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Insurance Incentives and the Use of Monitoring Devices

To the Editor:—Coté *et al.*[1] are convinced that the use of oximeters will save lives by facilitating early recognition of hypoxemia. They speculate that if insurance companies provided incentives such as reduced malpractice insurance costs, more individuals would use these monitoring devices.

The Joint Underwriting Association (JUA), which is the insurance consortium in Massachusetts, has already introduced such incentives. In February, 1986, Dr. Ellison Pierce suggested to the Executive Committee of the Massachusetts Society of Anesthesiologists (MSA) that if anesthesiologists in Massachusetts instituted a firm risk management program, the JUA might place MSA members in a lower risk category and thereby reduce premium costs. Dr. Joseph Beauregard, at that time President of the MSA, and Mr. Edward Brennan, Counsel to the MSA, conceived the idea of linking the verifiable use of certain monitoring instruments with a premium discount. They negotiated with the officials of the JUA and, in January, 1987, the MSA and the JUA agreed to such a discount that was then approved by the Division of Insurance (DOI) of the Commonwealth of Massachusetts. This was codified in a document entitled "Stipulation Regarding Discounts For Anesthesiologists Who Participate In Risk Management Activities." The Stipulation is 21 pages long, but its essence is found in the first paragraph: "A discount of 20% shall be granted to any anesthesiologist who certifies to the JUA that he or she shall have access to and shall use both a pulse oximeter and in all cases where physically possible an end-tidal CO_2 analyzer (capnograph) in all circumstances where their use is recommended in the Standards for Basic Intraoperative Monitoring adopted by the American Society of Anesthesiologists (ASA) on October 2, 1986 . . ." The Stipulation then makes a number of exceptions for unexpected equipment failure, emergencies, impracticalities, *e.g.*, burned patients, and in routine obstetric practice. There are also premium penalties for failure to use the devices after agreeing to do so.

The key evidence that persuaded the JUA and the DOI was the preliminary finding of the Closed Claim Study being conducted by the Professional Liability Committee of the American Society of Anesthesiologists.[2] At that time, an analysis of the first 381 claims resulting from anesthetic death or major neurological injury showed that, in the opinion of the reviewers, 113 (30%) could have been prevented if one or both devices had been used, had they been available at the time.

As part of this Closed Claims Study, the Ad Hoc Committee on Closed Claims of the MSA reviewed 151 claims that were closed from the founding of the JUA in 1975 to the end of 1984. Of the 45 cases with Severity of Injury (SOI) classification 7, 8, and 9 (major permanent neurological injury or death), 25 (56%) could have been prevented if a pulse oximeter had been in use.

One can debate the merits or otherwise of using financial incentives to influence professional behavior, but the findings of a recently completed appraisal by the JUA of the current use of the two devices are striking. Of the 78 anesthesia services in Massachusetts that the JUA insures, 70 are in full compliance and the remainder in partial compliance. There are 275 anesthesiologists practicing in Massachusetts who are insured by the JUA and, of these, 241 have been approved for the discount. Since the Stipulation only went into effect on July 1, 1987, this indicates a remarkably rapid rate of acquisition and introduction into everyday use of the two monitors. Of course, this might well have occurred even without the discount. Studies by industrial psychologists suggest that, at the professional level, control and achievement are at least as important as money in providing incentives.[3]

Only continued study will demonstrate whether or not the use of these devices will reduce the incidence of major anesthetic mishaps. The MSA and the JUA plan to do so.

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Urinary Retention following Spinal Opiates

To the Editor:—The editorial by Dray on epidural opiates and urinary retention highlights at least three issues of clinical importance.[1]

First, the editorial suggests that certain opiates produce lower incidence of urinary problems after spinal use compared with morphine. The tenet of oral and parenteral opiate studies is that side-effect incidence must be compared to equi-analgesic dosage. We would argue that until this is obeyed for spinal opiates such a conclusion is premature. Clinical trial design is complex for spinal opiates, particularly for