

# 2006-based Medicare Economic Index Cost Categories & Cost Weights

National Health Statistics Group  
Office of the Actuary



# **Data Sources – AMA Physician Practice Information Survey (PPIS)**

## **PPIS Advantages**

- Currently the only data available on self-employed or physician-owned practice expenses.
- Representative of the American physician community and contains data for 42 specialties & 10 non-MD specialties.
- Geographically representative.

## **PPIS Disadvantages**

- Not collected on a regular basis and currently has a six year lag in the expense data available facing physicians.
- Unknown when or if the survey will be fielded again.

# Other data sources considered - MGMA

- Provides data on medical practice expenses, revenue, and operational and output indicators for single-specialty and multispecialty **group** practices.
- CMS has concerns with both the sample size and representativeness of the MGMA data. The sample represents only approximately 1 percent of physician practices nationwide and have disproportionate sample sizes for each State, suggesting very uneven response rates geographically.
- Unclear how physician income and benefits of the owner, which are major cost components in the MEI, are reported on this survey.

# **Other data sources considered - SAS**

- Census Bureau Services Annual Survey (SAS) data are reported based on NAICS classification. These data do not include data on physician net income, nor do they distinguish between physician and non-physician compensation.
- We had difficulty comparing the SAS and PPIS data due to the different categorization methodologies. For example, the SAS collects expense data for lease and rental payments for all equipment while the PPIS collects expense data separately for medical equipment and office equipment.

# MEI Categories derived from PPIS data

Cost Categories	Cost Weights 2006=100
<b>2006-based Medicare Economic index</b>	<b>100.000</b>
<b>Physician Compensation</b>	<b>48.266</b>
Wages and Salaries	43.880
Benefits	4.386
<b>Practice Expenses</b>	<b>51.734</b>
Non-physician Compensation	19.153
Non-physician Wages	13.752
Professional & Technical Wages	6.006
Managerial Wages	1.446
Clerical Wages	4.466
Services Wages	1.834
Non-physician Benefits	5.401
Other Practice Expenses	26.308
Office Expenses	20.035
Utilities	1.266
Chemicals	0.723
Paper	0.657
Rubber & Plastics	0.598
Telephone	1.501
Postage	0.898
All Other Services	3.582
All Other Products	0.500
Fixed Capital	8.957
Moveable Capital	1.353
Professional Liability Insurance	4.295
Medical Equipment	1.978
Medical Materials and Supplies	1.760
Other Professional Expenses	4.513

# **Category Selection and Weight Estimation**

- The major expenditure categories, along with their respective weights, are derived from the 2006 American Medical Association (AMA) Physician Practice Information Survey (PPIS). The expense data used for the MEI are limited to the mean expenses reported for owners of physician practices (self-employed) or physicians who reported expenses at the individual level.

**Total Expenses = Physician's Compensation + Practice Expenses**

## **Physician's Compensation:**

- (1) Physician's Wages and Salaries
- (2) Physicians' Benefits
- (3) Employed Physician Payroll

## **Practice Expenses:**

- (1) Non-physician Compensation
- (2) Office Expenses
- (3) Professional Liability Insurance
- (4) Medical Equipment
- (5) Medical Supplies
- (6) Other Professional Expenses

# MEI – Physician Compensation

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# **Physician's Compensation (Own Time) 48.266%**

- Accounts for slightly less than half of the index and derived directly from 2006 PPIS data.
- We only use mean expense data from respondents that were owners (self-employed) or physicians who reported expenses at the individual level. We included data from selected non-MD specialties: optometrists, oral surgeons, podiatrists, and chiropractors.
- The expenses from the MD specialties and the non-MD specialties were weighted together based on physician counts based on the Medicare Physician and Other Practitioner Registry.
- Equal to the sum of mean physician net income (physician compensation) for self-employed physicians plus that of the office's other employed physician compensation.

# Physician Compensation

- Physician Compensation is comprised of:
  - Wages & Salaries (43.880%)
    - For self-employed physicians, W&S account for 92% of compensation (based on PPIS data)
    - For employed physicians, W&S account for 86% of compensation (based on weighted average IRS Statistics of Income (SOI) data for physician & outpatient care centers)
  - Benefits (4.386%)
    - For self-employed physicians, Benefits account for 8% of compensation (based on PPIS data)
    - For employed physicians, Benefits account for 14% of compensation (based on weighted average IRS Statistics of Income (SOI) data for physician & outpatient care centers)
  - Self-employed physicians compensation accounts for 84% of total physician compensation.
  - As a check we looked at BEA data for wage and salary accruals share of total compensation for Ambulatory Healthcare Services, which showed wages accounting for 81%.

# MEI – Practice Expense (51.734%)

## Non-physician Compensation

Cost Categories	Cost Weights 2006=100
<b>2006-based Medicare Economic index</b>	<b>100.000</b>
<b>Physician Compensation</b>	<b>48.266</b>
Wages and Salaries	43.880
Benefits	4.386
<b>Practice Expenses</b>	<b>51.734</b>
<b>Non-physician Compensation</b>	<b>19.153</b>
<b>Non-physician Wages</b>	<b>13.752</b>
Professional & Technical Wages	6.006
Managerial Wages	1.446
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Services Wages	1.834
<b>Non-physician Benefits</b>	<b>5.401</b>
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# Practice Expense

## **Non-Physician Compensation (19.153%)**

- The Non-physician Compensation cost category and weight of 19.153% was calculated directly from the PPIS mean expense data.
- Using the Bureau of Labor Statistics (BLS) Employment Cost for Employee Compensation Survey (ECEC) for 2006 for NAICS 62, Health Care and Social Assistance, Non-physician compensation expense category was disaggregated into:
  - Non-physician wages (13.752%)
  - Non-physician benefits (5.401%)
- This survey provides the wages & salaries as a % of total compensation (71.8% for 2006).

# Practice Expenses

## Non-physician Wages (13.725%)

- Non-physician wages were then further disaggregated into occupational categories using the 2006 BLS Occupational Employment Survey (OES) Mean Hourly Wage and CPS employment counts for NAICS 6211, Offices of Physicians.

SOC Occupational Group	2006 Expenditure Shares	2000 Expenditure Shares
Total	100.000	100.000
Professional & Technical Workers	43.671	42.635
Managers	10.517	24.138
Clerical Workers	32.477	28.187
Service Workers	13.336	5.040

Compared to the 2000-based index, the 2006 OES data showed a notable decrease in managers and an increase in service workers. This difference was driven by CPS employment counts and a change in the occupational classifications. For 2006, the CPS followed the Standard Occupational Classification (SOC) classifications as did the BLS OES data.

# MEI – Practice Expense (51.734%)

## Office Expenses

Cost Categories	Cost Weights 2006=100
<b>2006-based Medicare Economic index</b>	<b>100.000</b>
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Benefits	4.386
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Non-physician Benefits	5.401
Other Practice Expenses	26.308
<b>Office Expenses</b>	<b>20.035</b>
Utilities	1.266
Chemicals	0.723
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Telephone	1.501
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# Practice Expenses

## Office Expenses (20.035%)

- The Office Expenses cost category and weight of 20.035% was calculated directly from the PPIS mean expense data.
- We then disaggregated the Office Expense cost weight into 10 detailed categories using the 2002 Bureau of Economic Analysis (BEA) Benchmark Input-Output data for NAICS 621A00, (Offices of Physicians, Dentists, and Other Health Practitioners).
- Our reasons for disaggregating this category included:
  - To respond to industry requests for the MEI to better reflect costs faced by physicians in running a practice.
  - To allow for a higher level of precision in the price proxies to better capture the price pressures of specific inputs
  - To interpret the broader scope of the 2006 PPIS Office Expense question.

# Office Expenses (continued)

- The Office Expenses cost weight (12.209 %) used in the 2000-based MEI was based on the AMA 1998 Socioeconomic Monitoring System (SMS) survey, which defined office expenses as “rent, mortgage interest, depreciation on medical buildings, utilities, and telephones.”
- The AMA expanded the office expense question in the 2006 PPIS survey to include "*office (non-medical) equipment and office (nonmedical) supplies*, as well as rent, mortgage, interest, *maintenance, refrigeration, storage, security, janitorial*, depreciation on medical buildings used in your practice, utilities, or *other office computer systems (including information management systems/electronic medical record systems)* and telephone.”

# **Office Expenses** (continued)

- The Office Expenses detailed cost categories and associated cost weights were developed by matching the BEA I-O data as closely as possible to the 2006 AMA PPIS survey.
- We then calculated the relative share for each category as a percentage of the total Office Expenses category using the I-O data.
- Next, we aged the 2002 weights forward to 2006 to derive the 2006 detailed Office Expense cost weights as a percent of 2006 total Office Expenses.
- We then applied the resulting 2006 distributions to the aggregate 2006 AMA Office Expenses weight of 20.035 percent to calculate the individual weights as a percent of total expenses.

# Office Expenses (continued)

Cost Category	Cost Weight	Price Proxy
Office Expenses	20.035	
Utilities	1.266	CPI Fuel & Utilities
Chemicals	0.723	PPI for Other Basic Organic Chemical Manufacturing
Paper	0.657	PPI for Converted Paper
Rubber & Plastics	0.598	PPI for Rubber and Plastics
Telephone	1.501	CPI for Telephone Services
Postage	0.898	CPI for Postage
All Other Services	3.582	ECI Compensation Services Occupations
All Other Products	0.500	CPI-U All Items Less Food and Energy
Fixed Capital	8.957	CPI for Owner's Equivalent Rent
Moveable Capital	1.353	PPI for Machinery and Equipment

# MEI – Practice Expense (51.734%)

## Remaining Categories

Cost Categories	Cost Weights 2006=100
<b>2006-based Medicare Economic index</b>	<b>100.000</b>
<b>Physician Compensation</b>	<b>48.266</b>
Wages and Salaries	43.880
Benefits	4.386
<b>Practice Expenses</b>	<b>51.734</b>
Non-physician Compensation	19.153
Non-physician Wages	13.752
Professional & Technical Wages	6.006
Managerial Wages	1.446
Clerical Wages	4.466
Services Wages	1.834
Non-physician Benefits	5.401
Other Practice Expenses	26.308
Office Expenses	20.035
Utilities	1.266
Chemicals	0.723
Paper	0.657
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Telephone	1.501
Postage	0.898
All Other Services	3.582
All Other Products	0.500
Fixed Capital	8.957
Moveable Capital	1.353
Professional Liability Insurance	4.295
Medical Equipment	1.978
Medical Materials and Supplies	1.760
Other Professional Expenses	4.513

# **Practice Expenses**

**PLI, Medical Equipment, Medical Supplies,  
Other Professional Expenses (12.546%)**

- The remaining cost categories and cost weights were derived directly from the mean expenses reported on the 2006 PPIS.

# Comparison of the 2006 to 2000 cost shares

Cost Category	2006 expense	2000 expense
<b>Physician Compensation</b>	<b>48.266</b>	<b>52.466</b>
Wages and Salaries	43.880	42.730
Benefits	4.386	9.735
<b>Practice Expenses</b>	<b>51.734</b>	<b>47.534</b>
<b>Non-physician Compensation</b>	<b>19.153</b>	<b>18.654</b>
Non-physician Wages	13.752	13.809
P&T Wages	6.006	5.887
Management	1.446	3.333
Clerical	4.466	3.892
Services	1.834	0.696
Non-phys benefits	5.401	4.845
Other Practice Expenses	26.308	18.129
<b>Office Expenses</b>	<b>20.035</b>	<b>12.209</b>
Utilities	1.266	
Chemicals	0.723	
Paper	0.657	
Rubber & Plastics	0.598	
Telephone	1.501	
Postage	0.898	
All other Services	3.582	
All Other Products	0.500	
Fixed Capital	8.957	
Moveable Capital	1.353	
<b>Professional Liability Insurance</b>	<b>4.295</b>	<b>3.865</b>
<b>Medical Equipment</b>	<b>1.978</b>	<b>2.055</b>
<b>Drugs &amp; supplies</b>	<b>1.760</b>	<b>4.320</b>
Medical materials & supplies	1.760	2.309
Drugs	--	2.011
<b>Other Professional Expenses</b>	<b>4.513</b>	<b>6.433</b>

# **Questions for the Panel's** **Consideration**

## Data Sources

- Are there other data sources that could be used that would be an improvement over those used for the 2006-based index?
- Are there concerns with using self-employed physician data?
- Can the Panel consider the reliability of the AMA PPIS data design, particularly the sample design, number of respondents to the survey by type of specialty, and the credibility of the contractor used to conduct the survey?
- Can the Panel give guidance regarding ways to adjust the PPIS 2006 data forward to a more recent year to appropriately reflect increases in practice expense and physician's compensation ("own-time")?

# **Questions for the Panel's**

## **Consideration**

### Cost Categories

- Do the cost categories in the MEI reflect 21<sup>st</sup>-century delivery of physician care? Are there any missing categories?
- Does the MEI account for the costs related to the regulations and requirements that physicians must comply with, such as the Physician Quality Reporting Initiative (PQRI) and Electronic Health Records (EHRs)?

### Cost Weights

- Are the weights associated with the cost categories reasonable?
- Can the Panel discuss the appropriateness of the breakout of the detailed categories under Office Expenses, particularly the cost weight for Office Rent?
- Given the cost data limitation, how regularly should the MEI be rebased?