
Perspectives: A Nurse Anesthetist

by Jeffery M. Beutler

Nurse anesthesia became a formal specialty in the United States in the latter part of the nineteenth century as a result of the dismal morbidity and mortality results of the “occasional” anesthetist. Surgeons turned to the Catholic Sisters and then to the professional nurse to provide a stable, qualified, and experienced anesthesia provider. There are now approximately 20,000 active, practicing certified registered nurse anesthetists (CRNAs) in the United States who administer more than 60 percent of the twenty-four million anesthetics administered annually. This commentary responds to the preceding article by Jerry Cromwell and Margo Rosenbach, from the perspective of the CRNA.

The Cost Of Anesthesia

The Cromwell and Rosenbach article is important and timely. Even though the costs of health care are a subject of considerable interest in an era of budget constraints and limited resources, surprisingly little study has been devoted to the multibillion-dollar market for anesthesia services. With the growing costs of Medicare and Medicaid, more and more questions likely will arise about the cost of health care. And well they should: Cromwell and Rosenbach demonstrate convincingly that patients are charged at least \$850 million too much for anesthesia services each year. According to their article, many anesthesiologists who bill for the services of CRNAs have incomes of \$750,000 to \$2 million.¹ This startling amount should, at minimum, bring the \$140,000 reported taxable income under close scrutiny. It also should raise questions as to the degree of income sheltering that occurs within professional corporations. The following facts are presented to further illuminate the points Cromwell and Rosenbach have made.

The authors astutely note that physician anesthesiologists have

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achieved artificially high prices in the form of both high average incomes and artificially high numbers of anesthesiologists. These two economic factors have resulted in a total cost increase of 270 percent in just ten years. Even though CRNAs are a lower-cost provider of quality anesthesia services and there is no close substitute for surgeons' services, increases in anesthesiologists' charges have far outstripped those of the surgeon. Therefore, relative to surgeons' fees, anesthesiologists' fees are excessive. The existence of a lower-cost substitute for physician anesthesiologists' services in the form of CRNAs makes the rise in anesthesiologists' fees even more difficult to understand. Had there not been a lower-cost alternative, the anesthesiology costs may have increased even more dramatically.

Cromwell and Rosenbach draw their conclusions from Medicare data. According to Medicare, approximately 50 percent of all anesthesiologists do not accept assignment, and, therefore, they balance bill for an even greater amount than the \$20 Medicare conversion factor cited. CRNAs, on the other hand, must accept assignment when direct Medicare reimbursement for CRNA services goes into effect January 1, 1989. Medicare charges represent about 37 percent of the total surgical cases performed annually.² Concerning the remaining surgical cases, anesthesiologists charge patients up to a \$60 conversion factor with \$30 to \$40 being a common range. Thus, the authors may underestimate the true cost to the health care system by as much as 200 percent. The potential savings to the health care system could be as much as 60 percent greater than the \$850 million they originally projected.

The authors placed the average taxable income for anesthesiologists at \$140,000 in 1985. Many anesthesiologists earn incomes in excess of \$750,000. Many others who work fewer hours still generate incomes that exceed those of full-time surgeons. The American Medical Association (AMA) projects that the number of anesthesiologists will increase by 41.7 percent by the year 2000.³ Based on this projected growth rate and a historical income growth rate of 145 percent for the past ten years, the total cost for anesthesiologist services by the year 2000 will be 340 percent of what it is currently, or a 22 percent increase per year. If this unwarranted growth is allowed to continue and if the current "regulated payment inequities" are not corrected, then the costs for anesthesia services will exceed the nation's ability to pay.

Anesthesiologists also are attempting to increase their market share by creating "supervisory" positions in facilities where anesthesia care was previously provided by "independent" CRNAs. This is similar to railroad firemen's insisting that their services were as essential for safety on an internal combustion diesel train as they had been to the operation of a

coal-fired steam engine. These firemen successfully maintained their jobs and spent most of their time in a featherbed in the caboose. This "featherbedding" preserved the income of a specific class of railroad worker, but it had a disastrous effect on the railroad industry. Similarly, this new form of professional featherbedding in the name of quality threatens to increase costs needlessly in an industry already under attack for skyrocketing inflation. If society and health payers do not resolve the featherbedding problem in much of health care, including anesthesiology, the nation's goal of accessible health care at affordable costs for all citizens will continue to be thwarted.

Outcomes: Anesthesiologists Versus CRNAs

According to American Association of Nurse Anesthetists (AANA) data, 25 percent of all CRNAs provide anesthesia services in urban and teaching hospitals with over 500 beds. Interestingly, CRNAs also provide 65 percent of all anesthesia in rural America. According to the same data source, 20 percent of all CRNA-administered anesthetics are provided without the collaboration of an anesthesiologist. According to the study performed by Cromwell and Rosenbach, CRNAs and anesthesiologists working separately and collectively perform the same tasks and participate in the same procedures regardless of complexity. Moreover, recent data collected and analyzed by an independent firm for the AANA demonstrate that when CRNAs and anesthesiologists work in joint practice arrangements, the cases assigned to CRNAs are, as a general rule, longer and more complex. Further, in the same settings, CRNAs provided anesthesia for 87 percent of all Medicare cases, which tend to be of greater length, of higher complexity, and reimbursed at a lower payment level than non-Medicare cases.

A congressionally mandated study by the National Research Council of the National Academy of Sciences confirmed that there is no significant difference in outcomes of care between anesthesia providers. This report stated: "There was no association of complications of anesthesia with the qualifications of the anesthetist or with the type of anesthesia."⁴ Studies show that most poor anesthesia outcomes have nothing to do with the level of education of the provider, that is, anesthesiologist or CRNA, but stem from lack of attention, organization, and the ability to function as a part of the surgical team—factors not unique to any health profession.⁵ From these studies, it is obvious that CRNAs and anesthesiologists possess the necessary education and clinical experience to administer anesthesia with similar results.

Cromwell and Rosenbach's statement that "a surprising percentage of

CRNAs work directly with the surgeon” is itself surprising. CRNAs are licensed to practice—and do practice—independently of anesthesiologists. Medical direction, when required, may be provided as well by a surgeon or an obstetrician rather than an anesthesiologist.

Saklad, a prominent anesthesiologist, wrote in 1968: “The number of medical judgements made by the anesthesiologist in any single {anesthetic} administration are few indeed.”⁶ Certainly, the sicker the patient, and the more complex the case, the greater the potential for requiring medical decisions. If specific medical decisions are needed during an anesthetic, the attending surgeon or obstetrician can, and often does, provide that input, regardless of the anesthesia provider. When other appropriate consultation is required, neither the CRNA nor the anesthesiologist will hesitate to request other physician consultants. Failure to consider this option led to some gaps in the article.

Sydney Wolfe, cofounder of the seventeen-year-old Public Citizen Health Research Group, stated: “Arguments that anesthesiologists are automatically better than CRNAs make no sense at all.”⁷ Careful, outcome-based quality assurance research is critical, regardless of provider, to assist in maintaining and improving the overall quality of care in this important specialty area. The AANA and the American Society of Anesthesiologists (ASA) support the development of quality assurance information.

Market Incentives For Anesthesiology

Cromwell and Rosenbach are correct when they conclude that patients would benefit from lower prices for anesthesia services and that the way to achieve lower prices is to build market-like incentives into the existing third-party payment system. An example of how a market system might work is plastic surgery. Here, the patient usually pays the entire bill, and third-party reimbursement is virtually nonexistent. The results are striking: in the plastic surgery submarket, nurse anesthetists working directly with surgeons provide the vast majority of the anesthesia services, with savings being passed on to the patient.

I concur with Cromwell and Rosenbach’s general conclusion that artificial barriers have distorted free-market forces. Barriers include those imposed by (1) both state and federal statutes and regulations; (2) private third-party payer policies; (3) voluntary accreditation standards; (4) physician dominance and control over hospital and ambulatory surgical center policies, including access to clinical privileges, patients, and clinical teaching resources; and (5) restrictions of physician-owned insurance companies. Many of these barriers have more to do with protecting

particular professions than protecting the public safety and welfare, as the Cromwell-Rosenbach article clearly demonstrates. Unless decisive action is taken, increasing economic pressure will lead to further market aberrations, which threaten to destroy any reasonable possibility of creating a truly competitive market in the foreseeable future. When barriers to the independent practice of appropriately qualified professionals are removed, much of the tortured logic underlying reimbursement for anesthesia care can be avoided, since competitive pressures will be able to determine reasonable prices for anesthesia services.

Anesthesia charges then will fall, since the price insensitivity and artificial barriers that have protected them from competition will no longer exist. Smaller fees will make this specialty less attractive to current and potential future practitioners, reducing the "oversupply" of anesthesiologists and limiting their work to areas where they are most effective and efficient. Concomitantly, professional and economic premiums will attract increased numbers of professional nurses to this nursing specialty. Society will save scarce resources that can be put to other, more productive, use.

Conclusion

Anesthesia is a demanding and highly respected profession. Over the past decades, many CRNAs and anesthesiologists have contributed selflessly to the care of patients, the provision of anesthesia services, and the expansion of the art and science of the profession. CRNAs and anesthesiologists who have worked to foster cost-effective services and savings to the system should be protected from any revisions in payment methodologies. This protection could be achieved through reimbursement revisions that weight payments for individual anesthesia services and that pay for them regardless of qualified provider or the practice arrangement.

Cromwell and Rosenbach have provided data and economic evidence to support their contention that reimbursement policy and other artificial barriers to professional practice by selected qualified providers are distorting the market for anesthesia care and threatening the professional role of nurse anesthetists. While their recommendations for change are well considered, perhaps the best solution to this problem is to work toward the elimination of the unwarranted barriers to competition in this specialized field, permitting more free-market principles to act to control cost, quality, and provider mix. Or, perhaps Congress should consider amending Medicare legislation to permit the Health Care Financing Administration, through its intermediaries, to contain future health care

costs by acting as a prudent buyer of services contracting with those providers who are willing to pass cost savings on to the government, beneficiaries, and ultimately the public. Anesthesia Medicare reimbursement, comprising 35 to 40 percent of the required anesthesia market, may be a good place to start such an experimental program. Introducing the "prudent buyer" concept into this health care market will have positive effects on reducing anesthesia costs without sacrificing quality and may lead the way to containing other health care costs.

NOTES

1. Assume that an anesthesiologist employs four CRNAs and that each CRNA administers an average of 650 anesthetics per year. The average anesthetic procedure has a total relative value of thirteen units (time, plus base units, plus modifiers). Assume that the average conversion factor is \$25 (the national range is from \$12.50 to \$60). The product of these numbers equals \$845,000 (four CRNAs times 650 cases per year times thirteen relative value units per case times \$25 conversion factor equals \$845,000). Even after considering the costs for CRNAs in 1986 dollars (four CRNAs times \$75,000 in wages, benefits, malpractice insurance, and overhead equals \$300,000), the net income for this practice will exceed \$500,000. When a \$60 conversion factor is used, the gross income would approach \$2 million, and the expenses would remain unchanged, Anesthesiologists who "supervise" hospital-employed CRNAs enjoy the benefits of a slightly reduced income without the additional expense of employing CRNAs. According to Center for Health Economics Research (CHER) data, approximately 75 percent of all anesthesiologists supervise and bill for the services provided by CRNAs.

On a case-by-case basis, anesthesiologists working without CRNAs charge on average 30 percent more per Medicare case than do CRNAs working without anesthesiologists. According to unpublished AANA survey data, the average conversion factor charged by solo CRNAs is \$18.50. According to Medicare data, the average national conversion factor paid by Medicare for anesthesiologists (without modifiers) is \$24. Assuming a total average relative value of 11.3 for Medicare cases (base, plus time units) the CRNA fee would be \$209 (11.3 times \$18.50), and the anesthesiologist fee for the same procedure would be \$271, a difference of \$62. The CRNA in this situation will have to accept assignment, or what Medicare allows. The anesthesiologist, in contrast, can balance bill the patient for that amount of the fee that exceeds what Medicare allows. This results in increased out-of-pocket costs for the Medicare recipient and a higher fee differential between CRNAs and anesthesiologists.

2. Data from the National Center for Health Statistics, personal communication, May 1987.
3. B. Gavzer, "What this Medical Battle Could Cost You," *Parade*, *Chicago Sun-Times*, July 1988, 10.
4. *Health Care for American Veterans*, House Committee Print no. 36, (Washington, DC.: U.S. GPO, 7 June 1977), 1156.
5. G.A. Blumenreich and B. Wolf, "Restrictions on CRNAs Imposed by Physician-Controlled Insurance Companies," *AANA Journal* 54 (1986): 538-539.
6. M. Saldad, "A Role for the Anesthesiologist," *Clinical Anesthesia* 2 (1967): 91-98
7. Gavzer, "What this Medical Battle Could Cost You."