wage index. The impact analysis reveals, however, that localities with expensive office rents generally receive lower PE GPCI values. Part of the reason for this relationship comes from the specific structure of this impact analysis. Because the results in this chapter use 2000-based MEI weights—since only the purchased service recommendation is implemented in this impact analysis—the methodology in essence assumes that the 'All Other Services' category portion of the purchased services index cost share weight comes from the office rent index using the 2000-based MEI cost weights. When the impact analysis reassigns some of the office rent cost share to the purchased services category, localities with high office rents will generally experience a decrease in their PE GPCI.[41]

[41] To determine the effect of implementing the purchased services index using 2006-based MEI weights, see Section 7 for the combined impact form instituting all four proposed changes.

Table 5.4: Impact Analysis, Purchased Services Index (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	11	12.4%
0.00 to 0.01	**39**	**43.8%**
-0.01 to 0.00	**30**	**33.7%**
-0.05 to -0.01	9	10.1%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	0.000
Abs. Mean	0.006
Min	-0.034
P10	-0.013
P25	-0.004
P50 (Median)	**0.001**
P75	0.007
P90	0.010
Max	0.018

Table 5.5: Impact Analysis, Purchased Services Index (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**50**	**56.2%**
-0.01 to 0.00	**38**	**42.7%**
-0.05 to -0.01	1	1.1%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.003
Min	-0.015
P10	-0.006
P25	-0.002
P50 (Median)	**0.000**
P75	0.003
P90	0.005
Max	0.008

6 EXPANDING THE OCCUPATIONS INCLUDED IN THE EMPLOYEE WAGE INDEX

To address recent stakeholder feedback indicating that the current methodology for creating the employee wage index omits key occupations categories, this report uses an alternative approach to select the occupations to be included in the index. Specifically, this revision to the Sixth Update chooses occupations based on the physician practices outlays for these particular employee skill sets. Relying on national cost share weights from BLS to select occupations not only provides a more systematic approach to determining which occupations should be included in the employee wage index, but it also allows CMS to determine how much weight each occupation should receive within the index.

Although the proposed modifications should improve the accuracy of the employee wage index methodology, the quantitative impact on PE GPCI levels is small. The average absolute change in a locality's PE GPCI value is 0.5%. In fact, almost ninety percent of Medicare localities experience a change of less than one percentage point in their PE GPCI. This finding is robust to a number of different occupation cut-offs.

The remaining three sections describe the modifications to the employee wage index in more detail. Section 6.1 briefly describes the data upon which the employee wage index relies. Section 6.2 describes the methodology for selecting occupations to include in the employee wage index. The section also briefly reviews how the selection of occupations fits into the complete employee wage index calculation, but a more detailed description of the wage index methodology can be found in previous work.[42] Finally, Section 6.3 summarizes the results from an empirical analysis of the impact of adopting this revised employee wage index methodology.

6.1 Description of the BLS Wage Data

Due to its reliability, public availability, level of detail, and national scope, the revised employee wage uses the BLS OES data to estimate both occupation cost shares and hourly wages. As described above, the OES panel data are collected from approximately 200,000 establishments, and provides employment and wage estimates for about 800 occupations. To calculate the employee wage index, Acumen's methodology draws from occupations who work in the "offices of physicians" industry.[43] This industry comprises establishments of health practitioners having the degree of M.D. (Doctor of Medicine) or D.O. (Doctor of Osteopathy) primarily engaged in the independent practice of general or specialized medicine (except psychiatry or psychoanalysis) or surgery. These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO

[42] See: O'Brien-Strain et al. 2010.
[43] NAICS code 621100

medical centers. The OES data break down wages into detailed occupational categories and also include national level cost share estimates for the physicians industry.

As part of the mandate from Section 3102(b) of the Affordable Care Act, Acumen also evaluated whether CMS should begin using wage data from the ACS to calculate the employee wage index. Appendix B presents this analysis. The remainder of the section, however, only presents the preferred specification which employs BLS OES data.

6.2 Methodological Overview for Calculating the Employee Wage Index

Implementing the employee wage using the BLS OES data requires a six step process. These steps include:

1. Selecting the occupations for inclusion in the wage index calculation,
2. Calculating an RVU-weighted national average hourly wage by occupation,
3. Indexing the wage for each occupation in each county to the national median,
4. Calculating each occupation's share of the national employee wage expenditure,
5. Calculating county-specific hourly wage index, and
6. Creating Medicare locality measures that are RVU-weighted averages of the index.

With the exception of Step 1, this method parallels the methodology described in the Sixth Update report under current legislation.[44] Thus, the remainder of this section narrowly focuses on how to choose the occupations for inclusion in the employee wage index.

In the revised employee wage index methodology, Step 1 relies on two criteria to identify the occupations to include in the employee wage index. The first criterion excludes physician-related occupations from consideration. This restriction is necessary because the physician work GPCI already accounts for regional variation in physician-related occupations. Thus, including physician wages in the PE GPCI would result in double counting.[45]

[44] *Ibid*. Also note that the step to calculate hourly wages described previously in that report is unnecessary since the BLS OES data estimate hourly wages rather than earnings and hours separately.

[45] The physician-related occupations are found under the Healthcare Practitioner and Technical Occupations (SOC Code 29-000) major occupation group. To determine which occupations within this group should be excluded, we used a three step approach. Acumen first grouped similar occupations, using the second-to-last digit of their SOC code. Each group of occupations was evaluated collectively for inclusion from this point forward. Next, because technical specialties are currently in the employee wage index, it was decided any occupation with a '29-2' prefix should be included. Finally, our team examined the '29-1' occupational groups for inclusion. Based on the current PE index, registered nurses and physician assistants are considered support staff and were therefore automatically included. Pharmacists were also incorporated in the index. However, the other professions within the '29-1' occupational group—representing different types of physicians and therapists—were excluded. All other occupations, except the ones mentioned above, were considered for inclusion. Appendix D contains more information regarding the occupations excluded and included in the employee wage index.

Once the physician-related occupations have been excluded from consideration, the second criteria selects the remaining occupations to include in the employee wage index using a cutoff based on the cumulative share of non-physician wage expenses. This methodology mirrors an Acumen proposal to CMS in its Revision of the Medicare Wage Index Final Report[46] and builds upon a previous methodology used by MedPAC.[47] Under the revised framework, CMS selects the occupations based on their national cost share from BLS OES national employment and wage data within the offices of physicians industry. Increasing the cumulative cost share threshold increases the number of occupations covered by the wage index whereas decreasing the cumulative cost share threshold does the reverse.

After careful consideration, this report proposes including all occupations which make up 100 percent of the total non-physician wage share in the offices of physicians industry.[48] This strategy identifies 155 individual occupations which were employed in the offices of physicians industry.[49] Further, the proposed methodology coincides with the IOM's recommendation to use the BLS OES data to include the full range of occupations employed in physicians' offices.[50] Unlike the proposed MedPAC framework, this report elects not to aggregate any occupations into larger categories and instead relies on the BLS occupation 4-digit occupation groupings.

6.3 Employee Wage Index Revision Impact Analysis

Substituting the occupational categories used in the Sixth Update with the occupations representing 100 percent of total non-physician wages in the offices of physicians industry does not result in significant changes in localities' employee wage indices, PE GPCIs, or GAFs. Table 6.1 describes how the methodological changes affect the employee wage index figures for localities. Table 6.2 and Table 6.3 produce parallel analyses at the PE GPCI and GAF levels.

By construction, the impact of adopting the proposed methodology is larger in the employee wage index than either the PE GPCI or the GAF. Because changing the methodology to compute the employee wage index does not affect the physician work or malpractice GPCIs, the changes in the employee wage index are diluted at the PE GPCI level. More specifically, the

[46] MaCurdy, Thomas, Thomas DeLeire, Karla López de Nava, Paulette Kamenecka, Yang Tan, Sean McClellan. Revision of the Medicare Wage Index: Final Report Part I. April 2009, http://www.acumenllc.com/reports/cms/MWI_Report_5_1_09.pdf

[47] Please see RTI International Report, "Potential Refinements to Medicare's Wage Indexes for Hospitals and Other Sectors", prepared for MedPAC, June 2007

[48] Appendix E discusses changes to the employee wage index from the proposed Sixth Update of the GPCI. The appendix also provides an impact analysis demonstrating how including 100 percent instead of 90 percent of non-physician occupations within the offices of physicians industry affects employee wage index values.

[49] For a list of all occupations reported in the offices of physicians industry, refer to http://www.bls.gov/oes/2009/may/naics4_621100.htm#%285%29

[50] Edmunds, Margaret, ed. and Frank A. Sloan, ed. "Geographic Adjustment in Medicare Payment: Phase I: Improving Accuracy, Second Edition." Board on Health Care Services, Institute of Medicine, 2011. 5-37 – 5-38.

average locality experiences a change in its employee wage index value of 1.2 percentage points, whereas this figure is only 0.5 percentage points for its PE GPCI or 0.2 percentage points at the GAF level. Although only approximately one in two localities experience a change of wage index values of less than 1 percentage point after the occupational definitions have been expanded, almost nine out of every ten of localities experience changes of less than one percentage point to their PE GPCI values. Further, only one locality sees a change in its GAF of more than one percentage point due to the revised employee wage index methodology.

Table 6.1: Impact Analysis, Expanded Occupations (Employee Wage Index)

Employee Wage Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	19	21.3%
0.00 to 0.01	**23**	**25.8%**
-0.01 to 0.00	**25**	**28.1%**
-0.05 to -0.01	21	23.6%
-0.10 to -0.05	1	1.1%
< -0.10	0	0.0%

Percentile	Employee Wage Difference
Mean	-0.002
Abs. Mean	0.012
Min	-0.066
P10	-0.023
P25	-0.010
P50 (Median)	**-0.001**
P75	0.009
P90	0.015
Max	0.041

Table 6.2: Impact Analysis, Expanded Occupations (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	2	2.2%
0.00 to 0.01	**40**	**44.9%**
-0.01 to 0.00	**39**	**43.8%**
-0.05 to -0.01	8	9.0%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	-0.001
Abs. Mean	0.005
Min	-0.028
P10	-0.010
P25	-0.004
P50 (Median)	**0.000**
P75	0.004
P90	0.006
Max	0.017

Table 6.3: Impact Analysis, Expanded Occupations (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**42**	**47.2%**
-0.01 to 0.00	**46**	**51.7%**
-0.05 to -0.01	1	1.1%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.002
Min	-0.012
P10	-0.004
P25	-0.002
P50 (Median)	**0.000**
P75	0.002
P90	0.003
Max	0.008

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7 COMPLETE IMPACT FROM FOUR METHODOLOGICAL CHANGES

The four proposed methodological changes discussed in the Final Revisions to the Sixth Update have an effect on locality PE GPCI and GAF values. Recall that the four methodological changes include: i) updating the GPCI cost share weights to correspond with the 2006-based MEI cost shares, ii) using ACS data to calculate the office rent index, iii) creating a purchased services PE GPCI category and corresponding index, and iv) expanding the occupations included in the employee wage index. After these changes have been implemented, the average locality experiences a change in the value of its PE GPCI of just under 2 percentage points, and a change in its GAF of 0.7 percentage points. As expected, the combined effect of these changes is larger than any one alteration taken on its own. Of the four modifications discussed in this report, updating the cost shares using the 2006 MEI base weights causes the largest change in locality GPCI and GAF values.

The remainder of this section provides more detail of the combined effect from implementing these four changes simultaneously. First, Section 7.1 provides an overview of the distribution of changes in locality GPCIs and GAFs. To further quantify the impact of these changes, Section 7.2 performs two analyses which display the individual impact on locality RVUs after instituting each change.[51] Appendix F contains a more detailed, locality-by-locality analysis of the GPCI and GAF values from the Revision to the Sixth Update.

7.1 Combined Impact Analysis

Although instituting the four changes discussed in this report causes small changes in the PE GPCI and GAF values for most localities, the payment levels of physicians in certain localities changes significantly. Table 7.1 shows that three out of every ten localities experience a change in their PE GPCI of less than 1 percent. Five localities experience a decrease in their PE GPCI of more than five percentage points. No locality receives an increase in its PE GPCI of more than 5 percent. The average absolute change in the value of its PE GPCI across all localities is 1.9 percentage points.

The changes to locality GAFs, however, are smaller in magnitude. Table 7.2 reveals that more than 78 percent of localities would experience a change in the GAF of less than 1 percentage point. In fact, no localities experience a change in their GAF of more than 2.9 percentage points. The typical change in GAF values due to the changes in the Final Revisions of Sixth Update is only 0.7 percentage points.

[51] Appendix F lists the separate impacts on GAF values for each of the four changes to the data sources used and the methodology CMS uses to calculate locality GPCIs for CY 2012 discussed in this report.

Table 7.1: Combined Impact Analysis (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	38	42.7%
0.00 to 0.01	**21**	**23.6%**
-0.01 to 0.00	**7**	**7.9%**
-0.05 to -0.01	18	20.2%
-0.10 to -0.05	5	5.6%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	0.001
Abs. Mean	0.019
Min	-0.076
P10	-0.038
P25	-0.010
P50 (Median)	**0.007**
P75	0.018
P90	0.024
Max	0.042

Table 7.2: Combined Impact Analysis (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	6	6.7%
0.00 to 0.01	**49**	**55.1%**
-0.01 to 0.00	**21**	**23.6%**
-0.05 to -0.01	13	14.6%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.007
Min	-0.029
P10	-0.013
P25	-0.003
P50 (Median)	**0.002**
P75	0.006
P90	0.009
Max	0.018

7.2 The Gross Change in Locality RVUs

Another method for displaying the impact of the these four methodological changes is to examine the magnitude of the shift in RVUs across localities assuming that physician practices performed the same mix of services in each locality as they had in the past. Table 7.3 displays both the 2009 total RVUs and the change in RVUs under of the assumptions that CMS implements only one of these changes at a time. For example, the 'ACS Rent' row represents the gross impact from only implementing an office rent index created from ACS data, while the

'Purchased Services Index' row only estimates the change from implementing a purchased services index. Note that all impacts reported are gross impacts.

Evaluating each of the changes separately, all methodological alterations move less than one percent of RVUs to a different locality. Since there were a total of 2,213 million RVUs in 2009, the gross shift in RVUs from updating the cost shares using the 2006-based MEI figures is less than 0.8 percent of total RVUs (i.e., 17.14/2,213=0.8%). The impact of the other three changes is even smaller in magnitude. Creating an office rent index using ACS data causes a change in RVU of 0.5 percent. Implementing the purchased services index or using a revised methodology for choosing the occupations to be included in the employee wage index causes a gross change in RVUs of less than 0.3 percent.

Table 7.3: RVU Impact Analysis[52]

RVU Category		Millions of RVUs
2009 RVUs		*2,213*
Change in RVUs from:	2006-based MEI	17.14
	ACS Rent	11.26
	Purchased Services Index	5.93
	Revised Employee Wage Index	5.02
	All Changes	**16.95**

[52] The "All Changes" row estimates the gross change across localities. For any given locality, however, the individual changes can offset one another, and thus the "all changes" RVU impact is not equal to the sum of the four component RVU impact figures

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8 SUMMARY OF FINDINGS

The Final Revisions to the Sixth Update recommends four significant changes to the GPCI methodology. These modifications include:

- Updating the GPCI cost share weights to coincide with 2006-based Medicare Economic Index (MEI) cost share weights
- Using American Community Survey (ACS) data to calculate the office rent index
- Creating a purchased services category and corresponding index within the practice expense (PE) GPCI
- Expanding the occupations included in the non-physician employee wage index

Each of these proposals offers an improvement in the data source or methodology used to calculate the GPCI values. Using the 2006-based MEI base weights rather than 2000-based MEI base weights to calculate GPCI cost share better reflects the latest cost structure for today's physician practices. By calculating the office rent index using ACS rather than HUD FMR data, CMS not only moves away from using data that partially relies on information from the 2000 Census, but also responds to Affordable Care Act mandates to explore incorporating ACS data in the PE GPCI. The third change, creating a purchased services index, makes the GPCI methodology more comprehensive by accounting for geographic variation in the cost of labor-related services provided by contractors. Finally, by expanding the number of occupations CMS includes within the employee wage index, this report creates a more comprehensive measure of regional variation in labor costs relevant to physician costs.

These changes have an effect on locality GPCIs and GAFs that is fairly small in magnitude. Overall, the typical locality experiences a change in the value of its GAF of 0.7 percent. For almost 80 percent of localities, their GAF values do not change by more than 1 percent. Updating the GPCI cost shares using the 2006-based MEI causes the largest changes in GPCI and GAF values. Failing to update the MEI, however, would mean that the CY 2012 physician fee schedule would be based on practice cost share data that is over a decade old.

Acumen is not the only group, however, making a series of recommendations to improve the way the Medicare program calculates GPCIs. The Institute of Medicine (IOM) recently released a report in June 2011 as well as a revised version in September 2011 examining how CMS accounts for geographic variation in labor prices under both the GPCI and Medicare Wage Index. Both reports recommend for CMS to use the BLS OES data to include the full range of occupations employed in physicians' offices. After reviewing this recommendation, Acumen updated its proposal to include 100 percent of the non-physician occupations within the BLS

offices of physicians' industry data set. Because the September revision of the report was only recently released, however, neither CMS nor Acumen has had sufficient time to fully evaluate the IOM's additional recommendations. The additional recommendations can be considered in the development of future GPCI updates.

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APPENDIX A: SIXTH UPDATE BASELINE USING 2009 RVU WEIGHTS

The baseline comparison for all impact analyses is the Sixth Update using 2009 RVUs. These figures do not match the Sixth Update proposed in O'Brien-Strain et al. (2010) since this analysis relied on 2008 figures for the county RVU weights. Updating the county RVU weights caused very little change to the baseline figures. The average absolute change in the PE GPCI was only 0.002 and for the GAF was only 0.001. In fact, no locality experienced a change in their GAF greater than 0.003. Table A.1 describes the impact on the updating the county RVU on the PE GPCI values in more detail and Table A.2 describes the impact of updating the county RVU weights on the PE GPCI. Table A.3 breaks down the impact of updating the county RVU weights on the PE GPCI by locality.

Table A.1: Analysis, Sixth Update Using 2009 RVU County Weights (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**4**	**4.5%**
-0.01 to 0.00	**85**	**95.5%**
-0.05 to -0.01	0	0.0%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	-0.002
Abs. Mean	0.002
Min	-0.006
P10	-0.003
P25	-0.002
P50 (Median)	**-0.002**
P75	-0.001
P90	0.000
Max	0.001

Table A.2: Analysis, Sixth Update Using 2009 RVU County Weights (PE GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**11**	**12.4%**
-0.01 to 0.00	**78**	**87.6%**
-0.05 to -0.01	0	0.0%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	-0.001
Abs. Mean	0.001
Min	-0.003
P10	-0.002
P25	-0.001
P50 (Median)	**-0.001**
P75	0.000
P90	0.000
Max	0.001

Table A.3: Sixth Update with 2009 RVU County Weights (Baseline Comparison)

Medicare Locality	Difference in PE GPCI	CY 2012 with 2009 RVUs (Baseline)				CY 2012 with 2008 RVUs				Difference in GAF	GAF	
		PE GPCI	**Employee Wage**	**Office Rent**	**Equip. and Supplies**	**PE GPCI**	**Employee Wage**	**Office Rent**	**Equip. and Supplies**		**CY 2012 with 2009 RVUs**	**CY 2012 with 2008 RVUs**
ALABAMA	-0.002	**0.857**	0.859	0.705	1.000	**0.859**	0.861	0.708	1.000	-0.001	0.906	0.906
ALASKA	-0.003	**1.089**	1.166	1.065	1.000	**1.092**	1.169	1.070	1.000	-0.001	1.033	1.034
ARIZONA	-0.001	**0.972**	0.985	0.924	1.000	**0.974**	0.987	0.926	1.000	0.000	0.977	0.977
ARKANSAS	-0.001	**0.844**	0.840	0.685	1.000	**0.844**	0.841	0.686	1.000	0.000	0.894	0.894
ANAHEIM/SANTA ANA, CA	-0.003	**1.269**	1.163	1.713	1.000	**1.272**	1.166	1.719	1.000	-0.001	1.129	1.130
LOS ANGELES, CA	-0.003	**1.211**	1.135	1.548	1.000	**1.214**	1.138	1.554	1.000	-0.001	1.098	1.100
MARIN/NAPA/SOLANO, CA	0.000	**1.276**	1.280	1.561	1.000	**1.277**	1.280	1.562	1.000	0.000	1.128	1.128
OAKLAND/BERKELEY, CA	-0.003	**1.282**	1.360	1.459	1.000	**1.285**	1.363	1.464	1.000	-0.001	1.136	1.137
REST OF CALIFORNIA*	-0.003	**1.095**	1.102	1.183	1.000	**1.097**	1.104	1.189	1.000	-0.001	1.038	1.039
SAN FRANCISCO, CA	-0.003	**1.399**	1.397	1.821	1.000	**1.402**	1.400	1.828	1.000	-0.002	1.194	1.196
SAN MATEO, CA	-0.003	**1.399**	1.397	1.821	1.000	**1.402**	1.400	1.828	1.000	-0.002	1.194	1.196
SANTA CLARA, CA	-0.003	**1.322**	1.434	1.488	1.000	**1.325**	1.437	1.493	1.000	-0.001	1.163	1.165
VENTURA, CA	-0.003	**1.233**	1.116	1.658	1.000	**1.236**	1.119	1.664	1.000	-0.001	1.105	1.107
COLORADO	-0.002	**0.992**	1.041	0.907	1.000	**0.993**	1.044	0.909	1.000	-0.001	0.990	0.991
CONNECTICUT	-0.003	**1.146**	1.165	1.270	1.000	**1.149**	1.167	1.277	1.000	-0.001	1.086	1.087
DC + MD/VA SUBURBS	-0.003	**1.213**	1.191	1.470	1.000	**1.216**	1.194	1.476	1.000	-0.002	1.125	1.126
DELAWARE	-0.005	**1.031**	1.060	1.018	1.000	**1.035**	1.065	1.027	1.000	-0.003	1.008	1.011
FORT LAUDERDALE, FL	-0.002	**1.060**	0.983	1.242	1.000	**1.062**	0.985	1.246	1.000	-0.001	1.062	1.063
MIAMI, FL	-0.002	**1.072**	0.977	1.293	1.000	**1.074**	0.979	1.297	1.000	-0.001	1.099	1.100
REST OF FLORIDA	-0.002	**0.961**	0.915	0.991	1.000	**0.964**	0.917	0.997	1.000	-0.001	0.996	0.997
ATLANTA, GA	-0.002	**0.993**	1.011	0.958	1.000	**0.995**	1.014	0.962	1.000	-0.001	0.997	0.998
REST OF GEORGIA	-0.001	**0.886**	0.899	0.747	1.000	**0.887**	0.900	0.749	1.000	-0.001	0.936	0.937
HAWAII	-0.005	**1.228**	1.104	1.656	1.000	**1.233**	1.107	1.670	1.000	-0.003	1.089	1.092
IDAHO	-0.001	**0.887**	0.906	0.740	1.000	**0.889**	0.908	0.743	1.000	0.000	0.926	0.927

Medicare Locality	Difference in PE GPCI	CY 2012 with 2009 RVUs (Baseline)				CY 2012 with 2008 RVUs				Difference in GAF	GAF	
		PE GPCI	Employee Wage	Office Rent	Equip. and Supplies	PE GPCI	Employee Wage	Office Rent	Equip. and Supplies		CY 2012 with 2009 RVUs	CY 2012 with 2008 RVUs
CHICAGO, IL	-0.002	**1.041**	1.065	1.046	1.000	**1.043**	1.068	1.050	1.000	-0.001	1.076	1.077
EAST ST. LOUIS, IL	0.000	**0.928**	0.959	0.806	1.000	**0.928**	0.960	0.806	1.000	0.001	0.999	0.998
REST OF ILLINOIS	0.000	**0.884**	0.908	0.727	1.000	**0.885**	0.909	0.727	1.000	0.000	0.951	0.951
SUBURBAN CHICAGO, IL	-0.002	**1.040**	1.065	1.046	1.000	**1.043**	1.067	1.050	1.000	-0.001	1.059	1.060
INDIANA	-0.001	**0.906**	0.928	0.775	1.000	**0.907**	0.929	0.775	1.000	0.000	0.929	0.929
IOWA	-0.002	**0.863**	0.878	0.696	1.000	**0.865**	0.880	0.699	1.000	-0.001	0.898	0.899
KANSAS*	-0.001	**0.874**	0.892	0.713	1.000	**0.875**	0.893	0.715	1.000	0.000	0.924	0.924
KENTUCKY	-0.003	**0.863**	0.887	0.683	1.000	**0.866**	0.891	0.688	1.000	-0.002	0.916	0.918
NEW ORLEANS, LA	-0.002	**0.980**	0.912	1.064	1.000	**0.982**	0.914	1.068	1.000	-0.001	0.980	0.981
REST OF LOUISIANA	0.000	**0.865**	0.838	0.766	1.000	**0.865**	0.840	0.764	1.000	0.000	0.915	0.915
REST OF MAINE	-0.001	**0.890**	0.915	0.737	1.000	**0.892**	0.917	0.739	1.000	-0.001	0.922	0.923
SOUTHERN MAINE	-0.001	**1.030**	1.024	1.069	1.000	**1.031**	1.026	1.071	1.000	-0.001	0.993	0.994
BALTIMORE/SURR. CNTYS, MD	-0.002	**1.108**	1.136	1.179	1.000	**1.110**	1.138	1.183	1.000	-0.001	1.070	1.071
REST OF MARYLAND	0.000	**1.043**	1.046	1.084	1.000	**1.043**	1.046	1.083	1.000	0.000	1.025	1.025
METROPOLITAN BOSTON	-0.003	**1.181**	1.112	1.477	1.000	**1.184**	1.114	1.483	1.000	-0.001	1.079	1.081
REST OF MASSACHUSETTS	-0.003	**1.089**	1.101	1.164	1.000	**1.092**	1.104	1.170	1.000	-0.001	1.039	1.040
DETROIT, MI	-0.002	**1.009**	1.085	0.903	1.000	**1.011**	1.087	0.907	1.000	-0.001	1.048	1.048
REST OF MICHIGAN	-0.001	**0.915**	0.970	0.744	1.000	**0.917**	0.972	0.745	1.000	-0.001	0.962	0.962
MINNESOTA	0.000	**0.993**	1.069	0.870	1.000	**0.993**	1.069	0.869	1.000	0.000	0.969	0.968
MISSISSIPPI	-0.001	**0.860**	0.843	0.739	1.000	**0.861**	0.844	0.740	1.000	0.000	0.911	0.911
METROPOLITAN KANSAS CITY, MO	-0.002	**0.944**	0.984	0.824	1.000	**0.946**	0.986	0.827	1.000	-0.001	0.975	0.976
METROPOLITAN ST. LOUIS, MO	-0.002	**0.938**	0.968	0.827	1.000	**0.940**	0.970	0.830	1.000	-0.001	0.971	0.971
REST OF MISSOURI*	-0.001	**0.829**	0.834	0.641	1.000	**0.830**	0.836	0.642	1.000	0.000	0.904	0.904
MONTANA	-0.001	**0.862**	0.871	0.705	1.000	**0.864**	0.873	0.707	1.000	-0.001	0.916	0.917

Medicare Locality	Difference in PE GPCI	CY 2012 with 2009 RVUs (Baseline)				CY 2012 with 2008 RVUs				Difference in GAF	GAF	
		PE GPCI	Employee Wage	Office Rent	Equip. and Supplies	PE GPCI	Employee Wage	Office Rent	Equip. and Supplies		CY 2012 with 2009 RVUs	CY 2012 with 2008 RVUs
NEBRASKA	-0.004	**0.877**	0.885	0.736	1.000	**0.881**	0.890	0.743	1.000	-0.002	0.904	0.906
NEVADA	-0.002	**1.054**	1.067	1.091	1.000	**1.056**	1.069	1.095	1.000	-0.001	1.031	1.032
NEW HAMPSHIRE	-0.001	**1.050**	1.033	1.126	1.000	**1.051**	1.035	1.129	1.000	-0.001	1.012	1.013
NORTHERN NJ	-0.002	**1.181**	1.186	1.364	1.000	**1.183**	1.188	1.369	1.000	-0.001	1.105	1.106
REST OF NEW JERSEY	-0.002	**1.120**	1.114	1.254	1.000	**1.122**	1.116	1.257	1.000	-0.001	1.066	1.067
NEW MEXICO	0.000	**0.895**	0.934	0.725	1.000	**0.895**	0.936	0.724	1.000	-0.001	0.949	0.950
MANHATTAN, NY	-0.003	**1.224**	1.207	1.484	1.000	**1.226**	1.210	1.489	1.000	-0.001	1.142	1.143
NYC SUBURBS/LONG I., NY	-0.003	**1.263**	1.191	1.649	1.000	**1.266**	1.194	1.655	1.000	-0.001	1.158	1.160
POUGHKPSIE/N NYC SUBURBS, NY	-0.006	**1.063**	1.037	1.170	1.000	**1.069**	1.043	1.182	1.000	-0.003	1.037	1.040
QUEENS, NY	-0.003	**1.224**	1.207	1.484	1.000	**1.226**	1.210	1.489	1.000	-0.001	1.150	1.151
REST OF NEW YORK	-0.002	**0.932**	0.946	0.842	1.000	**0.934**	0.948	0.845	1.000	-0.001	0.948	0.949
NORTH CAROLINA	-0.001	**0.911**	0.940	0.774	1.000	**0.912**	0.941	0.776	1.000	-0.001	0.935	0.936
NORTH DAKOTA	-0.001	**0.849**	0.886	0.634	1.000	**0.850**	0.888	0.635	1.000	-0.001	0.899	0.899
OHIO	-0.002	**0.912**	0.957	0.751	1.000	**0.914**	0.960	0.755	1.000	-0.001	0.971	0.971
OKLAHOMA	-0.002	**0.856**	0.844	0.724	1.000	**0.859**	0.847	0.728	1.000	-0.001	0.904	0.904
PORTLAND, OR	-0.002	**1.014**	1.118	0.871	1.000	**1.016**	1.120	0.874	1.000	-0.001	0.995	0.996
REST OF OREGON	0.000	**0.943**	1.004	0.788	1.000	**0.943**	1.004	0.789	1.000	0.000	0.951	0.951
METROPOLITAN PHILADELPHIA, PA	-0.002	**1.068**	1.083	1.117	1.000	**1.070**	1.085	1.121	1.000	-0.001	1.062	1.063
REST OF PENNSYLVANIA	-0.002	**0.904**	0.919	0.780	1.000	**0.906**	0.922	0.782	1.000	-0.001	0.956	0.958
PUERTO RICO	-0.001	**0.685**	0.568	0.533	1.000	**0.686**	0.569	0.535	1.000	-0.001	0.786	0.787
RHODE ISLAND	-0.002	**1.050**	1.084	1.051	1.000	**1.052**	1.087	1.054	1.000	-0.001	1.039	1.040
SOUTH CAROLINA	-0.002	**0.898**	0.913	0.769	1.000	**0.900**	0.915	0.772	1.000	-0.001	0.925	0.926
SOUTH DAKOTA	0.000	**0.850**	0.840	0.708	1.000	**0.850**	0.840	0.707	1.000	0.000	0.887	0.887
TENNESSEE	0.000	**0.888**	0.904	0.745	1.000	**0.888**	0.904	0.746	1.000	0.000	0.919	0.919
AUSTIN, TX	-0.002	**0.992**	0.973	1.013	1.000	**0.994**	0.975	1.017	1.000	-0.001	0.979	0.980

APPENDIX B: ADDITIONAL INVESTIGATIONS USING ACS DATA

This appendix presents additional analyses using American Community Survey (ACS) data. Specifically, Section 4 estimates the impact of using 5-year instead of the 3-year ACS data to calculate the office rent index. Section B.1 discusses the results from an empirical analysis of the impact of using the ACS to calculate the employee wage index.

B.1 Creating an Office Rent Index from 3-Year and 5-Year ACS Data

As described in Section 4, the revised office rent index methodology uses 2006-2008 ACS household survey to estimate locality rent levels. The Census Bureau does not only offer 3-year data releases, but also 1 and 5-year releases as well. Although 1-year estimates provide the most current data, Acumen rejected using 1-year data to calculate the office rent index because the 1-year data did not have a large enough sample size to estimate rents for many counties. Specifically, the Census Bureau states that the 1-year ACS data are less reliable than the 3-year or 5-year data and only contains rental rates for areas with populations over 65,000. The 3-year ACS data report rental rates for areas with populations over 20,000.

Recently, however, the first-ever ACS 5-year estimates were released; these estimates are based on data collected from January 1, 2005 to December 31, 2009. Acumen obtained a customized extract of the 5-year ACS data from the U.S. Census Bureau in August 2011. One of the main advantages of using the 5-year data over the 3-year data is that the 5-year data contain a larger sample size; in fact, only 0.6% of counties are missing 2-bedroom rental information in the 5-year ACS files. The tradeoff of using the 5-year data is that the rent information collected is less current. The 2005-2009 5-year ACS data, for example, contains information that is both more current (i.e., 2009 responses) and less current (i.e., 2005 responses) than the 3-year 2006-2008 data. Going forward, however, if the Census releases the 3-year and 5-year data at the same time, creating the office rent index using the 5-year ACS data would contain two years of less current data than the 3-year file.

When comparing office rent indices calculated using the 3-year and 5-year ACS data, this report finds that localities' office rent indices, PE GPCIs and GAFs experience little change. Table B.1 describes how this change affects office rent index figures for localities. The average locality experiences a change in its office rent index of 0.9 percentage points. Further, three out of every four localities experiences a change in its office rent index of less than 1 percent. The changes at the PE GPCI and GAF levels are even smaller. Table B.2 and Table B.3 display these results. Specifically, approximately 98 percent of localities' PE GPCIs change less than 1 percentage point when using the 5-year ACS rather than the 3-year ACS and 100 percent of

localities see a change in their GAF of less than 1 percent. In fact, the average absolute change in a locality's PE GPCI value is 0.003, and the corresponding figure at the GAF level is only 0.001.

Table B.1: Impact Analysis, 5-Year to 3-Year ACS (Office Rent Index)

Office Rent Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	13	14.6%
0.00 to 0.01	**32**	**36.0%**
-0.01 to 0.00	**33**	**37.1%**
-0.05 to -0.01	9	10.1%
-0.10 to -0.05	2	2.2%
< -0.10	0	0.0%

Percentile	Office Rent Difference
Mean	-0.001
Abs. Mean	0.009
Min	-0.053
P10	-0.015
P25	-0.005
P50 (Median)	**0.000**
P75	0.006
P90	0.014
Max	0.035

Table B.2: Impact Analysis, 5-Year to 3-Year ACS (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**45**	**50.6%**
-0.01 to 0.00	**42**	**47.2%**
-0.05 to -0.01	2	2.2%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	0.000
Abs. Mean	0.003
Min	-0.015
P10	-0.004
P25	-0.001
P50 (Median)	**0.000**
P75	0.002
P90	0.004
Max	0.010

Table B.3: Impact Analysis, 5-Year to 3-Year ACS (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0 %
0.00 to 0.01	**45**	**50.6%**
-0.01 to 0.00	**44**	**49.4%**
-0.05 to -0.01	0	0.0%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.001
Min	-0.006
P10	-0.002
P25	-0.001
P50 (Median)	**0.000**
P75	0.001
P90	0.002
Max	0.004

B.2 Using ACS Data to Calculate the Employee Wage Index

To fulfill the requirements of Section 3102(b) of the Affordable Care Act (ACA), Acumen evaluated the impact of using wage data from the ACS—rather than the BLS OES—to calculate the employee wage index. Using a special tabulation of the 2005-209 ACS data containing wage data at the Census Work Area level, Acumen evaluated the utility in using this data for the physician work GPCI and the employee wage index.

The methodology to calculate the employee wage index using ACS data generally mirrors the employee wage index methodology presented in Section 6 with three modifications. First, one derives an hourly wage. Whereas the BLS provides direct hourly wage estimates, the ACS data includes information on annual earnings. To calculate the hourly wage value, Acumen calculated a proxy for hours worked in a year by multiplying "weekly hours worked" by "weeks worked."[53] Using this "hours worked in a year" proxy in conjunction with the median annual income in a county, Acumen calculated an hourly wage measure. Second, since the ACS represents household rather than establishment data, this report applies an external data source to determine the relative importance of each occupation's wage towards the employee wage index. This is not a novel method as the Fifth Update to the GPCI[54] used Physicians' Practice Cost and Income Survey (PPCIS) data to weight Census household wage data. This report, on the other

[53]The ACS does not contain numerical estimates of "weeks worked" measure but instead uses categories (e.g., 40-47, 48-49, 50-52 weeks). To create a point estimates of weeks worked Acumen assumed that people worked 52 weeks full-time for the 50-52 week category; for all other categories, the mid-point of weeks worked was used.
[54] Acumen, LLC, "Medicare Physician Fe Schedule Geographic Practice Cost Index (GPCI) Fifth Update: Final Report," November 30, 2007.

hand, uses the same occupation weights from the BLS OES within the offices of physician industry. Third, not all occupations available in the BLS OES appear in the ACS data received. Specifically, the ACS data contain occupations which match with the BLS data for 93 percent of non-physician employment and 89 percent of non-physician wages in the offices of physician industry.[55] For the occupations which were included in the ACS data received, the BLS employment shares were rescaled so that they summed to one.

After making these methodological adaptations, this report compares the impact of ACS wage data against two baselines:

- 2012 Current Regulation
- 2012 Current Regulation with BLS changes

Implementing the ACS data has a fairly large effect on employee wage index values, but a smaller effect on locality PE GPCI and GAF values. Table B.4 below demonstrates the impact on localities' employee wage indices when implementing ACS occupation and wage data. Approximately 11 percent of localities experience a gain or loss in their employee wage index greater than five percent when ACS data are used. On the other hand, about 27 percent of localities experienced a change in their employee wage index value of less than one percent. The average change in employee wage index values is 2.3 percent.

At the PE GPCI and GAF levels, however, the change in the index values is much smaller. Table B.5 displays the impact of using ACS data on the PE GPCI, and Table B.6 describes the effect of these same changes on the GAF. Whereas approximately 37 percent of localities experience a change in their employee wage index of less than one percentage point, over 64 percent of the localities' PE GPCIs change less than 1 percentage point and over 92 percent of localities see a change in their GAF of less than 1 percent. In fact, the average (unweighted) absolute change in a locality's PE GPCI value is 0.010, and the same change in a locality's GAF value is 0.004.

[55] Certain occupations such as "Occupational therapist aids and assistants" occupation had no data across several localities. In these cases, this report excludes these occupations due to insufficient data.

Table B.4: Impact Analysis, ACS Data vs. Current Regulation (Employee Wage Index)

Employee Wage Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	7	7.9%
0.01 to 0.05	17	19.1%
0.00 to 0.01	**15**	**16.9%**
-0.01 to 0.00	**18**	**20.2%**
-0.05 to -0.01	29	32.6%
-0.10 to -0.05	3	3.4%
< -0.10	0	0.0%

Percentile	Employee Wage Difference
Mean	-0.002
Abs. Mean	0.023
Min	-0.091
P10	-0.040
P25	-0.020
P50 (Median)	**-0.006**
P75	0.013
P90	0.038
Max	0.098

Table B.5: Impact Analysis, ACS Data vs. Current Regulation (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	14	15.7%
0.00 to 0.01	**25**	**28.1%**
-0.01 to 0.00	**32**	**36.0%**
-0.05 to -0.01	18	20.2%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	-0.001
Abs. Mean	0.010
Min	-0.039
P10	-0.017
P25	-0.009
P50 (Median)	**-0.003**
P75	0.006
P90	0.016
Max	0.042

Table B.6: Impact Analysis, ACS Data vs. Current Regulation (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	5	5.6 %
0.00 to 0.01	**34**	**38.2%**
-0.01 to 0.00	**48**	**53.9%**
-0.05 to -0.01	2	2.2%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.004
Min	-0.017
P10	-0.007
P25	-0.004
P50 (Median)	**-0.001**
P75	0.002
P90	0.007
Max	0.018

The second set of analysis comparing the difference between the ACS 5-year wage data and the BLS 3-year wage data find that using the ACS data does significantly change the GPCI values compared to this report's recommended BLS OES data. Both specifications use an expanded set of occupations compared to the current regulation. Table B.4 shows that the average absolute change in a locality's office rent index when substituting the occupational categories used in the Sixth Update with the occupations in the ACS is 0.023; on the other hand, Table 6.1 in Section 6 shows that substituting the occupational categories used in the Sixth Update with 100 percent of the occupations in the BLS results in a smaller change of 0.013. When comparing the quantitative impact of using the ACS occupations compared to 100% of the BLS occupations, this report finds that localities' employee wage indices differ significantly; the effect, however, is smaller on locality PE GPCI and GAFs values. Table B.7 describes how this change affects employee wage index figures for localities. Although the average locality experiences a change in its employee wage index of 2.6 percentage points, over 12 percent of localities experience a gain or loss in their employee wage index greater than five percent.

The changes at the PE GPCI and GAF levels, however, are smaller. Table B.8 and Table B.9 show these results, respectively. Specifically, approximately 57 percent of localities' PE GPCIs change less than 1 percentage point when using the ACS occupations rather than 100 percent of the BLS occupations; further, 91 percent of localities see a change in their GAF of less than 1 percent. In fact, the average absolute change in a locality's PE GPCI value is 0.011, and the corresponding figure at the GAF level is only 0.005.

Table B.7: Impact Analysis, ACS vs. Expanded BLS Occupations (Employee Wage Index)

Employee Wage Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	2	2.2%
0.05 to 0.10	4	4.5%
0.01 to 0.05	24	27.0%
0.00 to 0.01	**14**	**15.7%**
-0.01 to 0.00	**9**	**10.1%**
-0.05 to -0.01	31	34.8%
-0.10 to -0.05	5	5.6%
< -0.10	0	0.0%

Percentile	Employee Wage Difference
Mean	0.001
Abs. Mean	0.026
Min	-0.091
P10	-0.038
P25	-0.022
P50 (Median)	**-0.001**
P75	0.017
P90	0.043
Max	0.117

Table B.8: Impact Analysis, ACS vs. Expanded BLS Occupations (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	1	1.1%
0.01 to 0.05	16	18.0%
0.00 to 0.01	**27**	**30.3%**
-0.01 to 0.00	**24**	**27.0%**
-0.05 to -0.01	21	23.6%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	0.000
Abs. Mean	0.011
Min	-0.039
P10	-0.016
P25	-0.009
P50 (Median)	**0.000**
P75	0.007
P90	0.018
Max	0.050

Table B.9: Impact Analysis, ACS vs. Expanded BLS Occupations (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	5	5.6 %
0.00 to 0.01	**39**	**43.8%**
-0.01 to 0.00	**42**	**47.2%**
-0.05 to -0.01	3	3.4%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.005
Min	-0.017
P10	-0.007
P25	-0.004
P50 (Median)	**0.000**
P75	0.003
P90	0.008
Max	0.022

APPENDIX C: PURCHASED SERVICES INDEX

Table C.1: Industries Included in the Purchased Services Index

NAICS Code	Expense Type	Industry	% of Expense Type	MEI Cost Weight	Labor Related Share	Labor-Adjusted Weight
561700	All Other Services	Services to buildings and dwellings	19.37%	0.694%	1	0.694%
484000		Truck transportation	14.76%	0.529%	0	0.000%
54151A		Other computer related services, including facilities management	11.30%	0.405%	1	0.405%
561600		Investigation and security services	9.06%	0.325%	1	0.325%
561900		Other support services	8.24%	0.295%	1	0.295%
811300		Commercial and industrial machinery and equipment repair and maintenance	6.47%	0.232%	1	0.232%
230301		Nonresidential maintenance and repair	6.41%	0.230%	1	0.230%
811200		Electronic and precision equipment repair and maintenance	6.33%	0.227%	1	0.227%
812300		Dry-cleaning and laundry services	4.49%	0.161%	1	0.161%
541512		Computer systems design services	4.43%	0.159%	0	0.000%
518200		Data processing, hosting, and related services	2.34%	0.084%	0	0.000%
811400		Personal and household goods repaid and maintenance	2.13%	0.076%	1	0.076%
493000		Warehousing and storage	1.60%	0.057%	0	0.000%
532A00		General and consumer goods rental except video tapes and discs	1.44%	0.052%	0	0.000%
516110		Internet publishing and broadcasting	1.07%	0.038%	0	0.000%
812900		Other personal services	0.25%	0.009%	1	0.009%
5111A0		Directory, mailing list, and other publishers	0.17%	0.006%	0	0.000%
519100		Other information services	0.12%	0.004%	0	0.000%
511110		Newspaper publishers	0.03%	0.001%	0	0.000%
Total Other Services			**100.00%**	**3.582%**		**2.653%**

NAICS Code	Expense Type	Industry	% of Expense Type	MEI Cost Weight	Labor Related Share	Labor-Adjusted Weight
541610	Other Professional Expenses	Management, scientific, and technical consulting services	13.25%	0.598%	0.58	0.347%
561300		Employment services	12.03%	0.543%	1	0.543%
52A000		Monetary authorities and depository credit information	8.36%	0.377%	0	0.000%
550000		Management of companies and enterprises	8.12%	0.366%	0.57	0.209%
722000		Food services and drinking places	7.78%	0.351%	0	0.000%
541100		Legal services	7.15%	0.323%	0.67	0.216%
541200		Accounting, tax preparation, bookkeeping, and payroll services	6.37%	0.287%	0.66	0.190%
541800		Advertising and related services	6.30%	0.284%	1	0.284%
561400		Business support services	3.95%	0.178%	0	0.000%
561100		Office administrative services	3.39%	0.153%	1	0.153%
532100		Automotive equipment rental and leasing	3.30%	0.149%	0.46	0.069%
7211A0		Hotels and motels, including casino hotels	2.41%	0.109%	0	0.000%
813B00		Civic, social, profession, and similar organizations	2.11%	0.095%	1	0.095%
523000		Securities, commodity contracts, investments, and related activities	1.78%	0.080%	0	0.000%
5416A0		Environmental and other technical consulting services	1.59%	0.072%	0	0.000%
481000		Air transportation	1.41%	0.064%	0	0.000%
8111A0		Automotive repair and maintenance, except car washes	1.18%	0.053%	1	0.053%
533000		Lessors of nonfinancial intangible assets	1.11%	0.050%	0	0.000%
5419A0		All other miscellaneous professional, scientific, and technical services	1.01%	0.046%	1	0.046%
485000		Transit and ground passenger transportation	0.96%	0.043%	1	0.043%
S00203		Other State and local government enterprises[1]	0.90%	0.041%	1	0.041%
522A00		Nondepository credit intermediation and related activities	0.80%	0.036%	0	0.000%
541300		Architectural, engineering, and related services	0.72%	0.032%	0.7	0.023%

NAICS Code	Expense Type	Industry	% of Expense Type	MEI Cost Weight	Labor Related Share	Labor-Adjusted Weight
561500	Other Professional Expenses	Travel arrangement and reservation services	0.63%	0.028%	0	0.000%
511130		Book publishers	0.48%	0.022%	0	0.000%
541400		Specialized design services	0.42%	0.019%	0	0.000%
48A000		Scenic and sightseeing transportation and support activity for transportation	0.42%	0.019%	1	0.019%
561200		Facilities support services	0.41%	0.019%	1	0.019%
711500		Independent artists, writers, and performers	0.32%	0.014%	0	0.000%
713B00		Other amusement and recreation industries	0.29%	0.013%	0	0.000%
511120		Periodical publishers	0.26%	0.012%	0	0.000%
713940		Fitness and recreational sports centers	0.17%	0.008%	1	0.008%
711200		Spectator sports	0.14%	0.006%	0	0.000%
336300		Motor vehicle parts manufacturing	0.13%	0.006%	0	0.000%
482000		Rail transportation	0.11%	0.005%	0	0.000%
512100		Motion picture and video industries	0.10%	0.005%	0	0.000%
711A00		Promoters of performing arts and sports and agents for public figures	0.06%	0.003%	0	0.000%
811192		Car washes	0.04%	0.002%	1	0.002%
711100		Performing arts companies	0.02%	0.001%	0	0.000%
483000		Water transportation	0.01%	0.000%	0	0.000%
541700		Scientific research and development services	0.01%	0.000%	0	0.000%
111400		Greenhouse, nursery, and floriculture production	0.00%	0.000%	0	0.000%
326210		Tire manufacturing	0.00%	0.000%	0	0.000%
339920		Sporting and athletic goods manufacturing	0.00%	0.000%	0	0.000%
Total Other Professional Expenses			**100.00%**	**4.513%**		**2.358%**
Total Purchased Services				**8.095%**		**5.011%**

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APPENDIX D: EMPLOYEE WAGE INDEX

Following public comments regarding the CY 2012 proposed revisions to the Sixth GPCI Update, Acumen updated its proposed employee wage index calculation to include 100 percent of the non-physician occupations within the BLS offices of physicians' industry data set. Section D.1 of this appendix describes the motives behind and the impacts of expanding the occupations included in the employee wage index from 90 to 100 percent of the BLS occupations. Section D.2 presents a full list of the occupations included in the employee wage index calculation.

D.1 Expanding the Occupations Included in the Employee Wage Index

Updating the proposed employee wage index calculation to include 100 percent of the non-physician occupations within the BLS offices of physicians' industry data set creates a more comprehensive measure of regional variation in labor costs because it does not omit any occupations that the BLS determines work at offices of physicians. This strategy identifies 155 individual occupations in this industry. In the first edition of this report,[56] Acumen proposed to include the non-physician four-digit occupations that account for 90 percent of the total wage share in the offices of physicians industry. This specification only identifies 33 individual occupations with the highest wage share among all the occupations represented in this industry. The 90 percent threshold was chosen to coincide with a previous methodology used by MedPAC,[57] which recommends accounting for at least 85 percent of the total wages. However, recent reports from the IOM recommend for CMS to use the BLS OES data to include the full range of occupations employed in physicians' offices; consequently, Acumen modified its proposal to include 100 percent of the non-physician occupations within the BLS offices of physicians' industry data set. As the IOM notes in their report, "The expansion of occupations will be a better reflection of the current workforce and a broader range of health professions, which will help to improve the accuracy of the adjustment."[58, 59]

Including occupations representing 100 percent of total wages in the offices of physicians industry has little quantitative effect on localities' employee wage indices, PE GPCIs, or GAFs when compared to using the 90 percent threshold. Table D.1 describes how this change affects

[56] MaCurdy, Thomas, Jason Shafrin, and Mallory Bounds. "Proposed Revisions to the Sixth Update of the Geographic Practice Cost Index. June 2011.
[57] Please see RTI International Report, "Potential Refinements to Medicare's Wage Indexes for Hospitals and Other Sectors," prepared for MedPAC, June 2007.
[58] Edmunds, Margaret, ed. and Frank A. Sloan, ed. "Geographic Adjustment in Medicare Payment: Phase I: Improving Accuracy." Board on Health Care Services, Institute of Medicine, 2011. 5-34.
[59] Edmunds, Margaret, ed. and Frank A. Sloan, ed. "Geographic Adjustment in Medicare Payment: Phase I: Improving Accuracy, Second Edition." Board on Health Care Services, Institute of Medicine, 2011. 5-37 – 5-38.

the employee wage index figures for localities. Table D.2 and Table D.3 produce identical analyses at the PE GPCI and GAF levels. Moving from the 90 percent to the 100 percent wage bill cutoff, the average locality experiences a change in its employee wage index value of 0.5 percentage points, whereas this figure is only 0.1 percentage points for its PE GPCI and GAF. Only three out of 89 localities experience a change of wage index values of greater than 1 percentage point after the occupational definitions have been expanded; further, no localities had changes of more than one percentage point to their PE GPCI values. Although the empirical effect of including more occupations is small, this report believes that including all non-physician occupations provides a more comprehensive measure of regional variation in physician offices' labor costs.

Table D.1: Impact Analysis, 100% vs. 90% Occupation Threshold (Employee Wage Index)

Employee Wage Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**48**	**53.9%**
-0.01 to 0.00	**38**	**42.7%**
-0.05 to -0.01	3	3.4%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	Employee Wage Difference
Mean	0.000
Abs. Mean	0.004
Min	-0.015
P10	-0.007
P25	-0.004
P50 (Median)	**0.000**
P75	0.003
P90	0.005
Max	0.009

Table D.2: Impact Analysis, 100% vs. 90% Occupation Threshold (PE GPCI)

PE GPCI Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**48**	**53.9%**
-0.01 to 0.00	**41**	**41.0%**
-0.05 to -0.01	0	0.0%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	PE GPCI Difference
Mean	0.000
Abs. Mean	0.001
Min	-0.006
P10	-0.003
P25	-0.001
P50 (Median)	**-0.000**
P75	0.001
P90	0.002
Max	0.004

Table D.3: Impact Analysis, 100% vs. 90% Occupation Threshold (GAF)

GAF Difference	# of Localities	% of Localities
All	**89**	**100%**
> 0.10	0	0.0%
0.05 to 0.10	0	0.0%
0.01 to 0.05	0	0.0%
0.00 to 0.01	**48**	**53.9%**
-0.01 to 0.00	**41**	**41.0%**
-0.05 to -0.01	0	0.0%
-0.10 to -0.05	0	0.0%
< -0.10	0	0.0%

Percentile	GAF Difference
Mean	0.000
Abs. Mean	0.001
Min	-0.003
P10	-0.001
P25	-0.001
P50 (Median)	**0.000**
P75	0.001
P90	0.001
Max	0.002

D.2 Occupations Included in the Employee Wage Index

Table D.4: Occupations Excluded from the Employee Wage Index

SOC Code	Occupation Description	Percent of Employment
29-1011	Chiropractors	0.0%
29-1021	Dentists, General	0.1%
29-1022	Oral and Maxillofacial Surgeons	0.0%
29-1023	Orthodontists	--
29-1024	Prosthodontists	--
29-1031	Dietitians and Nutritionists	0.1%
29-1041	Optometrists	0.2%
29-1061	Anesthesiologists	1.3%
29-1062	Family and General Practitioners	2.9%
29-1063	Internists, General	1.5%
29-1064	Obstetricians and Gynecologists	0.7%
29-1065	Pediatricians, General	1.0%
29-1066	Psychiatrists	0.2%
29-1067	Surgeons	1.5%
29-1069	Physicians and Surgeons, All Other	6.3%
29-1081	Podiatrists	0.1%
29-1121	Audiologists	0.2%
29-1122	Occupational Therapists	0.1%
29-1123	Physical Therapists	0.4%
29-1124	Radiation Therapists	0.2%
29-1125	Recreational Therapists	--
29-1126	Respiratory Therapists	0.1%
29-1127	Speech-Language Pathologists	0.0%
29-1129	Therapists, All Other	0.0%

Table D.5: Occupations Included in the Employee Wage Index

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
	Offices of Physicians Industry Total	100.00%	--	--	100.00%	--	--
	Non-Physician Staff Only	81.00%	100.00%	--	49.66%	**100.00%**	--
29-1111	Registered nurses	9.75%	12.04%	12.04%	10.06%	**20.26%**	20.26%
31-9092	Medical assistants	13.15%	16.23%	28.27%	6.12%	**12.32%**	32.58%
43-6013	Medical secretaries	7.72%	9.53%	37.80%	3.67%	**7.39%**	39.97%
43-4171	Receptionists and information clerks	7.94%	9.80%	47.60%	3.25%	**6.55%**	46.52%
43-1011	First-line supervisors/managers of office and administrative support workers	3.28%	4.05%	51.65%	2.45%	**4.93%**	51.46%
29-2061	Licensed practical and licensed vocational nurses	4.07%	5.02%	56.68%	2.32%	**4.67%**	56.13%
43-3021	Billing and posting clerks and machine operators	4.01%	4.95%	61.63%	2.06%	**4.15%**	60.27%
29-2034	Radiologic technologists and technicians	1.91%	2.36%	63.99%	1.52%	**3.06%**	63.34%
11-9111	Medical and health services managers	1.06%	1.31%	65.30%	1.45%	**2.92%**	66.26%
43-9061	Office clerks, general	3.14%	3.88%	69.17%	1.28%	**2.58%**	68.83%
43-6014	Secretaries, except legal, medical, and executive	2.45%	3.02%	72.20%	1.13%	**2.27%**	71.10%
29-2071	Medical records and health information technicians	1.99%	2.46%	74.65%	0.88%	**1.77%**	72.88%
11-1021	General and operations managers	0.55%	0.68%	75.33%	0.83%	**1.68%**	74.56%
43-3031	Bookkeeping, accounting, and auditing clerks	1.45%	1.79%	77.12%	0.79%	**1.60%**	76.16%
43-3011	Bill and account collectors	1.47%	1.81%	78.94%	0.75%	**1.51%**	77.67%
43-6011	Executive secretaries and administrative assistants	1.02%	1.26%	80.20%	0.65%	**1.31%**	78.98%

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
29-2032	Diagnostic medical sonographers	0.55%	0.68%	80.88%	0.55%	**1.10%**	80.09%
31-9094	Medical transcriptionists	1.07%	1.32%	82.20%	0.54%	**1.10%**	81.18%
29-2012	Medical and clinical laboratory technicians	0.95%	1.17%	83.37%	0.54%	**1.09%**	82.28%
43-4071	File clerks	1.32%	1.63%	85.00%	0.45%	**0.91%**	83.18%
29-2011	Medical and clinical laboratory technologists	0.53%	0.65%	85.65%	0.42%	**0.85%**	84.03%
11-1011	Chief executives	0.14%	0.17%	85.83%	0.38%	**0.76%**	84.80%
43-4051	Customer service representatives	0.74%	0.91%	86.74%	0.36%	**0.72%**	85.51%
29-1199	Health diagnosing and treating practitioners, all other	0.16%	0.20%	86.94%	0.29%	**0.59%**	86.10%
29-2055	Surgical technologists	0.45%	0.56%	87.49%	0.29%	**0.58%**	86.68%
31-1012	Nursing aides, orderlies, and attendants	0.68%	0.84%	88.33%	0.28%	**0.57%**	87.26%
29-2031	Cardiovascular technologists and technicians	0.32%	0.40%	88.73%	0.27%	**0.53%**	87.79%
13-2011	Accountants and auditors	0.28%	0.35%	89.07%	0.26%	**0.52%**	88.31%
11-3011	Administrative services managers	0.23%	0.28%	89.36%	0.26%	**0.52%**	88.83%
29-2033	Nuclear medicine technologists	0.22%	0.27%	89.63%	0.24%	**0.49%**	89.32%
29-2099	Health technologists and technicians, all other	0.35%	0.43%	90.06%	0.23%	**0.46%**	89.78%
43-4111	Interviewers, except eligibility and loan	0.49%	0.60%	90.67%	0.22%	**0.44%**	90.22%
29-2081	Opticians, dispensing	0.36%	0.44%	91.11%	0.21%	**0.42%**	90.64%
31-9099	Healthcare support workers, all other	0.43%	0.53%	91.64%	0.20%	**0.41%**	91.05%
29-1051	Pharmacists	0.12%	0.15%	91.79%	0.20%	**0.41%**	91.46%
43-2011	Switchboard operators, including answering service	0.48%	0.59%	92.38%	0.19%	**0.39%**	91.86%
11-3031	Financial managers	0.12%	0.15%	92.53%	0.18%	**0.36%**	92.22%

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
13-1199	Business operations specialists, all other	0.20%	0.25%	92.78%	0.17%	**0.35%**	92.57%
37-2011	Janitors and cleaners, except maids and housekeeping cleaners	0.42%	0.52%	93.30%	0.15%	**0.30%**	92.87%
29-9099	Healthcare practitioners and technical workers, all other	0.18%	0.22%	93.52%	0.14%	**0.28%**	93.15%
15-1071	Network and computer systems administrators	0.12%	0.15%	93.67%	0.12%	**0.24%**	93.38%
21-1023	Mental health and substance abuse social workers	0.16%	0.20%	93.86%	0.11%	**0.22%**	93.61%
19-1042	Medical scientists, except epidemiologists	0.08%	0.10%	93.96%	0.11%	**0.21%**	93.82%
21-1022	Medical and public health social workers	0.14%	0.17%	94.14%	0.11%	**0.21%**	94.03%
15-1041	Computer support specialists	0.15%	0.19%	94.32%	0.10%	**0.21%**	94.24%
31-9091	Dental assistants	0.21%	0.26%	94.58%	0.10%	**0.20%**	94.45%
21-1014	Mental health counselors	0.13%	0.16%	94.74%	0.10%	**0.19%**	94.64%
51-9083	Ophthalmic laboratory technicians	0.17%	0.21%	94.95%	0.10%	**0.19%**	94.83%
31-2021	Physical therapist assistants	0.13%	0.16%	95.11%	0.09%	**0.18%**	95.01%
43-9021	Data entry keyers	0.21%	0.26%	95.37%	0.09%	**0.18%**	95.19%
29-2052	Pharmacy technicians	0.17%	0.21%	95.58%	0.09%	**0.17%**	95.36%
21-1091	Health educators	0.13%	0.16%	95.74%	0.08%	**0.17%**	95.53%
49-9042	Maintenance and repair workers, general	0.14%	0.17%	95.91%	0.08%	**0.16%**	95.69%
11-9199	Managers, all other	0.05%	0.06%	95.98%	0.07%	**0.15%**	95.84%
21-1093	Social and human service assistants	0.15%	0.19%	96.16%	0.07%	**0.14%**	95.98%
29-2021	Dental hygienists	0.07%	0.09%	96.25%	0.07%	**0.14%**	96.12%
39-5094	Skin care specialists	0.10%	0.12%	96.37%	0.06%	**0.12%**	96.24%
43-4199	All other information and record clerks	0.12%	0.15%	96.52%	0.06%	**0.12%**	96.36%

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
15-1051	Computer systems analysts	0.05%	0.06%	96.58%	0.06%	**0.11%**	96.47%
31-9093	Medical equipment preparers	0.11%	0.14%	96.72%	0.05%	**0.11%**	96.58%
11-3021	Computer and information systems managers	0.03%	0.04%	96.75%	0.05%	**0.10%**	96.68%
15-1031	Computer software engineers, applications	0.04%	0.05%	96.80%	0.05%	**0.10%**	96.78%
31-2022	Physical therapist aides	0.13%	0.16%	96.96%	0.05%	**0.10%**	96.89%
43-9199	Office and administrative support workers, all other	0.10%	0.12%	97.09%	0.05%	**0.10%**	96.98%
37-2012	Maids and housekeeping cleaners	0.14%	0.17%	97.26%	0.05%	**0.10%**	97.08%
29-2041	Emergency medical technicians and paramedics	0.09%	0.11%	97.37%	0.05%	**0.09%**	97.17%
13-1079	Human resources, training, and labor relations specialists, all other	0.05%	0.06%	97.43%	0.04%	**0.09%**	97.26%
13-1073	Training and development specialists	0.05%	0.06%	97.49%	0.04%	**0.08%**	97.34%
13-1072	Compensation, benefits, and job analysis specialists	0.05%	0.06%	97.56%	0.04%	**0.08%**	97.42%
43-9041	Insurance claims and policy processing clerks	0.08%	0.10%	97.65%	0.04%	**0.08%**	97.51%
43-3051	Payroll and timekeeping clerks	0.07%	0.09%	97.74%	0.04%	**0.08%**	97.59%
43-5021	Couriers and messengers	0.10%	0.12%	97.86%	0.04%	**0.08%**	97.66%
43-4161	Human resources assistants, except payroll and timekeeping	0.07%	0.09%	97.95%	0.04%	**0.08%**	97.74%
31-1011	Home health aides	0.10%	0.12%	98.07%	0.04%	**0.08%**	97.82%
13-1111	Management analysts	0.03%	0.04%	98.11%	0.04%	**0.07%**	97.89%
21-1021	Child, family, and school social workers	0.05%	0.06%	98.17%	0.03%	**0.07%**	97.96%
41-3099	Sales representatives, services, all other	0.04%	0.05%	98.22%	0.03%	**0.07%**	98.03%
43-5061	Production, planning, and expediting clerks	0.06%	0.07%	98.30%	0.03%	**0.06%**	98.09%
27-3031	Public relations specialists	0.04%	0.05%	98.35%	0.03%	**0.06%**	98.15%

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
11-3049	Human resources managers, all other	0.02%	0.02%	98.37%	0.03%	**0.06%**	98.20%
31-9011	Massage therapists	0.04%	0.05%	98.42%	0.03%	**0.06%**	98.26%
21-1011	Substance abuse and behavioral disorder counselors	0.04%	0.05%	98.47%	0.03%	**0.05%**	98.31%
13-2099	Financial specialists, all other	0.03%	0.04%	98.51%	0.02%	**0.05%**	98.36%
11-2021	Marketing managers	0.02%	0.02%	98.53%	0.02%	**0.05%**	98.41%
11-3041	Compensation and benefits managers	0.02%	0.02%	98.56%	0.02%	**0.05%**	98.46%
19-4021	Biological technicians	0.03%	0.04%	98.59%	0.02%	**0.05%**	98.51%
19-3021	Market research analysts	0.03%	0.04%	98.63%	0.02%	**0.05%**	98.56%
13-1023	Purchasing agents, except wholesale, retail, and farm products	0.03%	0.04%	98.67%	0.02%	**0.05%**	98.60%
13-1071	Employment, recruitment, and placement specialists	0.03%	0.04%	98.70%	0.02%	**0.05%**	98.65%
21-1013	Marriage and family therapists	0.03%	0.04%	98.74%	0.02%	**0.05%**	98.69%
15-1021	Computer programmers	0.02%	0.02%	98.77%	0.02%	**0.04%**	98.74%
29-2053	Psychiatric technicians	0.05%	0.06%	98.83%	0.02%	**0.04%**	98.78%
13-2051	Financial analysts	0.02%	0.02%	98.85%	0.02%	**0.04%**	98.83%
15-1081	Network systems and data communications analysts	0.02%	0.02%	98.88%	0.02%	**0.04%**	98.87%
11-9151	Social and community service managers	0.02%	0.02%	98.90%	0.02%	**0.04%**	98.91%
19-2012	Physicists	0.01%	0.01%	98.91%	0.02%	**0.04%**	98.95%
15-1099	Computer specialists, all other	0.02%	0.02%	98.94%	0.02%	**0.04%**	98.99%
33-9032	Security guards	0.04%	0.05%	98.99%	0.02%	**0.04%**	99.02%

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
13-1041	Compliance officers, except agriculture, construction, health and safety, and transportation	0.02%	0.02%	99.01%	0.02%	**0.04%**	99.06%
43-5081	Stock clerks and order fillers	0.04%	0.05%	99.06%	0.02%	**0.04%**	99.09%
29-2091	Orthotists and prosthetists	0.02%	0.02%	99.09%	0.02%	**0.03%**	99.13%
49-9062	Medical equipment repairers	0.02%	0.02%	99.11%	0.02%	**0.03%**	99.16%
41-2011	Cashiers	0.04%	0.05%	99.16%	0.02%	**0.03%**	99.19%
19-4099	Life, physical, and social science technicians, all other	0.02%	0.02%	99.19%	0.01%	**0.03%**	99.22%
11-2031	Public relations managers	0.01%	0.01%	99.20%	0.01%	**0.03%**	99.25%
21-1019	Counselors, all other	0.02%	0.02%	99.22%	0.01%	**0.03%**	99.28%
31-2011	Occupational therapist assistants	0.02%	0.02%	99.25%	0.01%	**0.03%**	99.30%
29-2054	Respiratory therapy technicians	0.02%	0.02%	99.27%	0.01%	**0.03%**	99.33%
15-1032	Computer software engineers, systems software	0.01%	0.01%	99.28%	0.01%	**0.02%**	99.35%
15-2041	Statisticians	0.01%	0.01%	99.30%	0.01%	**0.02%**	99.38%
53-3033	Truck drivers, light or delivery services	0.02%	0.02%	99.32%	0.01%	**0.02%**	99.40%
43-9011	Computer operators	0.02%	0.02%	99.35%	0.01%	**0.02%**	99.42%
19-1029	Biological scientists, all other	0.01%	0.01%	99.36%	0.01%	**0.02%**	99.45%
39-9021	Personal and home care aides	0.03%	0.04%	99.40%	0.01%	**0.02%**	99.47%
43-3061	Procurement clerks	0.02%	0.02%	99.42%	0.01%	**0.02%**	99.49%
27-3091	Interpreters and translators	0.02%	0.02%	99.44%	0.01%	**0.02%**	99.51%
15-2031	Operations research analysts	0.01%	0.01%	99.46%	0.01%	**0.02%**	99.53%
29-9011	Occupational health and safety specialists	0.01%	0.01%	99.51%	0.01%	**0.02%**	99.59%
51-8021	Stationary engineers and boiler operators	0.01%	0.01%	99.52%	0.01%	**0.02%**	99.61%
49-1011	First-line supervisors/managers of mechanics, installers, and repairers	0.01%	0.01%	99.53%	0.01%	**0.02%**	99.63%

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
43-9022	Word processors and typists	0.02%	0.02%	99.56%	0.01%	**0.02%**	99.65%
39-9099	Personal care and service workers, all other	0.02%	0.02%	99.58%	0.01%	**0.02%**	99.66%
27-1024	Graphic designers	0.01%	0.01%	99.59%	0.01%	**0.02%**	99.68%
43-9071	Office machine operators, except computer	0.02%	0.02%	99.62%	0.01%	**0.02%**	99.70%
41-9099	Sales and related workers, all other	0.01%	0.01%	99.63%	0.01%	**0.02%**	99.71%
43-2021	Telephone operators	0.02%	0.02%	99.65%	0.01%	**0.02%**	99.73%
27-4021	Photographers	0.01%	0.01%	99.67%	0.01%	**0.01%**	99.74%
21-1029	Social workers, all other	0.01%	0.01%	99.68%	0.01%	**0.01%**	99.76%
53-3041	Taxi drivers and chauffeurs	0.02%	0.02%	99.70%	0.01%	**0.01%**	99.77%
51-9082	Medical appliance technicians	0.01%	0.01%	99.72%	0.01%	**0.01%**	99.79%
21-1015	Rehabilitation counselors	0.01%	0.01%	99.73%	0.01%	**0.01%**	99.80%
21-1099	Community and social service specialists, all other	0.01%	0.01%	99.74%	0.01%	**0.01%**	99.81%
37-1011	First-line supervisors/managers of housekeeping and janitorial workers	0.01%	0.01%	99.75%	0.01%	**0.01%**	99.82%
43-4021	Correspondence clerks	0.01%	0.01%	99.77%	0.01%	**0.01%**	99.84%
43-6012	Legal secretaries	0.01%	0.01%	99.78%	0.01%	**0.01%**	99.85%
43-4041	Credit authorizers, checkers, and clerks	0.01%	0.01%	99.79%	0.01%	**0.01%**	99.86%
13-2071	Loan counselors	0.01%	0.01%	99.80%	0.01%	**0.01%**	99.87%
43-4061	Eligibility interviewers, government programs	0.01%	0.01%	99.81%	0.00%	**0.01%**	99.88%
37-3011	Landscaping and groundskeeping workers	0.01%	0.01%	99.83%	0.00%	**0.01%**	99.89%
31-2012	Occupational therapist aides	0.01%	0.01%	99.84%	0.00%	**0.01%**	99.90%
31-1013	Psychiatric aides	0.01%	0.01%	99.85%	0.00%	**0.01%**	99.90%

SOC Code	Occupation Description	Share of Total Employment (%)	Share of Non-Physician Employment (%)	Cumulative Share of Non-Physician Employment (%)	Share of Total Wages (%)	Share of Non-Physician Wages (%)	Cumulative Share of Non-Physician Wages (%)
53-3099	Motor vehicle operators, all other	0.01%	0.01%	99.86%	0.00%	**0.01%**	99.91%
39-9041	Residential advisors	0.01%	0.01%	99.88%	0.00%	**0.01%**	99.92%
31-9095	Pharmacy aides	0.01%	0.01%	99.89%	0.00%	**0.01%**	99.93%
29-2051	Dietetic technicians	0.01%	0.01%	99.90%	0.00%	**0.01%**	99.94%
43-9051	Mail clerks and mail machine operators, except postal service	0.01%	0.01%	99.91%	0.00%	**0.01%**	99.95%
35-2012	Cooks, institution and cafeteria	0.01%	0.01%	99.93%	0.00%	**0.01%**	99.95%
53-3011	Ambulance drivers and attendants, except emergency medical technicians	0.01%	0.01%	99.94%	0.00%	**0.01%**	99.96%
39-9032	Recreation workers	0.01%	0.01%	99.95%	0.00%	**0.01%**	99.97%
51-6011	Laundry and dry-cleaning workers	0.01%	0.01%	99.96%	0.00%	**0.01%**	99.98%
43-5071	Shipping, receiving, and traffic clerks	0.01%	0.01%	99.98%	0.00%	**0.01%**	99.99%
39-9011	Child care workers	0.01%	0.01%	99.99%	0.00%	**0.01%**	99.99%
35-3021	Combined food preparation and serving workers, including fast food	0.01%	0.01%	100.00%	0.00%	**0.01%**	100.00%

APPENDIX E: REVISED SIXTH UPDATE GPCIS BY LOCALTITY

This appendix lists the practice expense GPCI and GAF values for each locality under the CY 2012 Final Proposal as well as the CY 2012 baseline. Table E.1 lists each locality's PE GPCI under the Final Proposal and baseline and also breaks down the PE GPCI into its component parts. Table E.2 lists each locality's final GAFs. Recall that these numbers do not include final adjustments.

Table E.1: CY 2012 Final Proposal PE GPCIs

Medicare Locality	Diff. in PE GPCI	CY 2012 Final Proposal					CY 2012 Baseline			
		PE GPCI	Emp. Wage	Office Rent	Purch. Serv.	Equip & Supplies	PE GPCI	Emp. Wage	Office Rent	Equip & Supplies
ALABAMA	0.019	**0.876**	0.868	0.714	0.944	1.000	**0.857**	0.859	0.705	1.000
ALASKA	-0.024	**1.065**	1.100	1.095	1.024	1.000	**1.089**	1.166	1.065	1.000
ARIZONA	0.003	**0.976**	0.978	0.956	0.964	1.000	**0.972**	0.985	0.924	1.000
ARKANSAS	0.020	**0.863**	0.843	0.729	0.913	1.000	**0.844**	0.840	0.685	1.000
ANAHEIM/SANTA ANA, CA	-0.054	**1.215**	1.155	1.652	1.071	1.000	**1.269**	1.163	1.713	1.000
LOS ANGELES, CA	-0.059	**1.152**	1.146	1.382	1.063	1.000	**1.211**	1.135	1.548	1.000
MARIN/NAPA/SOLANO, CA	-0.032	**1.245**	1.280	1.522	1.115	1.000	**1.276**	1.280	1.561	1.000
OAKLAND/BERKELEY, CA	-0.031	**1.251**	1.334	1.444	1.121	1.000	**1.282**	1.360	1.459	1.000
REST OF CALIFORNIA*	-0.012	**1.082**	1.109	1.161	1.020	1.000	**1.095**	1.102	1.183	1.000
SAN FRANCISCO, CA	-0.042	**1.357**	1.360	1.846	1.172	1.000	**1.399**	1.397	1.821	1.000
SAN MATEO, CA	-0.048	**1.352**	1.360	1.820	1.172	1.000	**1.399**	1.397	1.821	1.000
SANTA CLARA, CA	0.012	**1.334**	1.433	1.605	1.168	1.000	**1.322**	1.434	1.488	1.000
VENTURA, CA	-0.043	**1.190**	1.122	1.601	1.066	1.000	**1.233**	1.116	1.658	1.000
COLORADO	0.011	**1.002**	1.028	0.948	1.014	1.000	**0.992**	1.041	0.907	1.000
CONNECTICUT	-0.038	**1.107**	1.116	1.230	1.063	1.000	**1.146**	1.165	1.270	1.000
DC + MD/VA SUBURBS	-0.017	**1.196**	1.189	1.466	1.113	1.000	**1.213**	1.191	1.470	1.000
DELAWARE	0.011	**1.042**	1.058	1.049	1.048	1.000	**1.031**	1.060	1.018	1.000
FORT LAUDERDALE, FL	-0.012	**1.049**	0.998	1.233	0.995	1.000	**1.060**	0.983	1.242	1.000
MIAMI, FL	-0.020	**1.051**	1.017	1.213	0.992	1.000	**1.072**	0.977	1.293	1.000
REST OF FLORIDA	0.004	**0.966**	0.928	1.002	0.966	1.000	**0.961**	0.915	0.991	1.000
ATLANTA, GA	0.020	**1.013**	1.010	1.036	1.006	1.000	**0.993**	1.011	0.958	1.000
REST OF GEORGIA	0.010	**0.896**	0.899	0.761	0.933	1.000	**0.886**	0.899	0.747	1.000
HAWAII	-0.076	**1.152**	1.119	1.484	0.998	1.000	**1.228**	1.104	1.656	1.000
IDAHO	0.005	**0.893**	0.897	0.747	0.932	1.000	**0.887**	0.906	0.740	1.000
CHICAGO, IL	0.008	**1.049**	1.070	1.048	1.061	1.000	**1.041**	1.065	1.046	1.000
EAST ST. LOUIS, IL	0.006	**0.934**	0.945	0.792	1.006	1.000	**0.928**	0.959	0.806	1.000

Medicare Locality	Diff. in PE GPCI	CY 2012 Final Proposal					CY 2012 Baseline			
		PE GPCI	Emp. Wage	Office Rent	Purch. Serv.	Equip & Supplies	PE GPCI	Emp. Wage	Office Rent	Equip & Supplies
REST OF ILLINOIS	0.023	**0.907**	0.906	0.774	0.965	1.000	**0.884**	0.908	0.727	1.000
SUBURBAN CHICAGO, IL	0.029	**1.070**	1.074	1.141	1.056	1.000	**1.040**	1.065	1.046	1.000
INDIANA	0.015	**0.921**	0.923	0.808	0.961	1.000	**0.906**	0.928	0.775	1.000
IOWA	0.022	**0.885**	0.878	0.739	0.947	1.000	**0.863**	0.878	0.696	1.000
KANSAS*	0.018	**0.892**	0.872	0.788	0.937	1.000	**0.874**	0.892	0.713	1.000
KENTUCKY	0.006	**0.869**	0.875	0.686	0.925	1.000	**0.863**	0.887	0.683	1.000
NEW ORLEANS, LA	-0.006	**0.974**	0.925	1.061	0.949	1.000	**0.980**	0.912	1.064	1.000
REST OF LOUISIANA	0.010	**0.875**	0.849	0.771	0.912	1.000	**0.865**	0.838	0.766	1.000
REST OF MAINE	0.012	**0.903**	0.911	0.766	0.934	1.000	**0.890**	0.915	0.737	1.000
SOUTHERN MAINE	-0.008	**1.022**	1.026	1.062	0.987	1.000	**1.030**	1.024	1.069	1.000
BALTIMORE/SURR. CNTYS, MD	-0.013	**1.095**	1.125	1.167	1.049	1.000	**1.108**	1.136	1.179	1.000
REST OF MARYLAND	-0.010	**1.033**	1.047	1.049	1.019	1.000	**1.043**	1.046	1.084	1.000
METROPOLITAN BOSTON	-0.035	**1.146**	1.099	1.449	1.058	1.000	**1.181**	1.112	1.477	1.000
REST OF MASSACHUSETTS	-0.029	**1.060**	1.083	1.091	1.039	1.000	**1.089**	1.101	1.164	1.000
DETROIT, MI	0.011	**1.021**	1.045	0.975	1.046	1.000	**1.009**	1.085	0.903	1.000
REST OF MICHIGAN	0.006	**0.921**	0.946	0.761	0.969	1.000	**0.915**	0.970	0.744	1.000
MINNESOTA	0.017	**1.010**	1.060	0.917	1.023	1.000	**0.993**	1.069	0.870	1.000
MISSISSIPPI	0.004	**0.864**	0.845	0.737	0.905	1.000	**0.860**	0.843	0.739	1.000
METROPOLITAN KANSAS CITY, MO	0.007	**0.951**	0.961	0.851	0.995	1.000	**0.944**	0.984	0.824	1.000
METROPOLITAN ST. LOUIS, MO	0.024	**0.962**	0.952	0.902	1.012	1.000	**0.938**	0.968	0.827	1.000
REST OF MISSOURI*	0.020	**0.849**	0.837	0.679	0.908	1.000	**0.829**	0.834	0.641	1.000
MONTANA	0.015	**0.877**	0.870	0.743	0.913	1.000	**0.862**	0.871	0.705	1.000
NEBRASKA	0.025	**0.902**	0.898	0.781	0.941	1.000	**0.877**	0.885	0.736	1.000
NEVADA	0.002	**1.056**	1.077	1.113	1.003	1.000	**1.054**	1.067	1.091	1.000
NEW HAMPSHIRE	-0.007	**1.042**	1.024	1.140	1.014	1.000	**1.050**	1.033	1.126	1.000
NORTHERN NJ	0.003	**1.184**	1.195	1.386	1.129	1.000	**1.181**	1.186	1.364	1.000
REST OF NEW JERSEY	0.004	**1.124**	1.130	1.264	1.086	1.000	**1.120**	1.114	1.254	1.000
NEW MEXICO	0.020	**0.914**	0.932	0.776	0.943	1.000	**0.895**	0.934	0.725	1.000
MANHATTAN, NY	-0.064	**1.159**	1.220	1.208	1.150	1.000	**1.224**	1.207	1.484	1.000
NYC SUBURBS/LONG I., NY	-0.053	**1.210**	1.204	1.490	1.127	1.000	**1.263**	1.191	1.649	1.000
POUGHKPSIE/N NYC SUBURBS, NY	-0.001	**1.063**	1.049	1.185	1.020	1.000	**1.063**	1.037	1.170	1.000
QUEENS, NY	-0.031	**1.192**	1.220	1.361	1.150	1.000	**1.224**	1.207	1.484	1.000
REST OF NEW YORK	0.005	**0.937**	0.940	0.833	0.984	1.000	**0.932**	0.946	0.842	1.000

Medicare Locality	Diff. in PE GPCI	CY 2012 Final Proposal					CY 2012 Baseline			
		PE GPCI	Emp. Wage	Office Rent	Purch. Serv.	Equip & Supplies	PE GPCI	Emp. Wage	Office Rent	Equip & Supplies
NORTH DAKOTA	0.026	**0.875**	0.883	0.678	0.949	1.000	**0.849**	0.886	0.634	1.000
OHIO	0.013	**0.925**	0.941	0.779	0.980	1.000	**0.912**	0.957	0.751	1.000
OKLAHOMA	-0.002	**0.854**	0.821	0.741	0.893	1.000	**0.856**	0.844	0.724	1.000
PORTLAND, OR	0.027	**1.042**	1.123	0.939	1.031	1.000	**1.014**	1.118	0.871	1.000
REST OF OREGON	0.018	**0.960**	1.019	0.818	0.953	1.000	**0.943**	1.004	0.788	1.000
METROPOLITAN PHILADELPHIA, PA	-0.012	**1.056**	1.059	1.102	1.062	1.000	**1.068**	1.083	1.117	1.000
REST OF PENNSYLVANIA	0.007	**0.911**	0.905	0.794	0.962	1.000	**0.904**	0.919	0.780	1.000
PUERTO RICO	-0.009	**0.676**	0.583	0.431	0.807	1.000	**0.685**	0.568	0.533	1.000
RHODE ISLAND	0.000	**1.050**	1.081	1.054	1.033	1.000	**1.050**	1.084	1.051	1.000
SOUTH CAROLINA	0.009	**0.907**	0.907	0.785	0.946	1.000	**0.898**	0.913	0.769	1.000
SOUTH DAKOTA	0.028	**0.878**	0.867	0.728	0.944	1.000	**0.850**	0.840	0.708	1.000
TENNESSEE	0.009	**0.896**	0.890	0.780	0.931	1.000	**0.888**	0.904	0.745	1.000
AUSTIN, TX	0.015	**1.007**	0.975	1.081	0.997	1.000	**0.992**	0.973	1.013	1.000
BEAUMONT, TX	0.026	**0.895**	0.858	0.817	0.949	1.000	**0.868**	0.857	0.746	1.000
BRAZORIA, TX	0.042	**0.985**	1.018	0.891	1.011	1.000	**0.944**	1.012	0.780	1.000
DALLAS, TX	0.018	**1.015**	1.030	0.993	1.029	1.000	**0.998**	1.032	0.943	1.000
FORT WORTH, TX	0.005	**0.977**	0.960	0.984	0.981	1.000	**0.972**	0.974	0.939	1.000
GALVESTON, TX	0.017	**0.994**	1.018	0.932	1.011	1.000	**0.978**	1.012	0.902	1.000
HOUSTON, TX	0.022	**0.999**	1.018	0.956	1.011	1.000	**0.978**	1.012	0.902	1.000
REST OF TEXAS	0.019	**0.911**	0.900	0.823	0.936	1.000	**0.892**	0.881	0.794	1.000
UTAH	0.018	**0.914**	0.897	0.833	0.952	1.000	**0.897**	0.898	0.786	1.000
VERMONT	-0.012	**1.006**	1.014	1.014	0.984	1.000	**1.018**	1.006	1.056	1.000
VIRGIN ISLANDS	0.005	**1.000**	1.000	1.000	1.000	1.000	**0.995**	1.000	0.981	1.000
VIRGINIA	0.007	**0.975**	0.968	0.949	0.995	1.000	**0.968**	0.962	0.943	1.000
REST OF WASHINGTON	0.024	**1.009**	1.072	0.886	1.029	1.000	**0.986**	1.052	0.869	1.000
SEATTLE (KING CNTY), WA	0.034	**1.142**	1.199	1.191	1.118	1.000	**1.108**	1.191	1.094	1.000
WEST VIRGINIA	0.007	**0.826**	0.799	0.648	0.900	1.000	**0.819**	0.809	0.646	1.000
WISCONSIN	0.019	**0.958**	0.990	0.834	0.988	1.000	**0.939**	0.993	0.792	1.000
WYOMING	0.018	**0.898**	0.890	0.769	0.951	1.000	**0.879**	0.889	0.738	1.000

Table E.2: CY 2012 Final Proposal GAFs

Medicare Locality	Diff. in GAF	GAF	
		CY 2012 Final Proposal	CY 2012 Baseline
ALABAMA	0.002	0.908	0.906
ALASKA	-0.010	1.023	1.033
ARIZONA	0.001	0.978	0.977
ARKANSAS	0.002	0.896	0.894
ANAHEIM/SANTA ANA, CA	-0.019	1.110	1.129
LOS ANGELES, CA	-0.023	1.075	1.098
MARIN/NAPA/ SOLANO, CA	-0.009	1.118	1.128
OAKLAND/ BERKELEY, CA	-0.009	1.127	1.136
REST OF CALIFORNIA*	-0.005	1.032	1.038
SAN FRANCISCO, CA	-0.010	1.184	1.194
SAN MATEO, CA	-0.013	1.182	1.194
SANTA CLARA, CA	0.012	1.176	1.163
VENTURA, CA	-0.015	1.090	1.105
COLORADO	0.004	0.994	0.990
CONNECTICUT	-0.013	1.073	1.086
DC + MD/VA SUBURBS	-0.002	1.123	1.125
DELAWARE	0.005	1.012	1.008
FORT LAUDERDALE, FL	0.001	1.063	1.062
MIAMI, FL	0.001	1.100	1.099
REST OF FLORIDA	0.004	0.999	0.996
ATLANTA, GA	0.009	1.006	0.997
REST OF GEORGIA	0.001	0.937	0.936
HAWAII	-0.029	1.060	1.089
IDAHO	-0.003	0.924	0.926
CHICAGO, IL	0.009	1.084	1.076
EAST ST. LOUIS, IL	0.004	1.003	0.999
REST OF ILLINOIS	0.009	0.959	0.951
SUBURBAN CHICAGO, IL	0.017	1.076	1.059
INDIANA	0.003	0.932	0.929
IOWA	0.005	0.903	0.898
KANSAS*	0.005	0.929	0.924
KENTUCKY	-0.002	0.914	0.916
NEW ORLEANS, LA	-0.003	0.977	0.980

Medicare Locality	Diff. in GAF	GAF	
		CY 2012 Final Proposal	CY 2012 Baseline
REST OF LOUISIANA	0.000	0.914	0.915
REST OF MAINE	0.002	0.923	0.922
SOUTHERN MAINE	-0.003	0.989	0.993
BALTIMORE/SURR. CNTYS, MD	-0.003	1.067	1.070
REST OF MARYLAND	-0.004	1.021	1.025
METROPOLITAN BOSTON	-0.011	1.068	1.079
REST OF MASSACHUSETTS	-0.012	1.027	1.039
DETROIT, MI	0.008	1.056	1.048
REST OF MICHIGAN	0.000	0.962	0.962
MINNESOTA	0.005	0.973	0.969
MISSISSIPPI	-0.003	0.908	0.911
METROPOLITAN KANSAS CITY, MO	0.003	0.978	0.975
METROPOLITAN ST. LOUIS, MO	0.009	0.980	0.971
REST OF MISSOURI*	0.005	0.909	0.904
MONTANA	0.005	0.920	0.916
NEBRASKA	0.005	0.909	0.904
NEVADA	0.004	1.035	1.031
NEW HAMPSHIRE	-0.002	1.010	1.012
NORTHERN NJ	0.006	1.111	1.105
REST OF NEW JERSEY	0.006	1.072	1.066
NEW MEXICO	0.006	0.954	0.949
MANHATTAN, NY	-0.024	1.118	1.142
NYC SUBURBS/ LONG I., NY	-0.016	1.143	1.158
POUGHKPSIE/ NYC SUBURBS, NY	0.002	1.039	1.037
QUEENS, NY	-0.007	1.143	1.150
REST OF NEW YORK	-0.002	0.946	0.948
NORTH CAROLINA	0.003	0.938	0.935
NORTH DAKOTA	0.006	0.904	0.899
OHIO	0.004	0.974	0.971
OKLAHOMA	-0.006	0.898	0.904
PORTLAND, OR	0.012	1.007	0.995
REST OF OREGON	0.005	0.956	0.951
METROPOLITAN PHILADELPHIA, PA	-0.001	1.061	1.062

Medicare Locality	Diff. in GAF	GAF	
		CY 2012 Final Proposal	CY 2012 Baseline
REST OF PENNSYLVANIA	0.001	0.957	0.956
PUERTO RICO	-0.015	0.771	0.786
RHODE ISLAND	0.002	1.040	1.039
SOUTH CAROLINA	-0.001	0.924	0.925
SOUTH DAKOTA	0.007	0.894	0.887
TENNESSEE	-0.001	0.918	0.919
AUSTIN, TX	0.006	0.985	0.979
BEAUMONT, TX	0.008	0.933	0.925
BRAZORIA, TX	0.017	0.995	0.978
DALLAS, TX	0.007	1.005	0.998
FORT WORTH, TX	0.001	0.982	0.981
GALVESTON, TX	0.006	1.002	0.995
HOUSTON, TX	0.009	1.001	0.993
REST OF TEXAS	0.005	0.940	0.935
UTAH	0.006	0.950	0.944
VERMONT	-0.006	0.973	0.980
VIRGIN ISLANDS	0.002	1.000	0.998
VIRGINIA	0.001	0.974	0.973
REST OF WASHINGTON	0.010	0.996	0.986
SEATTLE (KING CNTY), WA	0.018	1.075	1.057
WEST VIRGINIA	-0.001	0.910	0.911
WISCONSIN	0.005	0.955	0.950
WYOMING	0.006	0.949	0.942

APPENDIX F: IMPACT ANALYSIS OF EACH OF THE FOUR CHANGES TO THE GPCI

This appendix lists the separate impacts on GAF values for each of the four changes to the data sources used and the methodology CMS uses to calculate locality GPCIs for CY 2012 discussed in this report. Specifically, Table F.1 shows the effect on the CY 2012 baseline when the GPCI cost share weights are updated to coincide with 2006-based MEI cost share weights. Table F.2 examines the changes to each locality's GAF value when the CY 2012 baseline is updated using ACS data to calculate the office rent index. Table F.3 lists the changes to each locality's GAF value when the CY 2012 baseline is updated using a purchased services category and corresponding index that is integrated within the PE GPCI. Finally, Table F.4 shows the effect on the CY 2012 baseline when the occupations included in the non-physician employee wage index are expanded. Recall that these numbers do not include final adjustments.

Table F.1: CY 2012 GAFs Using 2006-Based MEI

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Updated to 2006-Based MEI	CY 2012 Baseline
ALABAMA	0.004	0.909	0.906
ALASKA	-0.003	1.031	1.033
ARIZONA	0.002	0.979	0.977
ARKANSAS	0.004	0.898	0.894
ANAHEIM/SANTA ANA, CA	-0.017	1.112	1.129
LOS ANGELES, CA	-0.013	1.085	1.098
MARIN/NAPA/ SOLANO, CA	-0.014	1.113	1.128
OAKLAND/ BERKELEY, CA	-0.012	1.124	1.136
REST OF CALIFORNIA*	-0.006	1.032	1.038
SAN FRANCISCO, CA	-0.020	1.175	1.194
SAN MATEO, CA	-0.020	1.175	1.194
SANTA CLARA, CA	-0.013	1.150	1.163
VENTURA, CA	-0.016	1.090	1.105
COLORADO	0.002	0.992	0.990
CONNECTICUT	-0.005	1.081	1.086
DC + MD/VA SUBURBS	-0.010	1.115	1.125
DELAWARE	-0.002	1.006	1.008
FORT LAUDERDALE, FL	-0.001	1.061	1.062
MIAMI, FL	0.002	1.101	1.099
REST OF FLORIDA	0.003	0.999	0.996

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Updated to 2006-Based MEI	CY 2012 Baseline
ATLANTA, GA	0.000	0.997	0.997
REST OF GEORGIA	0.005	0.941	0.936
HAWAII	-0.014	1.075	1.089
IDAHO	0.004	0.930	0.926
CHICAGO, IL	0.003	1.078	1.076
EAST ST. LOUIS, IL	0.008	1.007	0.999
REST OF ILLINOIS	0.007	0.958	0.951
SUBURBAN CHICAGO, IL	0.001	1.060	1.059
INDIANA	0.004	0.933	0.929
IOWA	0.005	0.903	0.898
KANSAS*	0.006	0.931	0.924
KENTUCKY	0.006	0.922	0.916
NEW ORLEANS, LA	-0.001	0.979	0.980
REST OF LOUISIANA	0.004	0.919	0.915
REST OF MAINE	0.005	0.927	0.922
SOUTHERN MAINE	-0.002	0.991	0.993
BALTIMORE/SURR. CNTYS, MD	-0.003	1.067	1.070
REST OF MARYLAND	-0.002	1.023	1.025
METROPOLITAN BOSTON	-0.011	1.069	1.079
REST OF MASSACHUSETTS	-0.004	1.034	1.039
DETROIT, MI	0.005	1.052	1.048
REST OF MICHIGAN	0.005	0.967	0.962
MINNESOTA	0.000	0.969	0.969
MISSISSIPPI	0.005	0.915	0.911
METROPOLITAN KANSAS CITY, MO	0.005	0.980	0.975
METROPOLITAN ST. LOUIS, MO	0.004	0.974	0.971
REST OF MISSOURI*	0.008	0.912	0.904
MONTANA	0.008	0.924	0.916
NEBRASKA	0.003	0.907	0.904
NEVADA	0.000	1.031	1.031
NEW HAMPSHIRE	-0.003	1.009	1.012
NORTHERN NJ	-0.008	1.097	1.105
REST OF NEW JERSEY	-0.005	1.061	1.066
NEW MEXICO	0.005	0.954	0.949

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Updated to 2006-Based MEI	CY 2012 Baseline
MANHATTAN, NY	-0.010	1.131	1.142
NYC SUBURBS/ LONG I., NY	-0.012	1.146	1.158
POUGHKPSIE/ NYC SUBURBS, NY	-0.003	1.034	1.037
QUEENS, NY	-0.009	1.141	1.150
REST OF NEW YORK	0.001	0.949	0.948
NORTH CAROLINA	0.004	0.939	0.935
NORTH DAKOTA	0.006	0.904	0.899
OHIO	0.006	0.976	0.971
OKLAHOMA	0.005	0.909	0.904
PORTLAND, OR	0.001	0.996	0.995
REST OF OREGON	0.003	0.954	0.951
METROPOLITAN PHILADELPHIA, PA	0.000	1.062	1.062
REST OF PENNSYLVANIA	0.005	0.961	0.956
PUERTO RICO	0.008	0.794	0.786
RHODE ISLAND	-0.001	1.038	1.039
SOUTH CAROLINA	0.003	0.928	0.925
SOUTH DAKOTA	0.005	0.892	0.887
TENNESSEE	0.004	0.922	0.919
AUSTIN, TX	-0.001	0.978	0.979
BEAUMONT, TX	0.005	0.930	0.925
BRAZORIA, TX	0.004	0.981	0.978
DALLAS, TX	0.000	0.998	0.998
FORT WORTH, TX	0.000	0.982	0.981
GALVESTON, TX	0.001	0.997	0.995
HOUSTON, TX	0.001	0.994	0.993
REST OF TEXAS	0.003	0.938	0.935
UTAH	0.005	0.949	0.944
VERMONT	-0.002	0.978	0.980
VIRGIN ISLANDS	0.000	0.998	0.998
VIRGINIA	0.000	0.973	0.973
REST OF WASHINGTON	0.002	0.988	0.986

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Updated to 2006-Based MEI	CY 2012 Baseline
SEATTLE (KING CNTY), WA	-0.003	1.054	1.057
WEST VIRGINIA	0.008	0.920	0.911
WISCONSIN	0.003	0.952	0.950
WYOMING	0.007	0.949	0.942

Table F.2: CY 2012 GAFs Using ACS-based Office Rent Index

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Revised Office Rent Index	CY 2012 Baseline
ALABAMA	0.001	0.907	0.906
ALASKA	0.004	1.037	1.033
ARIZONA	0.004	0.981	0.977
ARKANSAS	0.005	0.899	0.894
ANAHEIM/SANTA ANA, CA	-0.008	1.122	1.129
LOS ANGELES, CA	-0.020	1.078	1.098
MARIN/NAPA/ SOLANO, CA	-0.005	1.123	1.128
OAKLAND/ BERKELEY, CA	-0.002	1.134	1.136
REST OF CALIFORNIA*	-0.003	1.035	1.038
SAN FRANCISCO, CA	0.003	1.197	1.194
SAN MATEO, CA	0.000	1.194	1.194
SANTA CLARA, CA	0.014	1.178	1.163
VENTURA, CA	-0.007	1.099	1.105
COLORADO	0.005	0.995	0.990
CONNECTICUT	-0.005	1.081	1.086
DC + MD/VA SUBURBS	-0.001	1.124	1.125
DELAWARE	0.004	1.012	1.008
FORT LAUDERDALE, FL	-0.001	1.061	1.062
MIAMI, FL	-0.010	1.089	1.099
REST OF FLORIDA	0.001	0.997	0.996
ATLANTA, GA	0.009	1.007	0.997
REST OF GEORGIA	0.002	0.938	0.936
HAWAII	-0.021	1.068	1.089
IDAHO	0.001	0.927	0.926
CHICAGO, IL	0.000	1.076	1.076
EAST ST. LOUIS, IL	-0.002	0.997	0.999
REST OF ILLINOIS	0.006	0.956	0.951
SUBURBAN CHICAGO, IL	0.012	1.070	1.059
INDIANA	0.004	0.933	0.929
IOWA	0.005	0.903	0.898
KANSAS*	0.009	0.933	0.924
KENTUCKY	0.000	0.917	0.916
NEW ORLEANS, LA	0.000	0.980	0.980

Medicare Locality	Diff. in GAF	GAF	
		CY 2012 Revised Office Rent Index	CY 2012 Baseline
REST OF LOUISIANA	0.001	0.916	0.915
REST OF MAINE	0.004	0.925	0.922
SOUTHERN MAINE	-0.001	0.992	0.993
BALTIMORE/SURR. CNTYS, MD	-0.001	1.069	1.070
REST OF MARYLAND	-0.004	1.021	1.025
METROPOLITAN BOSTON	-0.003	1.076	1.079
REST OF MASSACHUSETTS	-0.009	1.030	1.039
DETROIT, MI	0.009	1.056	1.048
REST OF MICHIGAN	0.002	0.964	0.962
MINNESOTA	0.006	0.974	0.969
MISSISSIPPI	0.000	0.910	0.911
METROPOLITAN KANSAS CITY, MO	0.003	0.979	0.975
METROPOLITAN ST. LOUIS, MO	0.009	0.980	0.971
REST OF MISSOURI*	0.005	0.908	0.904
MONTANA	0.005	0.921	0.916
NEBRASKA	0.005	0.909	0.904
NEVADA	0.003	1.034	1.031
NEW HAMPSHIRE	0.002	1.014	1.012
NORTHERN NJ	0.003	1.108	1.105
REST OF NEW JERSEY	0.001	1.067	1.066
NEW MEXICO	0.006	0.955	0.949
MANHATTAN, NY	-0.034	1.108	1.142
NYC SUBURBS/ LONG I., NY	-0.019	1.139	1.158
POUGHKPSIE/ NYC SUBURBS, NY	0.002	1.039	1.037
QUEENS, NY	-0.015	1.135	1.150
REST OF NEW YORK	-0.001	0.947	0.948
NORTH CAROLINA	0.002	0.937	0.935
NORTH DAKOTA	0.005	0.904	0.899
OHIO	0.003	0.974	0.971
OKLAHOMA	0.002	0.906	0.904
PORTLAND, OR	0.008	1.003	0.995
REST OF OREGON	0.004	0.955	0.951
METROPOLITAN PHILADELPHIA, PA	-0.002	1.060	1.062
REST OF PENNSYLVANIA	0.002	0.958	0.956

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Revised Office Rent Index	CY 2012 Baseline
PUERTO RICO	-0.012	0.774	0.786
RHODE ISLAND	0.000	1.039	1.039
SOUTH CAROLINA	0.002	0.927	0.925
SOUTH DAKOTA	0.002	0.889	0.887
TENNESSEE	0.004	0.923	0.919
AUSTIN, TX	0.008	0.988	0.979
BEAUMONT, TX	0.009	0.934	0.925
BRAZORIA, TX	0.013	0.991	0.978
DALLAS, TX	0.006	1.004	0.998
FORT WORTH, TX	0.005	0.987	0.981
GALVESTON, TX	0.004	0.999	0.995
HOUSTON, TX	0.007	0.999	0.993
REST OF TEXAS	0.004	0.939	0.935
UTAH	0.006	0.950	0.944
VERMONT	-0.005	0.975	0.980
VIRGIN ISLANDS	0.002	1.000	0.998
VIRGINIA	0.001	0.974	0.973
REST OF WASHINGTON	0.002	0.988	0.986
SEATTLE (KING CNTY), WA	0.012	1.068	1.057
WEST VIRGINIA	0.000	0.911	0.911
WISCONSIN	0.005	0.955	0.950
WYOMING	0.004	0.946	0.942

Table F.3: CY 2012 GAFs Including Purchased Services Index

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Purchased Services Index	CY 2012 Baseline
ALABAMA	0.002	0.907	0.906
ALASKA	0.000	1.033	1.033
ARIZONA	-0.002	0.975	0.977
ARKANSAS	-0.001	0.893	0.894
ANAHEIM/SANTA ANA, CA	-0.009	1.120	1.129
LOS ANGELES, CA	-0.006	1.093	1.098
MARIN/NAPA/ SOLANO, CA	-0.002	1.125	1.128
OAKLAND/ BERKELEY, CA	0.001	1.137	1.136
REST OF CALIFORNIA*	-0.002	1.036	1.038
SAN FRANCISCO, CA	-0.002	1.192	1.194
SAN MATEO, CA	-0.002	1.192	1.194
SANTA CLARA, CA	0.005	1.168	1.163
VENTURA, CA	-0.008	1.097	1.105
COLORADO	0.003	0.993	0.990
CONNECTICUT	-0.001	1.085	1.086
DC + MD/VA SUBURBS	0.000	1.125	1.125
DELAWARE	0.004	1.012	1.008
FORT LAUDERDALE, FL	-0.006	1.056	1.062
MIAMI, FL	-0.007	1.093	1.099
REST OF FLORIDA	-0.003	0.993	0.996
ATLANTA, GA	0.002	0.999	0.997
REST OF GEORGIA	0.000	0.936	0.936
HAWAII	-0.015	1.074	1.089
IDAHO	0.000	0.926	0.926
CHICAGO, IL	0.004	1.080	1.076
EAST ST. LOUIS, IL	0.005	1.003	0.999
REST OF ILLINOIS	0.003	0.953	0.951
SUBURBAN CHICAGO, IL	0.004	1.062	1.059
INDIANA	0.001	0.930	0.929
IOWA	0.002	0.900	0.898
KANSAS*	0.001	0.925	0.924
KENTUCKY	0.000	0.917	0.916
NEW ORLEANS, LA	-0.006	0.974	0.980
REST OF LOUISIANA	-0.003	0.912	0.915

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Purchased Services Index	CY 2012 Baseline
REST OF MAINE	-0.001	0.921	0.922
SOUTHERN MAINE	-0.003	0.990	0.993
BALTIMORE/SURR. CNTYS, MD	0.000	1.070	1.070
REST OF MARYLAND	0.000	1.025	1.025
METROPOLITAN BOSTON	-0.006	1.073	1.079
REST OF MASSACHUSETTS	-0.001	1.038	1.039
DETROIT, MI	0.006	1.054	1.048
REST OF MICHIGAN	0.003	0.964	0.962
MINNESOTA	0.005	0.973	0.969
MISSISSIPPI	-0.003	0.908	0.911
METROPOLITAN KANSAS CITY, MO	0.003	0.979	0.975
METROPOLITAN ST. LOUIS, MO	0.005	0.975	0.971
REST OF MISSOURI*	0.000	0.903	0.904
MONTANA	-0.002	0.914	0.916
NEBRASKA	0.000	0.904	0.904
NEVADA	-0.002	1.029	1.031
NEW HAMPSHIRE	-0.002	1.010	1.012
NORTHERN NJ	0.004	1.108	1.105
REST OF NEW JERSEY	0.002	1.068	1.066
NEW MEXICO	0.001	0.949	0.949
MANHATTAN, NY	0.003	1.144	1.142
NYC SUBURBS/ LONG I., NY	-0.003	1.155	1.158
POUGHKPSIE/ NYC SUBURBS, NY	-0.002	1.035	1.037
QUEENS, NY	0.003	1.153	1.150
REST OF NEW YORK	0.002	0.950	0.948
NORTH CAROLINA	0.002	0.937	0.935
NORTH DAKOTA	0.003	0.902	0.899
OHIO	0.004	0.974	0.971
OKLAHOMA	-0.004	0.900	0.904
PORTLAND, OR	0.005	1.001	0.995
REST OF OREGON	0.000	0.951	0.951
METROPOLITAN PHILADELPHIA, PA	0.003	1.065	1.062

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Purchased Services Index	CY 2012 Baseline
REST OF PENNSYLVANIA	0.001	0.958	0.956
PUERTO RICO	-0.007	0.780	0.786
RHODE ISLAND	0.001	1.040	1.039
SOUTH CAROLINA	0.000	0.925	0.925
SOUTH DAKOTA	0.001	0.888	0.887
TENNESSEE	0.000	0.918	0.919
AUSTIN, TX	0.000	0.979	0.979
BEAUMONT, TX	0.001	0.926	0.925
BRAZORIA, TX	0.006	0.984	0.978
DALLAS, TX	0.004	1.003	0.998
FORT WORTH, TX	0.000	0.981	0.981
GALVESTON, TX	0.004	0.999	0.995
HOUSTON, TX	0.004	0.997	0.993
REST OF TEXAS	-0.001	0.934	0.935
UTAH	0.000	0.945	0.944
VERMONT	-0.003	0.977	0.980
VIRGIN ISLANDS	0.000	0.998	0.998
VIRGINIA	0.001	0.974	0.973
REST OF WASHINGTON	0.005	0.991	0.986
SEATTLE (KING CNTY), WA	0.008	1.064	1.057
WEST VIRGINIA	-0.001	0.910	0.911
WISCONSIN	0.003	0.953	0.950
WYOMING	0.001	0.943	0.942

Table F.4: CY 2012 GAFs Using Updated Employee Wage Index

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Revised Employee Wage Index	CY 2012 Baseline
ALABAMA	0.002	0.907	0.906
ALASKA	-0.012	1.021	1.033
ARIZONA	-0.001	0.976	0.977
ARKANSAS	0.000	0.894	0.894
ANAHEIM/SANTA ANA, CA	-0.001	1.128	1.129
LOS ANGELES, CA	0.002	1.101	1.098
MARIN/NAPA/ SOLANO, CA	0.000	1.128	1.128
OAKLAND/ BERKELEY, CA	-0.005	1.131	1.136
REST OF CALIFORNIA*	0.001	1.039	1.038
SAN FRANCISCO, CA	-0.007	1.188	1.194
SAN MATEO, CA	-0.007	1.188	1.194
SANTA CLARA, CA	0.000	1.163	1.163
VENTURA, CA	0.001	1.107	1.105
COLORADO	-0.002	0.988	0.990
CONNECTICUT	-0.009	1.077	1.086
DC + MD/VA SUBURBS	0.000	1.124	1.125
DELAWARE	0.000	1.007	1.008
FORT LAUDERDALE, FL	0.003	1.064	1.062
MIAMI, FL	0.008	1.107	1.099
REST OF FLORIDA	0.002	0.998	0.996
ATLANTA, GA	0.000	0.997	0.997
REST OF GEORGIA	0.000	0.936	0.936
HAWAII	0.003	1.092	1.089
IDAHO	-0.002	0.925	0.926
CHICAGO, IL	0.001	1.077	1.076
EAST ST. LOUIS, IL	-0.003	0.996	0.999
REST OF ILLINOIS	0.000	0.950	0.951
SUBURBAN CHICAGO, IL	0.002	1.060	1.059
INDIANA	-0.001	0.928	0.929
IOWA	0.000	0.898	0.898
KANSAS*	-0.004	0.920	0.924
KENTUCKY	-0.002	0.914	0.916
NEW ORLEANS, LA	0.002	0.983	0.980

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Revised Employee Wage Index	CY 2012 Baseline
REST OF LOUISIANA	0.002	0.917	0.915
REST OF MAINE	-0.001	0.921	0.922
SOUTHERN MAINE	0.000	0.993	0.993
BALTIMORE/SURR. CNTYS, MD	-0.002	1.068	1.070
REST OF MARYLAND	0.000	1.025	1.025
METROPOLITAN BOSTON	-0.002	1.077	1.079
REST OF MASSACHUSETTS	-0.003	1.035	1.039
DETROIT, MI	-0.008	1.040	1.048
REST OF MICHIGAN	-0.004	0.957	0.962
MINNESOTA	-0.002	0.967	0.969
MISSISSIPPI	0.000	0.911	0.911
METROPOLITAN KANSAS CITY, MO	-0.004	0.971	0.975
METROPOLITAN ST. LOUIS, MO	-0.003	0.968	0.971
REST OF MISSOURI*	0.000	0.904	0.904
MONTANA	0.000	0.916	0.916
NEBRASKA	0.002	0.906	0.904
NEVADA	0.002	1.033	1.031
NEW HAMPSHIRE	-0.002	1.010	1.012
NORTHERN NJ	0.002	1.107	1.105
REST OF NEW JERSEY	0.003	1.069	1.066
NEW MEXICO	0.000	0.948	0.949
MANHATTAN, NY	0.002	1.144	1.142
NYC SUBURBS/ LONG I., NY	0.002	1.161	1.158
POUGHKPSIE/ NYC SUBURBS, NY	0.002	1.039	1.037
QUEENS, NY	0.002	1.153	1.150
REST OF NEW YORK	-0.001	0.947	0.948
NORTH CAROLINA	0.000	0.935	0.935
NORTH DAKOTA	-0.001	0.898	0.899
OHIO	-0.003	0.968	0.971
OKLAHOMA	-0.004	0.900	0.904
PORTLAND, OR	0.001	0.996	0.995
REST OF OREGON	0.003	0.954	0.951
METROPOLITAN PHILADELPHIA, PA	-0.005	1.058	1.062
REST OF PENNSYLVANIA	-0.003	0.954	0.956

Medicare Locality	Diff. in GAF	GAF	
		CY 2012, Revised Employee Wage Index	CY 2012 Baseline
PUERTO RICO	0.003	0.789	0.786
RHODE ISLAND	0.000	1.038	1.039
SOUTH CAROLINA	-0.001	0.924	0.925
SOUTH DAKOTA	0.005	0.892	0.887
TENNESSEE	-0.002	0.916	0.919
AUSTIN, TX	0.000	0.980	0.979
BEAUMONT, TX	0.000	0.925	0.925
BRAZORIA, TX	0.001	0.979	0.978
DALLAS, TX	0.000	0.998	0.998
FORT WORTH, TX	-0.003	0.979	0.981
GALVESTON, TX	0.001	0.996	0.995
HOUSTON, TX	0.001	0.994	0.993
REST OF TEXAS	0.004	0.939	0.935
UTAH	0.000	0.944	0.944
VERMONT	0.001	0.981	0.980
VIRGIN ISLANDS	0.000	0.998	0.998
VIRGINIA	0.001	0.974	0.973
REST OF WASHINGTON	0.004	0.990	0.986
SEATTLE (KING CNTY), WA	0.002	1.058	1.057
WEST VIRGINIA	-0.002	0.909	0.911
WISCONSIN	-0.001	0.949	0.950
WYOMING	0.000	0.943	0.942