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Policy Research Perspectives

Physician Practice Expenses by Location

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Introduction

In 2007, the American Medical Association (AMA) and over 70 medical specialty societies and the Centers for Medicare and Medicaid Services fielded the Physician Practice Information (PPI) survey to collect physician practice expense information. This was the first such survey effort by the AMA since 2001. This report summarizes this newly collected expense information by practice location.

Physician practice expenses can vary from one location to another due to differences in either the prices or quantities of inputs to medical practice. The prices of many resources in a medical practice, including the wages of employees and office rent per square foot of space, might be expected to be higher in urban areas compared to rural ones, but it's ambiguous a priori as to how total expenses vary between urban and rural settings. That's because the quantities of the items employed – the number of staff or the amount of office space, for example – could also vary. A recent *Medical Economics* survey found that practice expenses were lower in urban and inner city areas than in rural and suburban ones, suggesting that urban physicians tended to employ fewer resources in their practices (Brentnall, 2007).

Data and Methods

The PPI survey was fielded in 2007 and 2008, collecting 2006 practice expense information. A stratified sample was drawn from the AMA Masterfile, including both members and nonmembers of the AMA, and both MDs and DOs. Physicians were randomly drawn from each of 42 strata defined by their specialty if they met the eligibility criteria of non-federal, post-resident, patient care status. Surveys were completed by phone, fax and web. There were over 5,800 respondents in all, but many of these did not complete the expense section of the survey. Survey weights were constructed to account for differences in sampling rates by specialty, and for eligibility and nonresponse.

Summary information is provided for 5 major expense categories from the PPI survey:

- office expense,
- non-physician payroll,
- medical supplies (including drugs),
- medical equipment expense, and
- other expense.

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Professional liability insurance (PLI) premiums and employed physician payroll are excluded from the analysis. Information on separately billable expenses was collected on the PPI survey for medical supplies and drugs, as was the amount of nonphysician payroll for staff who could bill independently (e.g., nurse practitioners and physician assistants). These amounts are also excluded:

- independent biller payroll (is excluded from non-physician payroll), and
- separately billable supply and drug expense (is excluded from medical supply expense).

The PPI survey allowed physicians to report expenses at the individual level (their share if in a group), the department level, or the practice level. For those reporting at the department or practice level, expenses were divided by the number of physicians in the department or practice, as appropriate, to put all expense data at the individual level.

Median expense per physician is reported by both metro/non-metro location, and by census region, with metro location determined using the Office of Management and Budget's core based statistical areas. Non-metro areas are defined as rural and micropolitan statistical areas. Average physician expense in an area will be affected by specialty mix, practice setting and other factors. Regression analyses are performed to test whether any differences in average expense are statistically significant after controlling for these factors.

Results

Median total expense (excluding separately billable items and PLI premiums) per self-employed physician for 2006 was $221,000. The medians for non-metro and small metro (less than 1 million population) areas were similar at $240,000 and $236,000, respectively. The median for large metro areas was $213,000. Median expenses were similar across areas by expense category with the exception of nonphysician payroll, which was $100,000 per physician in non-metro areas, and $80,000 per physician in metro areas.*

Table 1
Median Practice Expense per Physician for 2006
by Metro/Nonmetro Location

	All Physicians	Non-Metro	Small Metro (< 1 million)	Large Metro (1 million +)
Total Expense	$221,000	$240,000	$236,000	$213,000
Office Expense	81,333	84,000	80,000	81,633
Nonphysician Payroll	82,000	100,000	80,000	80,000
Medical Supplies	6,000	10,000	6,000	5,000
Equipment	3,000	5,000	2,000	2,500
Other	10,000	10,000	10,000	10,000
Number of Observations	2,137	202	759	1,176

By census region, median total expense per physician ranged from $200,000 in the North East region to $242,000 in the South. In absolute terms, nonphysician payroll varied most among the expense categories, ranging from a median of just under $60,000 in the North East to $91,000 in the South.

These differences in expenses could be due to many factors including differences in specialty mix by location, or to sampling error. Regression analyses were performed on the log of total expenses, with survey weights to account for the stratified sample design of the PPI survey. Both physician specialty and practice setting (with several categories for office-based setting, hospital setting, and other setting) were significant factors in explaining variation in practice expense. However, the differences in total expense by metro location and census region were not statistically significant at the 5% level.

*Note that the sum of median expense by category will not necessarily equal median total expense.

Table 2
Median Practice Expense per Physician for 2006
by Census Region

	North East	North Central	South	West
Total Expense	200,000	213,000	242,000	222,000
Office Expense	75,000	81,633	89,947	80,000
Nonphysician Payroll	59,563	82,000	91,000	78,000
Medical Supplies	5,463	6,000	6,000	5,000
Equipment	1,000	4,000	3,000	3,000
Other	10,000	11,000	10,750	14,000
Number of Observations	427	457	813	440

Differences in expenses by specialty and setting will be driven, in part, by differences in the quantity of inputs to medical practice, but there were few direct measures of input quantities on the PPI survey. For nonphysician payroll, the PPI survey collected information on the number of nonphysician employees. As shown in Table 3, the median number of nonphysician employees per physician was 3.8 in non-metro areas, compared to 3.0 in large metro areas. By Census region, staff per physician ranged from 2.8 in the North East to 3.2 in the North Central.

Table 3
Median Staff and Patient Care Hours per Physician from the PPI Survey
(among those reporting expenses)

	Nonphysician Staff Per Physician	Patient Care Hours Per Week
By Location		
Non-metro	3.8	50
Small metro	3.2	50
Large metro	3.0	45
By Census Region		
North East	2.8	45
North Central	3.2	48
South	3.0	50
West	3.0	42

Among PPI respondents reporting expenses, those in non-metro areas worked a median of 50 hours in direct patient care per week compared to 45 hours per week for those in large metro areas. Physicians in the South also had a longer median work week than those in other areas. Hours worked should be related to the quantity of inputs used in a practice, as physicians who work longer hours will require more resources.

Conclusion

PPI respondents from large metro areas and from the North East had lower median total expenses than those from other areas. These physicians also tended to use fewer resources as measured by their hours worked and the number of nonphysician staff. This may have offset the higher staff wages and office rents that physicians in large metro areas would be expected to pay. Resource use should vary by physician specialty and setting, and these factors were significant in explaining variation in total expense. After controlling for these factors, expenses did not differ significantly by either metro location or Census region.

The finding of no differential in total expense between non-metro and metro locations is consistent with an analysis of data from the AMA's Socioeconomic Monitoring System (SMS) surveys. Throughout the 1990's unadjusted median total expense in large metro areas was consistently below the overall median. Again, however, the large metro respondents to the PPI survey had fewer employees and worked shorter hours than other respondents. The fact that large metro physicians had lower median expenses appears to be driven by differences in the quantities of inputs used, which may have offset any differences in input prices.

Reference

Brentnall, V. Exclusive Survey—Expenses: Rising costs hit all physicians. *Medical Economics* 2007; 84(23): 27-31.