

Resource-based relative value scale dictates revenue stream

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Work, practice expense, and liability insurance play key roles

The wise man is he who knows the relative value of things.

William Ralph Inge, 1860 – 1954, English author and Anglican prelate.

It is very important for physicians to have a firm grasp of the resource-based relative value scale. There is good reason for the enormous amount of attention paid to the RBRVS. This scale assigns valuation for billions of dollars worth of procedures and services that physicians provide annually and directly impacts how the money will be apportioned.

The Centers for Medicare and Medicaid Services (CMS, formerly known as HCFA) sets the valuation following input from the American Medical Association's Relative Value Update Committee (RUC). William Rich, III, MD, the American Academy of Ophthalmology's Secretary for Federal Affairs, has recently assumed the chairmanship of this important committee. Historically, CMS has accepted over 90% of the RUC's recommendations.

It is not only the Medicare program that adheres to the RBRVS in developing its fee schedule. An increasing number of managed care organizations, health insurance companies, workers' compensation

plans and Medicaid agencies have also adopted some or all elements of the RBRVS. A 2001 Deloitte and Touche survey revealed that almost three quarters of the non-Medicare plan respondents use the RBRVS.

In 1992, Medicare began the transition from a CPR (customary, prevailing, and reasonable) system to the RBRVS. The program was fully implemented by 1996. There were several factors that prompted this initiative. One of the key elements was a desire to stem what had been a steady increase in Medicare Part B payments (representing payments to providers). The success of the DRG (Diagnostic Related Groupings) system for Medicare Part A payments to hospitals suggested to legislators that a resource-based system for Part B payments might be beneficial in controlling costs.

An important step toward creation of the RBRVS was the 1985-1988 Harvard study by Hsiao and Braun that developed valuations for services and procedures and services in 12 specialties, including ophthalmology. An additional 15 specialties were added in 1990. Relative value units (RVUs), and thus reimbursement, for certain procedures in ophthalmology and other specialties are still based on the original "Harvard data."

The RBRVS is comprised of various components (physician work, practice expense, and professional liability insurance), geographic adjustments, and the conversion factor. Each of these is discussed below.

Physician work represents the effort of the physician in providing professional service. On average, physician work RVUs make up 55% of the total RVUs of a service. Work is considered to be comprised of these elements: time required to perform service, technical skill and physical effort, mental effort and judgment, and psychological stress associated with physician concern about iatrogenic risk to the patient. High scores in some of these areas will work to offset low scores in other areas.

Please note that the effort of support staff (medical assistants, nurses, etc.) is not included as part of physician work. Instead, support staff activities are included under practice expense (see below).

Physician work is temporally subdivided into preservice work, intraservice work, and postservice work. Preservice work essentially represents preparation for a service or procedure. Intraservice work is the actual performance of the service (for an operation, this is the "skin to skin" time). Postservice work includes creation of the medical record and, in the case of procedures, stabilizing the patient.

Under Medicare, preservice work for major procedures includes (with exceptions) services rendered the day prior to the procedure. Postservice work includes normal postoperative care for a variable amount of time (0, 10, or 90 days) following the procedure.

Work values based on the Harvard data are gradually being phased out. Surveys completed by practitioners are now used to establish relative physician work values for new procedures, and for selected established procedures.

Practice expense represents the cost to the physician in providing professional service. It excludes physician effort and professional liability insurance. On average, practice expense RVUs make up 42% of the total RVUs of a service. Practice expense is comprised of clinical labor, medical supplies, medical equipment, administrative labor, office expenses, and other expenses.

The Practice Expense Advisory Committee (PEAC) provides recommendations regarding direct practice expenses to the RUC. The RUC may reject, but may not change, these recommendations. The RUC then passes the recommendations on to CMS.

Professional liability insurance essentially represents the cost of obtaining malpractice insurance. This is the smallest component of the RBRVS, making up only 3% of the total RVUs of a service on average.

Geographic practice cost indices (GPCI) were created to account for the variability that exists across different regions of the country. The physician work GPCI is based on the earnings of all professional workers in a particular locality. The GPCI for practice expense is based on rent and wages. The professional liability insurance GPCI reflects the differing costs of malpractice coverage from area to area.

The conversion factor is the multiplier that converts the total relative value units for a service into a dollar figure reflected in the Medicare Fee Schedule. The conversion factor is updated annually by CMS by consideration of factors including medical inflation, the total number of beneficiaries, and the status of the general economy. The conversion factor was \$36.1992 in 2002 and is \$36.7856 in 2003. Many medical societies sharply criticize the update formula, believing that it is based on flawed assumptions.

The formulae for calculating the value in the Medicare Fee Schedule are:

$$(\text{Physician Work RVU} * \text{PW GPCI}) + (\text{Practice Expense RVU} * \text{PE GPCI}) + (\text{PLI RVU} * \text{PLI GPCI}) = \text{Total geographically adjusted RVU}$$
$$\text{Total geographically adjusted RVU} * \text{Conversion factor} = \text{Value in the Medicare physician payment schedule ("Fee schedule amount")}$$

The importance of the RBRVS becomes readily apparent when evaluating two clinical examples in ophthalmology (see Figure).

In the examples shown, the work RVU, practice expense RVU, and professional liability RVU for cataract extraction are 10.23, 7.59, and 0.41 respectively. The comparable values for pars plana vitrectomy are 11.89, 8.99, and 0.47.

The respective geographic practice cost indices are shown in the table. The work GPCI and practice expense GPCI are both higher in San Francisco than in Kentucky. However, the professional liability GPCI is higher in Kentucky than in San Francisco.

The total geographically adjusted RVUs for the two procedures in the two regions are shown in the bottom row of the table. For cataract extraction, the totals are 22.28 in San Francisco and 16.85 in Kentucky. For pars plana vitrectomy, the totals are 26.13 in San Francisco and 19.73 in Kentucky.

Multiplying these values by the 2003 conversion factor reveals that the fee schedule amount for a San Francisco ophthalmologist is \$819.58 for cataract extraction and \$961.21 for pars plana vitrectomy. A Kentucky ophthalmologist's fee schedule will reveal \$619.84 for cataract extraction and \$725.78 for pars plana vitrectomy.

The payment schedule is just one of many elements that impacts the performance of insurance companies. I will discuss the fundamentals of insurance in my next article.

Table 1 Geographically adjusted RVU comparison

	Cataract extraction with IOL (66984)		Pars plane vitrectomy (67036)	
	San Francisco	Kentucky	San Francisco	Kentucky
Work RVU	10.23	10.23	11.89	11.89
× Work GPCI	× 1.068	× 0.970	× 1.068	× 0.970
	<u>10.93</u>	<u>9.92</u>	<u>12.70</u>	<u>11.53</u>
Practice Expense RVU	7.59	7.59	8.99	8.99
× PE GPCI	× 1.458	× 0.866	× 1.458	× 0.866
	<u>11.07</u>	<u>6.57</u>	<u>13.11</u>	<u>7.79</u>
Professional liability RVU	0.41	0.41	0.47	0.47
× PLI GPCI	× 0.687	× 0.36	× 0.687	× 0.36
	<u>0.28</u>	<u>0.36</u>	<u>0.32</u>	<u>0.41</u>
Total geographically adjusted RVU	22.28	16.85	26.13	19.73