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Sedation for Gastrointestinal Endoscopy: New Practices, New Economics

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INTRODUCTION

Go to: [Go](#)

Gastroenterologists in the United States have routinely sedated patients as a part of the endoscopic service. In recent years, more and more endoscopists are turning to anesthesiologists or nurse anesthetists to provide sedation rather than administering it themselves.^a Numerous factors are driving this transition, including increasing use of propofol (a sedation agent which in most settings is administered only by an anesthesiologist), efforts to offset falling reimbursements, and effective marketing by anesthesiologists. The clinical merits and the politics of this trend have been recently reviewed (1, 2). The economic implications are less appreciated by clinical gastroenterologists, however, and are the subject of this paper. To approach the subject, it is useful to ask three questions: (1) How significant is the transition to non-gastroenterologist administered sedation? (2) How are the payors responding to this transition? and (3) Where are the payors headed?

How Significant Is the Transition to Non-Gastroenterologist Administered Sedation?

We can begin to define the size of this transition by reviewing data from the Center for Medicare and Medicaid Services (CMS) for claims submitted during the period of 2001 through 2003 for one CPT code, 00810, "Anesthesia for lower intestinal endoscopic procedures, endoscope introduced distal to duodenum." This is the code billed by anesthesiologists when they provide anesthesia during colonoscopy. In Medicare beneficiaries, the number of colonoscopy cases during which anesthesiologists provided sedation (measured by the number of services billed under 00810) more than doubled between 2001 and 2003, approaching 700,000 in 2003 (Fig. 1).^b Correspondingly, charges to Medicare for code 00810

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increased 86%, to a level of nearly \$80,000,000.^b

How large is the potential market for endoscopy-related anesthesiology services? In 2002, 14.2 million colonoscopies were performed in the United States (3). In 2003, the national Medicare mean allowed charges for code 00810 was \$106 per case.^b Therefore, if sedation were provided by anesthesiologists for all colonoscopies, and anesthesiology services were reimbursed by all commercial insurance payors at Medicare rates, then the allowed charges for anesthesia provided during colonoscopy would be \$1.5 billion. This figure represents a significant underestimation of potential charges, since the majority of colonoscopies in the United States are performed for patients with commercial coverage (4, 5), and commercial insurers reimburse anesthesiologists an average of approximately \$400 per case.^c Also, other gastrointestinal procedures (ERCP, EUS, and EGD) constitute an additional number of potential services. Therefore, expenditures on anesthesiologists' services related to endoscopy have the potential to reach several billion dollars per year.

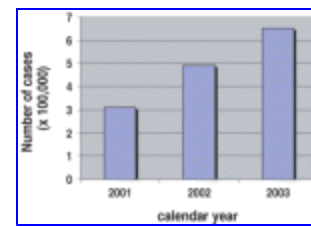
Given this enormous potential for revenue, anesthesiologists in some regions of the country are aggressively marketing their services to endoscopists. For similar reasons, this rapidly growing market is attracting increased scrutiny from Medicare contractors and commercial payors.

How Are Payors Responding to this Transition?

To answer this question, an understanding of the valuation of endoscopic sedation is necessary. In the late 1980s, Medicare determined that sedation (provided by the endoscopist) was part of the "practice expense" portion of the service (6–8). Accordingly, Medicare generally did not reimburse an additional amount for sedation, whether administered by an anesthesiologist, or by a gastroenterologist (and billed under code 99141, "Sedation with or without analgesia [conscious sedation]; intravenous, intramuscular or inhalation," or 99142, "Sedation with or without analgesia [conscious sedation]; oral, rectal and/or intranasal.") It appears increasing numbers of commercial payors may be taking steps to follow Medicare's lead (C. Katzoff, personal communication).

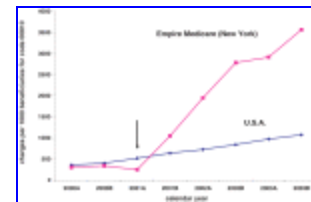
Historically, there has been a consensus among insurance carriers that sedation during high-risk cases constitutes an exceptional circumstance wherein (regardless of the sedative drug) anesthesiologists' services (billed under codes 00740, "Anesthesia for upper gastrointestinal endoscopic procedures, endoscope introduced proximal to duodenum," or 00810) should be allowed. To curb overuse, carriers have carefully defined "high risk" in their published policies. For instance, one carrier defines high risk as "(i) recent post-operative status for patients who have undergone a recent (1–2 weeks) major surgical procedure and are considered to be potentially unstable, (ii) chronic airway obstruction, (iii) unstable coronary artery disease, (iv) recent myocardial infarction or acute myocardial infarction, (v) heart failure, (vi) patient uncontrollable under conscious sedation, (vii) shock" (9). Moreover, carriers require that "supporting documentation should identify patient-specific reasons (data) such as reports from prior endoscopies indicating difficulty in completing the procedure; or unusual discomfort during the procedure; or evidence of an unstable medical condition" (9).

However, the vast majority of endoscopy is performed in average-risk subjects. Currently, policies in the United States regarding anesthesiologist payment during average-risk endoscopy vary across Medicare contractors and are evolving. Noridian Medicare (the Medicare contractor for 12 states) has carried forward into the "propofol era" its pre-existing policy that (regardless of the sedative drug) sedation is "inherent to" the endoscopic procedure. Citing the gastroenterology societies, Noridian states that "the routine assistance of an anesthesiologist for average risk patients undergoing ... endoscopic procedures is not warranted ..." (10). Other contractors have taken the opposite view. For example, GHI Medicare, the Medicare contractor for Queens, New York, states in a policy dated 12/01/01 that it "... will provide for the reimbursement of patients undergoing endoscopic procedures utilizing propofol or a paralytic agent" (11).



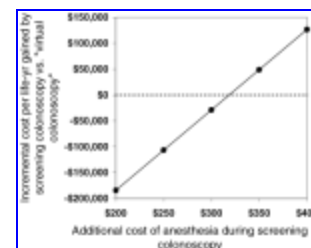
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Figure 1. The growth during the years 2001–2003 in the number of colonoscopy cases for which anesthesi...



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Figure 2. Growth in charges allowed under code 00810 for Empire Medicare Services (NY) as compared to...



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Figure 3. One-way sensitivity analysis on the cost of adding anesthesiologists' services to colonosco...

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Policy Drives Practice

As would be expected, the rates of anesthesiologist utilization during endoscopy in different regions of the country vary in tandem with regional payor policies. For example, approximately 35% of all code 00810 services provided in the United States in 2002 were billed in either the state of Florida or in the New York metropolitan area (12), two regions where Medicare contractor policies allow reimbursement for anesthesiologist services during gastrointestinal endoscopy. A second indicator, the rate of adoption of propofol by gastroenterologists, produces the same conclusion: A 2004 postal survey of 5,000 gastroenterologists showed that in the Northeast states, where carrier policies are unfavorable toward anesthesiologists, only 7% of gastroenterologists are utilizing propofol, *versus* 43% in the mid-Atlantic states, where favorable policies prevail (13). A third indicator, the growth in charges for code 00810, shows that growth is steepest in regions where carrier policy favors reimbursement. For example, the growth rate in charges for 00810 in metropolitan New York is steeper than the national growth rate (Fig. 2) (Empire Medicare Services, NY, personal communication). Of note, the steep rise in charges in New York began in the same calendar year in which Empire Medicare Services implemented the policy amendment that allowed payment to anesthesiologists for administering deep sedation to patients undergoing endoscopic procedures (Fig. 2, see arrow).

Whether their posture is pro or con, payors are now scrutinizing anesthesia claims related to endoscopy. Modernized information systems help payors link an endoscopist procedure claim with an anesthesia claim for the same date of professional service. If the payor mistakenly pays a claim, the error can be detected during a process of "post-payment review," and refunds either from the anesthesiologist or from the gastroenterologist may be requested up to several years after payments are made. In 2003, Noridian Medicare proposed requiring that the endoscopist report his or her service with a reduced services (52) modifier if an anesthesiologist was utilized during routine endoscopic procedure (Noridian Administrative Services, personal communication). This draft policy was not approved after resistance from professional societies.

Where are the Payors Headed?

Because of the costs involved in utilizing anesthesiologists during average-risk endoscopy, payor policies are evolving rapidly. At least three outcomes can be envisioned. First, the health-care system could simply absorb the added costs in the interest of possibly improving patient care. Second, payors could reduce or deny payments to anesthesiologists. And third, payors could create a two-tier approach, in which the professional fee normally paid to the gastroenterologist would be divided between the gastroenterologist and the anesthesiologist if an anesthesiologist participates in the procedure. This outcome would be analogous to the current Medicare "site-of-service differential," which provides a reduced gastroenterology professional fee when a procedure is performed in a hospital or ambulatory center setting rather than an office. To implement a "use-of-anesthesiologist differential," CMS would have the difficult task (which has never been undertaken) of apportioning the physician work of an endoscopic examination between instrumentation and sedation.

Several clues in the current landscape help predict where the payors may be headed. For the first time, sedation during endoscopy is addressed formally by the CPT® Editorial Panel, in a document which reflects several years of input from the interest groups. In CPT® 2005, Appendix G describes over 220 procedures (highlighted with a "bulls-eye" or "target" symbol) for which sedation is considered as included in the standard fee for the procedure. Almost all upper and lower GI endoscopic procedure codes are listed in this Appendix. The authors continue:

"Since these services include conscious sedation, it is not appropriate for the same physician to report both the service and one of the conscious sedation codes (99141 or 99142). It is expected that if conscious sedation is provided to the patient as part of one of these services, it is provided by the same physician who is

providing the service ... The inclusion of a procedure on this list does not prevent separate reporting of an associated anesthesia procedure/service (CPT codes 00100–01999) when performed by a physician other than the operating physician or a qualified professional under the responsible supervision of a physician other than the operating physician ... When clinical conditions of the patient require such anesthesia services, or in the circumstances when the patient does not require sedation, the operating physician is not required to report the procedure as a reduced service using modifier 52" (14).

In March 2004, the American College of Gastroenterology, the American Gastroenterological Association, and the American Society for Gastrointestinal Endoscopy reiterated their position that "the routine assistance of an anesthesiologist/anesthetist for average risk patients undergoing standard upper and lower endoscopic procedures is not warranted" (15). The statement continued: "Complex procedures and procedures in high-risk patients may justify the use of an anesthesiologist/anesthetist to provide conscious and/or deep sedation. In such cases, this provider may bill separately for their professional services." This statement draws upon previous single-society statements which adopt a similar position, describing the addition of anesthesiologists to routine endoscopic procedures as "cost-prohibitive" (16).

In November 2004, officials in CMS' Hospital and Ambulatory Policy Group/Division of Practitioner Service issued a profile of the types of codes that are likely to come under scrutiny at the 2005 RUC 5-yr review (17–19). These characteristics (which apply to some endoscopy codes) include high-volume codes; codes that have not been through a prior 5-yr RUC review; and services that were initially valued as inpatient codes, but are now predominantly done in an outpatient setting. A specific listing of the codes targeted for review will be identified when CMS publishes the Proposed Rule regarding the 5-yr review in early 2005.

Economics Drive Practice

What would be the implications for the practice of gastroenterology if the health-care system were simply to absorb the costs of utilizing anesthesiologists during endoscopy, adding these costs to the current costs of GI endoscopy? One topical matter for practicing gastroenterologists is how this development could impact the competitiveness of optical colonoscopy as a cancer-screening tool *versus* emerging non-invasive technologies. A recent study compares the cost-effectiveness of optical colonoscopy to that of CT colonography, or "virtual" colonoscopy (20). For their model, the authors assume that screening is performed every 10 yr from age 50 to 80, that optical colonoscopy (performed without anesthesia services) and virtual colonoscopy both cost \$820, and that virtual colonoscopy performs as well as it has in the most favorable study (21) (other recent studies of CT colonography have showed substantially lower performance (22)). On the basis of their model, the authors conclude that "even with optimal test performance, virtual colonoscopy must cost 25–40% less than (optical) colonoscopy for sequential testing (radiology in all, colonoscopy in some) to be economically sensible" (20).

The same model and cost data can be used to ask: "If the cost of optical colonoscopy is increased due to the addition of an anesthesiologist, at what point does optical colonoscopy become financially unattractive compared to CT colonography?" To answer this, a "sensitivity analysis" can be performed to demonstrate the impact of varying the cost of anesthesiologists' services (Fig. 3). According to this analysis, if anesthesia services increase the cost of colonoscopy by about \$350 per case, screening with optical colonoscopy begins to become costly (incremental cost effectiveness ratio >\$50,000/life-year gained) compared to CT colonography. Even if the assumptions in the model are altered, the conclusion that increasing the cost of optical colonoscopy will decrease its competitiveness warrants consideration by gastroenterologists.

CONCLUSIONSGo to: 

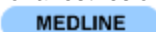
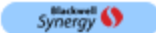

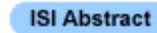

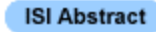
The rapid rise in the use of anesthesiologists during GI endoscopy has the potential to transform gastroenterology practice. While the clinical merits of utilizing an anesthesiologist during endoscopy in an average-risk patient may be debated, there is no question that the added costs of this service are significant. These costs appear to be leading to increased scrutiny by payors and regulatory bodies. The gastroenterology societies have taken the position that anesthesiologist assistance is appropriate in high-risk but not in average-risk cases, a position which has engendered controversy both inside and outside the gastroenterology community. Many payors have assumed a similar stance. The outcome of this process is uncertain, and solutions may be region-specific. Some gastroenterologists have proposed nurse administration of propofol sedation under non-anesthesiologist physician supervision, but this solution would require intensive lobbying efforts to change nursing practice laws in certain states (Alabama, Arizona, Connecticut, Florida, Kentucky, Louisiana, Mississippi, Missouri, South Carolina, Texas, and Wyoming, as of January 2005) (2). Local medical staff policies and malpractice liability criteria may also shape the debate over whether non-anesthesiologists can administer drugs like propofol. Ultimately, the outcome will be determined by science, economics, and the political influence of the various interest groups. Gastroenterologists should understand the issues involved, track the policies of Medicare contractor and commercial payors in their community, and become involved in the debate.

ACKNOWLEDGMENTGo to: 

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- a The term "anesthesiologist" is utilized in this paper to describe anesthesiologists and certified registered nurse anesthetists.
- b Data from the Center for Medicare and Medicaid Services, courtesy of Mr. James Menas.
- c Figure determined by the authors from interviews with anesthesiologists and payors in the New York area.

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