

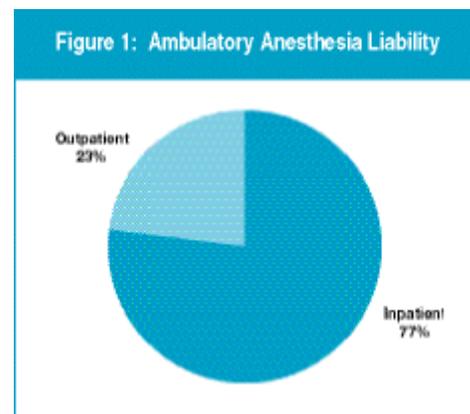
## Citation

Posner, KL: Liability Profile of Ambulatory Anesthesia. *ASA Newsletter* 64(6):10-12, 2000.

## Full Text

With the growth in ambulatory surgery and anesthesia in the United States comes a parallel growth in liability for the anesthesiologist providing ambulatory anesthesia services. The U.S. government estimates that about half of all anesthesia procedures are conducted on an ambulatory basis.<sup>1</sup> The good news for anesthesiologists practicing in an outpatient setting is that fewer than half of all closed anesthesia malpractice claims arise from procedures conducted on an ambulatory basis [Figure 1].

The Closed Claims Project database consists of standardized summary data on anesthesia malpractice claims collected from 35 professional liability carriers throughout the United States.<sup>2</sup> These carriers insure approximately half of the practicing anesthesiologists in the United States. The Closed Claims Project is conducted by the ASA Committee on Professional Liability and has been ongoing since 1985. There are currently 4,459 claims in the Closed Claims Project database. Claims for damage to teeth or dentures are excluded. The following data are derived from the 552 outpatient and 1,874 inpatient claims for adverse events from 1980 or later in the Closed Claims Project database.



While ambulatory anesthesia malpractice claims represent only 23 percent of the 2,426 claims analyzed, the proportion of claims arising from ambulatory settings has been increasing. Ambulatory anesthesia claims represented 20 percent of claims from 1985-89 and 26 percent of claims from 1990-95 ( $p < 0.05$ ). Claims for the late 1990s are not yet available because it takes nearly five years between the occurrence of an adverse event, claim closure and subsequent data collection for inclusion in the Closed Claims Project database.

## Patients and Procedures

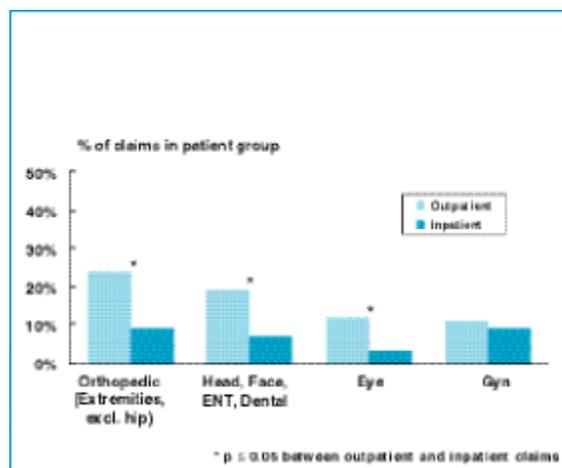
Not unexpectedly, patients filing claims for ambulatory anesthesia were generally younger and healthier than inpatients [Table 1]. Most outpatient claims were filed by ASA I-II patients with a mean age of 40 years compared to a mean age of 43 years for inpatients ( $p < 0.05$ ). This difference in age probably reflects the slightly higher percentage of pediatric patients in the ambulatory group as well as the lower percentage of older patients. Most claims in both groups were filed by females.

**Table 1: Patient Profiles**

|            | Closed Claims<br>Outpatient Plaintiffs<br>1980-1995<br>(n = 552) | Closed Claims<br>Inpatient Plaintiffs<br>1980-1999<br>(n = 1874) | U.S. Ambulatory<br>Surgery Patients<br>1996 <sup>1</sup><br>(n = 21,000,000) |
|------------|--|--|--|
| % Total    | 23 %   | 77 %   | 52 %   |
| % Female   | 61 %   | 60 %   | 56 %   |
| Mean Age   | 40*  | 43   | NA   |
| % < 15 yrs | 11 % **  | 8 %  | 8 %  |
| % > 65 yrs | 11 % **  | 16 %   | 34 %   |
| ASA 1-2    | 83 % **  | 61 %   | NA   |

<sup>1</sup> National Center for Health Statistics  
\* p < 0.05 compared to mean inpatient plaintiff age \*\* p < 0.01 compared to proportion of inpatient claims

The age profile of ambulatory anesthesia patients filing claims differs from the age profile of patients with ambulatory surgery visits in 1996 as reported by the U.S. government.<sup>1</sup> The proportion of pediatric patients (< 15 years) is similar in both groups, but the proportion of older patients is quite different [Table 1]. Patients 65 or older account for 34 percent of 1996 ambulatory surgery visits in the United States but only 11 percent of closed claims.<sup>1</sup> Although the ambulatory surgery visit data (1996) are more recent than the Closed Claims Project data (1980-95), even a comparison to the more recent closed claims from 1990 or later shows a similar trend, with only 13 percent of 1990-95 closed ambulatory anesthesia claims involving patients 65 or older. We do not know if this difference between claims and visits reflects the patient safety profile of ambulatory anesthesia or if it simply reflects differences in tendencies to file claims in different age groups. This is an example of the difficulty of attempting to generalize about anesthesia injury from closed claims. Since not all patients who are injured file claims, and some patients who are not injured do file claims, closed claims data can only describe liability and is not a valid source for information on the spectrum of anesthesia injury in general.

**Figure 2: Most Common Surgical Procedures Associated with Ambulatory Anesthesia Claims**

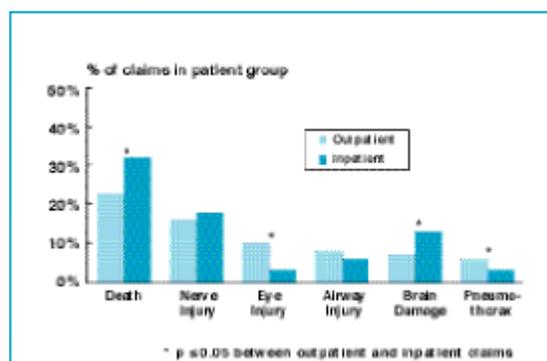
As expected, the surgical procedures associated with ambulatory anesthesia claims differed from inpatient claims [Figure 2]. This may account for some of the differences in complications, as the most common procedures in ambulatory anesthesia claims were orthopedic procedures on the extremities, procedures on the face, head or neck (including dental and ENT), ophthalmic surgery and gynecological procedures. These procedures combined represented two-thirds of ambulatory anesthesia claims (66 percent) and were more than twice as common in outpatient claims compared to inpatient claims (27 percent).

Claims associated with ambulatory anesthesia more commonly involved regional anesthesia or monitored anesthesia care (34 percent) than inpatient claims (23 percent,  $p < 0.05$ ). General anesthesia was implicated in 65 percent of outpatient claims and 73 percent of inpatient claims.

## Damaging Events

The "damaging event" is the particular aspect of anesthesia management that led to patient injury. In inpatient claims, the most common damaging events involved management of the respiratory system (26 percent). Examples include difficult intubation, inadequate oxygenation or ventilation, and airway obstruction. Among ambulatory anesthesia claims, 21 percent involved respiratory system events. Cardiovascular system events accounted for 9 percent of outpatient claims, while equipment problems accounted for another 10 percent. These percentages are similar to inpatient claims. However, miscellaneous events unrelated to the respiratory or cardiovascular systems or equipment comprised 26 percent of outpatient claims but only 15 percent of inpatient claims. The most common complaints were related to regional block placement (8 percent of outpatient claims), including block needle trauma, high block or dural puncture. In 3 percent of outpatient claims, the patient moved or coughed during anesthesia, usually during ophthalmic surgery, resulting in eye injury. In 2 percent of outpatient claims, surgery was conducted on the wrong side or wrong patient, or the wrong surgical procedure was performed.

Figure 3: Most Common Complications in Ambulatory Anesthesia Claims



## Most Common Complications

The injuries in ambulatory anesthesia claims tended to be less severe than the injuries in inpatient claims. Most ambulatory anesthesia claims were for temporary or nondisabling injuries (62 percent compared to 48 percent inpatients,  $p \leq 0.05$ ). Death and brain damage were less common among outpatients than inpatients ( $p \leq 0.05$ ) [Figure 3]. Eye injuries and pneumothorax were more common among outpatients ( $p \leq 0.05$ ). The most common nonfatal injuries in outpatient claims were nerve injury (16 percent), eye injury (10 percent), airway injury (8 percent), brain damage (7 percent), pneumothorax (6 percent), emotional distress (5 percent), burns (4 percent), headache (4 percent) and back pain (3 percent).

## Litigation and Payments

Ambulatory anesthesia claims were more likely to be resolved without a lawsuit than inpatient claims (21 percent ambulatory claims with no lawsuit filed versus 16 percent inpatient,  $p \leq 0.05$ ). Payment rates were about the same for ambulatory and inpatient anesthesia claims, which may reflect similarities in appropriateness of anesthesia care between the two groups: Half received anesthesia care that met standards, and only 38 percent received care that was clearly substandard.

While payment rates were similar, payment amounts differed between outpatient and inpatient claims. In general, payments to outpatients were lower than payments to inpatients (median \$75,000 versus \$140,000,  $p \leq 0.01$ ). This is not surprising because it has been found that payment amounts correlate with severity of injury, and outpatient claims involved less severe injuries than inpatient claims.<sup>3</sup> While

payments in outpatient anesthesia claims were relatively low, the highest payment was over \$14 million, and there were a total of 24 outpatient claims (4 percent overall) with payments greater than \$1 million.

## Conclusion

Analysis of closed claims suggests that ambulatory anesthesia represents an increasing area of liability risk for the anesthesiologist. The liability profile of ambulatory anesthesia may simply reflect the increasing proportion of procedures conducted on an outpatient basis as well as the type of patients and procedures in this setting rather than any particular patient safety issues.

## References

1. Hall MJ, Lawrence L. Ambulatory Surgery in the United States, 1996. Advance Data from Vital and Health Statistics. No. 300. Hyattsville, Maryland: National Center for Health Statistics; 1998.
2. Cheney FW. The American Society of Anesthesiologists Closed Claims Project. What have we learned, how has it affected practice, and how will it affect practice in the future? *Anesthesiology*. 1999; 91:552-556.
3. Cheney FW, Posner K, Caplan RA, Ward J. Standard of care and anesthesia liability. *JAMA*. 1989; 261:1599-1603.

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