RE-ASSESSING ANESTHESIA FEES UNDER THE MEDICARE FEE SCHEDULE, 1995

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The prior versions of this analysis were conducted for the Pennsylvania Society of Anesthesiologists in December 1993 and June 1994. The objective of these exercises was to extend and utilize the methodological approaches developed by William Hsiao and colleagues to examine the success of the Medicare Fee Schedule in appropriately re-aligning physician fees among services and specialties. This approach was extended to include the specialty of anesthesiology that had been omitted from the original Hsiao analysis. What is presented below is a further analysis moving from the MFS of 1992 to current fees for both anesthesiology and other specialties in 1995. The current anesthesia conversion factor is also examined relative to the recent Abt Associates study of anesthesia work values, concluding that Medicare's anesthesia fees should be adjusted upward by 24 percent.

Hsiao, et al., (Hsiao, WC, Dunn, DL, Verrilli, DK. Assessing the implementation of physician-payment reform. N ENgl J Med 1993; 328:928-933) presented a methodology for assessing the initial implementation of the Medicare Fee Schedule [MFS]. The methodology involved specification of a "standard service" equivalent, a commonly performed service identified for each of fourteen separate physician specialties. The method was designed to estimate what physicians in each specialty would earn if they practiced full time providing that single service under the MFS, rather than as they actually practice with many services and many payors.

In the April 1993 Hsiao study, time data for each "standard" service from each specialty derived from Hsiao's initial surveys of approximately 100 physicians in each specialty; for this 1995 analysis, time estimates are based on those published by HCFA with respect to the Multispecialty Points of Comparison services. In both cases data on average times per procedure were used to estimate the total volume of service that could be performed by the average physician if he or she provided only that service during a typical practice week. Based on those volumes, the MFS fees were used to estimate both expected gross weekly earnings and, using AMA practice expense data, expected annual net incomes.

The most commonly performed anesthetic where Hsiao's original study had collected time data was the anesthesia for a colectomy. Medicare data supplied to ASA by the AMA RUC indicate that in 1993, anesthesia for the colectomy was the fifth most common service provided to Medicare beneficiaries by anesthesiologists.

According to the original Hsiao survey, the colectomy anesthesia required 216.5 minutes on average; 26.4 minutes of preop time plus the remainder for intra- and post-op time. The more recent HCFA data on average times suggest a total of 182 minutes for a colectomy: 154 minutes of anesthesia time, plus 28 minutes for pre and post operative anesthesia services. This operation [00840 is the current CPT4 code] has a base value of 6 units; the intra- and post-op

average times from Hsiao's original data yielded an average of 12.67 time units. The more recent HCFA data discloses an average of 10.27 time units, so that the new total unit figure would be 16.27 units.

With a total of 16.27 units and a 1995 full fee schedule national average conversion factor of $14.77, the expected national MFS amount for this service for 1995 would be $240.31. Hsiao's paper assumes a 45 hour work week, 46 weeks per year. This results in a per physician 1995 gross income estimate of $163,990. Based on the statistics published in AMA Physician Marketplace Statistics, 1994, the 1993 average practice costs for anesthesia were $100,600. Extrapolating forward the trends from 1988 to 1993, the 1995 estimated average per physician practice costs for anesthesia would be $110,221. Thus the MFS only projected per anesthesiologist *net* income for 1995 would be $53,769.

Anesthesiology may differ from other specialties in that anesthesiologists can supervise the work of nurse anesthetists or residents in administering anesthesia. The above analysis assumed that all anesthesia would be personally performed. In fact, the practice cost estimates from AMA can be presumed to include data from both anesthesia practices that only personally perform operations as well as those that may practice and supervise many simultaneous operations. In order to estimate the extent of supervised anesthesia, data were collected from a number of practices in several states. Operations were identified as either personally performed or supervised with two, three, or four simultaneous operations. Supervision of more than two operations represented about 10 percent of the total. The average number of simultaneous operations was 1.58. This would be roughly equivalent to personally performing single operations two days a week while supervising two operations at a time three days a week.

Supervising two simultaneous operations does not imply doubling the gross reimbursement per procedure. First, some parts of the process must be personally performed by the anesthesiologist in question. These include patient pre-op interviews and patient induction. For that reason, the starting times of multiple supervised operations must be staggered so that induction of one patient is complete before a second operation can begin.[1] Second, Medicare reimbursement rules change when the anesthetic procedure involves supervision. In particular, prior to 1992, when two operations were being supervised the base units for those procedures were reduced by ten percent and time units were based on 30 minute rather than 15 minute intervals. (These were the rules that were modelled for the earlier anesthesia analyses.) For 1994 and later, base and time units are not reduced, but the reimbursement for a physician who medically directs two or more procedures is subject to a reduction. For 1995 the allowed charge would be 57.5 percent of the allowed charge for a personally performed procedure. For 1998 and beyond, the reduction will be to 50 percent.

For this analysis it was also assumed that half of the medically directed procedures involve CRNA's or others that are not in the anesthesiologists' employ and half involve the physicians' own staffs. For the former, the allowed charge for the anesthesiologist will be only 57.5 percent of the allowed charge for a personally performed procedure. For the latter, allowed charge will be 115 percent of the personally performed allowed charge.

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1 Supervision of patient emergence from anesthesia also requires the anesthesiologist's personal attendance.

The net effects of the staggered starts and the reduced/adjusted reimbursements were modelled as follows: first, a stagger time offset was assumed to be 20 minutes. (Some respondents suggested that 30 minutes would also be a reasonable, conservative approach.) On the assumption that while a single colectomy could be performed in 182 minutes, two "simultaneous" supervised colectomies would require 246 minutes. Thus, a physician who only performed "doubles" could perform slightly less than 11 such doubles, or nearly 22 colectomies in a single week, compared to the 14.8 single colectomies from the HCFA data based estimate.

Based on the post-1994 reimbursement regulations and the $14.77 national conversion factor, the gross reimbursement for the two operations would be $360 compared to $240 for a single operation. The weekly gross revenue under these circumstances (doubles only) would be $4550; gross annual revenue would be approximately $209,288; and annual net income would be $99, 067. However, based on the observation that the average number of multiple supervised anesthesia procedures is 1.58, the gross revenue estimates must be blended to combine the personally performed only estimate with that of the supervised estimate. This would yield a projected annual per physician net income of $72,717.

Comparable projected incomes for a variety of other specialties are presented in Table 1. The basic approach was the same as that for anesthesiology. The procedure selected as the standard service was used for each specialty--if that procedure appeared on the list of Multispecialty Points of Comparison. Where the original procedure used by Hsiao did not appear on the Points of Comparison list an alternative commonly performed procedure was selected. Average performance times were used to estimate potential weekly volumes and potential gross revenues were estimated with the volume estimates and 1995 MFS values. Estimated 1995 per physician practice costs were extrapolated from AMA practice expense data from 1988 through 1993.

An annual net income for anesthesiology of $72,717 would be lower than all but three of the 11 included specialties reported here. Those specialties are the primary care specialties of family practice, internal medicine, and pediatrics. This estimate is lower than those calculated for any of the surgical specialties, psychiatry, and cardiology or gastroenterology. If the 1998 medical direction rules were in place the estimated anesthesiology net income for 1995 would be reduced from $72,717 to $61,298.

A recent study by Abt Associates for the American Society of Anesthesiologists examined work components of selected anesthesia procedures, based upon HCFA average time data and work intensity linkages to non-anesthesiology procedures. Anesthesia work values were found to be undervalued by about 35 percent. Translated into anesthesia conversion factor terms, the anesthesia reimbursement for a colectomy was found to be undervalued by 14 percent, and the aggregate undervaluation for anesthesia reimbursement across the specialty was 24 percent. If the conversion factor for anesthesia were to be adjusted to correct for this undervaluation, the 1995 estimate for net anesthesiology incomes (with the use of CRNA's) would increase to $98,329 and $116,623, respectively. Relative to the other eleven specialties examined, anesthesiology would move up from eighth place to seventh place in the heirachy passing psychiatry but still below the surgeons and specialty internists. If the 1998 reduction rules were in effect, a 14 percent increase in the conversion factor would leave anesthesiology in eighth place behind psychiatry. See Table 1, below.

There was some controversy with respect to Dr. Hsiao's original April 1993 study. The estimates for internal medicine and other primary care intensive specialties were believed to be biased downward because those specialties do provide some procedure-oriented care that would tend to raise their net incomes. Similarly, surgeons themselves do provide a variety of office visits and other primary care services that are less remunerative per unit time than surgery. The estimates for surgeons expected net incomes might therefore be believed to be biased upward. The estimate for anesthesiology, however, suffers from neither of those biases. Anesthesiologists, for the most part, provide a single service: the unit of anesthesia. Adjusting upward the anesthesia conversion factor would not be expected to significantly affect the ordinal ranking of anesthesiology even adjusting for the known upward and downward biases inherent in the Hsiao methodology.

TABLE 1
RE-ESTIMATIONS OF PROJECTED INCOMES NET OF PRACTICE EXPENSES;
1995 MFS FEES FOR MODAL PROCEDURES BY SPECIALTY;
PRACTICE EXPENSES FROM AMA PHYSICIAN MARKETPLACE STATISTICS

SPECIALTY	PROC	ESTIMATED 1995 NET
THORACIC SURG	33512	370473
CARDIOLOGY	93620	276090
GS	44140	263210
UROLOGY	52601	204433
NEUROSURG	63030	269285
OPHTHALMOLOGY	66984	188355
DERMATOLOGY	11642	217961
OTOLARYNGOLOGY	69631	201135
OBG	58150	131234
GASTROENTEROLOGY	43235	123748
PSYCHIATRY	90844	96006
FP	99213	28655
INTERNAL MEDICINE	99213	19999
PEDIATRICS	99213	23176

ANESTHESIOLOGY	00840	REDUCTION 1995 RULE TO 57.5%	1998 RULE TO 50%
WITH CRNA'S			
CF = $14.77+24%		116623	102463
CF = $14.77+14%		98329	85311
CF = $14.77		72717	61298
PERSONALLY PERFORMED ONLY			
CF = $14.77+24%		93127	93127
CF = $14.77+14%		76728	76728
CF = $14.77		53769	53769