Increase seen in use of anesthesiologists to provide sedation during endoscopies, colonoscopies

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Between 2003 and 2009, the use of anesthesia services to provide sedation during endoscopies and colonoscopies increased substantially, according to a study in the March 21 issue of *JAMA*. The authors also found that most of the gastroenterology anesthesia use was for low-risk patients, and that there was considerable regional variation in use.

"The continuous increase in spending on medical care has triggered a debate concerning which services and procedures provide adequate value and which do not, and therefore represent potential areas to reduce cost. The use of anesthesiologists, nurse anesthetists, or both during gastrointestinal endoscopies has been identified as one such potential area. Under current payment guidelines for gastrointestinal endoscopies, if intravenous sedation is needed, the endoscopist has to administer it with support of a nurse, and the sedation component is included in the professional fee. Involvement of an anesthesiologist or nurse anesthetist, which implies an additional payment, is only justified for procedures performed on high-risk patients," according to background information in the article. "The frequency with which anesthesiologists or nurse anesthetists provide sedation for gastrointestinal endoscopies, especially for low-risk patients, is poorly understood and controversial."

Hangsheng Liu, Ph.D., of the RAND Corporation, Boston, and colleagues analyzed data to examine the proportion of gastroenterology procedures assisted by a separate anesthesiologist or nurse anesthetist

and the associated payments for these services. The authors also evaluated regional variation in anesthesia use and estimated what proportion of these services were potentially discretionary. The study analysis included claims data for a 5 percent representative sample of Medicare fee-for-service patients (1.1 million adults) and a sample of 5.5 million commercially insured patients between 2003 and 2009, who had either an upper gastrointestinal endoscopy or colonoscopy as outpatients. Overall, 26.6 percent of Medicare patients and 28.6 percent of commercially insured patients received anesthesia services.

Although the number of gastroenterology procedures per million enrollees per year remained largely unchanged among Medicare patients, with an average of 136,718, the number of gastroenterology procedures per million enrollees per year increased more than 50 percent in commercially insured patients, from 33,599 in 2003 to 50,816 in 2009. The proportion of procedures using anesthesia services increased at a similar rate for commercially insured patients (13.6 percent to 35.5 percent) and Medicare patients (13.5 percent to 30.2 percent). Payments for gastroenterology anesthesia services doubled among Medicare patients and quadrupled among commercially insured patients over the study period.

The authors found that the proportion of procedures with anesthesia services varied substantially by geographic region. Patterns were similar for Medicare and commercially insured patients, with the lowest use in the West region (Medicare sample, 14.0 percent; and commercially insured sample, 12.6 percent in 2009) and the highest use in the Northeast region (47.5 percent and 59.0 percent in 2009, respectively).

Overall, the proportion of anesthesia services delivered to low-risk patients (as defined by a measure of the American Society of Anesthesiologists) was more than two-thirds in the Medicare population, and more than three-quarters among the commercially insured

population. Also, the number of procedures with anesthesia services for low-risk patients increased substantially in both populations during the study period.

"Our results suggest that the majority of gastroenterology-related anesthesia services are provided to low-risk patients and can be considered potentially discretionary based on current payment policies," the authors write. "Because anesthesia use is projected to increase further, addressing such potentially discretionary use represents a sizeable target for cost savings. This is particularly true because the number of colonoscopies is likely to increase in the coming years."

Lee A. Fleisher, M.D., of the University of Pennsylvania, Philadelphia, writes in an accompanying editorial addressing the increase in the use of anesthesia services that there are several reasons endoscopists might prefer to use these services.

"One reason is that anesthesiologists and anesthetists provide deep sedation or general anesthesia as opposed to moderate sedation, which would potentially allow for the examination to be completed in a shorter time. … A second reason may be related to patient acceptance. Although it is difficult to conclusively demonstrate a link between procedure volume and anesthesia services, patient acceptance of endoscopy and colonoscopy may be directly related to the assurance of deep sedation or general anesthesia for the procedure, as the authors indicated."

"A third reason endoscopists might prefer to use anesthesia services may be that the presence of anesthesia services transfers the responsibility for managing sedation from the endoscopist to the anesthesiologist or nurse anesthetist; doing so has little financial consequence but may reduce medicolegal consequences for the endoscopist. … A fourth reason might relate to financial considerations. The current reimbursement for gastroenterologists performing endoscopy includes provision of sedation,

and the transfer of care to anesthesia services results in no decrease in their fees. With the addition of anesthesia fees, there is a net increase in total costs of provision of colonoscopy and upper gastrointestinal endoscopy."

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