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Chemotherapy Administration and Medicare RBRVS

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The Health Care Financing Administration's admirable quest for a resource-based relative value system on which to base payment for physician services was a massive undertaking that began in the early 1990s and has yet to be achieved. The Medicare Physician Fee Schedule has been in place since 1992 with a "resource-based" relative value scale known as RBRVS as its basis. Despite its name, however, RBRVS is not fully resource based and continues to generate controversy.

Each RBRVS relative value unit consists of three separate elements: a work component, a practice expense component, and a malpractice component. The work component is based on a study conducted by the Harvard School of Public Health prior to 1992 that established relative work values for an initial set of services by examining actual physician work. These values were used to extrapolate work values to all other services. The work component has been the subject of ongoing review and refinement and is currently the only component of the three that is resource based to any extent.

Practice expense and malpractice component values are all *estimates* based on a variety of historical data. HCFA discussed a number of flaws in the estimation process—data were often undesirably old and certainly were not resource based.[1] The information was deemed to be the best available at the time, however. With legislated deadlines looming, the estimates became an integral part of RBRVS.

Many physicians recognized immediately that the estimated practice expense values were often a poor reflection of reality. Within the specialty of oncology, chemotherapy administration stands out as a significant example.

Practice expense estimates were based on historical payment rates and estimates of costs. Chemotherapy administration was hit especially hard by this process for two reasons. First, historical payment rates for these procedures were potentially low (a fact recognized by HCFA at the time[2]) and had been made even lower by a 6.5 percent reduction in Medicare payment that occurred the year before RBRVS was introduced. Second, specialty data used in the estimate did not separate oncology from internal medicine. Thus, problems related to payment for chemotherapy administration within Medicare's old, "reasonable" charge system were carried over into RBRVS. In addition, nonphysician labor, supplies, and indirect expenses that are unique to chemotherapy administration were not acknowledged in the estimation process.

HCFA has been mandated by Congress to develop resource based practice expense values. This was scheduled to be completed by January 1, 1998, but HCFA encountered significant difficulties in the process. As a result, the Balanced Budget Act of 1997 delays initial implementation of the revised values until January 1, 1999, with a three-year phase-in before full implementation. As HCFA moves toward making RBRVS a true resource-based system, it is time to take a hard look at the practice expenses associated with chemotherapy administration.

IMPORTANT POINTS TO CONSIDER

HCFA has long been aware that chemotherapy administration is underpaid. For example, an item in the October 11, 1988, *Federal Register* reads as follows:

"Changes in treatment methods and advances in technology now allow chemotherapy to be furnished to many patients in the physician's office, thus reducing the need for hospitalization to administer chemotherapy. Furnishing these services in the physician's office is more convenient for some patients and may provide other benefits as well.

"Current Medicare Part B payment rules for physicians' services, however, may fail to compensate adequately for the services because the usual reasonable charge payment methodology may not fully recognize the overhead costs involved in these procedures. Some sources of additional costs include employment of nurse oncologists, special patient rooms, and safety equipment required because of the toxicity of the chemotherapeutic agents and safety procedures issued by the Occupational Safety and Health Administration...."[3]

Another item appeared in the November 25, 1991, *Federal Register.*

"Some commenters stated that the proposed rule methodology is unfair because the practice expense and malpractice RVUs will not recognize the higher costs of some subspecialties. In the case of these subspecialties, their higher practice costs percentages are not included

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Table 1. Payment Policy Changes for Chemotherapy Administration and Related Services

Previous Policy	Current RBRVS Policy
Payment was made for multiple units of chemotherapy administration per day.	More than one push is not paid. If chemotherapy is provided by both push and infusion methods, only infusion is paid.
Payment was made for hydration therapy and other infusion services (codes 90780, 90781).	Separate payment is made for infusion only if hydration therapy is provided before or after chemotherapy.
Payment was made for provision of chemotherapy agents (96545).	Not paid
Payment was made for supplies.	Not paid
Payment was made for chemotherapy administered under physician supervision in hospital outpatient departments.	Physician supervision not paid
Payment was made for both a chemotherapy infusion for more than eight hours (96408) and maintenance of the pump necessary to deliver the infusion (96520).	Either 96408 or 96520 is paid, but not both, even if both services are provided.
Payment was made for chemotherapy (96400) and a level 1 office visit (99211) when both were provided on the same day.	Either 96400 or 99211 is paid, but not both, even if both services are provided.

at all in the practice expense or malpractice RVU calculation....

"To determine the practice expense and malpractice RVUs, we used practice costs data from the AMA's *Socioeconomic Monitoring Report*.... We believe this report provides the best available data regarding practice expenses.... As additional survey information that includes more detailed data on these specialties becomes available, we will consider making refinements in the practice costs RVUs."[4]

Finally, a third item appeared in the November 25, 1992, *Federal Register*.

"We were persuaded by the data we received during the comment period that the practice expense RVUs do not adequately cover the cost of supplies for these (chemotherapy) services. The data also demonstrate that many carriers paid separately for these supplies prior to 1992.... We are continuing to study this issue. However, as an interim measure, we have increased the practice expense RVUs for codes 96408, 96410, 96420 and 96422."[5]

Changes in coding policies have eliminated payment for related services that helped offset low practice expense values for chemotherapy. Reimbursement for the total chemotherapy service needed by oncology patients has been steadily eroding. The policy changes highlighted in Table 1 are indicative of how payment for services that are an integral part of chemotherapy administration has been withdrawn over the last six years without a corresponding increase in the practice expense component of the basic chemotherapy administration codes.

Analysis using HCFA data shows that true resource-based practice expenses are higher than the amount paid using HCFA's estimated practice expense. For example, in 1996 HCFA's estimated practice expense payments for three common chemotherapy administration codes are shown in Table 2. In contrast, data recently distributed by HCFA from its Clinical Practice Expert Panels (CPEP) show that the actual expenses incurred by an oncology practice are much higher than the estimated practice expense allowable. CPEP data have been initially reviewed by a second panel convened by HCFA to validate the original information. Indications are that some data elements, such as time spent by nurses in providing these services, are actually higher than CPEP data indicate.

In 1996, nearly 2.2 million services described by codes 96408, 96410, and 96530 were provided in this country.[6] With resource-based

Table 2. Estimated vs. Resource-Based Practice Expenses

Code	Practice Expense RVU	1996 Conversion Factor	Practice Expense Allowable	Projected Resource-Based Costs
96408 *(chemotherapy administration, intravenous; push technique)*	0.92	$34.63	$31.86	$91.34
96410 *(chemotherapy administration, intravenous; infusion technique, up to one hour)*	1.47	$34.63	$50.91	$101.60
96530 *(refilling and maintenance of implantable pump or reservoir)*	1.01	$34.63	$34.98	$85.10

costs between 2 and 2.88 times higher than HCFA's original cost estimates, practice expense for these three codes alone is underpaid by nearly $120 million.

Codes 96408, 96410, and 96530 are only three of seventeen chemotherapy administration codes affected by undervalued practice expense components. Table 3 shows the extent of the problem as it extends to all seventeen codes. We have extrapolated the cost data HCFA collected for codes 96408, 96410, and 96530 to the remaining fourteen codes to project practice expenses related to them. Two projections were made. One uses the ratio of HCFA cost to real cost for code 96410 (2.0) and represents the low end of the underpayment range. The second projection, using the ratio of cost to real cost for code 96408 (2.88), is shown as the high end of the range. Table 3 incorporates these ratios and HCFA volume and reimbursement data. Based on this analysis, medical oncologists incurred a Medicare underpayment for these fourteen different services of up to $86.8 million in addition to the $120 million underpaid for codes 96408, 96410, and 96530. Nationwide, practice expense for all chemotherapy administration codes may be underpaid by $274.8 million.

In addition to undervalued practice expense components, the elimination or reduction of payment for related services that are an important part of the care provided to the patient must be factored in. Table 4 includes two examples of such services. The first is the elimination of payment for code 96408 when more than one chemotherapy drug is administered by IV push technique. Practice expenses related to multiple pushes, while often less than those incurred in providing the first push, are an expense nevertheless. The second example is the elimination of payment for both an office visit and a chemotherapy injection even when both are provided on the same day.

Table 3: Projected National Practice Expense Underpayment

CPT Code	Medicare Services Allowed - 1996	Additional Practice Expense Value Required - Minimum	Additional Practice Expense Value Required - Maximum
96400	1,097,989	$4,921,782	$9,280,551
96405	1,910	$25,026	$47,190
96406	415	$8,013	$15,110
96412	985,288	$37,371,186	$70,467,411
96414	32,009	$1,401,706	$2,643,068
96420	1,484	$60,892	$114,819
96422	864	$34,856	$65,725
96423	646	$10,246	$19,321
96425	1,218	$57,117	$107,701
96440	698	$19,495	$36,760
96445	828	$27,979	$52,758
96450	1,950	$58,497	$110,303
96520	68,238	$1,999,983	$3,771,183
96542	2,145	$80,619	$152,015
Total Projected Underpayment:		$46,077,397	$86,883,915
96408	916,561	$54,825,378	$54,825,378
96410	1,092,869	$55,394,474	$55,394,474
96530	186,803	$9,364,434	$9,364,434
Total Calculated Underpayment:		$119,584,286	$119,584,286
Combined Projected and Calculated Underpayment		**$165,661,683**	**$206,468,201**

These estimates are difficult to make because there are no data readily available to accurately project the number of services provided that cannot be billed because of HCFA restraints. The estimate for code 96408 in Table 4 is based on five commonly used chemotherapy regimens that incorporate this procedure (5FU/leucovorin, CMF, CAF, AC, and CHOP). At the maximum end of the range, we have assumed that for every five IV pushes billed, there are fourteen provided that cannot be billed under current guidelines. The rationale for this determination includes one unreimbursed chemotherapy agent injection each for 5FU/leucovorin and AC, and two noncovered injections for CMF, CAF, and CHOP. The addition of two antiemetic agents given by IV push with AC, CAF, and CHOP, which are not reimbursed, totals fourteen noncovered services for these five regimens. With 916,561 instances of code 96408 actually billed in 1996, this analysis would suggest that 2.5 million were *not* paid. At the minimum end of the range, we have assumed that there is an average of

Table 4. Effect of Eliminated or Reduced Payments for Services Integral to Chemotherapy Administration

Code	Projected Number of Services Not Billed or Paid	Projected Underpayment (Minimum)	Projected Underpayment (Maximum)
Elimination of payment for code 96408 when more than one chemotherapy drug is administered by IV push technique.	916,561 (minimum) 2,566,368 (maximum)	$29,201,633	$61,875,132
Elimination of payment for code 96400 or 99211 when both are provided on the same day.	760,000	$3,404,800	$6,422,000
Projected Underpayment:		$32,606,433	$68,297,132

Table 5. Total Projected Underpayment for Chemotherapy Administration

Category	Projected Underpayment (Minimum)	Projected Underpayment (Maximum)
Chemotherapy Administration Practice Expense (Table 3)	$165,661,683	$206,468,201
Services Integral to Chemotherapy Administration (Table 4)	$32,606,433	$68,297,132
Total Projected Underpayment	$198,268,116	$274,765,333

one push that cannot be billed for each of the 916,561 instances actually billed. These estimates are included here because they represent practice expenses that clearly should be recognized. We believe that the range shown is a fair estimate of the impact of the gradual elimination of practice expense payments over the last few years.

HCFA's decision to deny payment for the practice expense of the codes shown in Table 4 creates an additional underpayment of between $32 and $68 million to medical oncologists nationwide. These and other services, such as those listed in Table 1, represent unreimbursed expense to oncology practices that should be considered as HCFA develops true resource-based practice expense values for chemotherapy administration.

The weakness in the present practice expense estimate as it pertains to chemotherapy administration is quite evident. Unfortunately there are no actual survey and billing data available at this time that detail unreimbursed overhead costs for chemotherapy administration. However, we believe these projections reasonably reflect overhead costs that are not reimbursed by Medicare. Resource-based costs for codes 96408, 96410, and 96530 calculated at $120 million, parallel estimates of costs for other chemotherapy administration at $86.8 million, and projections of costs related to services that simply are not reimbursed at up to $68 million produce total underpayment projections of $274.8 million nationwide (Table 5).

SUMMARY

A projected loss of this magnitude based on data now under consideration by HCFA is an issue that should be studied carefully. Indeed, the actual loss may be even higher. A true resource-based assessment must include accurate and specific cost data for all codes, a reliable measurement of the number of services provided that could not be billed or paid because of changes in HCFA policy over the last six years, and an inflation factor (expected to be minimal) that will put the final numbers on a current basis. The $274.8 million estimate does not include any of these elements. Furthermore, it does not include the cost of ordering, storing, and maintaining drug supplies—expenses that are necessary to facilitate the patient's ready access to treatment. Even so, losses of this amount are extraordinary.

Practice expense values that are truly resource based are an important step forward in the development of an equitable payment system for health care services. Current practice expense values for services such as chemotherapy administration, built on murky estimates that do not recognize circumstances unique to these codes and the subspecialty of oncology, are long overdue for an assessment that will allow them to stand on their own merits.

REFERENCES

[1,2]56 *Federal Register* 59566-59567: Medicare program; fee schedule for physicians' services, November 25, 1991.

[3]53 *Federal Register* 39644: Medicare program; request for comments on payment for chemotherapy in physicians' offices, October 11, 1988.

[4]56 *Federal Register* 59569, November 25, 1991.

[5]57 *Federal Register* 55985; Medicare program; fee schedule for physicians' services for calendar year 1993, November 25, 1992.

[6] Medicare Part B Extract and Summary System (BESS), Health Care Financing Administration, 1996 data.