Chapter 37. How Reimbursement and Physician Compensation Vary by Market

By Timothy Smith, CPA/ABV

1.0 Introduction
This chapter uses data findings from a recent study on commercial reimbursement rates around the country to analyze the impact of reimbursement on physician compensation. These findings show wide variation in commercial rates across and within those markets included in the study. Since these rates are reported as a percentage of Medicare, the data from the study is readily adaptable for financial modeling of collections and compensation in each of these markets. This modeling enables analysis of variations in reimbursement on physician compensation with a view toward improved use of physician compensation survey data and valuation analysis in determining fair market value (FMV). This chapter summarizes the study, its findings, and the related modeling for physician reimbursement and compensation.

More importantly, this chapter explores the implications of this modeling for establishing FMV compensation levels for physicians. What will be shown is that commercial reimbursement is one of the key drivers of physician compensation. Since commercial rates vary, however, compensation valuation (CV) analysts need to re-examine and adjust many assumptions about survey data and its application in valuation methods. This chapter points to the use of alternative appraisal methods and techniques that are not part of the prevailing paradigm for valuing physician compensation arrangements for clinical services.
2.0 Wide Variation in Physician Reimbursement Across and Within Markets

2.1 The HSC Study
A recent study by the Center for Studying Health System Change (HSC) indicates a wide range of commercial reimbursement rates across and within various local markets in the United States. The study selected eight markets for research because they were thought to have a wide range of payment rates, based on government studies. HSC was able to obtain data from the four main commercial payers—Aetna, United Healthcare, Cigna, and Blue Cross/Blue Shield—on reimbursement rates for each market. This data included various types of reimbursement, including inpatient, outpatient, and physician services. The payers provided commercial reimbursement rates to HSC as a percentage of Medicare rates. For physician reimbursement, rates were provided for the standard fee schedule and for practices from selected specialties that had negotiated higher rates than the standard fee schedule with the commercial payers. Based on this information, HSC was able to compile the data into key findings about commercial rates in each market.

2.2 Findings of the HSC Study
Exhibit 1 presents a summary of the study’s findings for physician reimbursement. It shows commercial rates, as a percentage of Medicare, for the standard fee schedule and the 75th percentile rate for specific practices in selected specialties by market. The data from this study shows a wide variation in commercial payer rates across and within markets, particularly by specialty. The data indicates that groups with bargaining power are able to negotiate significantly higher rates than the standard fee schedule.

Some of the commercial rates are surprising, given the relatively higher cost of living in markets such as Los Angeles or San Francisco. For many observers, Milwaukee or rural Wisconsin would not have been the expected winners for the highest rates according to the standard fee schedule in the markets studied.

2.3 The Study’s Analysis of Causes for Variations in Commercial Rates
The study noted that local market dynamics play a significant role in the reimbursement levels paid to physicians. Commercial payers establish a standard fee schedule. This schedule is often based on the framework of the Medicare Physician Fee Schedule (MPFS) and its resource-based relative value system (RBRVS). It also reflects the network goals of the insurer along with local physician supply considerations. Groups with leverage in the marketplace, however, are generally able to negotiate rates that

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are higher than the standard fee schedule. Small practices with little bargaining power are typically faced with accepting the standard fee schedule or not participating in the network or insurance plan. Unique factors within a local market accounted for variation across markets. For example, HSC specifically noted the large concentration of hospital-employed physicians as a significant factor in the high commercial rates observed in the Milwaukee market. Differences within a particular market were a function of the leverage that particular practices had relative to each other within that market.

3.0 Physician Reimbursement and Compensation Modeling Based on the HSC Study Findings

3.1 The Purpose of Developing the Reimbursement and Compensation Model

Revenue levels can have a significant impact on the earnings available in a practice for physician compensation. Dietrich and Anderson first noted the impact of commercial reimbursement on physician compensation in a critical analysis published in *Health Lawyers Weekly* in November 2008.2 Their analysis, based on their first-hand experience in the market, showed how commercial rates can significantly affect compensation on a per-wRVU (work relative value unit) basis. To test and evaluate their seminal work further, the HSC data was used to develop a comparative model for a hypothetical cardiology group. The purpose of the model was to show the impact of varying commercial reimbursement rates on physician compensation. To isolate the impact of reimbursement, other factors that might impact compensation were held constant. Examples of these other factors include payer mix, service mix, nonclinical revenues, and overhead.

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Since there is material variation in Medicare rates, the model also reflects the variation in Medicare reimbursement from market to market. Significant variations in the practice expense geographic practice cost index (GPCI) and the malpractice GPCI produce notable differences in revenues for Medicare.

### 3.2 Modeling Physician Reimbursement

The model was based on the 2010 relative value units (RVUs) for an actual nine-physician cardiology group. These RVUs were used to compute reimbursement with Medicare rates. The work, practice expense, and malpractice RVUs were multiplied by the appropriate GPICS for each market and then by the Medicare conversion factor to compute the total revenue for the group on a Medicare reimbursement basis. A simplified payer mix of 46% Medicare and 54% commercial was assumed. Reimbursement of HCPCS Level II codes were held constant over all markets. Commercial reimbursement was calculated using the data provided in the HSC study, including the standard fee schedule rates and the 75th percentile rates, noted as “Premium.” A national average was added to the eight markets included in the study. The rates for the national average were based on figures reported by Medicare and an assumed commercial reimbursement ratio of 125% of Medicare. Exhibit 2 shows the revenue rates per wRVU for Medicare, commercial, and a blended rate based on the payer mix assumption for the model.

<table>
<thead>
<tr>
<th>Market / Rate Level</th>
<th>Market Commercial to Medicare Ratio</th>
<th>Medicare Revenue per wRVU</th>
<th>Commercial Revenue per wRVU</th>
<th>Blended Revenue per wRVU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee, WI - Premium</td>
<td>223%</td>
<td>$73.57</td>
<td>$164.06</td>
<td>$122.44</td>
</tr>
<tr>
<td>Milwaukee, WI - Standard</td>
<td>166%</td>
<td>$73.57</td>
<td>$122.13</td>
<td>$99.79</td>
</tr>
<tr>
<td>Cleveland, OH - Premium</td>
<td>155%</td>
<td>$76.04</td>
<td>$117.86</td>
<td>$98.62</td>
</tr>
<tr>
<td>San Francisco, CA - Standard</td>
<td>108%</td>
<td>$93.50</td>
<td>$100.98</td>
<td>$97.54</td>
</tr>
<tr>
<td>Indianapolis, IN - Premium</td>
<td>156%</td>
<td>$74.07</td>
<td>$115.55</td>
<td>$96.47</td>
</tr>
<tr>
<td>Richmond, VA - Premium</td>
<td>145%</td>
<td>$74.68</td>
<td>$108.29</td>
<td>$92.83</td>
</tr>
<tr>
<td>Miami, FL - Premium</td>
<td>110%</td>
<td>$85.46</td>
<td>$94.01</td>
<td>$90.07</td>
</tr>
<tr>
<td>National Average</td>
<td>125%</td>
<td>$76.70</td>
<td>$95.88</td>
<td>$87.05</td>
</tr>
<tr>
<td>Los Angeles, CA - Standard</td>
<td>92%</td>
<td>$85.97</td>
<td>$79.09</td>
<td>$82.26</td>
</tr>
<tr>
<td>Richmond, VA - Standard</td>
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<td>$74.68</td>
<td>$83.64</td>
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<tr>
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<td>$74.07</td>
<td>$81.48</td>
<td>$78.07</td>
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<tr>
<td>Miami, FL - Standard</td>
<td>82%</td>
<td>$85.46</td>
<td>$70.08</td>
<td>$77.15</td>
</tr>
<tr>
<td>Cleveland, OH - Standard</td>
<td>101%</td>
<td>$76.04</td>
<td>$76.80</td>
<td>$76.45</td>
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</tbody>
</table>

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3 Rural Wisconsin was not included in the model for simplicity reasons. The larger point of the model is demonstrated by the urban/suburban markets that were included.

3.3 Modeling Physician Compensation
To isolate the potential impact of the differences in reimbursement on physician compensation, the model was expanded to include an estimate of compensation based on a standard cost assumption applied to all markets. The computation included overhead and physician benefits using the median practice cost and physician benefits per full-time equivalent (FTE) physician from the 2011 MGMA Cost Survey for cardiology practices. Physician compensation was computed as available earnings in the practice after deducting for overhead and physician benefits. The compensation results of the model are presented in Exhibit 3.

3.4 Compensation Factors Not Addressed by the Model
As noted earlier, this reimbursement and compensation model was designed to isolate the impact of reimbursement on physician compensation. To do this, other factors that affect compensation were held constant in the model. Some of these key factors include the following:

1. Payer mix;
2. Service mix, including the level of technical component services or ancillaries;
3. Other revenue sources, including on-call pay, clinical co-management fees, and diagnostic interpretation contracts; and

<table>
<thead>
<tr>
<th>Market / Rate Level</th>
<th>Market Commercial to Medicare Ratio</th>
<th>Revenue per wRVU</th>
<th>Compensation per wRVU</th>
<th>Compensation to Revenue %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee, WI - Premium</td>
<td>223%</td>
<td>$122.44</td>
<td>$80.40</td>
<td>65.7%</td>
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<tr>
<td>Milwaukee, WI - Standard</td>
<td>166%</td>
<td>$99.79</td>
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<tr>
<td>Cleveland, OH - Premium</td>
<td>155%</td>
<td>$98.62</td>
<td>$56.58</td>
<td>57.4%</td>
</tr>
<tr>
<td>San Francisco, CA - Standard</td>
<td>108%</td>
<td>$97.54</td>
<td>$55.50</td>
<td>56.9%</td>
</tr>
<tr>
<td>Indianapolis, IN - Premium</td>
<td>156%</td>
<td>$96.47</td>
<td>$54.43</td>
<td>56.4%</td>
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<tr>
<td>Richmond, VA - Premium</td>
<td>145%</td>
<td>$92.83</td>
<td>$50.79</td>
<td>54.7%</td>
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<tr>
<td>Miami, FL - Premium</td>
<td>110%</td>
<td>$90.07</td>
<td>$48.03</td>
<td>53.3%</td>
</tr>
<tr>
<td>National Average</td>
<td>125%</td>
<td>$87.05</td>
<td>$45.01</td>
<td>51.7%</td>
</tr>
<tr>
<td>Los Angeles, CA - Standard</td>
<td>92%</td>
<td>$82.26</td>
<td>$40.22</td>
<td>48.9%</td>
</tr>
<tr>
<td>Richmond, VA - Standard</td>
<td>112%</td>
<td>$79.52</td>
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<td>47.1%</td>
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<tr>
<td>Indianapolis, IN - Standard</td>
<td>110%</td>
<td>$78.07</td>
<td>$36.03</td>
<td>46.1%</td>
</tr>
<tr>
<td>Miami, FL - Standard</td>
<td>82%</td>
<td>$77.15</td>
<td>$35.11</td>
<td>45.5%</td>
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<tr>
<td>Cleveland, OH - Standard</td>
<td>101%</td>
<td>$76.45</td>
<td>$34.41</td>
<td>45.0%</td>
</tr>
</tbody>
</table>
4. Cost variables, including geographic differences in cost rates and utilization efficiencies for practice staffing, office space, equipment, and other practice resources.

These items can have a significant effect on net practice earnings available for physician compensation. Consequently, if one were to examine actual practices in the various markets used in the model, one would expect to observe compensation outcomes that would differ from those in the model. The differences would result from the relative degree to which these other factors would impact physician compensation. What is clear from the model, however, is that reimbursement is one of the main drivers of physician compensation levels in a market.

4.0 Implications of the HSC Study and Compensation Modeling

4.1 While wRVUs for Physicians May Be Equal, Reimbursement Is Not
As illustrated in Exhibit 2, reimbursement can vary significantly across and within markets, with commercial rates yielding the greatest differences in comparison to Medicare. The model indicates that reimbursement for the same level of wRVU productivity can vary widely from market to market and from practice to practice within a market based solely on the impact of commercial and Medicare rates. While physician productivity can remain constant in terms of wRVUs, physicians collect different amounts across and within markets for the same level of productivity. These collections set the limits for physician compensation. It should be noted that the model confirms the conclusions of Dietrich and Anderson in 2008.

4.2 Reimbursement Has a Material Impact on Physician Compensation
The model also indicates that the level of reimbursement paid in the marketplace for clinical services directly affects physician compensation. In general, the higher the level of reimbursement, the greater the level of net practice earnings that are available for payment to physicians as compensation, and vice versa. For physician-owned practices, the impact of local market reimbursement is self-adjusting. Physicians are only able to pay themselves based on available net practice earnings, unless they wish to go into debt. For practices owned by other types of providers or entities, such as health systems, physician compensation may not be negatively affected because the owners choose to subsidize compensation at a level that is not set commensurate with local market dynamics. Conversely, physician compensation may be artificially depressed because it is not allowed to rise to the level of local market reimbursement. A physician employer who does not pay at rates consistent with the local marketplace is likely to lose physicians to private practice or other employers who pay better. Whether in terms
of pay levels, practice losses, or recruiting issues, reimbursement plays a fundamental role in the economics of physician compensation.

4.3 Implications for the Use of Survey Data
Two implications can be deduced from the HSC study and the model relative to the use of survey data in compensation-setting practices, including the determination of FMV. The first is that the survey data is not reported at a relevant geographic level. It is not reported by local market. The only geographic indicators for the data in the surveys are usually regional or state. These groupings, however, may not be meaningful. For example, Milwaukee, rural Wisconsin, Indianapolis, and Cleveland are all included in MGMA's Midwest region. Yet, one can see a broad range of reimbursement across and within these markets. The idea that regional data reflects the particular local market would not appear to be the case if these markets were included in the respondents. A similar point can be made with regard to state data. Compare the rates for Los Angeles and San Francisco in the HSC study. There are substantial differences in the standard fees in these Southern and Northern California markets. While not included in the HSC study, a similar disparity in commercial reimbursement exists in the Houston and Dallas/Fort Worth markets. Dallas/Fort Worth rates are substantially higher. To adapt the famous political dictum that “all politics is local” to healthcare reimbursement, one can say that “all reimbursement is local.” Consequently, the geographic assortment of survey data may not produce applicable data for a given local market.

The second implication is that a potential bias may exist in the survey data due to the fact that the survey respondents are overwhelmingly from large groups or large employers. The physician compensation surveys, especially MGMA and AMGA, tend to be composed of physicians from large groups or organizations. Such groups tend to have greater bargaining power within local markets, as discussed in the HSC study. Thus, the surveys are most likely representative of groups with significant bargaining power. When this is the case, the physician compensation for such groups would tend to reflect higher rates of reimbursement than may be achievable by smaller groups in the marketplace. Since large groups are only a small percentage of the physician marketplace, smaller groups and lower reimbursement levels would be the expected norm in most markets. Thus, the tendency of the surveys may be to reflect premium market compensation.

5 Based on discussions with knowledgeable individuals in these markets and the author’s experience in valuing practices in these markets.
6 My co-editor, Mark O. Dietrich, is the author of this adaptation of former House Speaker “Tip” O’Neill’s famous political dictum.
7 For a complete discussion of this point, see Chapter 38, “Comparing the Surveys to the Physician Marketplace: Implications for Valuation Analysis.”
This premium compensation can be illustrated by the difference in compensation per wRVU between the standard fee and premium rates in the model.

4.4 Implications for Valuation Methods and Analysis

A few key implications for CV practice come out of the reimbursement and compensation model. As will be noted, many of these implications run counter to current trends in valuation and compensation-setting practices. Yet, they are consistent with the development of better understanding and application of data and valuation methods that is to be expected in the evolution of any appraisal discipline.

Favoring Professional Collections Over wRVUs for Physician Productivity

The first implication is that wRVUs alone are generally an inadequate determinant of compensation, given the impact of local market reimbursement dynamics. Many valuation consultants focus their compensation analysis on using wRVUs as the sole or primary measure for determining FMV compensation. A typical method is the “percentile matching technique” that uses survey data to match the percentile benchmarking of a subject physician’s wRVUs with the corresponding percentile of compensation. The model, however, would indicate that this technique could produce false indications of market-based compensation: The compensation at a given percentile may result from higher reimbursement in a market rather than higher wRVU productivity. Indeed, statistical analysis indicates there is a weak correlation between wRVUs and compensation in the MGMA data. A better application of the percentile matching technique would be to use professional collections as the measure of productivity. The metric of professional collections combines wRVUs along with payer mix and local market reimbursement factors, making it a more meaningful indicator of the value of physician productivity in a given marketplace.

Avoiding the Use of Specific Percentiles as FMV Guidelines

Some consultants will use the median compensation per wRVU rate as the definitive indication of FMV for any given physician in any market. Others will go further and opine that the 75th percentile compensation per wRVU rate is always consistent with FMV. Using the model, both of these opinions are examined in Exhibits 4 and 5. These exhibits are based on the use of the 2011 MGMA rates for the invasive-interventional cardiology subspecialty. In addition, the 2011 MGMA median wRVUs of 9,524 for this subspecialty were used for estimating the financial impact of the conversion rates on the practice in total.

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8 For a complete discussion of this issue, see Chapter 39, “An Analysis of the Relationship Between Productivity and Compensation in the MGMA Data and Its Implications for Valuation and Compensation-Setting Practices.”

9 The “total practice impact” is calculated as follows: variance per wRVU × 9,524 wRVUs × 9 physicians.
Application of the model indicates that use of both the median and 75th percentile compensation per wRVU rates creates significant losses for the hypothetical practice in many of the markets from the HSC study. As would be expected, the median rate produces losses in fewer markets and these losses are less in total than what is observed.
by using the 75th percentile value. Since the model only addresses reimbursement and not the other key economic factors, the real-world application of a specific conversion rate would vary from the numbers shown in Exhibits 4 and 5. Nonetheless, the model shows the imprecision and inadequacy of summarily using this or that percentile as the universal indication of FMV across the country. Compensation per wRVU is an outcome; it is a calculated rate that results from the combination of many factors. Selecting a given rate as the universal value for FMV is overly simplistic and insufficient for rigorous appraisal analysis.

Some try to argue that physicians have alternatives, including going to other markets and making the median rate, or even higher. They claim that the prevailing market rate for compensation is the median rate. There are some statistical difficulties, however, with this claim. First, the data does not support this assertion. The surveys show a wide variation in compensation per wRVU rates. Statistically speaking, the median is defined as the middle value of the data set. Relatively half the data is below this value, and half is above it. For a specific value figure to be the predominant rate, one would need the mode, not the median. If everyone were paid the median rate, it would reposition the statistical median to a rate higher than the initial median, based on the relative dispersion of the data above this value. More importantly, universal application of the median rate would create material losses in many markets. Not all employers will offer rates that sustain such losses. For those who do, one has to wonder how long such employers, such as hospitals and health systems, would be able to sustain these losses on their physician practices in using the median rate.

As for the view that the 75th percentile compensation per wRVU is FMV for any physician, the model exposes the high degree of inaccuracy of such a claim. This idea lacks support from a rigorous appraisal perspective and would appear to create material losses in many markets for employers who adopt this take on FMV.

Another reason to avoid the creation of losses in physician practices through overly simplistic survey use is the healthcare regulatory risk. A recent Medicare compliance alert indicates that regulators may scrutinize losses on physician practices in terms of commercial reasonableness. It should also be noted that the Stark regulations list location as one of the factors to be considered in determining FMV for regulatory compliance purposes. Clearly, reimbursement varies by location, and the model has shown its impact on physician compensation.

11 69 F.R. 16107 and 72 F.R. 51015-16.
Focus on Earnings-Based Compensation

One of the critical takeaways from the model for appraisal practice is that the use of earnings-based compensation (EBC) can bring greater precision and accuracy than survey-based compensation for determining FMV. EBC uses the net earnings from providing professional services as the basis for establishing compensation for a professional. It is calculated by using the net revenues received from services rendered and deducting the costs incurred to generate the services. EBC has been the historically predominant paradigm for physician compensation, and it is the one framework that ensures practices do not operate significantly in the red. In addition, it is widely used in tax practice for determining reasonable compensation for professionals in corporate entities. EBC is preferred because it takes into account local market reimbursement dynamics, along with the other key economic factors that impact practice net earnings available for physician compensation. To apply EBC in appraisal practice, the analyst uses cost and income approach methods to value a subject physician compensation arrangement.

The Big Picture: Avoid Exclusive and Uncritical Use of Survey Data

Perhaps the most general implication of the HSC study and the model discussed here is that valuation and compensation-setting practices should avoid using survey data without careful study. The wide availability of market survey data for physician compensation has made it relatively simple to obtain and apply such data for compensation purposes. It is also easy to fall into the trap of making assumptions about the surveys without adequate examination of the data. As more research and information on compensation data emerge, the complexity inherent in physician compensation becomes more apparent. This complexity warrants not only more research and analysis, but also more sophisticated economic models that can apply survey data with greater precision and relevance to the fundamental factors that drive physician compensation. One simple solution to avoid the uncritical use of survey data is not to rely on it exclusively for valuation work. Using the market approach in conjunction with the income and cost approach based on EBC can bring reasonableness and reality to appraisals. The triangulation of the three approaches can provide greater accuracy and rigor to the determination of FMV for healthcare regulatory purposes.

12 See Chapter 24, “Valuing Physician Employment Arrangements for Clinical Services: Cost and Income-Based Methods,” for an in-depth discussion of this concept.