Volume 66, Number 6
June 2002

CONTENTS

FEATURES

Professional Liability: How Do We Solve the Problems?

ARTICLES

DEPARTMENTS

The views expressed herein are those of the authors and do not necessarily represent or reflect the views, policies or actions of the American Society of Anesthesiologists.

SUBSTANCE ABUSE HOTLINE
Contact the ASA Executive Office at (847) 825-5586 to obtain the addresses and telephone numbers for state medical society programs and services that assist impaired physicians.

With each passing year, anesthesia becomes safer for patients, but not necessarily safer for physicians. Although anesthesia-related injuries are down, malpractice insurance premiums are rising. Can we avert a malpractice crisis?

The ***ASA NEWSLETTER*** (USPS 033-200) is published monthly for ASA members by the American Society of Anesthesiologists, 520 N. Northwest Highway, Park Ridge, IL 60068-2573.
E-mail: mail@ASAhq.org
Editor: Newsletter_Editor@ASAhq.org
Web site: http://www.ASAhq.org
Periodical postage paid at Park Ridge, IL, and additional mailing offices.

POSTMASTER: Send address changes to the *ASA NEWSLETTER*, 520 N. Northwest Highway, Park Ridge, IL 60068-2573; (847) 825-5586.

America the Suable

Perhaps we are witnessing the beginning of the end of capitalism. Big business is violating the public trust. Politicians are representing lobbies rather than constituents. Trial attorneys are out of control. In the era of only one superpower, which is the most powerful and technologically advanced country to ever exist on the planet, a growing state of uneasiness exists. Americans suffering post-9/11 depression are more conservative and tentative when investing, traveling and purchasing. Recession recovery has been stalled. Can anything reverse this downward economic spiral?

The obvious place to start would be tort reform. Litigation costs are so astronomically high that the very roots of society are being rotted. As physicians, we are witnessing the exodus of obstetricians, orthopedic surgeons and neurosurgeons out of Mississippi, Nevada, Pennsylvania and West Virginia. A malpractice insurance crisis seems imminent, and most states are apt to be affected. The driving force that has increased rates beyond the breaking point involves the abandonment of St. Paul companies in underwriting malpractice insurance. Other companies also have dropped this line of business. Their reasoning is simple economics — one does not spend $1.99 in payouts for every $1 collected. The remaining companies willing to provide coverage are expected to increase rates as much as 300 percent over the next 20 years. St. Paul handled 25 percent of the malpractice market covering 42,000 physicians and 750 hospitals in 12 states.[1] With their departure, malpractice costs for neurosurgeons and obstetricians could reach $400,000 annually!

With the rapid egress of doctors from West Virginia, Pennsylvania, Nevada and Mississippi, their state legislatures are deliberating over tort reform legislation. However, this issue is time-critical because once doctors leave, it is hard to replace them, especially considering the looming doctor workforce shortage. Las Vegas — the city of opportunity for many new settlers — is losing 42 percent of their obstetricians, leaving 78 physicians to cover 23,000 births in a population of 1.5 million! When queried, 76 percent of all obstetricians have been sued, and 40 percent have been sued three times or more.

Another horrifying trend is emerging in rural areas. It seems that it is cheaper to let the patient die than to expend resources and incur legal exposure by attempting heroic medical care. Hospitals are closing emergency rooms, maternity wards or ceasing neurosurgical coverage because of high malpractice costs. In Bisbee, Arizona, closure of the only maternity ward within 4,000 square miles has forced pregnant women to travel 60 miles to the next labor and delivery suite. In Mississippi, a $5 million malpractice suit awarded because a neurosurgeon failed to obtain a CT scan on a 27-year-old who tripped in a movie theater (he had a "slow" subdural hematoma) has resulted in no neurosurgical coverage in one out of every four days in the hospital's emergency room. No physician is willing to move into Mississippi because it is too tort-friendly. As a consequence, if someone has head trauma on the no-coverage night, it will take at least one hour to transport the patient to the nearest neurosurgeon.

I do not wish to give you the impression that avaricious, unscrupulous, "carpe diem" trial attorneys are preying only on doctors. These omnivores are crippling the business sector with asbestos litigation, construction claims,

Continued on page 38

Mark J. Lema, M.D., Ph.D.
Editor

Streamlining the Approval of Clinical Publications

Eugene P. Sinclair, M.D., Speaker of the House of Delegates

Clinically useful publications are approved for distribution to members in various ways. This article explains the process used to develop and approve practice parameters and committee booklets.

In March 1991, the Task Force on Practice Parameters submitted report 428-1 to the Board of Directors. The report recommended 1) that the task force become a standing committee, 2) the topics for the first two practice parameters and 3) a process for approving practice parameters.

The task force recommended that practice parameters not require approval by the House of Delegates. It recommended that the review process originate with the panel of experts who developed the parameter. Next, the Committee on Practice Parameters was to review the document before sending it to the Administrative Council for final approval. As a precedent for this recommendation, the task force cited the mechanisms that other specialty societies used to approve similar publications. The Board amended this proposed approval process to require final approval by the House of Delegates, which would retain only veto authority. The House approved the Board's changes.

Eugene P. Sinclair, M.D.

Until 1997, each year in which practice parameters were submitted to the House, the speaker explained that by prior action of the House, practice parameters could not be amended but could be fully debated, approved, rejected or referred. In 1997, the House added this provision to its Rules of Order.

In recent years, the development process for practice parameters has been expanded to include presentation for comment in appropriate forums before the committee submits them to the House.

Booklets that committees develop for general distribution are approved in a different manner. This Section on Clinical Care submitted report 610.1 to the 1997 House of Delegates. The report observed that there seemed to be inconsistent review processes for various publications with varying outcomes. A committee publication up to that time would be submitted to the Board and the House where each body would fully consider, amend appropriately, then approve, reject or refer it.

The section report noted that the work products of committees may be controversial but are authoritative and contain valuable, timely information that is requested by members in order for them to practice according to current guidelines for good medical practice. To make this information available to members on a more timely basis, the report suggested development of a final review mechanism that is not as costly or lengthy as the process for developing a practice guideline.

In response to this suggestion, the House authorized the President to oversee the development of a mechanism for expedient review of committee work products intended for general distribution to the membership. The review process was to occur before publication and emphasize the impact that a publication might have on clinical practice.

In December 1997, the Administrative Council approved the mechanism by which some committee publications have subsequently been authorized for distribution without final approval by the House of Delegates. The process requires that the section chair, vice-chair and chair of the relevant board committee approve the committee publication prior to distribution. Each individual in the approval chain reviews the document and indicates approval, disapproval or approval with noted revisions. After determining that the document is consistent with ASA policies and that appropriate processes were utilized in its development, a disclaimer statement that was approved by the 1997 House of Delegates is appended to the publication. It reads:

> *"This document has been developed by the [committee name] but has not been reviewed or approved as a practice parameter or policy statement by the ASA House of Delegates. Variances from recommendations contained in this document may be acceptable based on the judgment of the responsible anesthesiologist. The recommendations are designed to encourage quality patient care and safety in the workplace but cannot guarantee a specific outcome. They are subject to revision from time to time as warranted by the evolution of technology and practice."*

In summary, the diverse approval mechanisms for clinical publications retain the scientific integrity of the final products and are characterized by development through open dialogue between the House and the originating task force or committee.

309 Attend 23rd ASA Legislative Conference, Support Fee Schedule Update 'Fix' on Hill

Michael Scott, J.D., Director
Governmental and Legal Affairs

Keynoted by Centers for Medicare & Medicaid Services (CMS) Administrator **Thomas A. Scully** and wrapped up by senior presidential adviser **Karl Rove**, the 23rd annual ASA Legislative Conference focused on several federal issues, including problems with the Medicare Fee Schedule update formula and the need for antitrust, professional liability and regulatory reform. Also discussed at length was the current status of "opt-out" gubernatorial actions under the current Medicare regulation requiring physician supervision of nurse anesthetists.


Thomas A. Scully


Karl Rove

As in all but one of the past 10 years, the conference was held at the J.W. Marriott Hotel in downtown Washington, D.C. Conferees heard presentations by several elected and appointed federal officials as well as private sector experts on April 29 through May 1 and conducted Capitol Hill visits principally on May 1. A total of 309 ASA members attended.

Administrator Scully noted ASA's success in gaining an overturn of the Clinton rule on nurse anesthetist supervision and commended the Society for its capacity to draw attention to its views on various Medicare issues. He acknowledged that the Medicare Fee Schedule update formula was not sustainable in its present form and also indicated that CMS would turn its attention this year or next to the recommendation as to anesthesia work values of the American Medical Association (AMA)-Specialty Society Relative Value Update Committee (RUC).

Focus on the Medicare Fee Schedule

The Medicare Fee Schedule issue drew comments from several speakers. **Alexander A. Hannenberg, M.D.**, chair of ASA's Committee on Economics, provided a comprehensive explanation of the various "moving parts" in the update formula and discussed proposals for "fixing" the formula short-term or long. He also brought participants up to date in the most recent action of the RUC with reference to a possible increase in anesthesia work values.

Nurse anesthetists were delivering their messages on Capitol Hill. How will YOU be heard?

Photography by Chad Evans Wyatt

Several federal legislators, including Representatives **Rob J. Portman** (R-OH), **Fortney H. "Pete" Stark** (D-CA) and **John C. Cooksey** (R-LA), discussed current efforts in the House to develop a Medicare reform bill within budgetary limits. Senator **Arlen Specter** (R-PA) drew attention to his recent success in gaining more federal dollars for health care research, and Senator **Robert G. Torricelli** (D-NJ) focused on the special budgetary problems presented by the






From left: Rep. Rob J. Portman; Rep. Pete Stark; Sen. Arlen Specter; Sen. Robert G. Torricelli; and Jeanine Freeman, Esq.

war on terrorism.

Insights into the upcoming 2002 elections were provided by Mr. Rove, senior political advisor to President Bush and by **Ed Goeas**, President of The Tarrance Group, a political polling and consulting firm. Mr. Rove also entertained participants by comparing the realities of White House life with those portrayed in the television series "West Wing" and his personal efforts to keep up with the president's challenging physical regimen.

Opt-Outs Discussed

The early portion of the conference was devoted to current ASA efforts to persuade the nation's governors not to opt out of the current Medicare rule requiring supervision of nurse anesthetists. **S. Diane Turpin, J.D.**, ASA's Assistant Director of Governmental Affairs (State), moderated a panel in which the current state of activity was extensively reviewed. Ms. Turpin's remarks were supplemented by presentations from **Jeanine Freeman, Esq.**, Vice-President of Governmental Affairs for the Iowa Medical Society, and **Susan Good**, a legislative representative for the Montana Society of Anesthesiologists. Emphasis was placed on the need for early and active participation in the process by the entire membership of component societies.

Discussion then followed, led by **John M. Zerwas, M.D.**, chair of ASA's Committee on Governmental Affairs, dealing with ways in which hospital staff medical bylaws and policies can be used to assure appropriate supervision of nonphysician providers. Dr. Zerwas' remarks were supplemented by **Elizabeth "Libby" Snelson, Esq.**, an expert on medical staff bylaw issues. Particular note was taken of the fact that federal and state supervision standards merely represent the minimum oversight standards that hospitals must meet, leaving to the medical staff the responsibility for establishing a higher standard, if necessary, in cooperation with the hospital's administration.

Three federal legislators provided comments supportive of ASA's efforts to resist gubernatorial opt-outs: Senator **Maria Cantwell** (D-WA) and Representatives **Gil Gutknecht** (R-MN) and **Pete Sessions** (R-TX).

In anticipation of congressional visits, participants were briefed extensively by ASA's legislative team on all current issues of major concern to physicians, and these briefings were supplemented by a presentation by **Julius Hobson**, AMA Director of Congressional Affairs.

Ways and Means Leadership Unveils Medicare Proposal

On May 9, Representative Nancy L. Johnson (R-CT), chair of the Health Subcommittee of the House Ways and Means Committee, briefed members of the Coalition for Fair Medicare Payment on her proposal, along with Committee Chair William M. Thomas (R-CA), to deal on a current basis with the physician reimbursement crisis created by application of the statutory Medicare Fee Schedule update formula.

Earlier this year, Mrs. Johnson had introduced legislation (H.R. 3882) that would implement the recommendation of the Medicare Payment Advisory Commission (MedPAC) that the current formula be scrapped and replaced with one essentially based on the changing cost of delivery of physician services. CMS actuaries scored the cost of the proposal at $127 billion, later revised to $107 billion, over 10 years. In her May 9 briefing, Mrs. Johnson acknowledged that, under present budgetary restraints, there was no possibility of gaining passage of her bill this year at anything like this cost.

She noted that she and chairman Thomas were instead proposing a short-term "fix" in hope that a longer term solution could be achieved when budgetary problems eased. Under their proposal, physicians would receive a 2-percent statutory update in the conversion factor in 2003 (instead of the projected 5.7-percent cut), and after making certain technical changes in the current formula, the anticipated update for 2004 and 2005 would be 1.9 percent and 1.8 percent, respectively. Because CMS appears to be ready to ease its historical formula for measuring increased physician productivity, she said, the actual updates in these years would be potentially modestly even higher. She urged the coalition and other segments of organized medicine to get behind this proposal as the only truly viable option in a difficult budget year.

The Johnson-Thomas proposal, if implemented, would mean that unless Congress takes additional action before January 1, 2006, physician reimbursement rates would drop radically because of the ongoing operation of the current statutory formula. Mrs. Johnson noted, however, that she and Chairman Thomas were

Continued on page 14

Another Malpractice Insurance Crisis Brewing for Anesthesiologists?

Karen B. Domino, M.D., Chair
Committee on Professional Liability

Recent media is full of reports speaking of marked increases in medical malpractice insurance premiums and the impending crisis in availability of malpractice insurance.[1-3] Although obstetricians and surgeons have been most affected, malpractice insurance premiums for anesthesiologists are predicted to increase in the future. As superbly discussed by Edward Mills on page 13 of this *NEWSLETTER*, medical malpractice insurance premiums are increasing. Factors cited include large jury awards, increased defense costs, competition within the insurance industry (causing artificially low rates in the previous five years) and stock market losses due to economic slowing. As a result of the growing disparity between the escalating costs and diminishing revenues, several malpractice insurance companies no longer offer or have reduced the availability of malpractice insurance. The withdrawal of the St. Paul companies, the nation's second largest malpractice insurer, and the liquidation of PHICO in Pennsylvania have especially impacted anesthesiologists.

In order to assess the current impact of changes in malpractice insurance premiums on anesthesiologists, the ASA Committee on Professional Liability polled ASA component societies. Responses were obtained from 37 out of 50 states, revealing a possible malpractice crisis for anesthesiologists in 15 states (40 percent of respondents) [Table 1]. Premium increases for the current year were observed in 70 percent of states responding to the survey, with an average increase of 38 percent (range of 5 percent to 100 percent). Escalating malpractice insurance rates have been noted in Alaska, Florida, Illinois, Missouri, Nebraska, New Jersey, Ohio, Oregon, Pennsylvania and West Virginia and are spreading to adjacent states. In contrast, premiums have been unchanged in states with tort reform such as California.

When we compared the current rates, through a telephone survey of malpractice insurers, to rates from St. Paul described in a 1985 *NEWSLETTER*,[4] the average rate is essentially the same in 2002 as it was in 1985 ($18,000). When adjusted for inflation, the current premium value is markedly lower than in 1985, the peak of the preceding insurance crisis! Malpractice insurance premiums in the 1990s were lower due to the reduced risk classification for anesthesiologists and market forces. ASA patient safety initiatives and the Closed Claims Project are credited for the lower risk for anesthesiologists. However, premiums in several states, including Maryland, Nevada, Texas and West Virginia, are significantly higher in 2002 than in 1985. These findings suggest that the current volatility is likely to spread as the social, economic and marketplace factors driving up costs continue. History repeats itself!

Table 1: Anesthesia Malpractice Insurance Survey (n=37 out of 50)

	n	% of responses
Malpractice crisis		
for surgeons	17	46%
for obstetricians	19	51%
for anesthesiologists	15	40%
Concerns		
High rates	10	27%
Loss of providers	16	43%
Lack of availability of insurance	8	22%

References:

1. Treaster JB. Malpractice rates are rising sharply: Health costs follow. *The New York Times*. September 10, 2001:A1.
2. Campbell CA. Jersey physicians run for coverage. *The Star-Ledger* (Newark, NJ). February 18, 2002:1.
3. Treaster JB. New York doctors facing big jump in insurance rates. *The New York Times*. March 22, 2002:A25.
4. Cheney FW. Professional liability survey results reveal insurance statistics. *ASA Newsl*. 1985; 49(5):1.

Karen B. Domino, M.D., is Professor of Anesthesiology and Adjunct Professor of Neurological Surgery, University of Washington School of Medicine, Seattle, Washington.

Changing Trends in Anesthesia-Related Death and Permanent Brain Damage

Frederick W. Cheney, M.D., Director
ASA Closed Claims Project

Figure 1: Trends in Death and Permanent Brain Damage

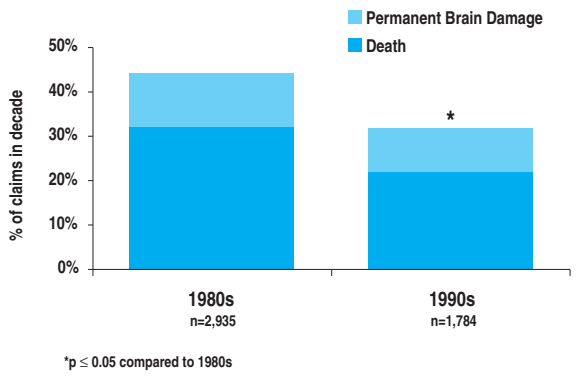
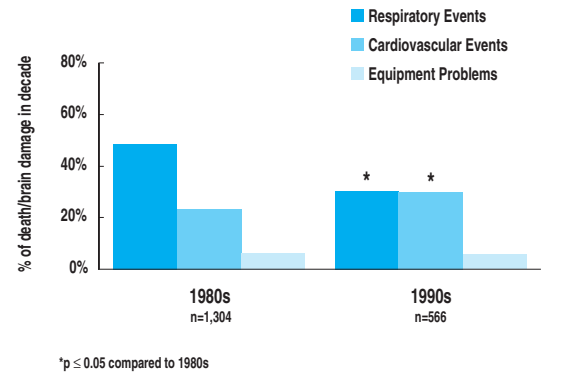


Figure 2: Trends in Death and Brain Damage Primary Damaging Events



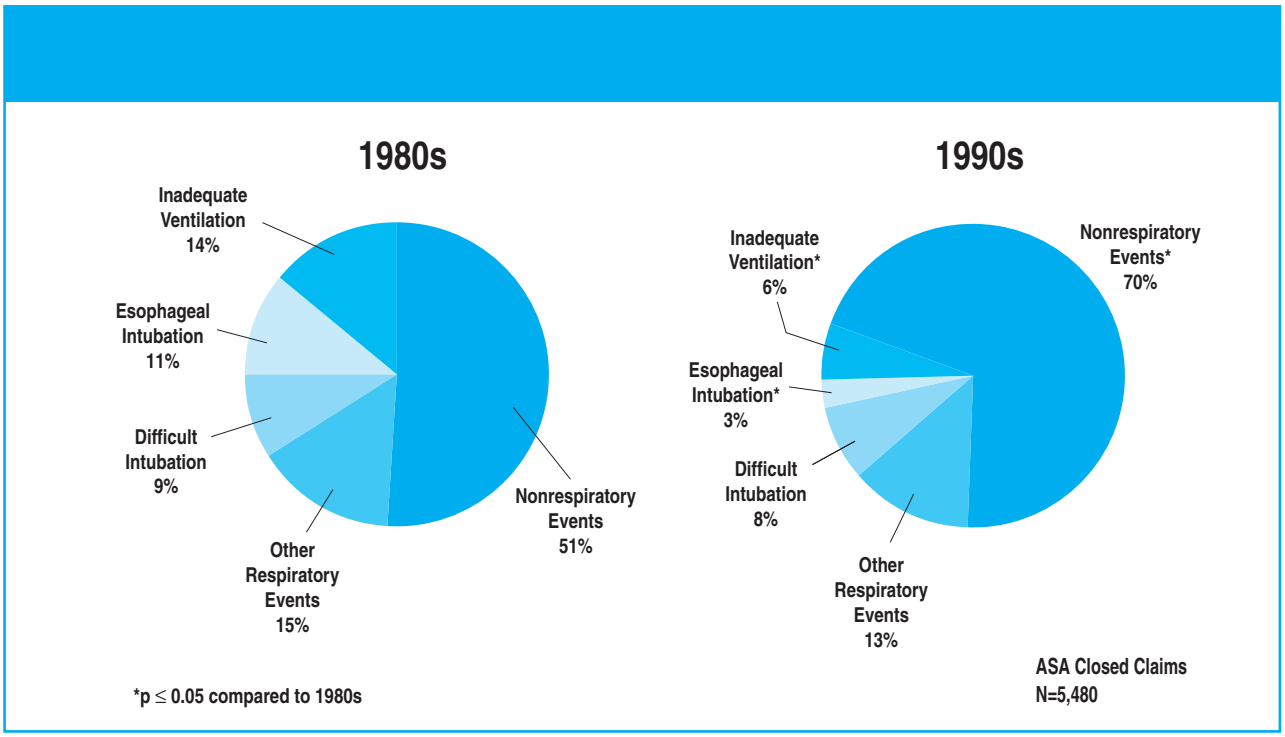
Analysis of the most recent data from the ASA Committee on Professional Liability Closed Claims Project indicates that severe anesthesia-related injuries such as death and permanent brain damage are becoming less frequent among injuries reported to insurance carriers. This standardized collection of case summaries of adverse anesthesia-related outcomes has been ongoing since 1985 and now contains 5,480 claims or potential claims from 35 insurance organizations that insure approximately 14,500 anesthesiologists. This analysis consists of 1,870 claims for death or permanent brain damage occurring in the 1980s and 1990s.

In the 1980s, 42 percent of claims involved death or permanent brain damage compared to 32 percent in the 1990s ($p<0.05$) [Figure 1]. This decrease was predominately due to a decrease in claims for death (32 percent versus 22 percent) in the 1980s versus the 1990s. In the 1980s, respiratory-related damaging events were more common (48 percent) than cardiovascular-related damaging events (23 percent) [Figure 2]. In the 1990s, cardiovascular and respiratory damaging events were responsible for the same percent of claims involving death or brain damage [Figure 2]. The third most common damaging event, equipment failure or misuse, showed little change between the decades.

Frederick W. Cheney, M.D., is Professor and Chair, Department of Anesthesiology, University of Washington School of Medicine, Seattle, Washington.

Trends in Respiratory Events

The most common respiratory damaging events causing death or permanent brain damage in the 1980s and 1990s were inadequate ventilation, esophageal intubation and difficult intubation [Figure 3]. Claims for inadequate ventilation and esophageal intubation decreased significantly in the 1990s as compared to the 1980s. These two events combined accounted for 25 percent of claims for death and brain damage in the 1980s, decreasing to 9 percent in the 1990s. As Figure 3 shows, reductions in these two events account for nearly the entire decrease in respiratory-related death and brain damage claims between the 1980s and 1990s. The proportion of claims for difficult intubation and other respiratory events leading to death or brain damage stayed relatively stable between the 1980s and 1990s [Figure 3].



The question arises as to the cause of the reduction in the relative proportion of anesthesia-related deaths or permanent brain damage as compared to other anesthesia-related injuries. The use of pulse oximetry (SPO_2) and end-tidal carbon dioxide ($ETCO_2$) monitors, which came into use in the mid- to late-1980s and became ASA standards in the early 1990s, would seem to be the most likely cause. When the claims are grouped by monitors used (or not used) during anesthesia, a clearer picture emerges. Figure 4 shows the most common respiratory events leading to death or brain damage as a proportion of respiratory events (rather than all claims). Inadequate ventilation decreased significantly when either SPO_2 alone or $ETCO_2$ also was monitored. On the other hand, SPO_2 monitoring did not affect the proportion of claims for esophageal intubation unless $ETCO_2$ also was monitored [Figure 4]. SPO_2 only gives information about an end-stage symptom (hypoxemia) of an esophageal intubation and does not make a primary diagnosis of this condition as does $ETCO_2$. The proportion of respiratory-related claims for difficult intubation was unaffected by the presence of SPO_2 and $ETCO_2$ monitoring [Figure 4]. If anything, the proportion of respiratory-related claims for death or permanent brain damage due to difficult intubation was greater when SPO_2 and $ETCO_2$ were utilized. This is not surprising, as placement of an endotracheal tube is a technical act whose success may not be influenced by monitoring. Thus the overall reduction in respiratory-related damaging events seems to be related to two injuries (inadequate ventilation and esophageal intubation) most affected by SPO_2 and $ETCO_2$ monitoring.

Trends in Cardiovascular Events

The cause of the increase in the proportion of cardiovascular-related damaging events as a mechanism of death or permanent brain damage in the 1990s is not readily apparent [Figure 2]. When the specific cardiovascular damaging events are analyzed according to decade, no significant pattern emerges. The largest cardiovascular-related category is the "unexplained/other," which includes pulmonary embolism, stroke, myocardial infarction, arrhythmia and undiagnosed (preoperative) conditions such as myocardial fibrosis or cardiomyopathy identified post mortem. These events account for 11 percent of death and brain damage claims in the 1980s and 17 percent in the 1990s ($p<0.05$).

Likewise, the occurrence of death or permanent brain damage due to cardiac arrest associated with neuraxial block (4 percent in the 1980s and 1990s), inadequate fluid replacement (2 percent in the 1980s; 3 percent in the 1990s) and excessive blood loss (3 percent in the 1980s; 2 percent in the 1990s) did not show any change with time. When the cardiovascular damaging event data are analyzed by monitoring group, no clear picture emerges.

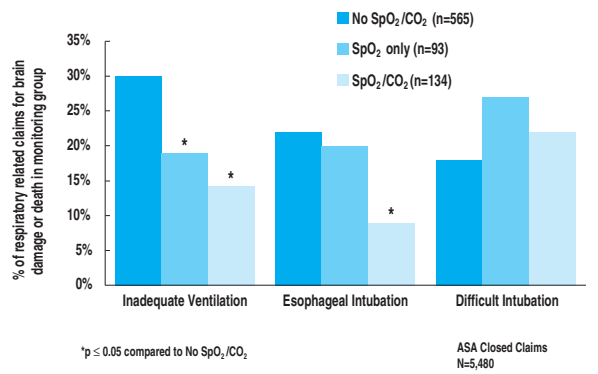
Implications for Further Reductions in Death and Brain Damage

Do the current findings have any implications for further improvement in decreasing the occurrence of anesthesia-related death or permanent brain damage? Any interpretation of closed claims data for predictive purposes has to be done with an understanding of its drawbacks, including lack of denominator data and a three- to five-year time lag between the date of injury and closure of a claim. The database represents claims, not all patient injuries, so it is possible (but unlikely) that plaintiff attorneys are not pursuing claims for anesthesia-related death and permanent brain damage as frequently in the 1990s as in the 1980s.

With the aforementioned in mind, the data seem to indicate that there is a decrease in the proportion of anesthesia-related claims for death and permanent brain damage in the 1990s. This seems to be related to the use of SPO_2 and $ETCO_2$ monitoring, as evidenced by the fact that the damaging events most affected are inadequate ventilation and esophageal intubation. Within the respiratory damaging events group, further opportunities for a reduction in severe injury would seem to lie in utilization of the ASA "Practice Guidelines for Management of the Difficult Airway."[1] The Closed Claims Project Subcommittee has been collecting data evaluating the role of this guideline (first published in 1993) in claims where the injury was due to difficult intubation. Analysis of these data should, in time, give information as to the impact of the guideline on the occurrence of the injury due to difficult intubation.

The relative increase in the proportion of cardiovascular damaging events in the 1990s deserves comment. This increase may be due to the fact that injuries related to the onset of bradycardia and hypotension, which were previously attributed to inadequate ventilation/oxygenation in the absence of SPO_2/$ETCO_2$ monitoring, are now more appropriately attributed to primary cardiovascular damaging events. There is no clear pattern of injury in the more frequently occurring cardiovascular damaging events category (unexplained/other). The only cardiovascular category where there is a recurring pattern is that of cardiac arrest associated with neuraxial block. In this case, early recognition of the phenomenon with prompt pharmacologic therapy and thump-pacing or chest compression offer the most opportunity for prevention of the injury.

Figure 4: Most Common Respiratory Damaging Events Associated With Death or Brain Damage by Monitoring Group



In summary, Closed Claims Project data indicate a downward trend in the occurrence of claims for severe patient injury. This seems to be primarily due to injuries that are amenable to prevention by SPO_2 and $ETCO_2$ such as inadequate ventilation/oxygenation and esophageal intubation. If the downward trend is entirely due to injuries preventable by monitoring, then future strategies to prevent severe injuries should be directed to cardiovascular events and respiratory-related damaging events not amenable to prevention by SPO_2 and $ETCO_2$ monitoring.

Reference:

1. Caplan RA, Benumof JL, Berry FA, et al. Practice guidelines for management of the difficult airway: A report by the American Society of Anesthesiologists Task Force on Management of the Difficult Airway. *Anesthesiology*. 1993; 78:597-602.

Does Anesthetic Care for Trauma Present Increased Risk for Patient Injury and Professional Liability? A Closed Claims Analysis

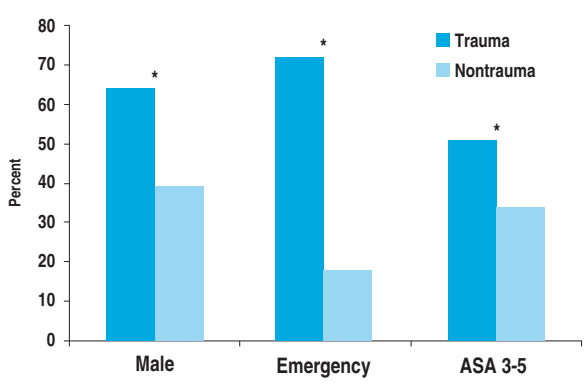
Sam R. Sharar, M.D.
Committee on Critical Care Medicine and Trauma Medicine

The astounding frequency of traumatic injury in the United States — 59 million persons (one in four) injured annually, 36 million emergency room visits, 2.6 million hospital discharges and 145,000 deaths — explains the regularity with which many anesthesiologists encounter such cases. As a result, "trauma anesthesia" is a somewhat transparent subspecialty of our practice in that to varying degrees, all physician providers of perioperative anesthetic care find themselves anesthetizing an acutely injured trauma victim. Nonetheless, the distribution of trauma care among hospitals is neither random nor equal due to the preferential use of "designated" trauma centers, geographic maldistribution of hospitals and/or administrative preference to transfer trauma patients to other hospitals for economic reasons.[1] Likewise, the distribution of trauma care among anesthesiologists is unequal due to these hospital factors but also as a result of personal aversions to trauma care: it occurs at inconvenient times (nights and weekends), carries a low reimbursement rate (due to the high frequency of uninsured victims), presents a high-stress environment, results in unpredictable and often poor patient outcomes and exposes providers to increased professional liability risk. The validity of these arguments is variable, however, ranging from confirmed (low reimbursement rates for trauma care[2]) to virtually unknown (anesthetic outcomes and professional liability risk).

In order to specifically assess the patient injury and professional liability risks of trauma anesthesia care relative to elective anesthesia care, we examined the ASA Closed Claims Project database between 1987 (the year after ASA "Standards for Basic Anesthetic Monitoring" were enacted) and 1999. The database consists of standardized summary data on closed anesthesia malpractice claims collected from 35 professional liability carriers that insure approximately half of the practicing anesthesiologists in the United States and is described elsewhere in detail.[3] All claims for trauma-related anesthetic care (defined as care provided within three days of acute injury for surgical treatment of blunt or penetrating trauma, burns, drowning or environmental injury) were reviewed to identify patterns of causation, injury, standard of care and liability. Findings were then compared to those for nontrauma claims occurring during the same period.

Of the 1,814 claims in the database for the time period selected, 87 (4.8 percent) involved trauma anesthesia care. Consistent with the national demographic pattern of traumatic injuries, the majority of claims involved men (64 percent compared to 39 percent for nontrauma claims, $p<0.01$) [Figure 1]. Also consistent with the concept that traumatic injuries frequently require urgent and nondeferrable operative management, the majority of trauma claims (72 percent) involved emergency anesthesia and surgery, compared to only 18 percent for nontrauma claims ($p<0.01$). The high acuity of anatomic and physiologic derangement in trauma patients was demonstrated by the high frequency of abnormal ASA physical status (51 percent of trauma claims were labeled ASA class 3-5 com-

Figure 1: Demographic Description of Trauma and Nontrauma Claims



*p ≤ 0.01 trauma versus nontrauma claims

Frequency (in percent) of trauma claims compared to nontrauma claims by patient sex (male), emergency nature of case and critical illness (ASA physical status 3-5). Values for trauma claims exceed those for nontrauma cases in all categories ($p<0.01$).

Sam R. Sharar, M.D., is Associate Professor, Department of Anesthesiology, University of Washington School of Medicine, Harborview Medical Center and Children's Hospital and Regional Medical Center, Seattle, Washington.

pared to 34 percent for nontrauma claims, p<0.01).

Outcome measures in the two study groups are summarized in Table 1. Significant increases were identified in the group of trauma claims compared to nontrauma claims for two outcomes: death (40.3 percent versus 23.4 percent, p<0.01) and median payment ($225,000 versus $95,000, p<0.01). A trend toward an increased rate of brain damage was observed in the trauma group, although it was not statistically significant (16.1 percent versus 10 percent, p=0.07). There was no difference between trauma and nontrauma claims in the frequency of payment for malpractice claims (44.8 percent versus 47.1 percent), and somewhat surprisingly, there also were no differences in the proportion of claims for aspiration (2.6 percent versus 4.3 percent), awareness of intraoperative events (0 percent versus 2.4 percent) or difficult intubation (10.3 percent versus 9 percent). Thus, within the population of patients represented in the ASA Closed Claims Project database, trauma claims are associated with greater severity of injury (death and possibly brain damage) and also result in a higher median claim payment than nontrauma claims [Table 1].

Table 1: Frequency of Outcomes for Trauma and Nontrauma Claims

Outcome	Trauma	Nontrauma	p value
Death	40.3%	23.4%	< 0.01
Brain Damage	16.1%	10.0%	0.07
Aspiration	2.6%	4.3%	NS
Difficult Intubation	10.3%	9.0%	NS
Intraop. Awareness	0%	2.4%	NS
Standard of Care Met	50.6%	54.3%	NS
Adequate Records	51.7%	52.6%	NS
Payment Made	44.8%	47.1%	NS
Median Payment	$225,000	$95,000	< 0.01

Two additional endpoints of our analysis were the appropriateness of anesthetic care and the adequacy of anesthetic record-keeping, as judged by the anesthesiologist reviewers [Table 1]. These endpoints were chosen to indirectly explore the issue of whether providing urgent or emergent care in a critically ill patient at unpredictable times affects anesthetic decision-making and/or documentation. We found similar frequencies in both trauma and nontrauma claims for the frequency with which an appropriate standard of care was met (50.6 percent versus 54.3 percent) and the frequency of adequate anesthetic record-keeping (51.7 percent versus 52.6 percent). It appears that within this select population, trauma care does not impose additional impediments to anesthetic decision-making or documentation of care over what already exists for nontrauma care.

As with all studies based on the ASA Closed Claims database, these results must be interpreted carefully due to inherent limitations in the database. Numerical estimates of risk cannot be determined due to the absence of denominator data (i.e., total number of anesthetics provided) and the fact that not all anesthesia-related injuries result in a malpractice claim. In addition, data collection is retrospective and nonrandom. Nonetheless, we are able to draw several conclusions about patient injuries and professional liability from our analysis. First, these data suggest that, compared to nontrauma claims, trauma anesthesia claims involve more emergent patients, more critically ill patients and result in poor outcomes more frequently. Considering the urgency, medical acuity and likely outcome of caring for acutely injured patients, trauma anesthesia does often present a high-stress environment for providers. Second, although the frequency of claims payment is similar in both trauma and nontrauma claims, the median payment is higher for trauma claims. The reasons for this cannot be determined from our analysis but may include younger age or more severe injury in trauma claims. Third, in contrast to conventional wisdom that anesthetic complications of aspiration, difficult intubation and awareness of intraoperative events are more likely in trauma patients, there was no increase in claims for these complications in the trauma group compared to the nontrauma group. For example, we observed no trauma claims for awareness of intraoperative events despite reports that in the select population of hypotensive trauma patients the incidence of this complication may be as high as 43 percent.[4] These observations may reflect limitations of the database in that the true frequency of these complications in trauma patients cannot be calculated from closed claims data.

In summary, our review of ASA Closed Claims data

Continued on page 21

Central Line Complications From the ASA Closed Claims Project: An Update

T. Andrew Bowdle, M.D., Ph.D.

We previously reported on central line complications from the ASA Closed Claims Project in 1996 from a database of 3,533 claims of all types.[1] There were 48 claims related to central venous or pulmonary artery catheters, including 20 fatalities. Seventy-five percent of the fatalities were due to cardiac tamponade or vascular injury. We have now undertaken re-evaluation of central line complications from the ASA Closed Claims Project, from a database of 5,475 claims of all types, including 75 claims related to central lines. Analysis of the claims reported since 1996 reveals some interesting differences from the previous analysis.

In this most recent analysis, we have divided the claims into two groups, those with clinical events occurring prior to 1990 and those occurring in 1990 or later [Table 1]. The set with event dates prior to 1990 corresponds very closely, although not precisely, to the claims that we reported on in 1996. (There is a lag time between the clinical event and the legal process that ultimately results in a closed claim.) A few cases have been added as the closed claims database has been refined, and a few cases have been excluded because the central line complication was due to the actions of someone other than the anesthesiologist, usually the surgeon.

Table 1: Overall Complications and Fatalities for the Periods 1978-89 and 1990 and Later

Complication	1978-89	1978-89 fatalities	1990 & later	1990 & later fatalities
Cardiac tamponade	10	8	2	2
Wire or catheter embolism	10	0	0	0
Vascular injuries	16	9	16	7
Hemothorax	6	6	5	3
Hydrothorax	3	1	1	1
Carotid artery injury	5	1	9	3
Subclavian artery injury	2	1	1	0
Pulmonary artery rupture	4	4	1	1
Pneumothorax	7	1	3	0
Air embolism	2	1	1	1
Fluid extravasation in neck	0	0	3	1
Total	**49**	**23**	**26**	**12**

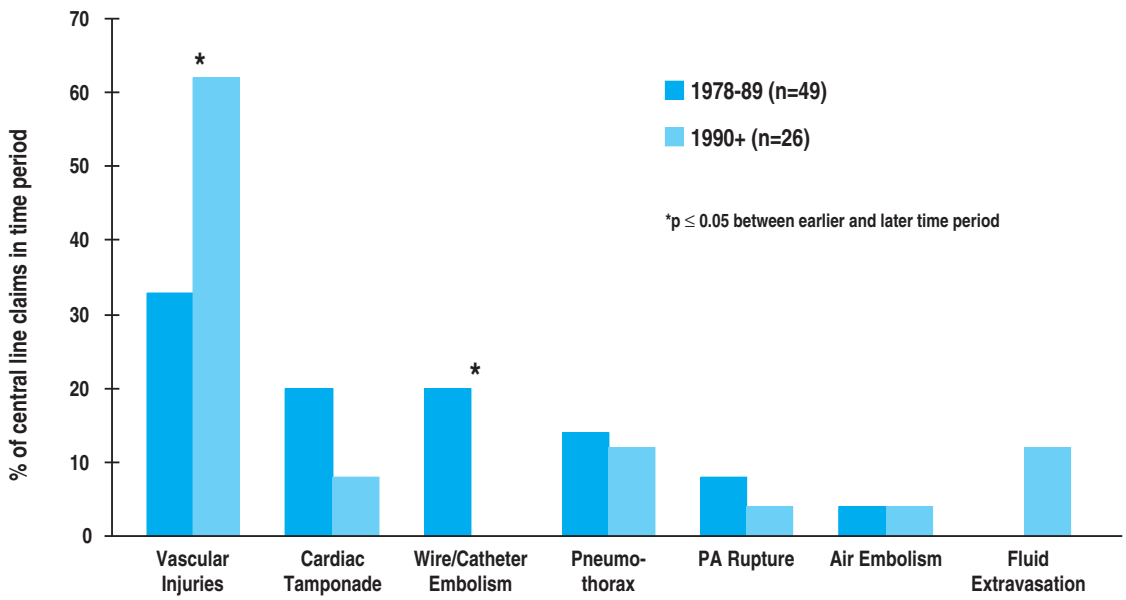
In the analysis of closed claims with clinical events prior to 1990 (essentially our 1996 report), three classes of complications of central lines were most important: perforation of the heart with pericardial tamponade (10 out of 49 claims), catheter or wire embolism (10 out of 49 claims) and injury to veins or arteries other than the pulmonary artery (16 out of 49 claims). These complications accounted for 17 out of the 23 deaths.

Interestingly, the closed claims for central line complications with event dates of 1990 and later have a somewhat different distribution compared to those with event dates preceding 1990 [Figure 1]. Cardiac tamponade accounts for only two of 26 claims and catheter or wire embolism for zero out of 26. Unfortunately, injury to veins or arteries other than the pulmonary artery resulting in hemothorax, hydrothorax or injury to the carotid or subclavian arteries continues to be a major problem. Sixteen of 26 cases, including seven fatalities, were accounted for by this class of complication. As in the analysis from 1996, the inadvertent placement of a large-bore catheter or an introducer sheath into an artery instead of a vein was a prominent cause of morbidity and mortality.

Several methods have been used to distinguish vein from artery, including the subjective evaluation of the pressure of blood spurting from the needle, the color of the blood,

T. Andrew Bowdle, M.D., Ph.D., is Professor of Anesthesiology and Pharmaceutics (Adjunct) and Chief, Division of Cardiothoracic Anesthesiology, University of Washington, Seattle, Washington.

Figure 1: Central Line Injuries in the ASA Closed Claims Project Database



assessment of blood gases, deliberate stimulation of arrhythmias by the guidewire and transduction of a pressure waveform. Some of these methods have major drawbacks. The subjective evaluation of the pressure of blood spurting from the needle depends upon the size of the needle, the pressure in the vessel and perhaps even the position of the needle bevel in the vessel. The color of the blood depends upon the ambient lighting and the characteristics of the syringe and the oxygen saturation. A high F_iO_2 may make venous blood appear very much like arterial blood, and conversely, hypoxemia may make arterial blood appear venous. Blood gases may be helpful but are relatively impractical because of the time required to receive the result. The onset of arrhythmia with advancement of the guidewire into the heart is indirect evidence of venous placement but carries the hypothetical risk of inducing a potentially harmful arrhythmia or even of perforating the heart with the guidewire. By contrast, transduction of a pressure waveform safely and instantaneously identifies the vessel as artery or vein; only very rarely will there be any ambiguity in the recognition of arterial and venous waveforms.

Jobes et al. performed a retrospective review of 1,021 cases of internal jugular cannulation and found 43 cases of arterial puncture, five of which were unrecognized by blood flow and color criteria, resulting in inadvertent placement of 8.5 French introducer sheaths in the carotid arteries. One patient suffered a hemothorax and died.[2] Subsequently they performed a prospective study of 1,284 patients using transduction of the pressure waveform to positively identify the vein.[2] Arterial puncture was unsuspected in 10 patients until it was detected by inspection of the pressure waveform. Consequently there were no inadvertent arterial cannulations.

Compact, portable two-dimensional (2D) ultrasound devices also have proven useful in locating central veins and distinguishing them from arteries.[3,4] A recent report from the Agency for Healthcare Research and Quality reviewed the clinical evidence related to the use of ultra-

Continued on page 25

Why Are My Malpractice Insurance Rates Increasing?

Edward C. Mills, Board of Directors
Anesthesia Patient Safety Foundation

Today as anesthesiologists open the envelopes containing their malpractice insurance premiums, they may be shocked to find significant rate increases. These increases are not unique to anesthesiologists and reflect ongoing changes in the malpractice insurance marketplace. Volatile jury awards, increased defense costs and changes in the medical malpractice insurance marketplace have combined to cause a dramatic shift in the cost of professional liability insurance.

For a number of years, physicians have had the benefit of stable or even declining malpractice rates. Anesthesiologists in particular saw significant rate reductions given the advent of improved monitoring devices, implementation of ASA practice guidelines and an increased focus on patient safety. These developments, along with vigorous competition among malpractice insurance carriers, ushered in a sustained period of low and stable premiums. So what changed?

At the outset, we need to recognize that adverse patient outcomes are the underlying factor in establishing rates. While the likelihood that such adverse outcomes will result in litigation has not significantly changed, the costs associated with both resolving and defending claims has increased.

The ultimate cost to resolve a specific claim is influenced by a number of factors. The nature of the injury, the extent to which the medical care can be defended, the ability and willingness of the physician to participate in the defense, the legal rules governing the litigation and the effectiveness of counsel in presenting each side of the case all contribute to a claim's overall value. The ever-increasing volatility in jury awards drives up settlement costs and fosters an environment where both insurance companies and their policyholder prefer settling cases.

Other factors also contribute to the underlying losses that are the foundation of anesthesia rates, including the number of health care providers involved in the claim and the amount of insurance coverage available. With respect to anesthesiologists, the limits of coverage required by hospitals is often higher than that of the surgeons with whom anesthesiologists work. This disparity frequently makes the anesthesiologist a more inviting target for litigation, and this in turn increases the losses attributed to their specialty. Settlement and defense costs attributed to anesthesiologists also may be distorted when claims involving multiple health care providers are defended by a single insurance company that may allocate the loss among all of their insureds.

The combination of the above factors has caused the average severity of our anesthesia claims to increase approximately 88 percent from 1994 to 2000, while the frequency of claims has actually declined.

Defense costs also continue to escalate. These costs include attorney fees, expert witness fees and expenses of court reports, travel costs, trial exhibits, etc. During the period from 1994 through 2000, our average cost for the defense of a claim increased by 39 percent.

Overall these statistics indicate that premium rates for anesthesiologists should have been increasing instead of remaining stable or even declining as they did during this same period of time. This leads to a second important influence on rates: market conditions.

During the period between 1994 and 2000, there was significant competition within the insurance industry to insure anesthesiologists. Anesthesiologists contributed to this price competition by frequently moving their coverage from one carrier to another based primarily on price. This competition prevented insurance companies from implementing needed rate increases, despite the increased losses noted above, without the risk of losing market share. Insurance companies were able to offset significant losses through the use of investment income. Today, with a substantial decline in interest rates and stock prices, companies are unable to support their claims and defense costs with investment income, and consequently, companies must now raise rates to cover claim losses.

In addition, rates were further stabilized from 1994 to 2000 as competition for premium dollars fueled a period of both consolidation and expansion within the malpractice insurance industry. A number of companies pursued growth through mergers while other companies attempted to expand beyond their traditional geographic territories. Both scenarios placed a priority on substantial premium

Edward C. Mills is President and Chief Executive Officer, Preferred Physicians Medical Risk Retention Group, Inc., Mission, Kansas.

Table 1: Factors That Influence Malpractice Premium Rates

Medical	• Quality of care • Nature and severity of injury • Defensibility • Documentation
Legal	• Volatility of jury award • Level of tort reform • Limits of coverage • Increasing defense costs
Economic	• Validity of rate level • Competition entering and exiting malpractice market • Increases and decreases in investment income

growth, which is typically obtained by significantly underpricing the cost of insurance. This was especially true as companies pushed into unknown but volatile territories such as Florida, Pennsylvania and Texas.

The disparity between the costs associated with insurance company losses and the premiums being charged have become apparent over the last three years. Several large companies have since become insolvent, others have withdrawn from writing malpractice, and many others have incurred sizeable underwriting losses. During 2000, the top 10 writers of malpractice insurance collected approximately 50 percent of all premiums written in the United States. Less than two years later, six of these 10 companies no longer offer malpractice coverage or have greatly reduced their premium volume. The largest of these companies, St. Paul, has withdrawn from the malpractice market completely.

As if these conditions alone were not enough to cause a dramatic increase in insurance rates, the impact of the September 11 terrorist attacks also must be included. Reinsurance rates, already on the increase because of growing losses described above, are likely to climb even higher as reinsurers attempt to respond to the magnitude of the losses sustained.

In conclusion, the dramatic increase in malpractice insurance costs is largely a combination of escalating costs of resolving and defending claims, changes within the insurance industry and a corresponding decline in interest rates and the stock market. Given that rates are influenced by a number of factors [Table 1], it is nearly impossible to forecast the future. Absent meaningful tort reform, the underlying losses are unlikely to change. Continued consolidation or displacements within the industry may reduce competition and thereby lessen the pressure to hold down premiums, while a rebound in the stock market and increases in interest rates would restore investment income and offset the need for large increases in premiums. In the end, physicians in general and anesthesiologists in particular should plan to pay more for their malpractice insurance.

Washington Report: Ways and Means Leadership Unveils Medicare Proposal

Continued from page 4

keeping up the pressure on CMS to make certain administrative changes to correct prior estimation errors and to change a number of actuarial assumptions. This in effect would wipe out most, if not all, the budgetary cost of the MedPAC proposal and make implementation of this or some similar proposal much easier before 2006.

Anesthesia Information Management Systems

John S. Gage, M.D.

The Future

An office-based anesthesiologist, you arrive at the surgeon's operating suite for the first case of the day. The time is several years in the future. You unpack your equipment and plug your automated anesthesia record keeper into the ethernet connection located at the head of the table. You are instantly connected to the central data warehouse for automated anesthesia records at the ASA data repository. By entering a unique identifier, you are linked to the system.

As you enter preoperative data about your patient into the system, your record keeper stores this information locally and simultaneously communicates the data, stripped of all identifying information, to the central data repository at ASA. Your data is automatically compared with all other cases in the warehouse. As you enter more data, the central repository instantaneously picks cases that are similar to yours — same concurrent pathology, same operative procedure, same anesthetic setting, etc. By the time you are finished with your preoperative evaluation, the data repository has finished its search and communicates information back to your record keeper about how patients like yours have been anesthetized by other practitioners and what the potential caveats are in similar cases. You read this information and finalize your anesthetic plan. Throughout the data interchange with ASA, software installed by the Centers for Medicare & Medicaid Services has ensured that none of your data is identifiable and that the privacy guarantees of the Health Insurance Portability and Accountability Act regulations have been satisfied.

Once the anesthetic begins, physiologic data from your patient are stored locally and once again stripped of identifying data, then communicated to the ASA database. Your data is becoming another case in the database and, simultaneously, the number of cases similar to yours is being narrowed by the database according to the anesthetic choices you have made. Slowly, representative records of cases nearly identical to yours are selected and displayed in tandem with your record. This provides you with more insight into the progress of your anesthetic in the context of very similar cases and suggests specific questions you can address to an automated literature search engine or instant message software also available on your automated record keeper. You see that your physiologic data "looks better" than most comparable cases, and you congratulate yourself on a smooth anesthetic.

As the case ends, your patient will need a prescription for pain medication postoperatively, which you send via encrypted e-mail to a nearby pharmacy that your record keeper has selected on the basis of the patient's insurance coverage. Finally, your bill is submitted electronically to the patient's insurer.

The Present

No element of the hypothetical experiment above currently exists. Yet each element is possible today. Not only are these features possible, they are in fact easily and inexpensively implemented using the most reliable software in use today, software based on Internet technology — the same software that banks and other businesses are increasingly relying on for their entire business process. Users of the Internet can experience something similar to a central data warehouse of anesthesia cases by searching with a typical Internet search engine, using progressively more specific search terms and by observing the number of returned Web pages decrease. As stated, the technology is in place today. It is cheap and reliable. Other initiatives related to anesthesia such as the Accreditation Council for Graduate Medical Education's program for resident management of resident statistics are beginning to use Internet technology. To reiterate, the trend has not reached record keeping, however.

The principle reason usually given for this situation concerns the hypothetical activities of plaintiffs' attorneys who might, for example, use prescription records or a central data repository of anesthesia cases to attack physicians. Ironically, the practice of law, in contrast to the practice of medicine, is at the forefront of efforts to computerize its activities. Today many law firms insist on e-mail submissions of important documents, and every law firm has available to it the most sophisticated search engines containing every legal case on record. By fighting a rearguard action against plaintiffs' attorneys, our specialty has made impossible any useful attack on improving outcomes with

John S. Gage, M.D., is Associate Professor of Anesthesiology, State University of New York at Stony Brook, Stony Brook, New York.

actual data about actual cases using computer technology. Thus we inadvertently find ourselves supporting the central contention of the tort bar that only attorneys can protect patients from medical mishaps while we watch its members empower themselves with technology that we deny ourselves.

In this context, it is heartening that the Anesthesia Patient Safety Foundation (APSF) has recently endorsed the use of automated anesthesia information management systems (AIMS): "The Anesthesia Patient Safety Foundation endorses and advocates the use of automated record keeping in the perioperative period and the subsequent retrieval and analysis of that data to improve patient safety" <www.gasnet.org/societies/apsf>.

In addition, APSF has formed a working committee to design a "data dictionary" to facilitate sharing data gathered by AIMS nationwide in a pursuit of outcome data that will permit the specialty to improve our practice through "a common set of data elements required in electronic anesthesia records [which will allow] the collection and comparison of large volumes of clinical data from multiple institutions for outcomes research and benchmarking." The APSF's data dictionary project is clearly the first step toward the goal of real-time, intelligent database access described above. The project merits the closest possible attention by all members of the specialty. As it is currently designed, however, it will not create the sort of national data warehouse that can most benefit the specialty.

Hence we are still left in a landscape lacking the promise of Internet technology-based, intelligent record keepers that are possible today. It is true that the principal AIMS vendors have extensive Web sites marketing their products, but these Web sites are static marketing set pieces lacking interactive examples.

Current Systems

The CompuRecord information management system was developed by an anesthesiologist. It is currently produced and marketed by Philips Medical Systems. The CompuRecord Web site <www3.medical.philips.com/en-us/product_home/product/compurecord_detail.asp> provides several screen images taken from the system. CompuRecord has achieved strong user acceptance from those who have used it. In at least one institution, the same computers used to interact with the CompuRecord system also are linked to the Internet, enabling anesthesiologists to access medical information and e-mail in the operating room.

The Saturn Information System from Draeger Medical, Inc., <www.nad.com/LEVEL10_Saturn_Prod.htm>, emphasizes end-user customization: "The List Manager provides a graphical interface for creation and maintenance of pick lists including access and accountability rights. The Environment Manager allows for the customization of default drugs, fluids, events, etc." These features acknowledge that AIMS must be flexible enough to change in response to an evolving clinical environment and that each setting is subtly different. Numerous graphics of representative screens are available.

The Picis Web site <www.picis.com/html/products/module_chart%2Banesthesia.html> contains a screen shot and an extensive description of the system. Picis has recently merged with Medical Systems Management to form PicisMSM to expand their product offering, including operating room scheduling and inventory management.

A relative newcomer to the AIMS scene is eko systems <www.ekosystems.com>. Of all the current AIMS, eko has the most sophisticated networking features. Software to enable the record keeper to interact with monitors and infusion devices is stored centrally and automatically downloaded when the record keeper identifies a particular device. In addition, eko promises creation and installation of new interfaces to other hospital systems in a matter of weeks, an extraordinarily fast turnaround time.

Deio, from Datex-Ohmeda, can be seen at <www.deio.net>. The Web site contains many screenshots of the main system and the various tools for customizing the system. Deio describes extensive integration capability between its record keeper, monitoring equipment and other hospital computer systems.

Scalable Vector Graphics

As a final note about Internet technology, it has, in the past, had one Achilles heel: it is a text-based system that does not support interactive graphics easily. This may be news to the reader who doubtless views the Internet as a cornucopia of graphics; but in reality, until quite recently, there has only been one source of what are called vector graphics (an efficient and interactive technology for graphic interfaces) on the Internet: Macromedia® Flash®. This proprietary system has been used largely in advertising. An example can be found at the PicisMSM site: <http://www.picismsm.com/index3.html>.

The World Wide Web Consortium®, recognizing the need for accessible and standard vector graphics on the

Continued on page 25

Being Extra Safe When Providing Anesthesia for MRI Examinations

Lawrence Litt, Ph.D., M.D.
Charles B. Cauldwell, M.D.

Last July, shocking reports of an anesthesia-related hospital accident burst into newspaper headlines and prime-time news programs across the nation. A sedated 6-year-old boy undergoing a magnetic resonance imaging (MRI) examination died after being struck in the head by an iron oxygen tank that allegedly had been brought into the magnet room by an anesthesiologist.

A follow-up Emergency Care Research Institute report in August titled "Patient Death Illustrates the Importance of Adhering to Safety Precautions in Magnetic Resonance Environments" pointed out that because we have known for decades about MRI magnets being able to violently suck in heavy metal objects, this accident tells us about a challenge that goes beyond requiring physicians to understand basic MRI safety principles. That challenge is to inculcate everyone with safety habits and protocols that are always followed, with no exceptions.

Magnets and Missiles

Only certain metals, iron, nickel and cobalt to name a few, are magnetic. Items made of nonmagnetic aluminum, titanium, copper, silver and gold are safe as far as missile dangers are concerned and are among the materials used to make MR-compatible intravenous (I.V.) poles, fixation devices and nonmagnetic anesthesia machines. Often one must bring into the MRI magnet room susceptible metal items such as infusion pumps for I.V. lines. In such cases, it is safer to position those objects in the magnet room before the patient enters the magnet bore.

What about implanted metals such as hip prostheses and Harrington rods, which are made of stainless steel, a metal usually only weakly magnetic? Leave such questions to your radiology colleagues. Issues with large, weakly magnetic metal objects are usually about image degradation not about the patient experiencing an uncontrollable magnetic force. Metals do not need to be missiles to be dangerous to the patient. Dangers from wires in epidural or Swan-Ganz catheters are instead related to radiofrequency (RF) pulsing, which can induce currents in wires and cause electric shocks or dangerous heating that can melt the catheter wall.

The electric currents in superconducting magnets experience almost no ohmic resistance because they are in metal coils cooled by thousands of liters of liquid helium and liquid nitrogen. Strong jolts to a superconducting magnet can cause a "quench," which is the destruction of the superconducting state. During a quench, the liquid gases, heated by the ohmic resistance losses that have returned, are supposed to exit the room via venting stacks. Having the liquid gases evaporate elsewhere avoids a potentially dangerous decrease in room oxygen tension.

What should one do if the unthinkable occurs and a missile does fly into the magnet, causing injury while pinning the patient to the inside of the bore? We have been taught that the magnet is always on and that the magnetic field is always there, something that is true so long as a superconducting electric current is maintained. In fact, all superconducting magnets can be turned off immediately. However, this is something that should be done only by MRI technicians, and while it is being done, the anesthesiologist should be removing the patient out of the magnet.

None of the above information should deter anesthesiologists from feeling safe while being with a patient in the magnet room during MR imaging. Noise levels can get high during MR imaging. As MRI scans are acquired, everyone in the magnet room, including the patient, should be wearing ear plugs, another potential obstacle to good communications! Anesthesiologists in the magnet room can provide additional safety, especially if they are positioned near the door, ready to stop and check anyone who seems to be entering with metal objects.

Lawrence Litt, Ph.D., M.D., is Professor of Anesthesiology and Radiology at the University of California-San Francisco.

Charles B. Cauldwell, M.D., is Professor of Anesthesiology and Pediatrics at the University of California-San Francisco.

The MRI Anesthesia Station

The MRI-compatible equipment that goes into the magnet room is really a second anesthesia station. Thus it is crucial that a primary anesthesia station be located in an adjacent area just outside the magnet room. If a potentially life-threatening problem arises, it must be possible to briskly take the patient out of the magnet to the primary anesthesia station where everything is ready for optimum care. When doing the reverse, taking the patient from the primary station into the magnet room, all physiological monitoring devices must be MRI-compatible. If the fiberoptic pulse oximeter in the magnet room does not work, one is forbidden to take the standard pulse oximeter from the outside station and bring it into the magnet room. Serious patient burns could result.

Logistics

Many logistical details require earlier interactions and preparations. Before starting the day's cases, the anesthesiologist should have the names, beeper numbers and telephone numbers of anesthesia work room personnel who are known to be available. When anesthesia is induced, we regularly have either a trained nurse or second anesthesiologist assisting until the patient is stable inside the magnet. While this second person is not obliged to stay during the scan, he or she is expected to return for emergence at the end of the case.

Patient-Related Issues

The selection of patients who receive care from an anesthesiologist for MRI examinations differs from one institution to another. At the University of California-San Francisco, almost all children are deeply sedated/anesthetized by anesthesiologists as are adults who need more than anxiolysis. In other hospitals, especially in children's hospitals, nurses based in the radiology department often deliver sedation under guidelines jointly arrived at by the anesthesiology and radiology departments, with anesthesiologists being brought in only when a patient is complicated or unstable. Collaborative arrangements among physicians and administrative and clinical nurses should be arranged in advance. Anesthesiologists are often central to establishing systems that will minimize problems. Organizing the scheduling of cases is particularly important both for providing optimum patient care and efficiently using physician and MRI instrument time. Pediatric cases at the University of California-San Francisco are bunched during certain hours on certain days. When cases must be done at other times, the MRI scheduler communicates with a pediatric anesthesiologist who is in liaison. Occasionally, parents will have a question several days before the examination, in which case we will contact them immediately by telephone. For all cases, however, anesthesiologists or nurses contact the parents or guardians on the day before the procedure in order to remind them of where and when to come and to communicate nothing-by-mouth (NPO) times. We follow the current ASA guidelines for NPO recommendations <www.ASAhq.org/practice/npo/npoguide.html>. Most pediatric outpatients, while not seen prior to the day of the MRI study, are met and examined in the induction area by staff anesthesiologists. In contrast, many adult patients are seen one or two days before the procedure in our anesthesia preoperative clinic. Questionnaires regarding implanted metal objects, such as a pacemaker, are filled out at the time of scheduling, and a final screening is done on the day of the examination.

The location and method of emergence and recovery depends upon the individual situation. We use propofol for the vast majority of cases and find that adults and children both recover quite quickly. Recovery usually takes place in the secondary anesthesia area outside the magnet room, with patients going home directly. If, however, an MRI scan has been quite long or if an infant or adult is sick or just waking up slowly, such a patient is transported either to the postanesthesia recovery room outside the operating rooms or to a recovery area in the radiology department where there are other patients who have been sedated for their procedure.

If MRI cases involving sedation/anesthesia are scheduled sequentially, the anesthesia staff is presented with a dilemma. Should he or she completely recover the first patient before starting to screen or induce the second one? MRI scanner time costs thousands of dollars per hour, and optimum MRI use would have no delay in turnover. There is no absolute right or wrong here except that proper care for both patients must be provided, and anesthesiologists should not be inappropriately pressured into starting another case. With additional support personnel in the context of rapid and uncomplicated emergence, it is often possible to have a rapid turnover.

In January 2001, the Joint Commission of Accreditation of Healthcare Organizations, in its "Comprehensive Accreditation Manual," put into effect its revised standards for sedation and anesthesia care <www.jcaho.org/standard/aneshap.html>. This document addresses many relevant

Continued on page 29

Orlando: 'The City Beautiful,' Site of ASA 2002 Annual Meeting

Jimmie D. Moore, M.D., Chair
Committee on Local Arrangements

Orlando is the number-one tourist destination in the world and the location of the 2002 ASA Annual Meeting. ASA first met here in 1998, and many will remember that outstanding meeting.

Orlando allegedly acquired its name during the Seminole War in 1835 when a U.S. solder named Orlando Reeves alerted his comrades of approaching Indians. His fellow soldiers showed their gratitude by naming the area after him. Prior to the Civil War, Orlando homesteaders raised cattle and cotton. The Civil War, followed by the storm of 1871, devastated the economy, but cattle ranching survived and was followed by citrus farming. Walt Disney quietly purchased 27,000 acres and announced in 1965 what was to become Walt Disney World, subsequently opening in 1971. Orlando, Orange County and central Florida have grown explosively since, and tourism has replaced citrus as the principle cornerstone of the local economy.

Photo courtesy of the Orlando/Orange County Convention & Visitors Bureau

Orlando and its magical theme parks will host the 2002 ASA Annual Meeting.

Orlando is known for its theme parks. Walt Disney World includes The Magic Kingdom, MGM Studios, Epcot and Animal Kingdom. Universal Orlando features Universal Studios and Islands of Adventure. SeaWorld is the home of Discovery Cove and the SeaWorld Park Adventure.

Orlando features sparkling lakes, moss-draped southern oaks and citrus groves. Leu Gardens is comprised of 50 acres of beauty along the shores of Lake Rowena. Many of the orange groves that gave Orange County its heritage are now the site of the many developments of this thriving city.

Another central Florida attraction, Gatorland, offers 110 acres of Florida swamp and is known internationally as the "Alligator Capital of the World," featuring gator wrestling and other gator shows. Cypress Gardens was the first Florida theme park and features many beautiful flowers and plants, the Wings of Wonder butterfly conservatory and the Bird Walk Aviary. It is widely known for its ski shows. The Busch Gardens and its famous Clydesdale horses are located in the neighboring Tampa area.

Other local communities include Winter Park, which is the home of the Charles Hosmer Morse Museum of American Art, housing the world's largest collection of Louis C. Tiffany glass. Boat tours of the Winter Park chain of lakes are available and offer views of the many beautiful lakefront homes of the city.

The Bok Tower and gardens are located at the highest elevation in our mostly flat peninsular state, 298 feet above sea level and about an hour's drive from Orlando. The 128-acre gardens display azaleas, camellias, magnolias and other seasonal flowering plants. The Bok Tower contains one of the world's greatest carillons and features daily recitals.

The Kennedy Space Center and visitor complex is where America's space flights originate. Tours include visits to the Launch Complex 39 Observation Gantry, the Apollo/Saturn V Center and the Firing Room Theater. You may encounter an astronaut, see images of exploration beyond earth's orbit and view an IMAX® film of a space journey. The Kennedy Space Center is located on the shores of the Atlantic Ocean about an hour east of Orlando.

Cirque du Soleil's La Nouba is in permanent residence at downtown Disney. It is a circus of astonishing, eccentric and high-energy performances and is like no other circus.

Come visit Orlando and the ASA Annual Meeting. You will find additional information on Orlando by exploring <www.orlandoinfo.com>.

Revised AMA Principles of Medical Ethics Adopted by ASA

Edward Lowenstein, M.D.

We are presently living in a period of great movements in ethical and moral consciousness throughout society. The medical profession is at least as deeply engaged in this examination as other learned professions, institutions and individuals. This contemporary focus flowed in part from the revelation of the immoral conduct of German physicians during the Nazi era, as documented in the post-World War II doctor trials in Nuremberg, Germany. Furthermore, two decades after the war, Harvard anesthesiologist Henry K. Beecher, M.D., documented that unethical medical research had been funded by the U.S. government, conducted in the most highly regarded academic medical institutions and published in the most prestigious peer-reviewed medical and scientific journals. In addition, the rights-based movements for self-determination in the 1950s and 1960s have influenced the evolution of medical ethics.

Thus, in the last four decades, the emphasis of medical ethics has changed to the status and claims of the patient rather than an overriding concern for doctors' conduct with each other, the emphasis originally defined in 1803 by Thomas Percival, M.D., of Manchester, England, in his treatise *Medical Ethics*. In fact, his work has sometimes been interpreted as "medical etiquette" rather than medical ethics because it was concerned primarily with behavior between and among physicians. Later in that century, Philadelphia physicians Isaac Hays, M.D., and John Bell, M.D., relentlessly urged members of the fledgling American Medical Association (AMA), including the influential Benjamin Rush, M.D., to adopt a code of ethics. As a direct result of their tenacity, AMA in 1847 became the first national professional organization to create and accept an ethical code, one based largely on Dr. Percival's seminal work.

Ethics are historically and socially contingent. Thus, it is inevitable that changes in codes governing medical ethics will continue to evolve as society changes. Accordingly, the AMA's "Principles of Medical Ethics" and the ASA's "Guidelines for the Ethical Practice of Anesthesiology" undergo continual review, modification and revision. The ASA guidelines begin with a preamble stating that ASA recognizes AMA's "Principles of Medical Ethics" as the foundation for the ethical conduct of ASA members. Indeed, ASA's "Guidelines for the Ethical Practice of Anesthesiology" is the only ASA document that is binding upon each member, who, in turn, is obligated to sign his or her membership card annually to affirm acceptance of this ethical obligation. These guidelines can be found in their entirety in "ASA Standards, Guidelines and Statements" on page 1 and at <www.ASAhq.org/Standards/10.html>.

The primary purpose of this article is to familiarize ASA membership with the recent changes in the "Principles of Medical Ethics" adopted by the AMA House of Delegates in June 2001, recommended to the ASA House of Delegates by the ASA Committee on Ethics and adopted by our House in October 2001.

The AMA's principals were created primarily for the benefit of the patient and represent standards of conduct that define the essentials of honorable behavior for physicians. In 2001, AMA added two new principles and rewrote, to some degree, many of the pre-existing seven. The remainder of this article briefly reviews these principles.

Principle I states that "a physician shall be dedicated to providing competent medical care with compassion and respect for human dignity."

Principle II mandates upholding the standards of professionalism and honesty plus the requirement to "report physicians deficient in character, competence or who are engaging in fraud to appropriate authorities." This principle includes a new stress on professionalism and on the responsibility to effectively address inadequate professional behavior in colleagues.

Principle III remains unchanged: "a physician shall respect the law and also recognize a responsibility to seek changes in those (legal) requirements which are contrary to the best interests of the patient."

Principle IV continues to admonish physicians to "respect the rights of patients, colleagues and other health professionals and… safeguard patient confidence within the constraints of the law." Patient confidentiality is threatened by recent regulations, and thus physicians may be obligated to pursue changes according to Principle III.

Principle V denotes the physician's obligation to "study, apply and advance scientific knowledge, make relevant

Edward Lowenstein, M.D., is Henry Isaiah Dorr Professor of Anaesthesia and Professor of Medical Ethics, Harvard Medical School, and Provost, Department of Anesthesia and Critical Care, Massachusetts General Hospital, Boston, Massachusetts.

medical information available to patients, colleagues and the public, obtain consultation" and utilize the expertise of other health professionals when indicated. It specifies a new duty "to maintain a commitment to medical education."

Principle VI emphasizes the freedom "except in emergencies… to choose whom to serve, with whom to associate and the environment in which to provide medical care." The term "medical care" has now been substituted for the previous term, "medical services."

Principle VII, as in the past, recognizes the responsibility to participate in activities to improve the community but for the first time specifies "the betterment of public health" as a moral concern.

As mentioned above, the following two Principles (VIII and IX) were added this past year.

Principle VIII actually paraphrases the ASA's first ethical guideline (I.1): "A physician shall, while caring for a patient, regard responsibility to the patient as paramount."

Principle IX states that "a physician shall support access to medical care for *all* [my emphasis added] people." It is of interest that this was originally proposed for inclusion in the ASA guidelines when undergoing revision several years ago.

As can easily be appreciated, the modifications are consistent with continuing the movement toward greater ethical responsibility of physicians both to individual patients and to the entire population. The current principles move further from protection of the profession at the expense of the laity.

Principle IX is a particularly noteworthy addition; it unequivocally defines a moral responsibility to all who are medically underserved. In the United States alone, there are approximately 40 million people without health insurance coverage, and another 40 million people are dependent on Medicaid, which is inadequately funded in many states. The limited access to continuity of medical care in the United States may represent as great an ethical transgression as all other medical ethics issues combined.

The Committee on Ethics encourages all ASA members to read the entire ASA "Guidelines for the Ethical Practice of Anesthesiology" and to do their utmost to live up to them.

Does Anesthetic Care for Trauma Present Increased Risk for Patient Injury and Professional Liability? A Closed Claims Analysis

Continued from page 10

reveals that trauma claims involve more emergent and more severely ill patients and result in larger claim payments than do nontrauma claims. These observations should be emphasized with regard to education, training, administration and reimbursement for trauma anesthesia care during the development and implementation of local and regional trauma care services.

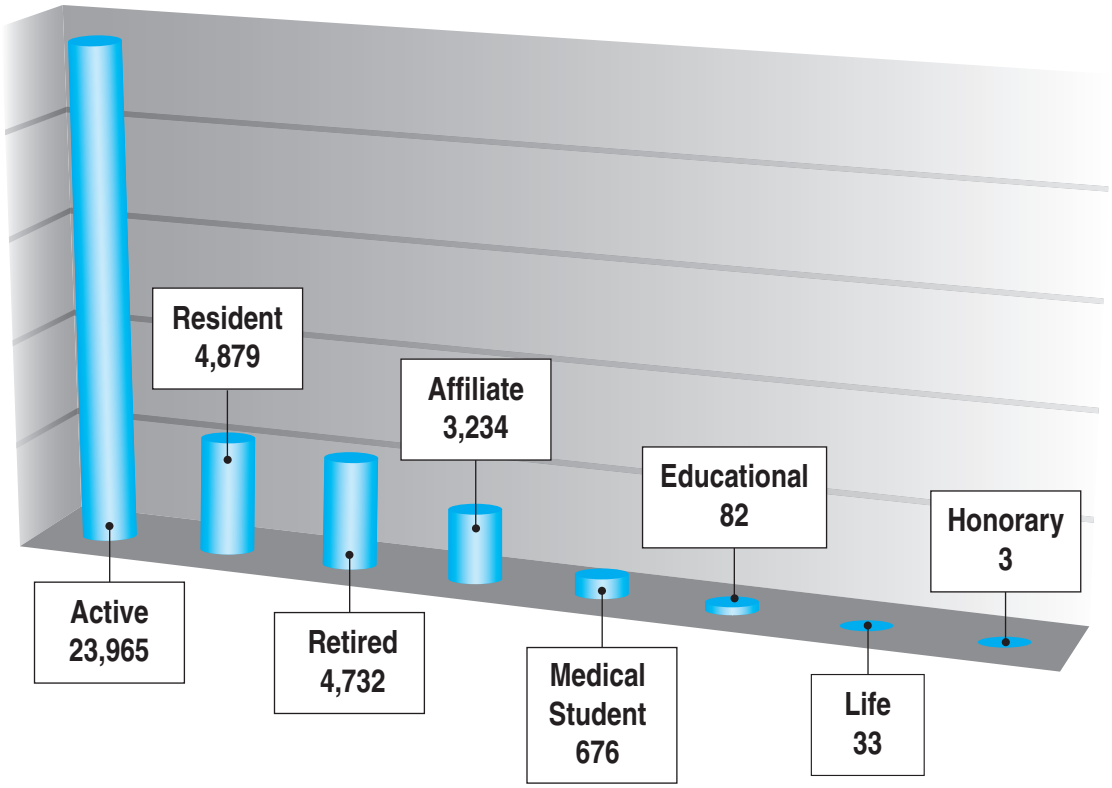
References:

1. Nathens AB, Maier RV, Copass MK, Jurkovich GJ. Payer status: The unspoken triage criterion. *J Trauma*. 2001; 50:776-783.
2. Selzer D, Gomez G, Jacobson L, et al. Public hospital-based level I trauma centers: Financial survival in the new millennium. *J Trauma*. 2001; 51:301-307.
3. Cheney FW. The American Society of Anesthesiologists Closed Claims Project: What have we learned, how has it affected practice and how will it affect our practice in the future? *Anesthesiology*. 1999; 91:552-556.
4. Bogetz MS, Katz JA. Recall of surgery for major trauma. *Anesthesiology*. 1984; 61:6-9.

at a Glance

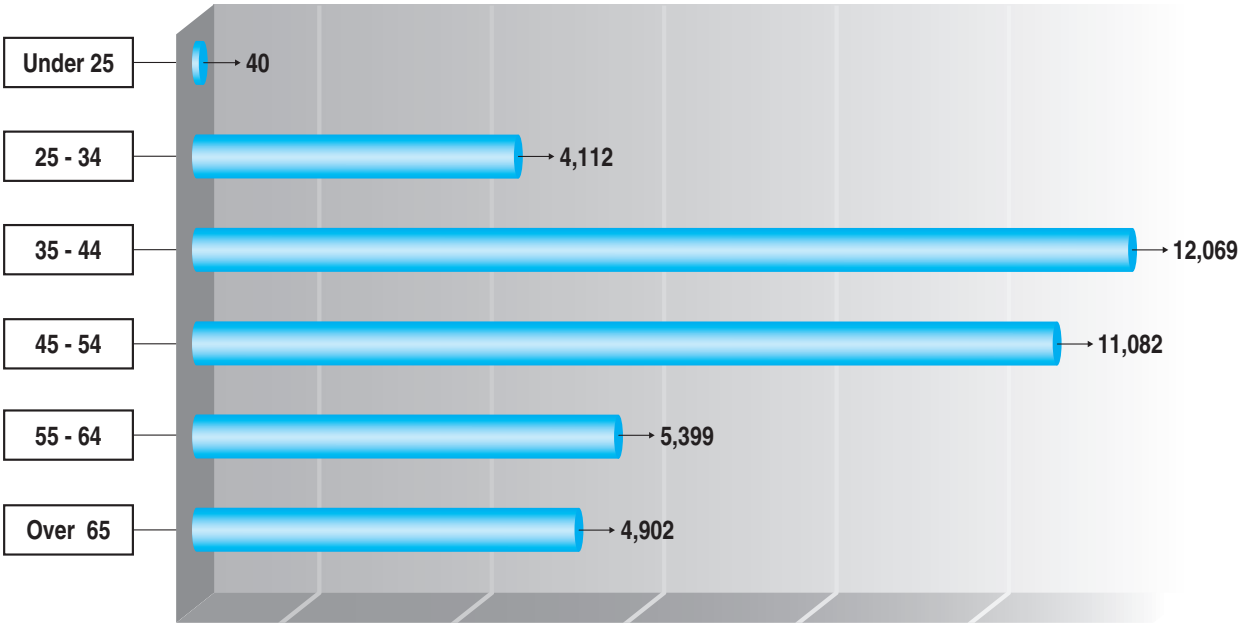
The following figures were compiled by ASA staff from available membership data as of March 31, 2002. Percentages reflect just less than 1 percent of unaccountable data due to individual member records with insufficient information.

Total ASA Membership = 37,604 *(an all-time high!)*



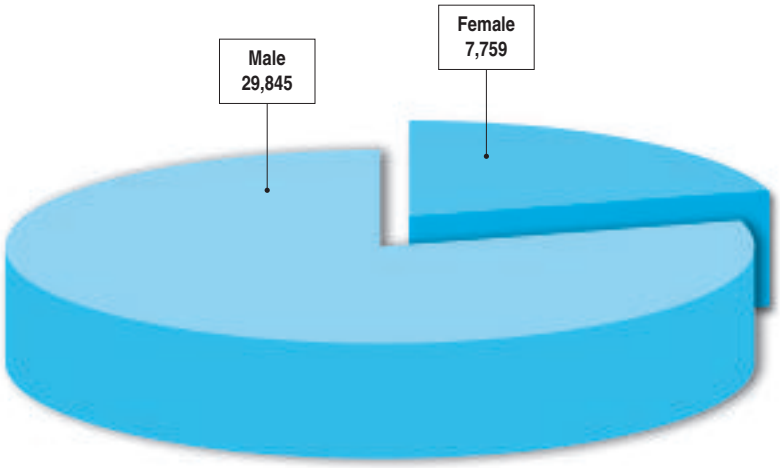
Membership Status

Active members make up the largest segment (64 percent) of ASA's total membership with resident members comprising about 13 percent.



Membership by Age

The greatest number of ASA members (32 percent) are between the ages of 35-44. The second largest group (29 percent) includes ages 45-54.



Membership by Gender

The number of female anesthesiologists (20.6 percent) has been increasing at a slow but steady rate but is expected to climb as more women enter medicine.

MHAUS Presents 9th Annual Hotline Partnership Award

Katherine O. Riess, Editor
The Communicator *(the official newsletter of MHAUS)*

Linda Millman Guller, MHAUS Public Relations Representative

Malignant Hyperthermia Association of the United States (MHAUS) Hotline Consultant Charles B. Watson, M.D., Bridgeport Hospital, Bridgeport, Connecticut, and Thomas R. Peterson, M.D., T.C. Thompson Children's Hospital, Chattanooga, Tennessee, were the recipients of the Ninth Annual Hotline Partnership Award in recognition of their outstanding teamwork in saving the life of an infant.

Dr. Watson, Dr. Peterson and two pediatric intensivists at T. C. Thompson Children's Hospital, Gregory Talbott, M.D., and Patrick Keegan, M.D., successfully managed the case of a five-month myopathic female who triggered a malignant hyperthermia (MH) episode while general anesthesia was induced to undergo magnetic resonance imaging. Dr. Peterson immediately recognized the MH symptoms, including extreme rigidity, increased temperature and end-tidal carbon dioxide, and acidosis. He directed his team, including Dr. Talbott, to follow the MH protocol. Once the baby was stabilized, Dr. Peterson called the MH Hotline to report the MH episode and seek further advice. The baby was transferred to the pediatric intensive care unit (PICU) under the care of Dr. Talbott and Dr. Keegan.

"This was my first MH case in 17 years and the first time that I have been directly involved with MHAUS and the MH Hotline," Dr. Peterson recounts. "When the baby triggered MH, she was so rigid it seemed she could be picked up by her ankles and held parallel to the floor. Our team response was nothing short of fantastic. We were in a remote location and had all the resources available, including a fully stocked MH cart with dantrolene, to immediately treat the infant. I now look back at my residencies and am thankful that I have the training to effectively identify and manage MH," Dr. Peterson said. "Dr. Talbott and Dr. Keegan continued administering dantrolene during the postoperative period and spoke on several occasions to MH Hotline Consultant Dr. Watson to get ongoing guidance and consultation regarding MH management and correct dantrolene dosing for the infant when MH symptoms returned in the PICU," he continues. "I am happy to report that the patient fully recovered from the episode and has undergone subsequent successful procedures with nontriggering agents. My thanks to the people of the MHAUS organization and their efforts, which clearly paid off in this instance."

"This was the first full-blown case of MH that I have treated," Dr. Talbott stated. "MH is unpredictable: There are no rules for the clinical course of MH-related events that follow the initial episode. I cannot say enough good things about Dr. Watson. Dr. Watson greatly helped Dr. Keegan and me anticipate what to expect over the next several days so that we could properly identify and treat the recurring MH symptoms to stabilize the baby. His expert guidance was comforting and totally on target. Dr. Watson and MHAUS came through for this little girl. I now keep the MH Hotline number immediately accessible in my Palm Pilot."

Dr. Watson recalled that "Drs. Peterson, Talbott and Keegan and their teams did a first-rate job of quickly identifying MH and following the MH protocol, including the administration of dantrolene. I believe that this case clearly illustrates the immeasurable value of the MH Hotline system. The Hotline triage staff processed and communicated a wealth of information during the initial call from Dr. Peterson and helped to coordinate and process the subsequent follow-up calls between the doctors at T.C. Thompson Hospital and me to help achieve a successful outcome.

"Right now, thanks to the efforts and research of MHAUS, MH is almost 100 percent treatable," Dr. Watson added. "Collectively, the MH Hotline Consultants have more experience with MH than any one clinician or medical center. I am proud to be an active member of this life-saving organization."

MHAUS President Henry Rosenberg, M.D., concluded, "Over the last 11 years, Dr. Watson has been a dedicated member of the MHAUS Hotline and is now the chair of our Quality Assurance Committee. The effective management of this case significantly illustrates Dr. Watson's expertise in guiding medical professionals to effectively identify and manage MH throughout its clinical course to help reduce morbidity and mortality." Dr. Watson also advised the doctors about how to register this case with the North American Malignant Hyperthermia Registry of MHAUS and to refer the patient's family to a regional biopsy center and MHAUS for further information about MH.

Other consultants who were honored at the breakfast included: Steven C. Hall, M.D., Edwin W. Lojeski, D.O., and Daniel I. Sessler, M.D., for 15 years of service; Barbara W. Brandom, M.D., James W. Chapin, M.D., and Harvey K. Rosenbaum, M.D., for 10 years of service; and Lena S. Sun, M.D., for five years of service. Our congratulations and sincere appreciation to all.

For more information on MHAUS, telephone the General Information Line at (607) 674-7901.

Central Line Complications From the ASA Closed Claims Project: An Update

Continued from page 12

sound for placement of central lines and concluded that ultrasound improved catheter insertion success rate, reduced the number of venipuncture attempts and reduced the number of complications.[5] 2D ultrasound is particularly useful when the internal jugular vein cannot be located easily and quickly using standard anatomical landmarks. However, consideration should be given to transducing a waveform even when the 2D ultrasound is used to identify the vein because the needle, which is nearly parallel to the ultrasound beam, is often not clearly seen in the ultrasound image.

Analysis of complications of central lines from the ASA Closed Claims Project confirms that the placement and use of central lines are associated with the possibility of serious morbidity or mortality. Fortunately, many of these complications may be preventable by positively identifying the vessel as a vein prior to inserting a wire or large-bore catheter. As in 1996, the author recommends examination of the pressure waveform as the most convenient and reliable method for distinguishing the vein and artery. 2D ultrasound devices also may be useful aids to locating the vessels and may help to reduce complications, especially in cases where locating the vein is difficult.

References:

1. Bowdle TA. Central line complications from the ASA Closed Claims Project. *ASA Newsl*. 1996; 60(6):22-25.
2. Jobes DR, Schwartz AJ, Greenhow DE, et al. Safer jugular vein cannulation: Recognition of arterial puncture and preferential use of the external jugular route. *Anesthesiology*. 1983; 59:353-355.
3. Troianos CA, Jobes DR, Ellison N. Ultrasound-guided cannulation of the internal jugular vein. A prospective, randomized study. *Anesth Analg*. 1991; 72:823-826.
4. Randolph AG, Cook DJ, Gonzales CA, Pribble CG. Ultrasound guidance for placement of central venous catheters: A meta-analysis of the literature. *Crit Care Med*. 1996; 24:2053-2058.
5. Rothschild JM. Ultrasound guidance of central vein catheterization. Evidence Report/Technology Assessment, No. 43. Making Health Care Safer. A Critical Analysis of Patient Safety Practices. Agency for Healthcare Research and Quality Publication No. 01-E058. 2001; 245-253. <www.ahrq.gov/clinic/ptsafety/>.

Anesthesia Information Management Systems

Continued from page 16

Internet, has sponsored the creation of a standard called Scalable Vector Graphics (SVG) <www.w3.org/Graphics/SVG/Overview.htm8>. Using SVG, a truly interactive anesthesia record keeper with the most sophisticated graphic capability can be installed on a local machine using Internet software and made capable of communicating facilely to other devices and databases over standard networks. The author has created a Web site using SVG and Internet software to provide a proof of concept for these techniques for the reader. In order to view the site, the reader must first download the SVG browser plug-in from <www.adobe.com/svg/viewer/install/main.html> and install it. Internet Explorer® 5.5 or higher is recommended. The proof of concept is at <www.roitsystems.com/aims/>.

Automated record-keeping is long overdue for our specialty. APSF has laudably taken a leadership role is achieving widespread installation. Modern Internet technology, reliable and available today, may be a crucial addition to AIMS of the future.

Editor's Note: *The mention of certain brand-name products is not intended to be construed as an endorsement by ASA and is essentially the personal preference of the author.*

Important Changes to 2002 Annual Meeting Registration Process

In an effort to streamline and simplify the Annual Meeting registration process, ASA is making several major and noteworthy changes. For the first time, preregistrants' name badges and tickets will be sent in the mail. This system replaces registration packets on site. Preregistrants will need to go to the Registration Area to pick up badge holders and continuing medical education (CME) certificates. CME certificate will not be mailed. In addition to receiving tickets and badges by mail in advance of the meeting, preregistrants also will receive an attendance verification card. This card must be redeemed on site for CME certificates.

The *ASA Annual Meeting Refresher Course Lectures* boo which will now include a CD-ROM of the printed materials will be available in the Orange County Convention Cente ASA Book Sales for $20. The book will no longer be com mentary with the purchase of four Refresher Course ticket

On-site registration will be held in Hall F at the Oran County Convention Center.

Also, online registration will be available beginning June at <www.ASAhq.org/AnnMtg>. Reservations for ing and for special Orlando attraction tickets also will available online. A hyperlink to a customized Orlan Web site will offer a wealth of information about Orl including weather, maps and restaurant information

The preregistration deadline is September 10. N refunds or exchanges will be made after Septembe

Most program events will be held at convention House of Delegates and related activities are sche the Peabody Orlando Hotel. Co-headquarters h Rosen Centre (formerly Omni Rosen) and the Pe

Remember these important changes...

- ✔ Preregistrants' name badges and tickets will be mailed approximately three weeks before the meeting. You will NO LONGER RECEIVE REGISTRATION PACKETS on site. Preregistrants also will receive an attendance verification card that must be redeemed at the meeting for CME certificates.
- ✔ Badge holders and CME certificates will NOT be mailed and must be picked up after your attendance is verified at the Registration Area at the Orange County Convention Center in Orlando.
- ✔ As an added value, the *ASA Annual Meeting Refresher Course Lectures* book will now include a CD-ROM of the lecture summaries, but it will no longer be complimentary with the purchase of four Refresher Course tickets. The book with the CD-ROM may be purchased for $20 at the Book Sales booth or in advance of the meeting at <www.ASAhq.org/Pubs/pubstoc.htm>.
- ✔ Those who plan to register on site must go to the Registration Area in Hall F at the Orange County Convention Center.
- ✔ Online registration will be available beginning in June at <www.ASAhq.org/AnnMtg>. Reservations for housing and for special Orlando attraction tickets also will be available online.

Online registration will be available at: <www.ASAhq.org/AnnMtg>

Negotiating a Managed Care Contract for Anesthesia: Beyond the Conversion Factor

Karin Bierstein, J.D.
Assistant Director of Governmental Affairs (Regulatory)

"In today's increasingly challenging economic environment, anesthesia groups across the country are looking for creative ways to enhance revenue for their practices." So writes Hal Nelson, CPC, Vice-President of Anesthesia Compliance for Per-Se Technologies and a speaker at ASA's most recent Conference on Practice Management. Mr. Nelson suggests that negotiating payment terms for specific services in your managed care contracts is a fertile area. "Having come from [the payer] side, I can tell you that savvy negotiation is the name of the game in getting a good pricing structure. Although a good unit rate [conversion factor] is important, one should also consider the myriad carve-out services that can be imbedded in a contract to help augment the total reimbursement to a group. Listed below are my top 10 items to ask for when negotiating a contract."

1. Invasive monitoring lines (A-line — Current Procedural Terminology (CPT™) 36620, CVP — 36489 and Swan-Ganz — 93503)

Make sure that the carrier explicitly states that these items are payable in addition to the anesthesia charge and that no multiple-procedure discount applies. Also be sure that payment is allowed when the anesthesiologist places the lines outside the operating room (O.R.), not in conjunction with an anesthesia service. The current payer trend is to try to deny these lines as being bundled into the base unit allowance, so insist that the insurance company "carve out" these items before signing any contract.

2. Acute pain

Many anesthesia groups have some involvement with acute pain management. Be certain that your contracts specify that any acute pain service that is not the primary mode of anesthesia in the case can be reimbursed separately. This would include epidurals, peripheral nerve blocks and spinals and is consistent with CPT coding principles. You also should negotiate separate payment for daily pain management codes 01996 (epidural management), 99231 (spinal narcotic management) and patient-controlled analgesia (01997, or 99199 for an unlisted service if the payer does not recognize 01997). Additional payment for these acute pain services can result in a large revenue boost for any group.

3. Obstetrical (OB) anesthesia/ analgesia

Beware of payers who do not carve out OB anesthesia services. Many will give you an attractive unit rate for all anesthesia services but will have hidden verbiage within their contracts capping the units for OB cases at an unreasonably low level. Know specifically what you will be getting paid for: 1) vaginal deliveries, 2) cesarean sections and 3) labor ending in a cesarean section. Since "face-to-face" monitoring requirements for obstetrical anesthesia can be clinically different from O.R. anesthesia, it is best to incorporate language into the contract stipulating the payment method for OB anesthesia.

4. Physical status modifiers P3-P5

Many carriers will pay you one to three additional base units respectively for physical status modifiers P3-P5. These patients are a higher risk for the anesthesiologist than a P1 or P2 so the payment should be increased accordingly on these cases. The carrier should not need to see a specific diagnosis code to substantiate the physical status modifier billed as long as the preoperative assessment documentation supports the modifier billed.

5. Qualifying circumstances (extreme age — CPT 99100, controlled hypothermia — 99116, controlled hypotension — 99135, emergency — 99140)

Depending upon your practice characteristics, these codes can sometimes equate to substantial increased revenue for a group. Extreme age is defined as under 1 or over 70 years of age. This code is extremely helpful for groups that work with a large number of pediatric cases. Controlled hypothermia and hypotension should be mandatory requests for any group doing neurosurgical anesthesia cases. Emergency code 99140 is applicable to all groups for cases such as emergent appendectomies and other cases where a delay in treatment would result in an increased risk to life or limb.

6. Transesophageal echocardiography (TEE) services (codes 93312-93318)

Special carve-out payment should be guaranteed for three types of TEE services performed in conjunction with anesthesia. First, code 93313 should be paid when the anesthesiologist places the TEE probe for a cardiologist to interpret. Second, code 93312-26 should be paid in addition to anesthesia when an anesthesiologist places the TEE probe and personally performs a diagnostic interpretation with a written report. Lastly, code 93318-26 should be paid when an anesthesiologist places a TEE probe and performs subsequent routine monitoring during the case (no diagnostic report). As is true of invasive monitoring lines, a fee schedule alone for these codes does not guarantee payment. Only explicit contract language specifying separate payment will suffice.

7. Monitored anesthesia care (MAC)

Some commercial carriers have begun to insert language into contracts that limits MAC payment to P3 or higher cases. Your contract should specify that MAC is paid at the same rate as a general anesthetic, without regard to the physical status modifier billed.

8. ASA Relative Value Guide (RVG) year used for calculating unit value

Carriers are infamous for stating that they pay flat fee services based on the ASA RVG. The $64,000 question is, which year? 1988 or 2002? Make sure that any unit rate agreed upon is tied to current ASA values and is independent of Medicare, whose base units are not 100-percent consistent with ASA's. Speaking of Medicare, be wary of contract rates that are directly tied to Medicare allowances. In 2002, Medicare payments for anesthesia dropped nationally by 6.9 percent, meaning that unit values for contracts tied to these rates also took a hit. If you contract at a percentage of Medicare rates, you may want to specify one particular year (such as 2001) so that there are no negative changes in reimbursement on an annual basis.

9. Surgical field avoidance (SFA) and unusual positioning (UP)

ASA's "Anesthesia Guidelines" (found in the front of the RVG) allow a minimum of five base units for certain procedures where SFA or UP is involved. Although this may sound good in theory, few payers will recognize this additional payment without something written into the contract. Carriers who pay extra for these items will need to provide a procedural modifier (such as -22) to represent this increased risk and alert the payer to reimburse the group additional units.

10. Use of physician extenders

Some contracts will allow you to bill for services performed by nurse practitioners or physician assistants employed by the group. This can come in handy for groups who utilize such extenders within their practice in both an office and hospital setting (pain visits, etc.). Since these individuals are typically paid a flat salary by the group, it does not take long to recoup the extender's employment costs and generate additional revenue for the practice.

Note: *Another item that anesthesia groups may want to start addressing in their negotiations is payment for concurrent cases involving residents. As noted in an article by Alexander A. Hannenberg, M.D., in the May 2001* NEWSLETTER*, United Healthcare requires use of the Medicare modifiers and is now reducing the payment by 50 percent for concurrent cases whether or not they involve residents. This is an attempt to capitalize on the Medicare payment rules, which allow 50 percent of the fee to the anesthesiologist who is medically directing residents, nurse anesthetists or anesthesiologist assistants. Private payers such as United Healthcare, of course, do not make up the other 50 percent through graduate medical education reimbursement as does Medicare. Anesthesiologists who work with residents should consider negotiating a continuation of the current standard that allows 100 percent of the fee for all cases whether or not they involve residents.*

ASA Helps Interventional Pain Physicians With New Epidurolyis Code

The American Medical Association/Specialty Society Relative Value Update Committee (RUC) met in April to recommend RBRVS changes to Medicare for the 2003 Medicare Fee Schedule. ASA presented a large number of new and revised CPT™ codes for assignment of either RBRVS units or ASA base units and was highly successful. On behalf of the American Society of Interventional Pain Physicians (ASIPP), which is not a member of the RUC, we presented a new CPT code for epidurolysis of adhesions performed in a single day. The existing code applies only if the procedure is performed over two or three days. Laxmaiah Manchikanti, M.D., President of ASIPP, joined

Karl E. Becker, Jr., M.D., ASA RUC Advisor, left, Norman A. Cohen, M.D., RUC Alternate, and Laxmaiah Manchikanti, M.D., ASIPP President, present information supporting a proposed value for the new CPT code for epidurolysis of adhesions performed in a single day.

Karl E. Becker, Jr., M.D., ASA RUC Advisor, and Norman A. Cohen, M.D., RUC Alternate, at the presenters' table and helped secure an appropriate value for the one-day procedure [see photo]. (Confidentiality rules prohibit disclosure of the numeric value.) For 14 out of 15 anesthesia codes, the RUC assigned the exact number of base units for which we had asked. Four out of four block codes fared equally well.

The Centers for Medicare & Medicaid Services (CMS) will indicate whether it agrees with the values that the RUC is recommending in late June or July. Historically, CMS has accepted more than 95 percent of the RUC's recommendations.

Being Extra Safe When Providing Anesthesia for MRI Examinations

Continued from page 18

issues, including the need for continued monitoring of outcomes measures. Sedation/anesthesia programs for MRI examinations are dynamic, and regular evaluation is needed to identify new opportunities to improve care.

Final Word

Back in 1988 when the evolution of quality assurance was relatively new, there was an interesting article by J. R. Gumpert titled "Why on Earth Do Surgeons Need Quality Assurance?" [*Ann R Coll Surg Engl.* 70(2): 85-92]. In it he introduced an acronym meant to encompass all FACETs of medical care. A good physician, he wrote, properly organizes the **F**inances, **A**dministration, **C**ommunication and **E**ducation of his team as well as the patient's **T**reatment. The MRI accident last July lets us add a big "S" for **S**afety, also one of the FACETS of our job.

References:

1. Archibold RC Hospital details failures leading to MRI fatality. *The New York Times*. August 22, 2001:1.
2. Report of ECRI (formerly the Emergency Care Research Institute). <www.ecri.org/documents/hazard_MRI_080601.pdf>.
3. *Anesthesia in Remote Locations Safety* [videotape]. American Society of Anesthesiologists; 1997. Patient Safety Videotape Series: Videotape no. 26 <www.ASAhq.org/NEWSLETTERS/1997/12_97/Anesthesia_1297.html>.

APSF Developing Data Dictionary

Ellison C. Pierce, Jr., M.D., Executive Director
Anesthesia Patient Safety Foundation

The Anesthesia Patient Safety Foundation (APSF), now in its 18th year, continues in its mission to encourage activities that will prevent patients from being harmed by the effects of anesthesia. Long-standing activities such as the APSF newsletter, research grant awards and the Web site are alive and well. Support from ASA, its component societies and its membership as well as from industry continues. We thank you all.

Currently, major attention is being paid to the role of automated information management systems (AIMS) in promoting patient safety. The APSF Board of Directors approved the following at its 2001 Annual Meeting: "The APSF endorses and advocates the use of automated record-keeping in the perioperative period and the subsequent retrieval and analysis of the data to improve patient safety." This position was developed following APSF board retreats in 2000 on perioperative data management and in 2001 on the role of AIMS in improving morbidity and mortality conferences. The Summer 2001 *APSF Newsletter* that devoted an entire issue to information systems can be found on the Web site <www.apsf.org>.

It has become obvious that there is need for a common nomenclature to be available in comparing perioperative information and outcomes. Therefore, APSF has appointed a Data Dictionary Task Force (DDTF), chaired by Terri G. Monk, M.D., of the University of Florida, Gainesville, Florida. The role of the task force will be to:

- Identify a common language of specific perioperative terms
- Define a minimum set of data elements necessary for a perioperative information management system
- Standardize the data elements as a first step in building a national outcomes database dedicated to the identification of causes and prevention of anesthetic morbidity and mortality.

Ellison C. Pierce, Jr., M.D., is a member of the Committee on Patient Safety and Risk Management. He is currently retired from practice.

Members of the task force include a number of well-known anesthesiologists who are knowledgeable in the field of information management (see "Data Dictionary Task Force" on the APSF Web site <www.apsf.org>). In addition, a technical working group has been established made up of experts from the several corporations involved in designing information systems. Iain C. Sanderson, M.D., of Duke University, Durham, North Carolina, is the chair. Ronald A. Gabel, M.D., chair of the ASA Committee on Performance and Outcomes, sits with both groups.

APSF President Robert K. Stoelting, M.D., has noted, "A common data set allows for the collection and comparison of large volumes of clinical data from multiple institutions for outcomes research and benchmarking."

A seed grant from APSF provided initial financial support for this undertaking, and contributions from each of the corporate participants are now funding it. These participants include Deio; Draeger Medical, Inc.; eko systems, Inc.; GE Medical Systems; Philips Medical Systems; Picis; and Siemens Medical Solutions. Initially, the DDTF will focus on the leverage of existing standards and lexicons as well as collecting and comparing data elements from installed clinical information systems to determine the common terms.

Dr. Monk has commented that, "Paper-based medical records do not facilitate the reliable and efficient transfer of medical information between health care facilities and providers. Computer-based patient records provide better interfaces between clinical data and health care providers… At the present time, the several computer-based anesthesia records in use lack the ability to interface with each other or with a central data depository. The retrieval of information is also limited by inconsistencies in the naming of prob-

Continued on page 32

Old School: AUA at 50

Alex S. Evers, M.D., President
Association of University Anesthesiologists

This is 50th year of operation for the Association of University Anesthesiologists (AUA), an organization that has had great impact on our specialty but remains unknown to most anesthesiologists. Founded in May 1953 by a small group of prominent academicians (E.M. Papper, M.D., H.K. Beecher, M.D., A. Lamont, M.D., and R.D. Dripps, M.D.), the organization now has 700 members who have been elected on the basis of a strong record of research, teaching and national leadership in anesthesiology.

The mission of AUA is the advancement of the art and science of anesthesiology by: 1) the encouragement of its members to pursue original investigations in the clinic and the laboratory; 2) the development of methods of teaching; and 3) free and informal exchange of ideas pertaining to these ideas. To achieve these goals, the association holds a three-day meeting each spring. Hosted by a university department of anesthesiology, the meeting has sessions on basic research, clinical research and education as well as plenary speakers in new areas of science potentially important to anesthesiology. The meeting provides a unique forum for young anesthesiologists to present their work to a large audience of experienced anesthesiology investigators; generations of leading anesthesia investigators have "cut their teeth" presenting to this critical audience of several hundred. The meeting is unique in that there are rarely presentations on political or economic issues — the focus is strictly on advancement of knowledge. Indeed, the bylaws have a clause that forbids the AUA President (or any of the President's friends) from delivering an address!

While AUA was formed and has developed as an academic association, its organization was fomented by political and economic conflict. As Dr. Papper said on the 30th anniversary of AUA, "AUA was founded in an environment in which there was a strange mix of considerable ferment, controversy, strong, hostile feeling and yet almost unlimited optimistic hope." In the early 1950s, major forces in ASA and the American Board of Anesthesiology (ABA) believed that fee-for-service reimbursement was the only acceptable way to practice anesthesiology. Many of the research and teaching faculty in university departments were salaried and were threatened with expulsion from ASA and noncertification by ABA. Initial planning for formation of AUA was conceived as a vehicle for the secession of academic anesthesiology from ASA.

Fortunately, cooler heads prevailed, and salaried practice was accepted by ASA. Moreover, leading academic physicians were welcomed into leadership roles in ASA, and the ASA Annual Meeting developed a serious scientific program. AUA was able to develop as a unique forum in which the novel ideas related to innovation in anesthesiology could be debated and developed in a small, nonpolitical and noncommercial (no booths, no sales, etc.) setting.

"Town/gown" conflicts are, of course, eternal, and the interests of academics and private practitioners will never be synonymous. While ASA has recently had a major political focus on preserving anesthesiology as the practice of medicine, academic anesthesiologists have struggled with unique reimbursement difficulties resulting in a shortage of personnel and the attendant strain on the core missions of teaching and research. To avoid the hostile conflicts that spawned AUA, the unique but essential needs of academic anesthesiology should be political priorities for ASA. It is important that we both preserve the sanctity of our specialty and advance our knowledge and practice.

AUA was spawned not just from political turmoil but also from an unbounded optimism about what could be accomplished in anesthesiology. That optimism has been justified as the last 50 years have seen a remarkable evolution in our ability to safely care for patients with increasing severity of illness and surgical trespass. Although currently our specialty seems focused on preservation, the remarkable revolutions in genetics, imaging and other aspects of biomedicine leave us poised to radically alter and improve

Alex S. Evers, M.D., is Professor and Chair, Department of Anesthesiology, Washington University School of Medicine, St. Louis, Missouri.

APSF Developing Data Dictionary

Continued from page 30

lems, medications and other data." Hence, the first step will be the creation of a data dictionary for the data elements required.

Use of AIMS is supported by many organizations, including the Institutes of Medicine, as a necessary undertaking in promoting further patient safety.

The task force is approaching the problem of sharing data from a different perspective, recognizing that the primary problem is the lack of a standard terminology. APSF intends to make the results readily available to the entire anesthesiology community. Dr. Sanderson expects that a preliminary reference data set will be available for review in October 2002 at the time of the ASA Annual Meeting.

Certainly, in my view, use of automated anesthesia information management systems is a most important step in promoting patient safety now and in the future. With efforts on the part of APSF and DDTF, we hope that over the next several years, installation of these systems will increase dramatically from the current usage — about 3 percent of U.S. hospitals. This increase in usage will allow more anesthesiologists to review recent anesthesia and surgical incidents in sick patients, such as diabetic individuals, before proceeding with anesthesia for follow-up surgery. If your automobile repair shop can tell you the history of oil changes in your vehicle, certainly your anesthesiologist should be able to determine your history with anesthetics.

ASA members are encouraged to follow the activities of the DDTF through the APSF Web site.

Old School: AUA at 50

Continued from page 31

perioperative care. AUA stands poised to encourage and catalyze the continued advancement of the art and science of anesthesiology.

The 50th anniversary of AUA will be celebrated in May 2003 at the Medical College of Wisconsin in Milwaukee under the leadership of its new President, Donald S. Prough, M.D. (He, too, will be forbidden from giving an address at the AUA meeting and also may need to use the *ASA NEWSLETTER* as his bully pulpit.)

Operating Room Fires: Still a Problem?

David E. Lees, M.D.
Committee on Equipment and Facilities

Most, if not all, anesthesiologists begin their clinical day knowing the location of the nearest defibrillator, but how many can say they checked for the location and types of the nearest fire extinguishers? In 1988, John Bruner, M.D., led a joint study by ASA and the National Fire Protection Association (NFPA) that examined operating room fires. ASA and NFPA have worked together for more than 50 years to lessen the risk of fire in our nation's health care facilities while assuring dependable medical gas services for our patients.[1] The Bruner study determined that, while rare, operating room fires have devastating consequences, cause severe patient injury or death, precipitate legal actions and take a great psychological toll on the patients, family, the operating room team and the institution itself. Fourteen years later, those observations are still true. Operating room fires receive publicity that is echoed and magnified many times over in the popular press.

Experts believe there are less than 100 incidents per year involving patient injury. Of these, between two and 10 per year involve serious injury or death and make the national media. The fact that decades-old episodes are still used as illustrations of the problem is testament to how rare and yet how indelible an occurrence can be in the public memory. Exact figures are difficult to come by for several reasons. Unless a municipal fire department is summoned, there will be no public record. Patient injury is quickly cloaked by hospital counsel to minimize adverse publicity; the facts then only become public with litigation. No state specifically requires reporting operating room fires. The Safe Medical Devices Act of 1990 requires reports to the Food and Drug Administration only when one can directly or indirectly attribute the cause of the fire to a specific device malfunction or operator error due to faulty design.

Some critics postulate that there has been an increase in operating room fires that correlates with the introduction of the pulse oximeter. Pulse oximeters supposedly encouraged the liberal use of oxygen to prevent heretofore-unrecognized hypoxemia, but there is doubt whether modern anesthesiologists are any more cavalier with oxygen than their colleagues of two decades ago. Given the lack of reliable data collected by a central source, it is difficult to say whether the incidence of operating room fires is on the increase, waning or unchanged. There is no doubt, however, as to the danger of an oxygen-enriched atmosphere where a small spark can trigger a conflagration. ASA Patient Safety Videotape No. 20, "Fire in the Operating Room," contains a dramatic and vivid demonstration of the effect of just 23 percent oxygen on the ignition of a disposable drape with an electrosurgical unit (ESU).

What Are the Contributing Factors?

The three elements of the classic "fire triangle" are present in almost every operating room:

- Fuel
- Ignition source
- Oxygen

The ignition source implicated most often is the ESU, with lasers ranking second. Plastic and rubber anesthesia supplies, disposable and woven drapes, preparation solutions and patient hair provide the fuel. Surgical procedures about the head and neck are most often implicated — more specifically, it is usually a laser- or ESU-induced surgical fire in the oropharynx or a facial burn due to the combination of electrosurgical units and an oxygen-enriched atmosphere about the head and neck.

Reducing the Chances

Experts may disagree whether it is possible to prevent all surgical fires, but it is possible to anticipate the likelihood in certain cases. Oxygen is under the control of the anesthesiologist, who should prevent the development of an oxygen-enriched atmosphere. Drapes should be tented to vent oxygen from under the drapes to the floor. Active gas scavenging also should be considered. Oxygen should be used sparingly, especially during monitored anesthesia care procedures about the head and neck; use no more than is necessary to maintain an adequate SaO_2.[2]

Surgeons should use clear adhesive "incise" drapes at the wound site to block the diffusion of oxygen into the operative field. Facial and scalp hair should be wetted with a water-soluble surgical lubricant. ESUs should be set to

David E. Lees, M.D., is Professor and Chair, Department of Anesthesia, Georgetown University Medical Center, Washington, D.C.

the lowest intensities practicable and care exercised to holster the "pencil" when not in use. A contaminated pencil should always be disconnected and not left to hang down on the drapes, nor should the cord be clamped to the drapes. Nursing can do much to reduce the combustible load in the room by removing the disposable paper wrappers and covers before the start of the case. Not only does this reduce the fuel in the room, but it also reduces the waste that must be disposed of as "red bag" waste with its higher disposal costs.

What to Do When a Fire Occurs

Every member of the operating room team — anesthesiologist, surgeon, nurse and technician — should know what to do in the event of an operating room fire. All personnel should know:

- Immediate bedside measures for fire suppression
- Location and type of fire alarms and the extinguishers in the operating room
- Location of oxygen zone shut-off valves and who is authorized to close them in the event of a fire
- Evacuation plans in the event that the operating room or suite must be abandoned

Remember that fire extinguishers are not all alike! They vary in fire rating, capacity and chemical make-up. Learn the indications and location of each type in your operating room suite. Those found in most hospitals are rated for one or more categories:

A – Ordinary combustibles (e.g., paper and wood)
B – Flammable liquids
C – Electrical fires

Education and fire drills are essential, but communication among the members of the operating room team before starting a procedure with a high fire risk is equally important. Teamwork in fire prevention and suppression may well determine whether a minor surgical fire is extinguished promptly without harm or whether it becomes an operating room tragedy amplified by the national media.

References:

1. National Fire Protection Association. NFPA 99: Standard for Health Care Facilities, 2002 Edition. 2002.
2. Emergency Care Research Institute. Eye on Medical Errors: Health Devices. 2002; 31(4):125.

Junior Editors Sought for First Time for In-Training Exam

The ABA/ASA Joint Council on In-Training Examinations is seeking 40 junior editors. The commitment for a junior editor is to accept training and feedback in question writing from senior editors, Joint Council members and the National Board of Medical Examiners and to prepare 15 questions per year from assigned sections of the Content Outline. Junior editors would serve four-year terms, an activity that would be acknowledged with certificates and be eligible for promotion to one of 25 senior editors and nomination for one of 14 members of the Joint Council with responsibility for the yearly In-Training Examination.

This request reflects a change in how questions are obtained for the In-Training Examination and how individuals are nominated to become oral board examiners. In the past, questions for the examination originated from individuals "waiting in line" to become oral examiners and from oral examiners themselves. The American Board of Anesthesiology and the ABA/ASA Joint Council now desire to separate the two activities of question writing and oral examining and make them independent of each other. In the new system, questions will originate from the junior and senior editors, not from oral examiners. Individuals may be involved in both activities; i.e., being a junior or senior editor does not preclude one from being an oral examiner, but the nomination processes and activities are separate (the first through the ABA/ASA Joint Council and the second through the ABA).

If you are interested, please send your curriculum vitae to Raymond C. Roy, M.D., Ph.D., Chair of the In-Training Council, by mail to the ASA Executive Office; fax to (336) 716-3394 or (336) 716-8190; or e-mail to <rroy@wfubmc.edu>. The decisions will be made by autumn 2002 with training to occur in 2002-2003.

Protecting Our Nation's Seniors: Another Reason to Get Involved With Your State Society

James F. Weller, M.D., Secretary
ASA Resident Component Governing Council

Over the past three years, ASA has made great efforts to influence the decision of the Centers for Medicare & Medicaid Services (CMS) on physician supervision of nurse anesthetists. On November 13, 2001, CMS published its final ruling on this issue, leaving in place the federal requirement for physician supervision of nurse anesthetists participating in the care of Medicare patients. This was a huge victory for ASA and for the safety of elderly patients throughout the country. Unfortunately, the final rule allows the governor of a state to opt out of the supervision clause after consultation with the state medical and nursing boards if the governor perceives that opting out is in the best interest of his or her constituents.

Since November, the governors of four states have elected to opt out of the physician supervision clause. On December 12, 2001, less than a month after publication of the CMS final rule, Governor Thomas Vilsack made Iowa the first state to opt out of physician supervision. In February, Governor Mike Johanns of Nebraska became the second governor to opt out. Idaho and Minnesota have since followed suit. Component societies in several other largely rural western states (Alaska, Kansas, Montana, North Dakota, Oregon, Washington and Wyoming) are currently engaged in the ongoing debate over opting out of the physician supervision clause of the CMS rule.

Now that the focus has shifted from the federal to the state level, what can we do as residents to continue the fight for the safest possible perioperative care for our nation's seniors? First, we must recognize that the arguments regarding patient safety that ultimately convinced federal regulators to maintain the physician supervision rule may be less cogent to state governors. Particularly in rural states, governors may believe that supervision of a nurse anesthetist by a physician (not necessarily an anesthesiologist) somehow restricts access to care, which it does not. Furthermore, our surgical colleagues, especially in rural areas, may see the opportunity to opt out of physician supervision as absolving them of responsibility for the medical management of their patients while in the operating room. It is vital that we communicate to them the indispensable role their medical training has prepared them to play in assuring perioperative patient safety.

In order to best address the specific issues unique to each state, it will be incumbent upon each state's anesthesiology society to organize proactively and to educate its political leadership. Many states already have laws mandating physician involvement in anesthesia care. Fortunately, every ASA member also is a member of his or her respective state society of anesthesiologists. It is more important than ever, however, that members become actively involved at the state level by attending state society meetings, participating in organizational efforts and assisting in attempts to educate state governors and legislatures about the importance of physician involvement in anesthesia care.

The debate over physician supervision of nurse anesthetists is a good reason for residents to get involved in their state component societies, but it is not the only one. Activism at the state level offers a unique opportunity for physicians to engage their communities on a positive note as patient advocates. In a field that continues to struggle for recognition, it is now more important than ever that the future leaders of our specialty become leaders in their communities.

While the political focus has shifted from the federal to state government, residents should not abandon their national organization. It is a testament to the tireless efforts of ASA and the ASA Political Action Committee that we now have the opportunity to demonstrate the importance of physician supervision of nurse anesthetists at the state level. Now is not the time to abandon the national leadership but rather to take on the new challenge of providing leadership at the state level.

James F. Weller, M.D., is a CA-3 resident in the Department of Anesthesiology and Critical Care Medicine, The Johns Hopkins Hospital, Baltimore, Maryland.

South Carolina Physicians Celebrate the Kid in All of Us on Doctors Day

People all across the United States celebrated Doctors Day 2002 on March 30, but the folks at Anesthesia Associates of Rock Hill, P.A., in Rock Hill, South Carolina, took a step back in time, so to speak, to honor their own physicians and the thousands of physicians who care for children every day.

With the Doctors Day 2002 theme of pediatric anesthesia in mind, the staff at Anesthesia Associates surprised the doctors there with various refreshments, appetizers and a revealing collage featuring pictures of children that all the staff knew. Upon closer inspection, the doctors found out why the pictures looked so familiar: their staff had secretly amassed pictures of the doctors as children along with the doctors' and staff's own children and children that they had treated.

With the ASA's pediatric-themed 2002 Doctors Day poster as a backdrop, Anesthesia Associates staff called their storyboard presentation, "From Birth… to Adulthood — Pediatric Patients Receive Extra Special Care." The celebration came as a great surprise to the doctors there, but was warmly received by all. In appre-

It was a cakewalk on the "child side" for a group of South Carolina physicians during Doctors Day 2002.

Betty P. Stephenson, M.D., Receives TMA's Highest Honor

ASA Past President (1990) Betty P. Stephenson, M.D., was honored by the Texas Medical Association (TMA) on April 18, 2002, as the recipient of the TMA's 2002 Distinguished Service Award.

The award recognizes meritorious achievement in medical science, public service and service to the medical community. She was nominated by Harris County (Texas) Medical Society President and fellow ASA member Susan D. Curling, M.D. Dr. Stephenson was the recipient of the ASA Distinguished Service Award at the 2000 ASA Annual Meeting.

The ceremony was well-attended, and countless colleagues from across the country lauded Dr. Stephenson for her accomplishments in medicine and in legislative improvements for health care.

"Dr. Stephenson has worked tirelessly to represent her colleagues and patients in establishing the policies of medicine, endeavoring to improve accessibility and availability of health care for all our citizens," Dr. Curling said.

A native Texan, Dr. Stephenson has a long and storied career in her home state and beyond. She was President of the Gulf Coast Society of Anesthesiologists in 1976, President of the Texas Society of Anesthesiologists in 1983 and President of TMA in 1994-95. Dr. Stephenson is a pioneer not just in the specialty, but also in gender relations in medicine: she was the first female president of both the Harris County Medical Society and ASA.

ciation for the wonderful care that the physicians at Anesthesia Associates provide to all patients, each doctor received a copy of a poem giving thanks to their hard work, patience and compassion.

First observed in 1958, Doctors Day is a nationally recognized day that honors the nation's physicians each year on March 30. Because its origins are traced back to surgeon Crawford W. Long, M.D., who administered the first anesthetic for surgery on March 30, 1842, ASA sees Doctors Day as an important opportunity to make the public aware of the importance of anesthesiology to the field of medicine. Every year, ASA produces a comprehensive media kit, including press releases, public service announcements, proclamations, newspaper columns and the colorful fold-out poster.

For more information on how you can spread the word about Doctors Day, call ASA Communications Department at (847) 825-5586 or e-mail <communications@ASAhq.org>.

Component Society News: Medical College Honors Leading Researcher, David C. Warltier, M.D., Ph.D.

In recognition of his invaluable contributions to his school, his specialty and to the world of medicine in general, the Medical College of Wisconsin honored anesthesiologist and researcher David C. Warltier, M.D., Ph.D., with its highest honor, the Distinguished Service Award.

Dr. Warltier, Professor of Anesthesiology, Pharmacology and Medicine at the Medical College of Wisconsin, received the award at the school's 89th commencement exercises on Friday, May 17.

A faculty member at the college since 1977, Dr. Warltier is one of the most respected teachers in the anesthesiology and pharmacology departments. Currently, he is director of the medical scientist training program and has mentored more than 40 medical and graduate students and fellows.

Dr. Warltier's influence, however, is felt far beyond the confines of his school. His laboratory is considered one of the leading cardiovascular anesthesiology centers in the world. He is renowned for his research in coronary blood flow and ischemic heart disease and has made significant contributions to understanding blood vessel growth in the heart. Dr. Warltier is a pioneer in describing how anesthetics protect the heart from ischemia.

David C. Warltier, M.D.

He has published more than 285 articles, is a section editor of *Anesthesiology*, editor of the *American Journal of Physiology* and is the editor of the textbook *Ventricular Function*. His research has been instrumental in the development of a number of currently used clinical drugs.

In 2001, ASA honored Dr. Warltier with its Excellence in Research Award at the ASA Annual Meeting in New Orleans, Louisiana.

Despite his rigorous research and teaching responsibilities, Dr. Warltier still finds time to care for patients undergoing cardiac and major vascular surgery.

Aside from his work, Dr. Warltier has three important loves: his family, his golden retriever, Chili, and pre-Colombian art. He and his wife, Lynn, have four children and reside in River Hills, Wisconsin.

Ventilations: America the Suable

Continued from page 1

director/officer liability lawsuits and, of course, drug company cases.

With respect to pharmaceutical lawsuits, Americans have an Alice-in-Wonderland perception. As an example, if a drug can save or prolong 1,000 lives for every person who might die from a reaction, most individuals would gladly take the medication if afflicted with the disease. However, if a person dies from the medication, society, as is evident in recent court awards, believes that the survivors should collect at least $5.7 million.[2] Recent medical articles have estimated that 100,000 people die from drug-related incidents in the United States. If each person's estate received $5.7 million, the total cost would be $570 billion, or twice the combined revenues of the 12 largest pharmaceutical companies!

It is no wonder that "wonder" drugs, vaccines, orphan drugs and off-patent drugs (? droperidol) will no longer be manufactured for fear of company-bankrupting lawsuits. If a corporation wanted to price the cost of an essential orphan drug that had a 1-percent fatality based on current claims, the cost would be $57,000 per dose.

To place the entire tort craze in perspective, here are a few facts garnered from a recent *Forbes* article by Michael Freedman.[3]

- According to Tillinghast-Towers Perin, tort costs increase twice as fast as the economy and will comprise 2.4 percent of the gross domestic product by 2005, totaling $298 billion.
- Tort costs per person in the United States rise 4.3 percent yearly and will reach $1,000 per person in 2005.
- The average malpractice award was $1.1 million in 1994 and is now $3.5 million in 2001.
- Asbestos insurance payouts will hit $130 billion, or three times the estimated payout for the 9/11 World Trade Center attacks.
- Nationwide, 12 percent of all jury awards exceed $1 million except in Mississippi, New York and Pennsylvania, where 20 percent exceed $1 million.
- Of the total dollar payout:
  - 20 percent goes for economic loss
  - 22 percent goes for noneconomic loss
  - 25 percent goes for legal administrative costs
  - 16 percent goes for defense costs
  - 17 percent goes for claimant's attorney's fees

If tort reform is not seriously addressed in this country, doctors will not practice in rural areas or tort-friendly states, pharmaceutical companies will not make essential but less profitable drugs, executives will not sit on corporate boards and construction workers will stop building low-cost housing. It is obvious that aggressive trial attorneys born without a conscience or soul will not reign themselves in. Moreover, it is unlikely that politicians will enact tort reform when the 56,000 trial lawyers expend $1.4 million annually in political action committee monies supporting (mostly Democrats') campaigns. So must we wait until the economy collapses before action is taken?

I usually offer a few suggestions that might reverse this process, but the only solution is a serious change in the way we regard retribution for damages caused to individuals. Caps on noneconomic losses and emergency funds that bypass the court system (such as the September 11 fund) to quickly compensate victims will be part of the solution. Legislation banning lawsuits for administration of orphan drugs or special procedures will encourage drug companies and doctors to expand the health care horizons. Perhaps closing a couple of hundred law schools also might help the cause. The media could exercise some self-restraint in spectacularizing commonly known side effects of drugs or procedures so the sue-crazy mentality of many Americans can be changed. Finally, it might be worthwhile to advertise to all Americans the impact of the tort system on their lives. In this way, the next time one slaps a friend on the back for receiving a $1 million settlement in a frivolous lawsuit, he or she might reflect that $600,000 went to the attorney and associates and that $1,000 came out of his (her) own pocket in the form of increased product prices.

— M.J.L.

References:

1. Freedman M. The Tort Mess. *Forbes*. 2002; May 13:92.
2. Ibid. pg 92
3. Ibid. pg 93-4

Is the ASA Leadership Listening?

In the March *NEWSLETTER*, I was pleased to finally see a clear message from several anesthesiologists (Ross J. Musumeci, M.D., Daniel M. Podeschi, M.D., Jerry Stonemetz, M.D., and an anonymous letter writer) about the need for significant increases in Medicare/Medicaid reimbursement for anesthesiology services. Following is a summary of many comments elicited from the March *NEWSLETTER*:

Statements on current payment rates:

- Flat out wrong, if not ludicrous
- Demoralizing
- Reimbursement is poor at best
- Rates are already so egregiously low
- Problems with Medicare now go well beyond the issue of fairness
- Dismayed, disappointed and angry
- Disgracefully low Medicare rates
- Blatant unfairness of the Medicare Fee Schedule
- More than a 100-percent increase will be needed to make Medicare rates even close to competitive

Statements on proposed solutions:

- Ask ASA leaders to strongly denounce new Medicare rate for anesthesia
- ASA leadership [should] take a more aggressive stance in its challenge to the Medicare Fee Schedule
- Only when we become militant will anyone listen to us
- Contribute to ASA Political Action Committee

So again, I ask, is the ASA leadership listening? We should have a strategy that will result in a doubling in the Medicare rate for anesthesiology by next year. Using our resources to fight an across-the-board cut in Medicare rates is not the best way to achieve a fair fee schedule for anesthesiologists. All anesthesiologists should encourage state and national societies to make this a top priority today.

Craig A. Westwood, M.D.
Harrisonburg, Virginia

Response from Dr. Glazer

ASA leadership agrees with every one of the "statements on the current payment rates" from Medicare. The ASA Legislative Conference on April 29 - May 1, which will be historical by the time this is printed, will have had Medicare payment problems as our primary issue on which we lobby.

We constantly consult with our expert staff and lobbyists as to appropriate strategies to address this problem. At this time, militancy will not accomplish anything positive. Unfortunately, as recently explained in my *President's Update* from April 3, 2002, the current budgetary restraints and congressional and administration priorities make a long-term, fully adequate correction to our Medicare payment levels unlikely at this time, regardless of our strategies. There is reason to believe, however, that the 107th Congress will ameliorate the projected cuts, at least in the short term, before it adjourns later this year.

We are fully committed to vigorous advocacy to assure that Congress understands this problem, and we educate our legislators at every opportunity on the unacceptable Medicare payment level for anesthesiology services. Access problems are real and progressive, and this manifestation of the payment inadequacies may be our best argument for a repair of the system.

Barry M. Glazer, M.D.
ASA President

The views and opinions expressed in the "Letters to the Editor" are those of the authors and do not necessarily reflect the views of ASA or the NEWSLETTER *Editorial Board. Letters submitted for consideration should not exceed 300 words in length. The Editor has the authority to accept or reject any letter submitted for publication. Personal correspondence to the Editor by letter or e-mail must be clearly indicated as "Not for Publication" by the sender. Letters must be signed (although name may be withheld on request) and are subject to editing and abridgment.*

Straightening Out RVU Formulas

Editor's Note: *Recent letters about Medicare's serious undervaluation of anesthesia services have reopened discussion about an article we published two years ago (Jablonski VN, Marshall, WK. A methodology for the calculation of anesthesia relative value units.* ASA Newsl. *2000; 64(4):19-23). The issues and concerns raised by the article, however, are no less important now than they were before, so we decided to revisit the discussion and add an update.*
— M.J.L.

Virginia N. Jablonski, M.S.A., and Wayne K. Marshall, M.D., are to be commended for addressing the very real and important issue of productivity comparisons within a multispecialty group. Most multispecialty groups do not understand Relative Value Unit (RVU) calculations versus units of work for anesthesia. However, we are concerned that the publication and our membership's ensuing use of this methodology will do more harm than good. The article's **assumption** was that imputed RVU work values based on reimbursement [as developed by the Center for Medicare & Medicaid Services (CMS)] was an accurate reflection of the work of anesthesiologists. Our own society regularly contends that the work values and reimbursement assigned by CMS to anesthesia are grossly unfair.

A subsequent article by Norman A. Cohen, M.D., in the June 2000 *ASA NEWSLETTER* ("Between the RUC and a Hard Place") makes note of the efforts we are expending at the national level to undo CMS' erroneous assessment of our work. If we compare RVUs using Jablonski and Marshall's methodology, we will be understating our work effort by at least 40 percent. ASA has published a workbook[1] on how we can equate what we do to other specialties, and two recent publications[2,3] have addressed this issue as well. The conclusion? If we were paid for what we do like other specialists, our reimbursement should be 1.8- to 2.2-fold higher than it is. Therefore, a "work value correction factor" of 2 should be applied as part of the formula in the numerator. The result: a *doubling* of RVUs by anesthesiologists. This would then truly reflect the work we do (rather than the amount we are paid by CMS). I suggest that the new formula for conversion of anesthesia units to RVUs be:

{(base + time units) * anes conversion factor/surgical conversion factor} * specialty share weight * WORK VALUE CORRECTION FACTOR = work RVUs for anesthesia.

The formula above is only appropriate for physician care where all time and interpretative work and intensity is done by the physician. With supervision of multiple providers, I suggest subtracting the dependent provider component = one-half the time units (without the doubling factor). Dependent providers usually provide care during the less intense parts of care and are joined by the physician in charge of the case during all critical parts of the procedure. This is reflected in the personal participation requirements that CMS has for medical supervision of nurse anesthetists. ASA did not address care team issues when it looked at the CMS underpayments.[1] A factor of (n/n-1, where n= average concurrency ratio) is used to denote the fraction of time when an anesthesiologist is certainly not present. Given practice norms outside of an exclusive cardiac practice, I would suggest that n be greater than or equal to 2, as supervising anesthesiologists do not usually spend more than one-half of their time in the room, even if the supervision ratio falls below 2. The formula for care team practice would be:

[(total base + total time units) * anesthesia conversion factor / surgical conversion factor * specialty share weight * WORK VALUE CORRECTION FACTOR] – [(n-1/n) * (dependent care provider time units) * anesthesia conversion factor/surgical conversion factor * specialty share weight] = work RVUs for anesthesiologists — work RVUs for nurse anesthetists, anesthesiologist assistants or residents = total physician work to provide anesthesia.

To get total RVUs, one must remember to add in traditionally valued RVU procedures such as preoperative consultations, pain management, pulmonary artery catheterizations, etc.

An example of how an anesthesiologist routinely supervising two residents each doing an incisional hernia repair for two hours might value his or her RVUs:

WORK VALUE CORRECTION FACTOR = 1.8
N=2
Specialty share weight = .782
Anesthesia conversion factor = 17.76
Surgical conversion factor = 40.96
Base units/case = 6
Times units/case = 8
{[(6+6)*1.8] + [(1.8-1/2)* (8+8)]}*17.76/40.96*.782 = RVUs = 14.4

David A. Lubarsky, M.D.
Miami, Florida

Joseph G. Reves, M.D.
Charleston, South Carolina

References:

1. Hannenberg AA. Medicare & anesthesia reimbursement methods: The Medicare fee schedule is the wrong benchmark for commercial anesthesia payments. In: *Practice Management: Anatomy of the Bargain: Sword, Shield or Shackle?* Syllabus of the American Society of Anesthesiologists 1999 Conference on Practice Management, Lecture 16:1-23.
2. Johnstone RE, Hosaflook C. Financial impact if payers use Medicare rates. *Anesthesiology*. 2000; 93:852-857.
3. Lubarsky DA, Reves JG. Using Medicare multiples results in disproportionate reimbursement for anesthesiologists compared to other physicians. *J Clin Anesth.* 2000; 12:238-241.

Response from Karin Bierstein

Dr. Lubarsky and Dr. Reves are correct that Medicare undervalues anesthesia services. The current national average Medicare conversion factor, $16.60, is just a little more than one-third of the 2001 commercial average, $45-$47. His "work value correction factor" is indeed necessary to place anesthesia on the same scale as other specialties, and it is probably closer to 2.7 than to the 1.8 or 2.2 that the Lubarsky/Reves data suggested. Alexander A. Hannenberg, M.D., now chair of the Committee on Economics, made a similar point in his letter to the editor ("Not Everything Is Relative When Calculating RVUs") in the June 2000 issue of the *NEWSLETTER*.

The proposed method for measuring anesthesiologists' work when it involves medical direction of residents, nurse anesthetists or anesthesiologist assistants, is a valuable contribution. The portion of the formula reflecting the reduction for concurrent cases is not consistent throughout the Lubarsky/Reves letter, probably because of a typo. It is introduced in the second paragraph as "(n/n-1," and it appears following "The formula for care team practice would be:" as "(n-1/n)." Given that N=2 in his two-resident example and that the resulting value is 1/2, the formula should instead read "(n-1)/n."

Dr. Lubarsky and Dr. Reves are also quite right to point out that in order to account for all anesthesiology work in a day or in a single case, one must include the work RVUs for services such as visits and the placement of lines and catheters and not simply reflect imputed RVUs for the anesthesia services. Fortunately the RVUs for the other services can be taken directly from the Medicare Fee Schedule. Readers should note that if they are comparing RVUs across specialties, it is important to know whether everyone is using just the work RVUs, or total RVUs (work+practice expense+professional liability expense). All the specialties need to be speaking the same language.

Hard Days' Nights for Naught?

It is always with great anticipation that I read your "Ventilations" section in the *ASA NEWSLETTER* every month, Dr. Lema. You speak your mind whether it's politically correct or not. I wish more physicians would speak based on what's right and not on who's right or what is the best political avenue to drive through. I especially appreciate all the material you've written regarding anesthesiologists' well being not only for our own personal good but also how it relates to patient care. Optimal patient care is only as good as how we care for ourselves.

Your last commentary in the March 2002 issue of the *NEWSLETTER* "It's Been a Hard Day's Night," was so well written but especially right on target. The unfortunate thing is those who read it are those who agree with you; those who don't probably won't. If they can't hear it, they won't read it. In my very simplistic view, I've come to the conclusion that we physicians have, to a certain degree, contributed to the financial, moral and managerial mess that we're in. Rather than taking a stand — a strong stand — once we saw the writing on the wall, we sort of went along with it and tried to get as much as we could out of it by "beating the system." But beating the system meant, as you wrote so well, hurting ourselves by working outrageous hours to try to squeeze as much as we could from it. That in turn leaves us fatigued, more vulnerable to stress and not as sharp as we should be. This exists not only in the health care industry but in an acute care specialty. We've shot ourselves in the foot by now helping to create an environment that is not necessarily attractive for senior medical students. How shortsighted can we be? Again, the writing is not only on the wall, it's on the ceiling and the floor. We have to stand up and say, *enough, already!* If we were to primarily focus on quality patient care and minimizing risk, the situation wouldn't be as bad as it is.

I can only hope that more and more physicians get on your bandwagon and realize that the way we have dealt with what has affected us has not been in our best interest, nor for the interest of our patients.

A Pediatric Anesthesiologist
(Name withheld on request)

It's Been a Hard Day's Night, but Not for CEOs

I heartily agree with your article, "It's Been a Hard Day's Night," that appeared in the March 2002 "Ventilations." One small detail: It is unlikely that the CEO would approach you at 8:30 in the evening to extract more work. A telephone call from his or her weekend home would be the more realistic scenario.

Keep up the good work.

Samuel Tirer, M.D.
Philadelphia, Pennsylvania

Dental Error?

I empathize with the concerns of Malcolm T. Klein, M.D., for his daughter's safety in the dentist's office ("Safety Wisdom," March 2002). He made nine references to the use of Novocaine by his daughter's dentist. I doubt whether his dentist was using that agent. He was probably using Lidocaine. Perhaps Dr. Klein was using Novocaine as many lay people do, as a euphemism for "local" anesthesia. In any case, it was dentists who were among those who introduced Lidocaine about 50 years ago. They quickly appreciated its advantages over Procaine: rapid onset, better spreading factor and longer duration.

Martin W. Livingston, M.D.
Mamaroneck, New York

Catching Errors Can Be Like Pulling Teeth

Dr. Livingston's observation is correct. My article was initially written for lay publication. Accordingly, I used the familiar term "Novocaine" as a genericidal reference to local anesthetics used in the dental office. During the rewrite for submission to the *ASA NEWSLETTER*, the term unfortunately escaped the editorial process. This oversight underscores the fact that even an article *on* error is not immune *from* error.

Malcolm T. Klein, M.D.
Tampa, Florida

Pelican Brief Poem

Reference is made to "pelican anesthesia" in the March 2002 *NEWSLETTER*.

There are good people in this world, and Dale Shields is, of course, one of them. He, on retirement, could have devoted himself to golf or some other form of entertainment, but he chose to rescue injured pelicans.

Those of us who have seen, close up, these somewhat ungainly birds dive head-first from a frightening height to catch fish do not soon forget it.

I would like to, perhaps, bring a smile to those of us who are and were engaged in the sometimes grim business of anesthesiology by quoting a limerick by Dixon Lanier Merritt.

"A wonderful bird is the pelican
His mouth holds more than his belican
He takes in his beak
Enough food for a week
But I'm damned
If I see how the helican."

Benson Bodell, M.D.
Houston, Texas

Be Wary of FDA Droperidol Warning

The Food and Drug Administration (FDA) has recently issued a warning concerning droperidol. [April 2002 *NEWSLETTER*]. This warning also was mentioned in the Winter 2001-02 *Anesthesia Patient Safety Foundation Newsletter*. The FDA warning indicated that there was a significant risk of droperidol inducing serious arrhythmias, even when used in "low" (0.625-1.25 mg) antiemetic doses. The severity of the warning effectively threatens the routine use of the most cost-effective antiemetic administered to millions of patients over several decades. I was skeptical that evidence existed justifying the FDA's warning. I also felt that, to a certain degree, "strong-arm" tactics were being employed. Therefore, under the freedom of information act, I acquired the FDA's printout of the adverse reports leading them to their conclusions. Interestingly, I needed to inquire three times and wait more than two months for the FDA to forward the requested information to me.

The facts of the adverse droperidol reports were more than interesting. They can be tabulated in many ways. Briefly, however, there were 273 adverse reports, although several of the cases contained in the report were obvious duplicates or even triplicates. The cases were reported over a four-year period from late 1997 to late 2001. I tried to separate from these 279 cases those that reported arrhythmias as an adverse outcome, especially those identified as either prolonged QT interval or Torsades. I was also interested in what the range of doses of droperidol was in those particular cases and whether or not other drugs were concomitantly administered.

Eight cases involving 0.625 mg were reported, but two of these were duplicated, resulting in only six such cases in total. Three patients receiving 0.625 mg experienced a tachycardia (presumably sinus), two experienced ventricular tachycardia and one experienced Torsades. Of the cases containing a report of prolonged QT, doses of droperidol were 50 mg, 250 mg (orally), and 0.25 mg/kg. Of the 13 cases reporting Torsades, droperidol doses were 0.625 mg (n=1), 2.5 mg (n=2), 3.75 mg (n=1), 25 mg (n=2), 200 mg (n=1), 240 ml (n=3) and an unknown amount in another three cases. Additional medications were administered in most but not all of the cases. Many other adverse outcomes also were reported. Frequently, high doses of droperidol and other drugs were involved, and/or cases were complicated by suicide, alcohol intoxication, etc. For example, of the 79 cases where an arrhythmia was reported, nine involved a droperidol dose of 10 mg or more, and 33 involved a dose of 20 mg or more.

I fail to see how the data contained in the summary of the adverse reports could be interpreted to mandate the severe warning issued by the FDA, in particular in its implication for prophylaxis and treatment of perioperative nausea and vomiting. In addition, the majority of the serious adverse reports involve outrageous doses of droperidol, frequently in patients receiving other psychotropic medication. Finally, the source of many of the adverse case reports was often identified as "foreign."

I, like many other anesthesiologists, have administered droperidol to hundreds of patients in the dose of 0.25 to 1 ml, for many years. The only hemodynamic consequence I ever see is a predictable (and often intended) decrease in blood pressure of 20-30 mm Hg that lasts for five to 10 minutes. If one separates out this dose from the adverse report summary, there are three cases where a dose of droperidol of 0.625 to 2.5 mg resulted in Torsades. At roughly one case per year (three cases over four years) and in light of the likely enormous denominator considering the widespread use of droperidol, this can hardly be a serious indictment.

The literature supports the use of droperidol as a first-line antiemetic for postoperative nausea and vomiting (PONV). In light of the FDA's warning, many hospitals must now feel obliged to remove droperidol as the first-line perioperative antiemetic. Are the alternatives safer? Ondansetron and other similar drugs, if routinely substituted for PONV prophylaxis and treatment, will certainly significantly increase related costs. This is not to mention that quite a few of the patients in the same adverse drug reports also received ondansetron.

The FDA should reconsider how it comes to making its rather dramatic but all too often unscientific warnings. They should also ponder the consequences of their actions and the alternatives that clinicians will be forced to use. I certainly hope the FDA is not being led by its nose by the pharmaceutical industry, which certainly does not stand to make much money from any of the "older" drugs that we use. Witness the repeated shortages of commonly used, excellent and necessary drugs such as fentanyl and naloxone.

Peter L. Bailey, M.D.
Rochester, New York

Private Practices and FAER: A Case of Mutual Need

John B. Neeld, Jr., M.D.

Events of the past decade have had a profoundly negative impact on the nation's academic anesthesiology departments, yet this has been largely ignored by the private practice community despite the long-term adverse consequences for each of us.

This article will review the importance of our academic departments to the specialty, the problems they currently encounter and will suggest the role private practices must play in sustaining our academic core.

The prestige and growth our specialty enjoyed during the last half of the 20th century was directly linked to the excellence of our academic departments. It was there that new knowledge was developed (the hallmark of a profession), that medical students were recruited by observing the excitement and importance of our daily practices and where every anesthesiologist received the training that has allowed us the success we currently enjoy. Despite their importance in our lives and careers, our training programs generally asked little in return from their graduates. This situation must change.

The current problem academic centers face has multiple causes:

1. The reduction in residency recruitment caused by a national emphasis on primary care coupled with an inaccurate perception that opportunities in anesthesiology were diminishing
2. Increased departmental service demands while resident numbers were reduced, forcing faculty to forego research and education time to provide clinical services
3. Decreased reimbursement for services, reducing the ability of the clinical practice to support research
4. The decision by many faculty, faced with a reduction in the resources available for teaching and research and an abundance of private practice opportunities, to enter private practice.

As a result of these factors, our teaching centers have an inadequate number of mentors for young scientists and inadequate resources to attract their best and brightest graduates to an academic career. Without charismatic teachers and innovative researchers, who will attract the caliber of medical students we hope to recruit to our practices?

It is in the best interest of private practice groups to provide the assistance required to solve this problem. The solution will not be quick or inexpensive, but it can and must be accomplished.

The greatest need is for increased funds, which will support more young faculty in the early stages of their research and teaching careers. The best vehicle for this support is the Foundation for Anesthesia Education and Research (FAER). Since its inception in 1986, FAER has funded 400 research projects in 35 states. A survey of FAER recipients published in *Anesthesiology* in 1998 (volume 88, pages 519-524) revealed that 96 percent of FAER award recipients continued in academic careers, that the average recipient served as a mentor to four new investigators and that FAER recipients were very successful in obtaining subsequent research funding from other sources.

Despite its enviable record of success in developing academic leaders and our very real need to increase workforce numbers in the specialty, FAER's support from individual physicians and practice groups actually declined in 2001 to only $65,440, about 4 percent of FAER's total budget.

Private practice groups must do much more if our academic centers are to have the means to recruit and educate an adequate number of anesthesiologists to resolve the provider shortage. Think of the impact if each group were to annually contribute only $100 per physician to FAER! Surely each of us owes our specialty this much support.

John B. Neeld, Jr., M.D., is Chair, Department of Anesthesiology, Northside Hospital and Northside Anesthesiology Consultants, Atlanta, Georgia. He was ASA President in 1999.