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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.

Information technology has definitely made our lives easier. But we have a long way to go. Anesthesiologists are in need of a standardized data management system that would simplify complex record keeping. This issue tracks the progress made in this crucial area.

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In Case You Haven't Heard…There Are No Available Anesthesia Providers

Dear Hospital CEO, Surgical Chair, Medical School Dean, Community Surgeon, Invasive Radiologist/Cardiologist, HCFA Administrator, HMO Medical Director and Federal or State Legislator:

I would like to inform you that the medical practice of anesthesiology and the practice of nurse anesthesia are both involved in a continuing personnel crisis. In simple language, there simply are no doctors or nurses to satisfy your hiring or deployment needs for anesthesia care. Thus, because we live in the greatest consumer-oriented society developed by humankind, the principles of supply and demand are currently in effect. Conditions are metastable at best, and there are no quick solutions short of consolidating operating room suites and/or being more case-efficient.

Of course, you can always pay higher salaries to those doctors and nurses (as you are currently doing). My recent survey of shelves at Wal Mart, Kmart, Sears and Target reveal that all available anesthesiologists and nurse anesthetists are out of stock and on indefinite back order! Thus, paying higher salaries in your locality just "shuffles the deck" or "takes from Peter and gives to Paul" with respect to increasing personnel. Some who are reading this letter may have a feeling of incredulity (i.e., "deer in the headlights" image), so I will repeat the announcement: There are NO available anesthesia providers in North America (including Canada) to fill in the gaps!

You might ask how we came to this point of critical undersupply. You may even believe that anesthesiologists and nurse anesthetists are in collusion to limit the size of graduating classes to drive up prices (similar to what oil companies periodically do with oil production while having the blessing of our government). I can assure you that we are ALL responsible for this crisis. It is like everyone passing by the soup boiling on the stove and tossing in a little salt without first tasting it — yet expecting it to turn out perfectly.

Many of you have resisted the proactive steps that anesthesia groups have tried to promulgate with respect to pain service implementation. You hesitated to pay for legitimate and necessary pain care or were unwilling to provide seed monies to develop the clinics. As a result, anesthesia groups could not absorb the losses of providing a multidisciplinary approach to pain management and retrenched services. Pain specialists left their anesthesia groups in order to concentrate on profitable procedure-oriented pain treatment without the burden of continued participation in traditional operating room care.

Many of you allowed garages and basements to be turned into operating room suites so that the cost of caring for patients in the safe environment of a hospital setting could be reduced. Consequently, office-based anesthesia continues to remove anesthesia personnel from a more personnel-efficient operating room suite arrangement to a less efficient individual-practice paradigm. By the way, it is about 50 times more dangerous to have liposuction in the converted garage than in a hospital.

Some of you allowed reimbursements to drop or eliminated support to aca-

Continued on page 25

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

Who Can Our Patients Trust Now?

Neil Swissman, M.D., President

Trust. It plays a major role in our everyday activities. We trust that our automobiles will start. We trust that our computers will work. We trust that our doctors are looking out for our wellbeing. But sometimes an event happens in our life that shakes the very foundation of our basic sense of trust. At these times, we realize that we had been taking "trust" for granted. At these times, we become a little more jaded, a little wiser, and rightly or wrongly, we promise that we will never blindly trust again.

Neil Swissman, M.D.

For ASA, for the specialty of anesthesiology and perhaps for millions of Americans, such a time has come. On January 18, 2001, the Health Care Financing Administration (HCFA) removed the 35-year-old requirement that a nurse anesthetist must be supervised by a physician when administering anesthesia. Requirements such as this one, requirements established only after thorough research and experience, are not formed flippantly or selfishly. Personal interest has no place in a decision that can affect the lives of countless millions. This is where trust comes in. We trust that our peers and associates in the medical field have, first and foremost, patient safety in mind. We trust that politics, power and monetary gain do not influence decisions that will in turn influence our patients.

Such has been the case in recent history.

Everyone involved in the specialty of anesthesiology has reason to be proud. In 1999, the Institute of Medicine praised anesthesiology for its incredible, incremental improvements in patient safety. The numbers are worth repeating: In the 1980s, one person out of 10,000 could be expected to die. Today, the mortality rate is somewhere less than one death per 200,000 to 300,000 anesthetics. This almost unbelievable increase in patient safety came about through the work, dedication, high standards of care and resolve of anesthesiologists. *This* is the legacy of the *anesthesiologist*. We have achieved something that every group in the helping professions strives to achieve: We have become trusted. And we have earned that trust.

Ironically enough, our track record may be our, and the public's, worst enemy. Evidently, our track record indicates to HCFA, to the Clinton Administration, to the American Association of Nurse Anesthetists, that anesthesiologists are not needed anymore.

What a hopelessly misguided sense of blind trust!

What a glaring example of politics over patient safety!

But what is most infuriating about this decision is how strongly the facts support retaining physician supervision of nurse anesthetists. In 1992, HCFA itself opposed this rule change, saying that anesthesia care of Medicare patients was too risky to leave to unsupervised nurse providers. Every major surgical association, all 50 state medical societies and the American Medical Association have supported retaining the rule. More than 75,000 faxes and e-mails have been sent from citizens who have been slowly awakening to the truth. In Congress, more than 140 senators and representatives demanded further research concerning patient safety before coming to a decision.

Here is yet another irony: Ours is a culture that values democracy, advancement, rational thought and the understanding that these three ideals have made us the most technologically advanced nation on Earth. Yet, with this decision, the misinformed minority has won over the rational majority, and advancement is likely to be halted. This decision is an insulting slap in the face to every anesthesiologist who has spent 12 years training *just to be allowed* to perform his or her duties for patients who trust us.

This issue brings to mind an analogy that I have heard regarding Mississippi riverboat pilots. One can know of the Mississippi — its length, its depth, its tributaries, its unpredictability. But it is one thing to *know of* it, and quite another to *know* it. It would be folly for a novice to attempt to navigate it at any time, under any conditions. Only those with the training, the experience and the foresight would dare to try and pilot it. But because of HCFA's decision, many nurse anesthetists believe they are now pilots. Nurse anesthetists, who are required to participate only in two years of technical training, believe they have somehow earned the right to perform as physicians. But they do not deserve this right. They have not yet earned the public's trust.

Yes, my trust has been shaken. Yet despite our outrage at

Continued on page 25

Clinton Issues But Bush Suspends Supervision Rule

Michael Scott, Director
Governmental and Legal Affairs

On January 18, the Clinton administration published its final rule eliminating the Medicare/Medicaid requirement that nurse anesthetists be supervised by a physician. The new rule was to take effect March 19.

Two hours after his inauguration, President George W. Bush issued an order extending for a period of 60 days the effective date on all federal regulations that had been published but were not yet effective. The order would cover the supervision rule, which now would become effective May 18 unless new regulations are proposed.

The President has asked that this matter be reviewed by the current Secretary of Health and Human Services (HHS), Tommy Thompson. **ASA is urging him to take appropriate regulatory action to rescind the Clinton administration's rule**. Please take a moment to correspond with Secretary Thompson and let him know that patients will be put at unnecessary risk if this rule becomes effective. Direct your correspondence to: **The Honorable Tommy Thompson, Secretary, Department of Health and Human Services, 200 Independence Ave., S.W., Washington, DC 20201**.

For seven months, the supervision rule has been in the Office of Management and Budget (OMB), where opinion was deeply divided as to the wisdom of the rule. Two days before the end of the Clinton administration, OMB succumbed to pressure from then HHS Secretary Donna Shalala and Senate Minority Leader Thomas A. Daschle (D-SD) and approved the rule.

HHS Issues Privacy Rules

On December 28, former HHS Secretary Donna Shalala also published final regulations designed to protect the privacy of patient records. The effective date is February 26, 2001, but compliance is not required until early 2003.

The new regulations are expected to create something of an administrative nightmare for provider groups as they do not override stricter state requirements already in existence. It is estimated that the new regulations will cost an added 19 cents per visit; provider groups believe this figure is much too low.

The regulations will be discussed at length in the March *NEWSLETTER* and will be the subject of presentations at ASA's Legislative Conference April 30 – May 2.

107th Congress Organizes; Key Medicare Chairs Named

Unique because of a 50-50 deadlock in the Senate and the swearing in of a First Lady as a Senator, federal legislators in early January began the process of organizing the first Congress of the new century. [Your author is a purist and fervently believes the new century begins with 2001.]

Among the early nettlesome issues in the Senate was the decision as to committee composition, with Democrats arguing for an equal number of members and Republicans claiming the right to a majority because of the tie-breaking authority of new Vice-President Dick Cheney. As of this writing, it appears that the dispute has been solved by granting Democrats an equal number of committee members and developing a procedural mechanism that will allow Republicans to bring nominations and bills to the Senate floor from committee.

As was anticipated, the most senior Republican on the Finance Committee, Charles E. Grassley (R-IA), will become its chairman, with Max Baucus (D-MT) succeeding the retired Daniel Patrick Moynihan as ranking minority member. Seniority did not win the day on the House Ways and Means Committee, however: William M. Thomas (R-CA) defeated the more senior Philip M. Crane (R-IL) for the chairmanship. Charles B. Rangel (D-NY) will continue as ranking minority member. W.J. "Billy" Tauzin (R-LA) is the new chairman of the House Commerce Committee, and Henry A. Waxman (D-CA) is expected to continue as ranking minority member.

Many congressional observers have expressed their expectation that the primary health-related issues before these committees will be: compromise managed care legislation, Medicare reform and development of a drug benefit for Medicare beneficiaries. In view of the 50-50 composition of the Senate and the narrow margin enjoyed by the GOP in the House, however, resolution of party and chamber differences on these issues will not be easy; the 106th Congress proved incapable of resolving these issues, and nothing in the current political mix suggests that the path will be smoother this year.

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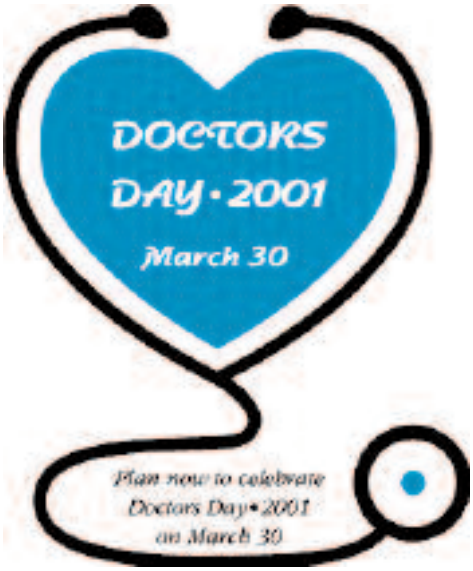
Doctors Day 2001: Tooting Your Horn About Advancing Pain Management and Reducing Medical Errors

R. Lawrence Sullivan, Jr., M.D., Chair
Committee on Communications

The popular historian Stephen Ambrose previously achieved notoriety with his vivid recounting of the Lewis and Clark expedition of 1803-1805 in the best-selling book titled *Undaunted Courage: Meriwether Lewis, Thomas Jefferson, and the Opening of the American West*. Once again, he has captured the interest of many Americans in his recent recounting of the westward expansion of the railroad from Nebraska to California in his intriguing book, *Nothing Like It in the World: The Men Who Built the Transcontinental Railroad 1863-1869*. This unique effort to establish a reliable and rapid link to the shores of the Pacific required the vision, perseverance and heroic deeds of engineers, construction experts, frontiersmen, geologists, Civil War veterans, Chinese immigrants and ambitious entrepreneurs. It also required the concurrence of a divided Congress, fortuitously resolved by the resignation of Southern congressmen when their states attempted to secede from the Union. The development of the railroad revolutionized 19th century travel and communications in America, and it was the most important factor leading to the expansion of the Western frontier beyond the Missouri River and the subsequent inclusion of the Western territories into the Union.

Not many years preceding railroad expansion, ether was discovered as a genuine anesthetic agent. On March 30, 1842, in Jefferson, Georgia, Crawford W. Long, M.D., became the first person to administer an anesthetic to a surgical patient. While engineers were not consulted, congressional funding not sought and entrepreneurs not created, the discovery's parallel historical significance to 19th century Americans and to the world community is of equal stature. Indeed, the pioneering work of Long, Horace Wells and William T.G. Morton revolutionized the therapeutic approach to diseases and trauma by facilitating the surgical treatment of many maladies.



Since that time, Americans have witnessed an explosive growth in travel and communications with supersonic airplanes, "bullet" trains and wireless telephones. So too have they witnessed an evolution of surgery and anesthesia care into highly technical, computer-enhanced, scientifically based, life-preserving disciplines.

Each year, Doctors Day is celebrated on March 30, a tradition initially established by the women's auxiliary of the Barrow County Medical Society of Georgia to commemorate the achievement of Dr. Long. In 1958, Congress proclaimed that this day should be established as an annual national observance to honor all physicians in the United States for their commitment to the physical and mental well-being of humankind.

To put this day of recognition in proper perspective in the 21st century, physicians of all specialties should reflect on the immense changes that have evolved over more than 150 years. There is much for which we can be proud. The medical profession can rightfully boast of its triumphs over communicable diseases, advances in the treatment of cancer, pharmacologic innovations in the management of hypertension, diabetes, behavioral disorders and pain, the

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dramatic reduction in perinatal mortality rates and the evolution of organ transplantation technology. Despite the adverse climate created in the managed care environment, medicine is still the greatest and most respected of all professions.

Because anesthesiologists have a unique historical connection with Doctors Day, ASA has annually urged its members to use this occasion to educate patients, the media, physician colleagues, other health care workers and the public at large about the broad and varied role that anesthesiologists occupy in modern health care delivery as well as many other important aspects of our specialty. Additionally, press releases are prepared, and for the last two years, a video news release has been produced by ASA for targeted audiences across the United States. In January, a Doctors Day poster was sent to all ASA members for display in their hospitals, physician offices, patient waiting areas or other suitable locations. In previous years, under the aegis of the Committee on Communications, a specific anesthesia-related subject or theme has been adopted. This year, the committee has focused on issues related to pain medicine.

The subject of pain, which years ago was simply considered a symptom of other pathologic states, has engendered a singular focus by physicians in many disciplines. But anesthesiologists have established themselves as leaders in developing new strategies and techniques to treat pain, both in the acute postsurgical patient as well as in those suffering from chronic disorders such as cancer. In 1993, the American Board of Anesthesiology became the first specialty board recognized by the American Board of Medical Specialties to offer subspecialty certification in pain management. Many anesthesia practice settings offer such expertise with the assumption of postoperative pain management responsibilities and with the establishment of chronic pain management consultative services. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) now demands that accredited facilities meet minimum standards in providing pain assessment and management resources for all patients. These facts reflect the lead-

PLAN NOW TO CELEBRATE Doctors Day ❖ 2001

Doctors Day gives anesthesiologists and the medical profession as a whole an opportunity to raise public awareness about physicians' active roles in their communities.

You may wish to plan some activities that will help to make your colleagues and patients more aware of the continuing advancements in anesthesiology.

Let others know about anesthesiology's involvement with and its commitment to better, safer patient care:

- ❖ Visit a local preschool or elementary school and explain the role of doctors (and specifically, anesthesiologists). Or, participate in the career fair of a high school or children's museum. Call ASA if you need extra posters to take with you.
- ❖ Contact your community newspaper, cable television station or local radio station and offer to be interviewed about a relevant health care topic. Make sure to include your message about the involvement of the anesthesiologist in patient care — inside and outside the operating room.
- ❖ Hold a public education seminar or visit a civic group to talk about the safety advancements of anesthesiology, pain medicine, anesthetic options for childbirth or the hazards of smoking.
- ❖ Make arrangements to visit a prenatal class at your local hospital or community center to talk about the options for and recent advancements in anesthesia and analgesia for childbirth.

ASA will help you by providing materials for your activity, including: media kits, story ideas, historical information on Dr. Crawford W. Long, Doctors Day stickers and extra posters, and patient education brochures and slide shows.

ership role that anesthesiologists have exhibited in this arena.

Although anesthesiologists can reflect with pride on accomplishments achieved in patient safety, critical care innovations, obstetrical anesthesia and pain management, we should not be content with past successes. In November 1999, the Institute of Medicine of the National Academy of Sciences issued a well-publicized report on the incidence of medical errors titled "To Err Is Human." The underlying conclusion was that the health care system in America has caused unnecessary deaths due to human error and that many of these errors are systematically preventable.

In this report, however, anesthesiology as a specialty was commended for having taken a proactive approach to reducing medical errors by adopting practice guidelines, standardizing equipment, developing accurate and real-time monitoring systems and establishing the Anesthesia Patient Safety Foundation. Yes, we can "toot our horns" as long as we realize that, like other specialties, we are still not error-free. The challenge to improve the safety of our patients by reducing medical errors remains a top priority in our profession.

"Yes, we can 'toot our horns' as long as we realize that, like other specialties, we are still not error-free. The challenge to improve the safety of our patients by reducing medical errors remains a top priority in our profession."

Reports such as the one from the Institute of Medicine have created immense public (and political) interest in the accountability of all health care workers. Physicians, nurses, allied health practitioners, hospitals and other health care entities have been called upon to demonstrate their ability to render care safely — to "first, do no harm." Some physicians feel threatened by such external forces. In anesthesiology, the effort to reduce errors remains a serious but welcome challenge. Since its inception, the practice of anesthesiology has appreciated the particular risks involved in the care of the surgical patient, and it has sought ways to reduce such risks. The understanding of anesthetic action and the development of safer drugs, the advent of electronic monitoring instrumentation and the adoption of strict monitoring standards of care and practice guidelines have contributed to a much safer environment for the surgical patient.

Those who have promoted such changes have exhibited vision and courage. Recently, Michael W. Leonard, M.D., an anesthesiologist from Evergreen, Colorado, was commended in the national press for his courageous advocacy in supporting the disclosure of medical errors to patients and their families (*San Francisco Chronicle*, December 24, 2000). Dr. Leonard has been a relentless advocate for patient rights, both in his hospital and in his community, while developing innovative policies and systems for improved patient care. Starting on July 1, 2001, JCAHO will require that hospitals and other licensed facilities adopt policies which ensure that patients receive an honest explanation when errors do occur. While some physicians, fearing legal retribution, would prefer to keep errors under wraps, being honest and upfront with patients will reduce errors in the long run.

Yes, Doctors Day may be a time to reflect on our legacy. Yet, more importantly, it is a time to recommit ourselves to meet the challenges of the future. It is this dedication to improving patient safety and reducing medical errors that we should acknowledge and celebrate each year on Doctors Day.

APSF Retreats, Returns With Report on Perianesthetic Data Management

J.S. Gravenstein, M.D.

On October 13, 2000, the Anesthesia Patient Safety Foundation (APSF) Board of Directors held a retreat on data management to which clinicians and industry representatives had been invited. APSF President Robert K. Stoelting, M.D., moderated the meeting.

The first speaker, Jeffrey B. Cooper, Ph.D., asked: "Is anesthesia safe enough yet?" We still lack credible data, and the statistic that there is one anesthetic death in 200,000 may be too optimistic. Growing production pressure and anesthesia in out-of-the-way settings threaten safety. Anesthesiology and APSF have spearheaded the safety movement. Dr. Cooper believes automated perioperative data collection is needed to learn about the true details of critical incidents and disasters.

Matthew B. Weinger, M.D., talking about "utopia," imagined an accurate, readily available, prioritized and comprehensive data system. Today we get data (the blood pressure = 120/80 mmHg) instead of information (the blood pressure is normal) and instead of knowledge (the clinical implications of this information are…). We also need population statistics obtained from a large database enriched by evidence-based guidelines. Small portable sensors and tracking devices would cater to patients and physicians. DNA readings taken from the fingertip assure the patient's identity and guarantee confidentiality. Retinal displays would project information onto the physician's retina, simultaneously presenting the clinical scene. Mixed reality would superimpose video images of the airway during laryngoscopy, and haptic displays would guide the anesthesiologist. A "flight" recorder would store information as long as necessary. All of this would be wireless and noninvasive. Continuous plasma drug and electrolyte levels will be enhanced by real-time measures of intracellular function (e.g., myocardial cellular stress-activated protein kinase levels). The future system will access many sources of information and seamlessly collect data throughout the perioperative phases.

Later, speakers from industry brought the audience back to earth by describing the current systems.

First, Chester A. Phillips III, M.D., from Agilent Technologies, Inc., said he regretted that many consider preanesthetic assessment to be "grunt work." Outcome statistics are based in part on a comprehensive preanesthetic assessment. There exists a lack of standards for a preanesthetic evaluation. Today the person providing the anesthesia may not have collected the preanesthetic information, which adds to the importance of structure and standards. Production pressure adds to the problem, and delays are not tolerated even though data are missing. With standards lacking, customers request and industry offers configurability, which introduces diversity and hinders studies of large groups of patients. Dr. Phillips concluded: "We need to engineer a preanesthesia process and set some basic standards. In addition, organizations like APSF could promote the teaching of medical informatics in the anesthesia curricula."

Lori Cross from Datex-Ohmeda spoke next on physiologic monitoring during anesthesia. There exists a difficult information paradox: When one has all the time in the world, one has no critical data to record, but during moments of crisis, one has no time to collect data. Ms. Cross presented four key points: First, define the needed data precisely, recognizing that, for example, blood pressure data will be influenced by the method, site and the context of measurement. Second, reduce artifacts at the source. All data sources are not created equal, and artifact rejection can vary widely from system to system. Third, collect the right amount of data, which depends on the user and the circumstances. The granularity of the traditional anesthesia record is insufficient for an assessment of physiologic processes. An optimal monitoring system must eventually bring all these different requirements under one hat. Fourth, inspect and protect what you collect, with quality control and confidentiality being key issues. Progress will be enhanced through the establishment of a standard anesthesia data dictionary, eventually resulting in a voluntary global anesthesia database for multicenter research and outcome studies.

Next, R. Derderian from North American Dräger Com-

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pany addressed the topic of monitoring the anesthesia machine and ventilator. Microprocessors in modern anesthesia equipment have lain the foundation for data, voice recorders and possibly video recorders helpful in the analysis of disasters. A host of data are already captured, including error codes, alarm settings, messages and waveforms. Most manufacturers still have their own communication protocols. Uniformity will come only when the profession adopts standards and defines archival requirements. Expenses are not limited to the front-end data standardization and collection but extend to the archiving, maintenance and evaluation of the data. The most modern equipment is slow to migrate into the nonhospital-based anesthesia care sites, the very area in greatest need of excellent data capture.

Charles H. McLeskey, M.D., representing Abbott Laboratories spoke about drug identification. Of the preventable 44,000 to 98,000 annual hospital deaths, the Institute of Medicine (IOM) reports that 7,000 are due to medication errors. Even intimidation of a younger colleague by an older one can lead to impaired performance and medication errors. Verbal orders in the operating room should be repeated back. When writing orders, write "1 mg" without a decimal point, and for 1/10 mg, write "0.1 mg" to forestall it being misread as 1 mg. Pre-filled syringes might reduce, but not eliminate, the problem. When storing drugs, separate look-alikes. Handheld automated physician order entry devices might contain menus of acceptable formulary medications and default dose ranges and offer "smarts" that raise case-specific questions. Bar-coding technology might minimize medication errors and automatically call up patient information when a drug is being ordered.

Tim Vanderveen from Alaris Medical Systems discussed infusion pumps and patient safety. The typical hospital utilizes from three to seven different infusion devices, each with unique user interfaces. While today's infusion pumps accurately deliver from a few drops to a liter or more per hour, this accuracy relates to volume of fluid delivered, not accuracy and appropriateness of the drug and dose. Hospitals desire a "one size fits all" pump configuration so the device can be used anywhere at any time. The complexity of the entire infusion system contributes to the high incidence of medication errors associated with intravenous infusions. Standardizing the user interface, matching performance characteristics to the area of use, and connecting infusion devices to physician order entry and pharmacy information systems are among the suggestions for addressing infusion-related medication errors. In addition, new approaches to training are required to ensure that users are competent.

The next two speakers addressed outcome: how to measure it and how to study mishaps and disasters.

Terri G. Monk, M.D., spoke about outcome measurements that must be clearly defined: Is the question important? Does it pass the "so what" test? Is the question answerable? Is it feasible? Passive and active data collection requires consideration. In the passive case-control study, the investigator waits for the problem to develop. The prospective cohort study or a randomized clinical trial is active, e.g., data are collected before the problem develops. The IOM report, "To Err Is Human," calls for mandatory and voluntary error reporting systems to be developed and instituted, probably in the near future. Data collection techniques include scanable coding forms. Computer-aided input at the site eliminates errors in data entry but requires complex safeguards. A Web-based data collection anticipates electronic entry of data and automatically forwards it to a coordinating center. Site training can be done online, enabling private practice physicians to participate. Confidentiality must be guaranteed, aided by encryption and restricted access.

Robert A. Caplan, M.D., concluded the presentations with a discussion of data analysis. First, he said we need to be able to analyze data for events that have a high frequency, a high clinical impact or both. A trend analysis follows. Then we must check for the "undata," i.e., unexpected events that are unexplained and possibly of great interest. Finally, we need to frame a hypothesis that will be meaningful. A project of this dimension requires energy and considerable financial resource from industry and government. We need a consortium involving all affected parties and a stable corps of directors, analysts and visiting scholars to do justice to a large database. In addition to cost and staffing, confidentiality and liability need to be recognized as obstacles. During the 15 years of the Closed Claims Project, liability has not been an issue. A pilot study could assess the liability risks.

These presentations were followed by a lively discussion that supported the concept of automated record keep-

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APSF Task Force Reports on Legal Issues of Data Collection and Analysis Systems

David M. Gaba, M.D.
Committee on Patient Safety and Risk Management

Organizational Safety Requires Learning From Adverse Events

It is a basic tenet of the High Reliability Organization Theory that optimum safety requires the ability of an organization to learn from adverse occurrences. For example, commercial aviation in the United States has a number of programs to achieve this organizational learning. Most prominent are:

1. A high-profile, highly capable independent organization for the investigation of the probable cause(s) of accidents (i.e., National Transportation Safety Board [NTSB]);
2. Several programs of reporting and analyzing incidents or "near-misses" (e.g., National Aeronautics and Space Administration Aviation Safety Reporting System (NASA ASRS)[1]; Federal Aviation Administration Aviation Safety Action Program);
3. Emerging programs to analyze data from flights not involving an incident or accident (e.g., Flight Operational Quality Assurance [FOQA][2] and Aviation Performance Measuring System [APMS]).

The lessons from these analytical programs can frequently be put into action by manufacturers, air carriers and air traffic control through alterations in procedures or training. Even in aviation, organizational learning is not perfect. Of the seven aviation-related items that appeared on the NTSB's original "Most Wanted List" of safety improvements in 1990, three are still present a decade later.[3]

Similar systems are in place for nuclear power and chemical manufacturing. Nuclear accidents are investigated by the federal Nuclear Regulatory Commission (NRC), and near-miss reporting takes place both via the NRC and the Institute of Nuclear Power Operations (INPO). Chemical accidents are investigated by a chemical safety board modeled after the NTSB (but only funded eight years after Congress established it), and in some cases also by the Environmental Protection Agency or Occupational Safety and Health Administration. Chemical manufacturing does not have as robust systems of incident reporting, although some reports are collected by the Center for Chemical Process Safety (CCPS) that is affiliated with the American Institute of Chemical Engineers.

APSF: A Focus for Ideas About Data Collection and Analysis

Since its inception, the Anesthesia Patient Safety Foundation (APSF) has received suggestions to analyze patient safety issues based on voluntary reports or other data collection systems. In some cases, APSF has been approached by third parties interested in beginning such a program, while for others APSF itself has contemplated establishing a program. The kinds of reporting and data collection systems considered have varied widely, but they mirror roughly the systems used in commercial aviation. For more than eight years, APSF has been interested in creating a voluntary reporting and analysis system, emulating the NASA ASRS. Most recently, APSF was asked to participate in the activities of the newly formed National Center for Clinical Outcomes Research (NCCOR). NCCOR has publicly announced its intent to create a warehouse of clinical data using existing anesthesia record-keeping systems collected from an ongoing accumulation of cases (this could be similar to the FOQA and APMS programs in aviation).

In October 2000, APSF held a workshop with its board of directors to discuss important issues in data collection and analysis. In addition to the kinds of programs described above, there was even mention of the concept of an NTSB-like organization to conduct timely independent investigation of adverse occurrences.

Legal Issues Are the Primary Inhibitor to Implementing Data Collection and Analysis Systems

During this workshop, and indeed throughout the history of APSF, as such data collection systems were dis-

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cussed, the primary inhibitor to proceeding with what would otherwise seem sensible has been a concern about the discoverability and use of the information collected. Currently, for better or for worse, it is estimated that only a small fraction of cases involving medical error actually end up triggering a malpractice claim.[4] Of the claims that occur (and of those that are successful), many do not involve any breach of the standard of care.[5] Legitimate concern exists that collection of data about specific patients and cases will offer opportunities for plaintiffs' attorneys to search for cases about which to build claims. There is also concern that the level of candor desired in meaningful voluntary reports could jeopardize the reporter's legal position should the information be disclosed.

In the early 1990s, APSF considered some of these issues but decided that it could not come to grips with the daunting legal issues.[6] The legal ramifications of data collection and reporting are complex. Some aspects have been reviewed in several publications.[7-10] These sources acknowledge that such safety-related data collection and analysis systems would benefit from legal safeguards of the nondiscoverability of the data. Federal legislation (e.g., S. 2738 and S. 2743) has been introduced to provide such safeguards, but the fate of these bills in the new Congress is uncertain. There is no clear consensus on the levels of risk for different data collection activities under existing law across the many different jurisdictions in the United States. APSF is still not clear on the ability of various mitigation strategies to reduce or eliminate the likelihood of adverse disclosure of collected data or analyses. For example, the degree to which de-identification of reports (or even anonymity thereof) will preclude discovery is not certain since the meaningful facts of the case could be "self-identifying" in their details. On the other hand, the reporting system needs enough detail in the reports to be useful.

Any reporting system risks choking off voluntary submissions if potential reporters feel there is any meaningful risk to themselves or their institution should they file a report. To prevent this, the reporting system would try to quash any attempts to obtain its data; but this could be a costly and distracting legal process that might well be futile. APSF has been concerned that any system that did not take appropriate account of the legal ramifications could seriously alarm a large portion of clinicians and health care administrators. Not only would this jeopardize the success of the program in its own right, it could seriously jeopardize the ability of others to implement a better designed system in the future.

APSF Establishes a New Task Force

Because these same issues keep arising every time a meaningful patient safety data collection and analysis project is discussed, APSF has decided to commission a Task Force on Legal Issues of Data Collection and Analysis Systems. I am the initial organizer of the task force, and several other members of the board of directors have volunteered to participate. My colleagues and I hope that the industrial partners in APSF (which includes pharmaceutical, device and insurance companies) may be able to provide some pro bono in-house legal help. We also hope to recruit some academic experts to assist us with the legal issues, including faculty with both medical and law degrees.

The task force should undertake a review of existing statutes and case law, a comparison of pending legislation, consideration of model legislation for state and federal government, and potential design and operational protections for mitigating the legal risk. It should consider a wide spectrum of possible data collection and analysis systems, not just those proposed most recently. Finally, it should approach the problem objectively with the conviction that data collection and analysis should be attempted in the interest of improving patient safety if reasonable means can be found to mitigate the risk.

We envision that the task force will get under way in the spring of 2001. The task force may convene an experts' workshop on legal issues if it can secure external funding for this event. These issues require considerable thought and creativity before being addressed fully. For many years, we have put off a concerted effort to explore the risks and their potential solutions. The work of this task force will likely benefit not only anesthesiology's attempts to increase patient safety but those of the rest of health care as well. Here, as in other matters of patient safety, anesthesiology can lead the way.

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Continued on page 34

The Anesthesiologist and Fatigue

Steven K. Howard, M.D.

For a variety of complex reasons, health care personnel have traditionally worked long hours. Fatigue among resident physicians has been studied for many years, but the results of these studies have been mixed, especially regarding the effect of fatigue on *performance*. No studies have been performed on different age groups of anesthesiologists after residency training, and to summarize in detail the results of the many published articles is beyond the scope of this article. In general, as the hours of sustained wakefulness increase, the studies have shown major detrimental effects on mood, subjective sleepiness (how sleepy you feel) and subtle detrimental effects on psychomotor performance. This has obvious operational implications, as patients rely on us to provide safe care both day and night.

Determinants of Sleepiness

The major determinants of sleepiness are sleep quantity and sleep quality, circadian influences and the use of certain medications. If sleep is restricted below an individual's average normal requirement (which for most adults is *greater* than eight hours of sleep per 24 hours), then daytime sleepiness will result. This resultant "sleep debt" builds and continues to pressure the brain physiologically to fall asleep. Superimposed on this is the effect of the biphasic circadian clock that produces a state of increased sleep tendency and decreased performance capacity during two periods in the 24-hour day — from about 2 a.m. to 6 a.m. and from about 2 p.m. to 6 p.m. Central nervous system (CNS) depressants (e.g., alcohol) can exacerbate latent sleepiness while CNS stimulants (e.g., caffeine) can mask it. However, the only way to actually "pay back" the sleep debt is by acquiring adequate sleep.

That sleepiness can have real-world operational importance is supported by recent evidence from other domains. Many studies have shown that automobile accidents oscillate with circadian-induced sleepiness. Studies from the National Aeronautics and Space Administration reveal pilots having "microsleeps" in the cockpit during critical portions of flight. Similar analysis has rarely been performed for health care accidents, but there is no reason to think that health care workers will be immune to the impairing effects of fatigue.

My laboratory has performed two studies of fatigue in resident anesthesiologists. The investigations include 1) a study of daytime sleepiness and 2) a study of performance using a realistic patient simulator. What follows is a brief description of the two experiments.

Measurement of Daytime Sleepiness

Daytime sleepiness was measured in a group of anesthesiology residents. Daytime sleepiness is routinely measured in sleep laboratories to evaluate patients for sleep disorders such as obstructive sleep apnea and narcolepsy. Daytime sleepiness is measured by a test called the multiple sleep latency test (MSLT). The MSLT measures the ease of falling asleep over the course of a day and is based on the firmly established principle that the sleepier you are, the faster you fall asleep. The sleep latency (time to fall asleep) is determined using specific electroencephalography (EEG) criteria. The MSLT score is the average latency across five attempts to fall asleep over the course of a day. Pathologic MSLT scores are < 5 minutes and are seen commonly in patients with sleep disorders and in healthy people who have been sleep-deprived for 24 hours. Normal MSLT scores are > 10 minutes.

In this study, each subject was observed in each of three conditions. In the *baseline* condition, the subjects were on typical operating room rotations and had not had an on-call period for at least 48 hours. In the *post-call* condition, the subjects were on a demanding clinical rotation and were studied immediately after a 24-hour, in-hospital on-call period. In the *sleep-extended* condition, the subjects were required to extend and maximize their sleep for four consecutive days prior to being tested.

The residents' average total sleep time (hours ± standard deviation) for the four nights prior to the study period were: baseline 7.1 ± 1.5; post-call 6.3 ± 1.9; and sleep-extended 8.8 ± 1. In this study, subjects were found to

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have daytime sleepiness at or near pathologic levels in both the post-call condition (4.9 ± 4.7 minutes) *and* the baseline (6.7 ± 5.3 minutes) condition. The figure shows these data graphically over the course of the day. This documents a previously unknown level of chronic sleep debt in our subjects in the baseline condition even though subjects were averaging over seven hours of sleep per night. It is important to note that this level of daytime sleepiness was reversible, as shown for the sleep-extended condition. When the same subjects were allowed to obtain more sleep, the MSLT scores were normal (12.0 ± 6.4 minutes).

This study also revealed that subjects had poor ability to subjectively perceive their actual level of physiologic sleepiness as measured by the MSLT. They also had trouble perceiving that they had actually fallen asleep even when sleep was recorded unambiguously by the EEG. The study's findings suggest that there may be situations during our clinical work where we become vulnerable to falling asleep, are unable to perceive that this is occurring and do not even know that we have nodded off. This can only increase the risk to our patients or indeed to ourselves as we drive ourselves home.

Simulator Study

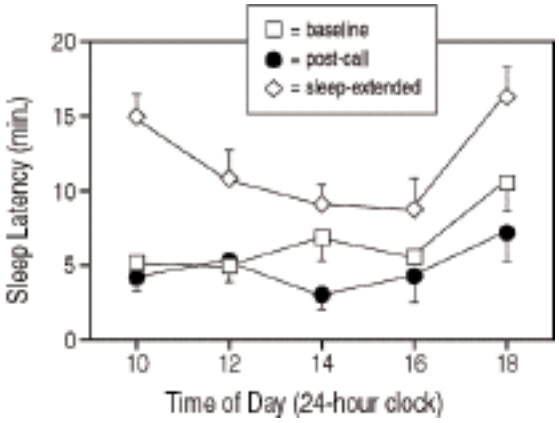
The next logical experiment was to test the effects of fatigue on performance using a patient simulator in a realistic environment. We asked the question: How does sleepiness and fatigue affect our ability to perform our job as anesthesiologists? Simulation is a useful technique for studying this question since it poses no risk to patients and allows for extensive manipulation of both the subject and the environment. Simulation also allows for the experiment to be controlled and reproduced between subjects, which is impossible to do with real patients.

We evaluated simulator performance of resident anesthesiologists in each of two conditions. In the *sleep-deprived* condition, the subjects were kept awake for 24 hours. This replicates a common clinical practice for some experienced anesthesiologists who provide anesthesia care for patients during the day after a busy on-call period. In the *sleep-extended* condition, the subjects were required to extend their sleep for four consecutive days prior to being tested in the simulator.

The simulations consisted of matched laparoscopic cases of four-hour duration beginning at 9 a.m. and ending at 1:30 p.m. Twenty-seven probes of vigilance were introduced into the scenario at randomly distributed times as were two subtle clinical events per case. All simulations were videotaped for retrospective analysis.

In this complex study, subjects had slightly slower average response times to vigilance probes in the fatigued condition, and certain subjects completely missed some probes

Figure 1



Physiologic sleepiness (sleep latency) as a function of condition and time of day. Subjects in the baseline condition had sleep latencies nearly at levels associated with clinical sleep disorders (<5 minutes) and in the post-call condition below these levels. The sleep-extended condition reveals a normal MSLT profile. Error bars are SEM (N=11 except for post-call, 10 a.m. for which N=8).

Open square = baseline
Filled circle = post-call
Open diamond = sleep-extended

because they were clearly asleep. An extensive analysis of 96 hours of the study's videotapes was performed to quantify profoundly sleepy behaviors (i.e., head nodding or obvious sleep episodes). We found a far greater number and duration of the sleepy episodes in the sleep-deprived group. Two subjects during the experiment had profound sleepiness for a total of more than 25 percent of the four-hour scenario (essentially asleep for one hour!). While all subjects often cycled rapidly between awake and sleepy behaviors, these subjects had several continuous episodes of sleep lasting more than five minutes.

Sleepiness and Fatigue in Society

Throughout the industrialized world and in virtually all transport industries where impaired performance translates into risk of death or injuries, work hours are controlled by regulation to mitigate the effects of sleep loss, fatigue and circadian disruption. In these industries, accidents related to fatigue are not considered isolated occurrences but rather as the expected result of errors and incidents induced by human physiological limitations. The National Transportation Safety Board (NTSB) examines the sleep/wake history of any crew member involved in an accident, and "fatigue" has been formally identified as a contributing factor and probable cause in major transportation accidents.

In contrast, within health care in the United States, regulation of work hours, schedules and rest requirements are either nonexistent or are markedly less than those considered appropriate by the rest of our society. Great Britain and Australia have addressed the work hours of junior doctors, which has had a significant impact on how physicians are trained in those countries. In many cases, the trainees' mentors now do the "after hours" work previously done by trainees. So now who is being sleep deprived?

Unlike pilots, nuclear power plant operators, truck drivers or train engineers, there is no U.S. federal regulatory body that has oversight responsibility for the work/rest practices of physicians. The incentives and disincentives to work while sleepy change with the practice setting. No doubt, trainees look at working the day after-call differently than does an experienced practitioner who is getting paid an incremental fee to care for a patient. This is a complicated issue, and answers to this problem have not and will not come easily.

Generally, the burden of proof has been placed on clinicians and investigators to prove that working long shifts (24-36 hours) and irregular on-call schedules is not safe for patients or clinicians. The case examples in which sleep loss and physician fatigue have been identified as important contributing factors to medical error have been treated as "isolated individual lapses" rather than as the "tip of the iceberg" of a widespread and serious risk. Perhaps the time has come for us to reverse the burden of proof in the interests of safety. The life we save might be our own.

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Any Reporting System Needs Postoperative Outcomes and Data Collection

Terri G. Monk, M.D.

The Institute of Medicine (IOM) was established in 1970 by the National Academy of Sciences to advise the federal government on issues of medical care, research and education.[1] In November 1999, IOM issued a landmark report titled "To Err Is Human: Building a Safer Health System." This document discussed the problem of medical errors and estimated that between 44,000 to 98,000 Americans die each year as a result of medical errors. Even if the lowest estimate is correct, it implies that more people die from medical errors each year than from motor vehicle accidents (43,458) or breast cancer (42,297).[2] The authors of this report recognized that the problem of medical error is not a problem of the individual health care provider but is instead a "systems problem." The IOM also concluded that health care is at least a decade behind other high-risk industries such as aviation in ensuring basic safety.[1] The stated goals of the IOM report were to question the status quo in medicine and to "break the cycle of inaction" in dealing with medical errors.

The IOM report recognized that several groups were already working on methods to improve patient safety and named the Anesthesia Patient Safety Foundation (APSF) as a leader in this field.[1] One of the conclusions of the report was that a national focus be established "to create leadership, research, tools and protocols to enhance the knowledge base about safety." To this end, APSF held a workshop in October 2000 to discuss the issues involved in outcomes research and data collection. During this program, it was noted that while anesthesia safety has improved over the past decades, there are still anesthetic mishaps that result in serious morbidity and death. At the present time, anesthetic outcome data are primarily derived from retrospective sources, and the true incidence of anesthetic mishaps is not known. The overall consensus of the participants at the meeting was that APSF should be the leader in the development of a reporting system for anesthetic errors and outcomes. As a result of this workshop, APSF has commissioned a Task Force on Postoperative Outcomes and Data Collection. I am organizing this task force and am presently recruiting individuals in academic medicine, private practice and industry to serve on this committee.

"The long-term goal of this committee will be to develop an active data dictionary that will direct database systems to obtain outcome data and will be linked to computer-based anesthesia record keepers throughout the country."

The Task Force on Postoperative Outcomes and Data Collection will have the following two objectives:

1. To identify the specific perioperative outcomes to be investigated;
2. To establish a data dictionary for the collection of this information.

There are three general criteria that will be used to determine which perioperative outcomes should be investigated.[3] First, is the outcome important? In clinical medicine, good outcome questions are usually patient-oriented. Clinically important questions address patient morbidity, mortality or quality-of-life issues. These questions should pass the "so what?" test, i.e., getting the answer should contribute substantially to medical knowledge. It is also essential that the outcome questions be answerable and obtaining the answers feasible.[4] The task force will focus on outcomes that will identify the true incidence of anesthetic complications and provide information on the etiologies of these problems.

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Paper-based medical records do not facilitate the transfer of medical information between health care facilities and providers. Computer-based patient records provide better interfaces between clinical data and health care providers.[5] At the present time, there are a variety of computer-based anesthesia records in use, but they lack the ability to interface with each other or with a central clinical data repository. The retrieval of information from these systems is also limited by inconsistencies in the naming of problems, medications and other data. The ultimate solution to this problem is the development of a common clinical data dictionary and a clinical codification system.[5] A data dictionary is an ordered collection of data that describes and locates each data element in an information system. It is the necessary building block for improving communication between computer-based anesthesia records. Acceptance of a standardized data dictionary by all anesthesia providers would produce uniform data for complete and reliable analysis of patient care and outcomes.

The Task Force on Postoperative Outcomes and Data Collection will begin its work in the spring of 2001. During the first year of its existence, the task force will create a passive data dictionary that can be used as a reference tool for the development of a standardized computer-based anesthesia record keeper.[5] The long-term goal of this committee will be to develop an active data dictionary that will direct database systems to obtain outcome data and will be linked to computer-based anesthesia record keepers throughout the country. The work of this task force and the commitment of APSF to the development of these outcome tools should greatly facilitate knowledge of perioperative outcomes and enhance patient safety.

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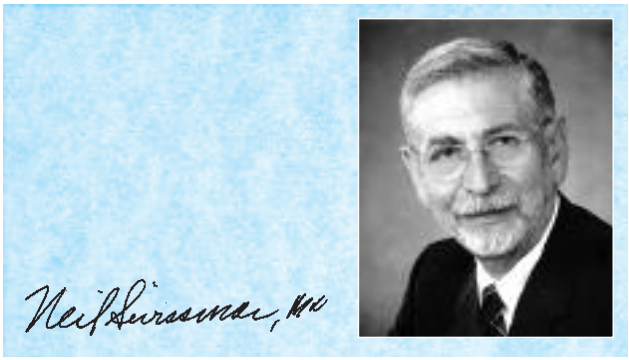

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ASA Involvements: President-Elect (2000); First Vice-President (1999); Treasurer (1997-98); Assistant Treasurer (1994-96); Director (1989); Alternate Director (1987-88, 1991-93); Delegate (1983-87); Member, committees on Communications, Economics, Professional Liability, and Quality Improvement and Practice Management.

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Affiliations: President (1994-96), President-Elect (1992-94), Secretary-Treasurer (1990-92), Indiana Society of Anesthesiologists; President (1991-93), Secretary-Treasurer (1980-82), Indianapolis Society of Anesthesiologists; Member, Board of Directors (1996-present), American Institute of Parliamentarians; Member, Board of Directors (1993-present), Indianapolis Medical Society; Member, American Medical Association, Society of Cardiovascular Anesthesiologists, American Society of Critical Care Anesthesiologists, American Society of Regional Anesthesia and Pain Management, Indiana State Medical Association, International Anesthesia Research Society, Society for Ambulatory Anesthesia and National Association of Parliamentarians.

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Affiliations: President (1991), President-Elect (1990), Minnesota Society of Anesthesiologists; Delegate (1987-92), Minnesota Medical Association.

Education & Honors: D.O., Kansas City College of Osteopathic Medicine; Residency, Detroit Osteopathic Hospital, Cleveland Clinic and Mayo Clinic; twice named "Teacher of the Year," Anesthesiology, Mayo Graduate School; Diplomate, American Board of Anesthesiology; Fellow, American College of Anesthesiologists.

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Affiliations: President (1982-84), District I, New York State Society of Anesthesiologists; President (1989-92), President-Elect, Secretary and Treasurer, Society of Academic Anesthesiology Chairs; President (1980-83), Vice President, Secretary/Treasurer, Society of Neurosurgical Anesthesia and Neurologic Supportive Care.

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Personal Notes: Dr. Cottrell has lectured extensively worldwide, authored or co-authored more than 90 scientific papers, 114 abstract presentations and 20 book chapters, and was co-editor of three textbooks.

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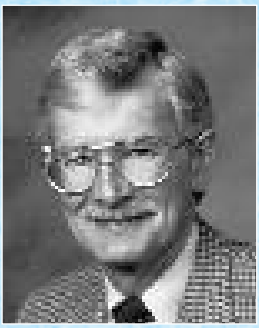

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Affiliations: President (1981-82), Secretary (1982-84), Mississippi Society of Anesthesiologists; Director and Chair (1984-89), Mississippi Medical Political Action Committee; Member (1996-present), Board of Directors, Foundation for Anesthesia Education and Research; Director, American Board of Anesthesiology.

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Peter L. Hendricks, M.D.

Professional Appointments: Vice-Chair, Department of Anesthesiology, Medical Center East, Birmingham, Alabama.

ASA Involvements: Assistant Secretary (2000-present); Director (1996-99); Chair, Committee on Anesthesia Care Team (1996-97); Member, committees on Ethics, Governmental Affairs, Standards of Care, Professional Liability, Economics; Member, House of Delegates Reference Committee and Board of Directors Review Committee.

Affiliations: Alternate Director (1991-97); President (1988-89), Secretary/Treasurer (1986-88), Alabama State Society of Anesthesiologists; Member, International Anesthesia Research Society, Society for Ambulatory Anesthesia, Society of Cardiovascular Anesthesiologists.

Education and Honors: M.D., University of Texas Medical Branch, Galveston, Texas; Residency, National Naval Medical Center, Bethesda, Maryland; Fellowship (pediatric anesthesia) Children's National Medical Center, Washington, D.C.; Diplomate, American Board of Anesthesiology.

Personal Notes: Dr. Hendricks and his wife, Lynn, have three children and reside in Birmingham, Alabama.

Assistant Treasurer
Roger A. Moore, M.D.

Professional Appointments: Chair of Anesthesia, Deborah Heart and Lung Center, Browns Mills, New Jersey, and Clinical Associate Professor of Anesthesiology, the University of Medicine and Dentistry of New Jersey.

ASA Involvements: Assistant Treasurer (1999-present); Director (1995-98); Alternate Director (1992-95); Member, Board Committee on Scientific Affairs (1996-98); Secretary-Treasurer (1996-99), Member, ASAPAC Board of Trustees (1991-99); Member, committees on Communications, Newsletter and Ambulatory Surgical Care.

Affiliations: President (1989-91), Vice President (1987-89), Chair, Judicial Committee (1987-present), New Jersey State Society of Anesthesiologists; Vice President (1996-98), Secretary-Treasurer (1995-96), Mid Atlantic Caucus; Vice-President (1999-present), Secretary-Treasurer (1994-1998), Society of Cardiovascular Anesthesiologists; Chair, Anesthesia Section (1984-85), Secretary, Anesthesia Section (1983-84), Medical Society of New Jersey; Fellow (1982-98), American Academy of Pediatrics; Associate Oral Board Examiner - Senior (1996-present), Examination Question Writer (1986-present), American Board of Anesthesiology; Treasurer (1999-present), New Jersey Society of Anesthesiology Political Action Committee.

Education & Honors: M.D., University of Virginia, Charlottesville, Virginia; Residency, University of Pennsylvania, Department of Anesthesia, Philadelphia, Pennsylvania; Fellowship (pediatric anesthesia and intensive care), Children's Hospital of Philadelphia; Diplomate, American Board of Anesthesiology.

Personal Notes: Dr. Moore and his wife, Jonni, have two children and reside in Moorestown, New Jersey.

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

Professional Appointments: Medical Director, Healthsouth Surgery Center of Wauwatosa, Wisconsin.

ASA Involvements: Speaker of the House of Delegates (2000-present); Vice-Speaker (1994-99); Director (1987-94); Alternate Director (1984-86); Member, committees on Ambulatory Surgical Care, Bylaws, and Quality Improvement and Practice Management, and several task forces studying practice parameters, practice management and exclusive contracts; ASA Representative, Joint Commission on Accreditation of Healthcare Organizations Ambulatory Health Care PTAC.

Affiliations: President (1974-75), Milwaukee Society of Anesthesiologists; Member, Society for Ambulatory Anesthesia, American Society of Regional Anesthesia and Pain Management, International Anesthesia Research Society, Wisconsin Society of Anesthesiologists, Milwaukee Society of Anesthesiologists, State Medical Society of Wisconsin, Milwaukee County Medical Society, American Institute of Parliamentarians and National Association of Parliamentarians.

Education and Honors: M.D., Marquette University School of Medicine; Residency, Milwaukee County General Hospital, Milwaukee, Wisconsin, and Veterans' Administration Hospital, Wood, Wisconsin; Diplomate, American Board of Anesthesiology; Fellow, American College of Anesthesiologists.

Personal Notes: Dr. Sinclair and his wife, Jean, have five children and reside in Elm Grove, Wisconsin.

Vice-Speaker of the House of Delegates
Candace E. Keller, M.D.

Professional Appointments: Staff Anesthesiologist, Wesley Medical Center and Forrest General Hospital, Hattiesburg, and Mississippi Baptist Medical Center, Jackson, Mississippi; Assistant Clinical Professor of Anesthesiology, University of Mississippi School of Medicine, Jackson, Mississippi.

ASA Involvements: Vice-Speaker of the House of Delegates (2000-present); Alternate Director (1991-99); Member, committees on Quality Improvement, Membership, Physician Resources, Professional Diversity, Anesthesia Care Team; Chair, Young Physicians Liaison Committee to AMA (1989-91); Chair (1997-99), House of Delegates Reference Committees.

Affiliations: President (1995), President-Elect (1994), Secretary (1986-89), Mississippi Society of Anesthesiologists; President-Elect (1999), Secretary-Treasurer (1994-98), Board of Trustees (1994-present), Delegate, House of Delegates (1989-present), Mississippi State Medical Association; Delegate (1999-present), Alternate Delegate (1992-98), Reference Committee (1996), American Medical Association; Delegate, AMA Young Physicians Section (1989-91); Women in Medicine Advisory Panel (1992-97), Co-chair (1995-97); Representative to Society for Advancement of Women's Health Research Medical Health Advisory Board (1993-97).

Education and Honors: M.D., University of Mississippi School of Medicine; Residency (general surgery) University of Mississippi Medical Center, Jackson, Mississippi; Residency (anesthesiology), University of Texas Medical Branch, Galveston, Texas; Diplomate, American Board of Anesthesiology; Graduate, American Institute of Parliamentarians.

Surviving the Perfect Storm: Challenges Faced by Our Training Programs

Kevin K. Tremper, M.D., Ph.D., President
Association of Anesthesiology Program Directors

Simon Gelman, M.D., Ph.D., Immediate Past President
Society of Academic Anesthesiology Chairs

The past decade has seen unprecedented changes in the management of health care that have placed academic medical centers at significant financial risk. In the early portion of the decade, managed care plans grew significantly, reducing fee-for-service income and progressing toward a capitated environment in some markets.[1] The financial risk was shifting from insurers to the providers. Hospital patient length of stay was dramatically reduced, resulting in decreased occupancy and reduced hospitalizations and surgical procedures along with reimbursement. Health care planners envisioned a future with primary care gatekeepers who would decrease the need for specialists.

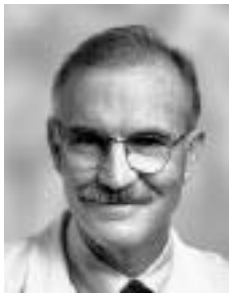
In 1997, the Health Care Financing Administration (HCFA) capped the number of residents for graduate medical education reimbursement and even proposed financial incentives to institutions that would voluntarily reduce their number of house officers. Academic medical centers strived to produce a greater number of primary care trainees to meet the perceived demand for these new gatekeepers of capitated care. Many academic medical centers expanded their primary care base by buying practices, thereby ensuring their referrals to maintain academic and financial viability.

At the height of this push for primary care, the field of anesthesiology appeared to be targeted as one with an oversupply that would be especially impacted by decreased surgical procedures resulting from full capitated care.[2] A shocking reduction in medical school applicants to anesthesiology programs occurred in 1995. The graduating CA-3 class in 1994 was 1,843, while the entering CA-1 class for 1996 was only 745.[3] Although this class was ultimately supplemented to 885, the number is still approximately 1,000 less than the graduating classes during the peak years of the early 1990s.[4] Nearly all training programs suffered a substantial drop in their number of residents, and the field noted a dramatic increase in the percentage of international medical graduates (IMG) (10 percent in 1990 to 57 percent in 1999).[3]

Managing an academic program while providing the necessary clinical service was a challenge with the residencies cut in half. This staffing problem has placed significant stress upon the faculty of these training programs as well as the financial resources of the departments and the institutions in which they are inexplicably bound. To make a difficult financial environment even worse, Congress passed the Balanced Budget Amendment in 1998 in which HCFA would progressively reduce graduate medical education (GME) reimbursement to teaching hospitals.[4,5] The result has been a progressive decrease in training hospitals' profitability, where many academic medical centers are either in the red, some to a dramatic degree, or are predicting progressive financial difficulties as the Balanced Budget Amendment is implemented.[6] Ironically, this has occurred during a decade in which the United States' economy has been remarkably strong, producing a positive federal budget.

Academic departments of anesthesiology enter the new millennium facing the confluence of three adverse financial pressures: 1) decreased professional fee reimbursement, 2) working within academic medical centers that are struggling to remain financially viable and 3) trying to retain academic faculty in the best job market for anesthesiologists in 20 years.[7] The reduction in resident class size in the late 1990s has obviously resulted in the decreased availability of trained anesthesiologists today. As the overall job market has improved, the academic "life" has progressively

Simon Gelman, M.D., Ph.D., is Chair, Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, Boston, Massachusetts.



Kevin K. Tremper, M.D., Ph.D., is Professor and Chair, Department of Anesthesiology, University of Michigan, Ann Arbor, Michigan.

Table 1: Current Manpower Needs in Academic Departments August 2000

Response Rate: 66.2% (94/142)	Yes	No
Additional Faculty Needed?	91.5%	8.5%
# of Faculty Needed	326	
Average # Per Department	3.8	
Additional CRNAs Needed?	66.5%	33.5%
# of CRNAs Needed	246	
Average # Per Department	4.0	

deteriorated. When the number of residents decrease, academic faculty are required to spend a greater and greater portion of their time providing service, thereby limiting time for academic development. It may be difficult for some faculty to determine the difference between an academic position and a private position, other than a lower salary.[8] With hospitals trying to meet their budgets, there are greater pressures to shift costs to the academic departments by not providing the necessary support. The demands for more clinical productivity with less support have placed academic departments under unprecedented financial stress.[6]

It is the current feeling among anesthesiology training department chairs that there is a significant shortage of faculty and that this problem may only become worse over the next three years. Last August, a survey was sent to all Society of Academic Anesthesiology Chairs/Association of Anesthesiology Program Directors members asking them two, two-part questions:

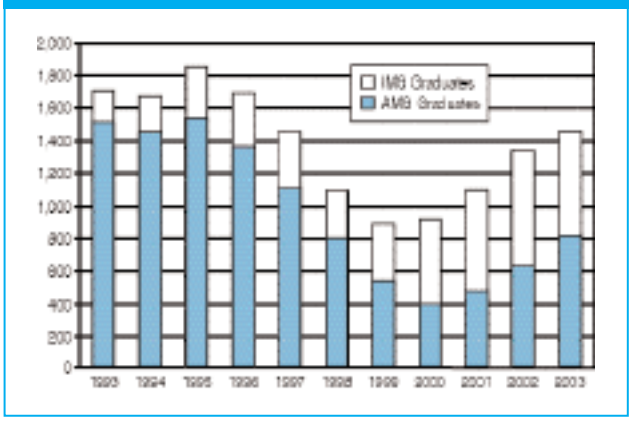
1. Do you currently need additional faculty?
   If yes, how many would you like to hire?
2. Do you currently need additional nurse anesthetists?
   If yes, how many would you like to hire?

The results are presented in Table 1. There are 326 open faculty positions in the 66 percent of departments that responded to the survey (3.8 per department). If the rate of open faculty positions is applied to all residency programs, there would be 490 openings in our academic departments as of August 2000 and nearly 370 positions for nurse anesthetists in those departments. This is very disconcerting since most academic departments recruit their new faculty during the summer, are therefore usually staffed at the highest levels by the end of August and lose faculty to community practices and attrition throughout the academic year.

How much and how quickly those situations will improve is unclear. The size of entering resident classes over the past few years has progressively increased[9,10] [Figure 1]. Unfortunately, since a large percentage of those residents are IMGs, it is unknown how many of those trainees will be able to enter the U.S. market due to issues relating to their visa status. Residents who have J-1 training visas must return to their home country after the completion of their training for a minimum of two years before applying for an immigration visa. The graduating classes of 2001, 2002 and 2003 should increase in size, but the number of American medical graduates (AMGs) is only 471, 632 and 811, respectively. This is well below the AMG graduates of the mid-1990s, which ranged from 1,358 to 1,547 [Figure 1]. For a more complete description of the residency composition and numbers, see the article by Alan W. Grogono, M.D., in the November 2000 *NEWSLETTER*.[10]

Continued on page 24

Table 2: AMG and IMG Resident Graduates 1993 through 2003



Clearly, if we are to maintain our residency programs, we require faculty to provide the clinical training as well as to continue to invest in the academic base of our specialty. Without that academic investment to develop new knowledge in the field of anesthesiology, the future of our medical specialty is at risk. This current problem should be a wake-up call to those in our specialty who felt that the work force was glutted with too many practitioners and hoped for a reduction in the number of residents. The shortage of trained anesthesiologists that we see today may improve the job market for anesthesiologists in the short run but may be a threat to the future of our specialty in the long run.

We need to make hospital deans and executives aware of the dwindling physician resources within our specialty. We need to inform medical students of the opportunities in our specialty from a clinical and academic perspective. As a specialty, we are obligated to provide the medical care needed by our patients and to develop new knowledge to meet the needs of future generations.

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APSF Retreats, Returns With Report on Perianesthetic Data Management

Continued from page 8

ing. No one present knew of flawed automated records that had biased the outcome of a malpractice suit. Because we lack systems independent of human input, we have no system free of error. Also, the pros and cons of color-coding drugs was discussed; uniform white labels would force clinicians to read the label. Bar-coding of drugs would help with the tracking of administration of drugs and would open the possibility of tapping into a database on the clinical pharmacology as well as the patient's drug history. It would not eliminate human errors.

APSF was called on repeatedly to lead the way in generating a data dictionary viewed as key in all attempts to establish a large database that would be essential for the collection and interpretation of comprehensive outcome data. The great cost of this effort would have to be shared by government, industry, foundations such as APSF and academic volunteers.

The meeting concluded with the decision to form two task forces under the aegis of APSF. One will deal with legal impediments to the collection of clinical data and critical incidents. David M. Gaba, M.D., will chair it. The other will work on the development of a data dictionary and will be chaired by Dr. Monk.

Ventilations: In Case You Haven't Heard...

Continued from page 1

demic medical centers, which precipitated a rapid egress of physicians from academic anesthesiology and fellowship training to hectic, though lucrative, private practice environments. In addition, when a preliminary report suggested that anesthesiologists would be in oversupply by the year 2000, you were quick to both discourage medical students from entering anesthesiology residencies and to treat attending physicians disrespectfully by being insensitive to their needs and threatening salary reductions. As a result, there was a 75-percent reduction in residents engaged in anesthesiology training during the 1990s.

With respect to nurse anesthesia training, one must first become a nurse! You have done little to make the practice of nursing appealing as a career for young people. Furthermore, in your effort to dilute health care, you expanded the roles for nurse practitioners in other areas, thus making nurse anesthesia less intriguing to them.

Many of you may be asking when this crisis will subside or if other providers can enter the field. You may inquire about the use of anesthesiologists' assistants (AAs) in place of nurse anesthetists. Currently, there are a "staggering" 700 AAs in the entire United States, and few states license them. Nurse anesthetists view them as direct (and less expensive) competition, and some physicians are wary of introducing yet another faction into this contentious practice paradigm. A few anesthesiologists even believe that the AAs in today's market may end up as the "anesthesiology alternative" in the next decade. After all, we are living in America, where anything can happen.

On a positive note, American medical graduates are entering anesthesiology in great numbers, like mayflies swarming around a bright light. I am unsure of what is happening with nurse anesthesia training, but I fear that no news is bad news with respect to recruitment. As far as AA programs, they remain in suspended animation; only two programs provide training and in insignificant numbers. Thus, do not believe the Pollyanna predictions of optimistic anesthesiologists who foresee a five-year turnaround. I am telling you that we are engaged in a decade-long problem.

In closing, I urge you to be nice to those anesthesiologists and nurse anesthetists who are currently engaged in caring for the surgical patient. An occasional word of appreciation, a sympathetic reply to their complaints of being overstressed, restraint in uttering pejorative comments or cessation of prophesizing doom to those who enter our specialty may improve your attempts to resolve staffing problems.

Remember that it is not good business to kill the golden goose for the remaining eggs, so do not be too short-sighted with respect to workload expectations.

Sincerely,
Dr. Mark J. Lema
(Anesthesiologist, Pain Specialist, Intensivist, Administrator, Educator, Researcher and Perpetually Exhausted Physician)

Who Can Our Patients Trust Now?

Continued from page 2

these events, the specialty of anesthesiology is still intact. We intend to pursue this issue as far and as long as necessary to protect our most vulnerable citizens. It is clear that the former administration was not concerned with the safety of our Medicare patients. Perhaps the new administration will see it differently.

Now it is up to us. Last year's ASA Political Action Committee contributions were unprecedented. But we need even more involvement now. Each and every ASA member must become active in his or her state component society. We must work to stop state-level attempts by nonphysician providers to inappropriately expand their scope of practice.

My trust in politics is wavering, but my trust in you, the member, is strong. No one can dare equate what we do with what other practitioners of anesthesia **claim** they can do. The federal government has wrongfully entered our arena and, in doing so, threatens what we have worked so hard to achieve. The political system has let its people down. We will not.

Trust me: This fight has just begun.

Real 2001 National Medicare Conversion Factor: $17.83, Up From $17.26

Karin Bierstein,
Assistant Director of Governmental Affairs (Regulatory)

At ASA's urging, the Health Care Financing Administration (HCFA) revised its computation of the national and local anesthesia conversion factors (CFs) in late December, and it instructed the Medicare carriers to use new higher dollar values starting on January 1.

On average, the new correct conversion factors are 57 cents (3.3 percent) higher than those originally announced. Also, on average, they will translate to an additional $1,850 for the typical anesthesiologist in 2001. Overall, the increase will cost HCFA nearly $44 million. ASA President Neil Swissman, M.D., explained the process by which our representatives worked with HCFA to bring about the numbers correction in blast e-mail messages and faxes sent on December 28 to ASA members, and then again in his January 8 *President's Update*. As a result of our discussions with HCFA staff, we expect to be involved much earlier in the process of verifying the calculation of the CF for 2002 and subsequent years.

If you did not receive the electronic, faxed or mailed notices, please provide ASA <Membership@ASAhq.org> with your current e-mail address, mailing addresses and telephone number. The "Program Memorandum" by which HCFA instructed the carriers to update their conversion factors is available on the ASA Web site <www.ASAhq.org/ProfInfo/cfincrease.htm>.

You will find the conversion factor for your own Medicare locality in the table on page 27. This table replaces the one published in the December 2000 *ASA NEWSLETTER*.

But why is the CF only slightly higher than last year?

The phase-in of the cuts in the Medicare allowance for practice expenses will not be complete until 2002.

Many readers know that the general Medicare update for 2001 was 5.2 percent and that the conversion factor applicable to medical and surgical procedures increased from $36.6137 to $38.251. This jump of 4.5 percent (reduced from 5.2 by certain legislative adjustments) will benefit anesthesiologists providing pain medicine and invasive monitoring services.

Anesthesia services, though, will continue to reflect the impact of HCFA's decision to remove nurses' (registered nurses, *not* nurse anesthetists) and anesthesia technicians' compensation from the practice expense component of the Medicare Fee Schedule. The expenses for employing these allied health providers allowed through 1999 were based only on a focus group's estimates, not on solid data. (For a full discussion of the HCFA decision, see the "Washington Report" in the October 1999 issue of the *NEWSLETTER* at <www.asahq.org/NEWSLETTERS/1999/10_99/washingtonrep1099.html>.) ASA has tried through surveys to demonstrate that anesthesiologists do incur payroll costs for clinical personnel (other than nurse anesthetists and anesthesiologists' assistants) whom they bring to the hospital, but we have found that only a small minority of our members employ such personnel. This is consistent with data from the Medical Group Management Association's 2000 Cost Survey. The median number of registered nurses employed by the small sample of anesthesia practices returning survey responses was .04 at a median cost of $1,961. Compare these medians to the analogs for cardiology: .58 for $24,767.

Although an increase in the practice expense values may not be in ASA members' immediate future, your Society is working on the values for "physician work." Dr. Swissman mentioned this issue in his *President's Update*, and we hope to be reporting favorable results from the American Medical Association/Specialty Society Relative Value Update Committee within the next few months.

SOURCE MATERIAL:

Cost Survey: 2000 Report based on 1999 Data. Medical Group Management Association. Englewood, CO; 2000. Telephone (888) 608-5601.

This chart replaces the one published in the December 2000 **ASA** NEWSLETTER.

REVISED2001 Participating Physician Anesthesia Conversion Factors

LOCALITY NUMBER	LOCALITY NAME	ANES CF '01	LOCALITY NUMBER	LOCALITY NAME	ANES CF '01
00	ALABAMA	16.96	02	METROPOLITAN KANSAS CITY, MO	17.57
01	ALASKA	19.68	01	METROPOLITAN ST. LOUIS, MO	17.61
00	ARIZONA	17.88	99	REST OF MISSOURI	16.56
13	ARKANSAS	15.96	01	MONTANA	16.45
26	ANAHEIM/SANTA ANA, CA	18.75	00	NEBRASKA	16.05
18	LOS ANGELES, CA	18.96	00	NEVADA	18.14
03	MARIN/NAPA/SOLANO, CA	18.22	40	NEW HAMPSHIRE	17.65
07	OAKLAND/BERKELEY, CA	18.61	01	NORTHERN NJ	18.96
05	SAN FRANCISCO, CA	19.45	99	REST OF NEW JERSEY	18.30
06	SAN MATEO, CA	19.10	05	NEW MEXICO	16.95
09	SANTA CLARA, CA	19.18	01	MANHATTAN, NY	20.98
17	VENTURA, CA	18.27	02	NYC SUBURBS/LONG I., NY	20.66
99	REST OF CALIFORNIA	17.70	03	POUGHKPSIE/N NYC SUBURBS, NY	18.59
01	COLORADO	17.36	04	QUEENS, NY	20.38
00	CONNECTICUT	19.00	99	REST OF NEW YORK	17.39
01	DELAWARE	17.91	00	NORTH CAROLINA	16.64
01	DC + MD/VA SUBURBS	18.96	01	NORTH DAKOTA	16.36
03	FORT LAUDERDALE, FL	18.90	00	OHIO	17.53
04	MIAMI, FL	20.06	00	OKLAHOMA	16.35
99	REST OF FLORIDA	17.72	01	PORTLAND, OR	17.26
01	ATLANTA, GA	17.98	99	REST OF OREGON	16.49
99	REST OF GEORGIA	17.05	01	METROPOLITAN PHILADELPHIA, PA	18.81
01	HAWAII/GUAM	18.12	99	REST OF PENNSYLVANIA	17.10
00	IDAHO	16.36	20	PUERTO RICO	14.53
16	CHICAGO, IL	19.42	01	RHODE ISLAND	18.31
12	EAST ST. LOUIS, IL	18.21	01	SOUTH CAROLINA	16.29
15	SUBURBAN CHICAGO, IL	18.76	02	SOUTH DAKOTA	15.85
99	REST OF ILLINOIS	17.10	35	TENNESSEE	16.66
00	INDIANA	16.63	31	AUSTIN, TX	17.45
00	IOWA	16.43	20	BEAUMONT, TX	17.88
00	KANSAS	16.80	09	BRAZORIA, TX	18.12
04	KANSAS	16.80	11	DALLAS, TX	18.00
00	KENTUCKY	16.84	28	FORT WORTH, TX	17.50
01	NEW ORLEANS, LA	17.93	15	GALVESTON, TX	18.04
99	REST OF LOUISIANA	17.11	18	HOUSTON, TX	18.61
03	SOUTHERN MAINE	17.19	99	REST OF TEXAS	16.92
99	REST OF MAINE	16.66	09	UTAH	16.81
01	BALTIMORE/SURR. CNTYS, MD	18.23	50	VERMONT	16.84
99	REST OF MARYLAND	17.33	50	VIRGIN ISLANDS	17.46
01	METROPOLITAN BOSTON	18.70	00	VIRGINIA	16.85
99	REST OF MASSACHUSETTS	17.98	02	SEATTLE (KING CNTY), WA	17.87
01	DETROIT, MI	20.92	99	REST OF WASHINGTON	17.21
99	REST OF MICHIGAN	18.50	16	WEST VIRGINIA	17.20
00	MINNESOTA	16.94	00	WISCONSIN	17.23
00	MISSISSIPPI	16.47	21	WYOMING	16.89

Nurse Anesthetists Challenge Rhode Island Office Surgery Regulations

S. Diane Turpin, J.D.
Assistant Director of Governmental Affairs (State)

The Rhode Island Department of Health adopted regulations to license physician offices providing surgical treatment.* The regulations became effective on September 7, 2000, with a requirement that all offices must be licensed by January 1, 2001. The Rhode Island Association of Nurse Anesthetists (RIANA) has filed a lawsuit challenging these regulations.

The regulations address numerous areas, including accreditation, written policies and procedures, governance, surgery, anesthesia, reporting requirements and equipment requirements. Under the regulations, procedures are to be performed only by physicians who have current surgical privileges for the same or a similar class of procedures at a nearby hospital. Only elective procedures may be performed in the office setting. Surgical procedures may be performed on ASA Physical Status 1 or 2 patients; surgical procedures may be performed on ASA Physical Status 3 patients only when the operating physician and a board-certified anesthesiologist concur in writing prior to the surgery that the patient is an acceptable candidate for the office procedure. Surgical procedures are limited to an expected duration of two hours as documented in writing prior to the initiation of the procedure. Surgical procedures exceeding two hours shall be peer-reviewed and documented. No overnight stays are permitted.

Each office shall implement written anesthesia service policies and procedures pertaining to at least the following: staff privileges for anesthesia services, emergency coverage, administration of anesthetics, maintenance of safety controls, qualifications and supervision of nonphysician anesthetists, qualifications of the supervising physician and anesthesia monitoring standards. The policies are to include provisions for preanesthesia evaluation by a physician, safety of patients during anesthesia, review of the patient's condition prior to induction and postanesthesia evaluation and the recording of all events related to anesthesia care. A board-certified anesthesiologist shall be responsible for developing these policies and procedures. The administration of anesthesia, with or without sedation or dissociative drugs, shall be under the direct supervision of a qualified physician.

In an office where general anesthesia is administered, an anesthesiologist or nurse anesthetist shall administer the anesthesia; in an office where anesthesia other than general anesthesia is administered, an anesthesiologist, nurse anesthetist or physician shall administer the anesthesia.

The regulations require the office to notify the licensing agency within 72 hours of certain events: 1) transfer of patient from the office to a hospital emergency department; 2) unscheduled hospital admission of the patient within 72 hours of discharge from the office; 3) extension of the surgical procedure beyond four hours; 4) unplanned readmission to the office within 72 hours; 5) death of patient within 30 days; 6) subjecting a patient to a procedure not ordered or intended by the physician; and 7) any other incident reported to the professional liability insurance carrier.

The regulations require the availability of appropriate monitoring equipment maintained in proper working condition. Monitoring equipment shall include monitors for pulse oximetry, noninvasive blood pressure and electrocardiogram (EKG). In offices where general anesthesia is administered, there shall be a blood pressure apparatus, EKG monitor, defibrillator, pulse oximeter with alarm, oxygen analyzer with alarm and end-tidal CO_2 monitor. Defibrillating equipment shall be available, and supplies of appropriate drugs, medications, fluids and electrolyte solutions shall be maintained in sufficient quantities for routine and emergency use.

RIANA filed a lawsuit against the Department of Health on the basis that portions of the regulations are 1) in violation of constitutional or statutory provisions; 2) in excess of the statutory authority of the agency; 3) made upon unlawful procedure; 4) affected by other error or law; 5) clearly erroneous in view of the reliable, probative and substantial evidence on the whole record; and 6) arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion. RIANA also asked the court to stay the effectiveness of the regulations pending adjudication of the matter.

S. Diane Turpin, J.D., Assistant Director of Governmental Affairs (State), rejoined the ASA Washington Office in September 1999 after completing a degree in law from St. Louis University, St. Louis, Missouri. She previously was a member of the Washington Office from 1990 to 1993.

RIANA challenges the requirement that a board-certified anesthesiologist shall be responsible for developing certain policies and procedures in the office setting and argues that this provision improperly gives anesthesiologists rulemaking authority that is vested in the Department of Health. RIANA contends that the regulations restrict the practice of nurse anesthetists and have the potential to eliminate nurse anesthetists from the office surgery market. RIANA also challenges the requirement that the operating physician and a board-certified anesthesiologist concur in writing prior to the surgery that an ASA Physical Status 3 patient is an acceptable candidate for a surgical procedure in the office setting.

In Rhode Island, nurse anesthetists must practice under the supervision of anesthesiologists, licensed physicians or licensed dentists (R.I. GEN. LAWS SECTION 5-34.2-2[c][1999]; R.I. CODE R. 14-140-022 [Section 1.19][1999]). The scope of practice of any individual nurse anesthetist must be defined by facility policies, and all responsibilities must be delineated in writing (*see* LAWS SECTION 5-34.2-5[b]; R. 14-140-022 [Section 8.6.2]). Hospitals must adopt written policies and procedures for the anesthesiology department that, among other things, provide for supervision of nonphysician anesthetists (*see* R.I. CODE R. 14-090-007 [Section 35.1]). Every patient must receive a preanesthetic evaluation by a physician (*see* R.I. CODE R. 14-090-007 [Section 35.2(a)]). Nurse anesthetists may administer anesthetics in the hospital under the direct supervision and in the physical presence of a duly licensed Rhode Island physician in such a manner as to make continuous exercise of his or her medical judgment throughout the entire conduct of the anesthesia (*see* R. 14-140-018[I] and [II]).

The court denied RIANA's request to stay implementation of the regulations. As such, the regulations remain in effect. No hearing date has been scheduled. The Rhode Island Society of Anesthesiologists has filed an amicus brief on behalf of the Department of Health.

Further developments in the lawsuit will be reported in this column.

[*] Copies of the regulations are available upon request from the ASA Washington Office (202) 289-2222.

Compliance Corner

From questions sent to members of the Committee on Practice Management and their answers:

Q. Are the allowable activities during medical direction illustrative or inclusive (the Georgia carrier has interpreted them to be examples rather than rigidly defined activities)?

The allowable activities are described as follows in Section 15018 of the Medicare Carrier Manual:

"A physician who is concurrently directing the administration of anesthesia to not more than four surgical patients cannot ordinarily be involved in furnishing additional services to other patients. However, addressing an emergency of short duration in the immediate area, administering an epidural or caudal anesthetic to ease labor pain, or periodic, rather than continuous monitoring of an obstetrical patient, does not substantially diminish the scope of control exercised by the physician in directing the administration of anesthesia to the surgical patients. It does not constitute a separate service for the purpose of determining whether the medical direction criteria are met. Further, while directing concurrent anesthesia procedures, a physician may receive patients entering the operating suite for the next surgery, check or discharge patients in the recovery room, or handle scheduling matters without affecting fee schedule payment."

A. *HCFA regards the current list of allowable activities in which anesthesiologists may engage while medically directing concurrent cases as exhaustive. This does not appear anywhere in writing but is clear from ASA's dis-*

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...Practice Parameters

James F. Arens, M.D., Chair
Committee on Practice Parameters

Activity in practice parameter development by ASA remains vigorous. In the April 2000 issue of *Anesthesiology*, the "Practice Advisory for the Prevention of Perioperative Peripheral Neuropathies: A Report by the American Society of Anesthesiologists Task Force on Prevention of Peripheral Neuropathies" was published under that task force, chaired by Mark A. Warner, M.D., of the Mayo Clinic. This is the first practice advisory developed by ASA. A practice advisory is a systematically developed report intended to assist decision-making in areas of patient care where strong scientific evidence is currently lacking. An advisory provides a rigorous synthesis and analysis of expert and practitioner opinion, clinical feasibility data and open-forum commentary. Advisories are not intended as standards or guidelines; they may be adopted, modified or rejected according to clinical needs and constraints. A practice advisory is an attempt to provide guidance for practice in the absence of sufficient scientific evidence.

There are three additional practice advisories under development.

An advisory on "Preanesthesia Evaluation" is being prepared for presentation at the House of Delegates meeting in 2001. The task force has been reconvened under the leadership of L. Reuven Pasternak, M.D. One open forum was held last October at the ASA Annual Meeting in San Francisco, California, and another was held at the December Postgraduate Assembly meeting in New York City. At the same time, the Health Care Financing Administration (HCFA) has become interested in the issue of perioperative testing. Michael F. Roizen, M.D., and Patricia A. Kapur, M.D., prepared a draft letter for the Committee on Economics to use as a response to HCFA.

An advisory on "Recovery from Anesthesia" is being developed. Jeffrey H. Silverstein, M.D., chairs this task force. An open forum will be held on May 5, 2001, at the Society for Ambulatory Anesthesia meeting (see page 35). This practice advisory will be presented to the 2001 House of Delegates for approval.

As a follow-up to the advisory on "Prevention of Perioperative Peripheral Neuropathies," a practice advisory is being developed on the "Prevention of Perioperative Blindness." The number of cases of postoperative blindness due to ischemic optic neuropathy continues to increase. Therefore, there is a need to get information to the membership on this devastating postoperative complication.

A practice advisory is being developed on the "Basic Expectations for Anesthesia Practice." This task force is being chaired by Carl C. Hug, Jr., M.D., Ph.D., and is scheduled to be presented to the 2002 House of Delegates.

Three current guidelines are in the process of being updated for presentation to the 2001 House of Delegates.

"Practice Guidelines for Management of the Difficult Airway" is being updated by a task force under the leadership of Robert A. Caplan, M.D.

"Practice Guidelines for Pulmonary Artery Catheterization" is being revised under a task force chaired by Michael F. Roizen, M.D.

"Practice Guidelines for Sedation and Analgesia by Nonanesthesiologists" is being updated under the leadership of Jeffrey B. Gross, M.D. This update is very timely in view of the renewed emphasis on sedation by the Joint Commission on Accreditation of Healthcare Organizations in recent surveys.

The Committee on Practice Parameters will recommend that a parameter be developed on prevention of drug errors. This will be presented to the March 2001 Board of Directors. However, the committee feels that "outside" funding will be required for a thorough study of the issue. Currently, we are attempting to identify likely outside funding agencies.

ASA continues to manage this process in-house with Richard T. Connis, Ph.D., and David G. Nickinovich, Ph.D., serving as the methodologists. Dr. Caplan provides ongoing guidance to the methodologists, who are located in Seattle, Washington. The task forces and their chairs developed these documents on a completely volunteer basis; all committee work in ASA is on a volunteer basis.

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James F. Arens, M.D., is Dr. R. Lee Clark Professor and Chair, Department of Anesthesiology, Division on Anesthesiology and Critical Care, University of Texas M.D. Anderson Cancer Center, Houston, Texas. He was ASA President in 1989.

Anesthesia Patient Safety Foundation

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

The Anesthesia Patient Safety Foundation (APSF) continues its effort to stress its mission: "No patient shall be harmed by anesthesia." In these endeavors, APSF recently held a successful retreat attended by some 150 academicians, industry leaders and board members. The subject was "Perianesthetic Data Management," reviewed in this issue of the *ASA NEWSLETTER* by J. S. Gravenstein, M.D. (page 7).

Out of the retreat came the decision to establish two task forces. The first is a Task Force on Legal Issues of Data Collection and Analysis Systems chaired by David M. Gaba, M.D. (page 9). The second is a Task Force on Postoperative Outcomes and Data Collection chaired by Terri G. Monk, M.D, that will examine standardization of nomenclature (page 14).

In addition to these three articles, Steven K. Howard, M.D., has provided a look at the serious problem of fatigue in anesthesia practice (page 11). This area needs emphasis and was the subject of a recent ASA videotape prepared by the ASA Committee on Patient Safety and Risk Management. It is available on the APSF Web site <www.apsf.org>.

In October 2000, APSF awarded three research grants on safety. The projects were titled:

"The Relative Safety of Major Anesthetic Techniques" by Fredrick K. Orkin, M.D., Professor of Anesthesiology and Health Evaluation Sciences at Pennsylvania State University College of Medicine; "Preoperative Smoking and Myocardial Ischemia" by Harvey J. Woehlck, M.D., Associate Professor at the Medical College of Wisconsin; and "Assessing Team Information Sharing" by Richard H. Blum, M.D., Instructor in Anesthesia at Harvard Medical School and Medical Director of the Postanesthesia Care Unit at Children's Hospital, Boston. Since 1985, APSF has awarded 47 patient safety research grants, totaling just under $2 million. Grant application guidelines may be found on the APSF Web site.

The review of problems associated with office-based anesthesia (*APSF Newsletter* Special Issue Spring 2000 and the APSF Web site) has also been favorably received along with the important ASA contributions to this subject. Other organizations, including the American Medical Association, accreditation groups and state regulatory bodies, are now beginning to explore errors in office-based surgery. Rebecca S. Twersky, M.D., Chair of the ASA Committee on Ambulatory Surgical Care, has recently joined the APSF Board of Directors.

APSF continues to receive widespread recognition from many areas of medicine that have inquired about its success in propagating the well-known reductions in anesthesia morbidity and mortality, especially following the Institute of Medicine's (IOM's) 1999 report, "To Err Is Human." The inquiries have come from a number of organizations, including the Agency for Healthcare Research and Quality, the American College of Surgeons, the Council of Medical Specialty Societies, the National Coalition on Healthcare, the National Quality Forum and the Kaiser Permanente Institute for Health Policy. A response to the IOM report from APSF may be found on the APSF Web site.

In addition, in response to the inquiries, Robert K. Stoelting, M.D., David M. Gaba, M.D., Jeffrey B. Cooper, Ph.D., Ellison C. Pierce, Jr., M.D., and Burton A. Dole, Jr., from the APSF Executive Committee, have drafted a briefing document: "Anesthesia Patient Safety Foundation – Error Reduction Process: What 15 Years of Experience Has Taught Us." Below are comments from that document.

Background: In 1985, the leadership of the American Society of Anesthesiologists realized that the root of an increase in professional liability insurance was, in part, due to avoidable errors. Working in collaboration with a broad

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group of constituencies, APSF was formed. APSF began the process of bringing together the key stakeholders, identifying key contributing factors to errors, funding investigator-driven research to get to the root of the problems, supporting solutions that were at hand and conducting a massive education effort to foster understanding of better ways and tools to minimize avoidable errors in the operating room and postoperative arena. This leadership of a committed group of stakeholders determined to reduce errors, coupled with new and better monitoring technologies, safer drugs, better training and education of practitioners and a dramatic increase in awareness about safety issues, has led to a substantial reduction in deaths and disabilities from anesthesia-related events and a subsequent reduction in professional liability rates and claims. *The implementation of this kind of voluntary, peer-to-peer improvement effort serves as an example to policymakers of a productive process to duplicate when considering error reduction regulation and legislation.*

Challenges: Most health care professionals train with a combination of immersion in science, theory and some hands-on skill building, not unlike an apprenticeship. Most are motivated by a sincere desire to help people avoid disease and achieve a healthy, productive life. As in all walks of life, mistakes happen in health care. Delivery of health care has become extremely complicated, with the half-life of technology and knowledge changing every four years. The complexity of health care processes is now coupled with arcane regulation of reimbursement, intense cost constraints and fears of a medicolegal system out of control. It has culminated in an eroding trust in the system by professionals and public alike. This has generated a paralyzing effect on the professionals who are indeed committed to saving lives and helping people but feel impotent to change the existing superstructure of care to create a system that minimizes errors at all costs. The report of the IOM drew public attention to the need for greater vigilance in improving these systems to assure that avoidable errors are anticipated and systems are corrected. *APSF believes that error reduction can be achieved, but doing so will not be simple, and it cannot be mandated by executive fiat*. Reducing error will require understanding how and why errors occur and fostering reasonable change through appropriate incentives. It is important to recognize that there do not yet exist robust, concrete, measurable outcomes concerning error and safety. Positive actions will need to be taken in the absence of the ability to document precisely any improvement.

Summary: APSF has spent the last 15 years understanding the roots of medical error and working with a multidisciplinary team of stakeholders to develop solutions and preventative strategies. We believe that this studiously apolitical approach to what is best for the patient and careful handling of the issues that tend to generate discord has created a highly replicable model — one that may be instructional to other colleagues who work with patients. Our hope is that the policy debate will not prompt mandates or development of databases without meaningful analyses and setting unrealistic goals that do more harm than good. We encourage a gradual and careful study of the problems of patient error and encourage an adoption of a voluntary compliance strategy that creates a learning culture, rather than one of blame and finger pointing. We are happy to be instructive in that process. We hope that you will consult our Web site <www.apsf.org> or contact us at <apsf100@aol.com>."

What's New In… Practice Parameters

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ASA remains strong because of the volunteer spirit of our members.

Approved parameters are published in *Anesthesiology,* and reprints are available from the ASA Executive Office. Practice parameters are also available for inspection and downloading from the ASA Web site at <www.ASAhq.org>.

The Committee on Practice Parameters gratefully acknowledges the valuable contributions of task force chairs, task force members, consultants and other members of ASA who have participated in the development of evidence-based guidelines. The committee welcomes suggestions for new parameter topics and for ways to improve the development process.

Fair Winds and Following Seas

John A. "Jack" Cooley, M.D.

It is a bittersweet moment that I write my last column as "Interim" Editor of the "Residents' Review" section of the *ASA NEWSLETTER*. I certainly have enjoyed authoring my own columns as well as "recruiting" and finding others to write for the *NEWSLETTER*, but I am also relieved to be liberated of the monthly deadline, and I can now claim back a small amount of my ever-scarce "free time." I wish all the best in the next two years to our new Editor, Mohammed A. Khan, M.D., <makhan@zeus.bwh.harvard.edu>, from the Brigham & Women's Hospital in Boston, Massachusetts.

I did not want my last installment merely to be a farewell column; rather I wanted to make one last observation and commentary. Since becoming "Webmaster" of our department's Web site <www.med.jhu.edu/anesthesiology>, I have also inherited a slightly less appealing title among my colleagues: I am now the "computer guy." Yes, I get pages at all times of the day and night that start something like, "Hey, Jack, don't you do the Web site? … Well, anyway, I was wondering if you knew about…"

This is where I get questions ranging from actual inquiries about the Web site, to help setting up scanners, to buying a 2 mega-pixel digital camera, to just getting Internet access or checking departmental e-mail. Do not get me wrong, I enjoy helping out where I can, but my computer knowledge is not much more than the next guy's, and when it comes to digital cameras, I do not even have the money to look for one. So what is my point?

My point is simple: Keeping up with technology, especially computer technology and Internet advancements, is not the job of any one person in a department. I am not advocating that everyone start managing a Web site or developing your database to track cases — someone else <www.workingpalm.com> is already doing that. Anesthesiologists, especially residents, need to keep pace with advancing technology, just as we keep abreast of new ideas and techniques in the medical arena of our specialty. As Rear Admiral Ron Marryott said to 1,400 newly sworn plebes of the United States Naval Academy Class of 1992 <www.usna92.com>, anyone who does not keep up with technology will become a "wallflower on the ballroom of success." Actually, he was cajoling graduates into choosing engineering and science majors instead of the "easy" liberal arts degrees. The analogy still remains the same: It is difficult to keep pace with the changing world of computer technology, but doing so is nearly as important as staying current with anesthesia literature.

It *is* that important because it will shape how we receive and use information of all types, from patient records to the latest journals to telemedicine and video-conferencing. In the not-to-distant future, journals may not even be published on paper anymore (Internet Journal of Anesthesiology <www.ispub.com/journals/ija.htm>), and established paper journals are already available online with hyperlinks and searchable databases <www.anesthesiology.org> and <www.anesthesia-analgesia.org>. As the Internet evolves and computers with artificial intelligence and fuzzy-logic become integrated into every aspect of our profession, it may no longer be necessary to "keep up" with computer technology as the technology will advance to the point where using it does not require special training or skills.[1,2] In the meantime, it pays to stay in the know, even if that "know" is not very much.

Here are a few easy steps: Do a little bit every day (or at least often). Do not try to learn it all in a few nights at home or post-call. After checking your e-mail or bidding on your favorite auction item on Ebay, try visiting some anesthesia-related Web sites; <www.asahq.org/anes_links> is a good place to start. Other great starting places are <www.wramc.amedd.army.mil/departments/surgery/Anesthesiology/educatio>, <www.gasnet.org> or your own department's Web page. If you do not know yours, or your department does not have one yet, try ours at <www.med.jhu.edu/anesthesiology/gaslinks>.

Be bold. Experiment. Just as you do not do the same anesthetic every day, you should not use technology the same way either. Instead of reading the "paper" newspaper on your coffee break, check out the electronic versions. My favorites are <www.nytimes.com> and <www.

John A. "Jack" Cooley, M.D., is a resident at Johns Hopkins Hospital, Baltimore, Maryland.

washingtonpost.com>. Do not forget your personal digital assistant, e.g., Palm Pilot™, Pocket PC™. Or bring the Web page with you; visit <www.avantgo.com> to see how. You can even bring your favorite *ASA NEWSLETTER* column with you.

Finally, ask your "computer guy/gal" for help if you need it. I am sure they will not mind lending a hand or at least pointing you in the right direction.

I hope my suggestions are helpful for those who do not have much computer experience and that I have included at least a few interesting links for those more experienced than me. To get the full effect of the hypertext linked article, view it on <www.asahq.org/NEWSLETTERS/2001/1_01/farewell.htm>. Until we meet online, "Fair winds and following seas."

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Compliance Corner

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cussions with the agency regarding incomplete medical direction. Some of the carriers, including Cahaba in Georgia and NHIC in Massachusetts, Maine and New Hampshire, have published policies specifying that the list is illustrative.

SOURCE MATERIAL:

Cahaba and NHIC Local Medical Review Policies are available at <www.lmrp.net>, along with most of the policies published by all the Medicare carriers.

APSF Task Force Reports on Legal Issues of Data Collection and Analysis Systems

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2001 ASA Scientific Papers: Call for Abstracts

The submission procedure for the 2001 ASA Annual Meeting scientific papers will be very similar to that used in 2000. For 2001, ASA has once again partnered with Marathon Multimedia, which specializes in online submission of scientific abstracts. The abstract submission program is accessible through ASA's Web site <http://www.ASAhq.org/AnnMtg/> by clicking on the "Scientific Abstract Submission Guidelines" link. All accepted abstracts will be published in their entirety in electronic format, and the summary of the abstract will be printed in the 2001 Annual Meeting program book. Submission instructions are available on the ASA Web site and will not be mailed to authors. It will not be necessary to request a packet of abstract submission material.

The following outlines the 2001 Scientific Papers submission process:

- **The submission Web site is**

2 Open Forums Set to Revisit PA Catheterization Guidelines and Discuss Recovery Room Discharge Criteria

Two upcoming open forums will allow ASA members the opportunity to comment on the subjects of pulmonary artery catheterization and recovery room discharge criteria.

An Open Forum of the Task Force on Pulmonary Artery Catheterization will be held during the 75th Clinical and Scientific Congress of the International Anesthesia Research Society in Ft. Lauderdale, Florida, from March 16-20. The Open Forum will be held on Monday, March 19, from 11:30 a.m. to 1 p.m.

Members of the Task Force on Pulmonary Artery Catheterization are: Michael F. Roizen, M.D., Chair; David L. Berger, M.D.; Ronald A. Gabel, M.D.; John Gerson, M.D.; Jonathan B. Mark, M.D.; Robert I. Parks, Jr., M.D.; David A. Paulus, M.D.; John S. Smith M.D.; and Steven H. Woolf, M.D., MPH. The task force is in the process of updating the practice guidelines that were first published in the journal *Anesthesiology* in February 1993. The guidelines will include recommendations on the use of pulmonary artery catheterization and its rationale, based on scientific evidence and expert opinion. For more information on the revisions to the "Practice Guidelines for Pulmonary Artery Catheterization," contact Frank Connell by e-mail at: <f.connell@ASAhq.org>.

The second Open Forum, "Practice Guidelines for Recovery Care," will come during the Society for Ambulatory Anesthesia Annual Meeting in Palm Springs, California.

On Saturday, May 5, from 3 p.m. to 5 p.m., members of the Task Force on Recovery Care will be on hand to conduct an Open Forum to hear comments and suggestions about the creation of "Practice Guidelines for Recovery Care." The Open Forum will be held at the Renaissance Esmeralda Resort in Indian Wells (Palm Springs). The program is scheduled to be held in Crystal E.

The results of these discussions will be presented to the ASA House of Delegates during the 2001 ASA Annual Meeting in New Orleans, Louisiana.

Members of the practice parameter task force include: Jeffrey H. Silverstein, M.D., Chair; Jeffrey L. Apfelbaum, M.D.; Jared C. Barlow, M.D.; Frances F. Chung, M.D.; Ralph B. Fillmore, M.D.; Sean E. Hunt, M.D.; Thomas A. Joas, M.D.; and Mark S. Schreiner, M.D. The methodologists for the group are Richard T. Connis, Ph.D., and David G. Nickinovich, Ph.D.

According to Dr. Silverstein, the practice parameter process is highly dependent upon input from the anesthesia community. The Open Forum provides an opportunity for practitioners to meet with task force members and offer suggestions that will have a direct impact on the final product.

For more information on the development of practice parameters for recovery care, contact Dr. Silverstein by e-mail at <jeff.silverstein@mssm.edu>.

currently available. The deadline for submitting all abstracts is Sunday, April 1, 2001, at 11:59 p.m. Central Standard Time.

- Abstract submission will require a computer, an Internet connection and a Web browser (version 4.0 or higher). If you do not have access to these items, you may find out about alternate submission methods from the ASA Executive Office.
- All submission instructions will be available on the ASA Web site and accessible at any point during the submission process. No separate submission packet will be mailed.
- Authors may input and revise their submissions until the deadline or until the abstract is officially submitted by clicking the "Submit" button. Entries will be checked automatically for completeness once officially submitted. After the closing deadline, entries that are not in compliance with all of the submission requirements will be assumed to be in draft format and will not be considered by the graders.
- Abstract length will be calculated by the computer and the maximum length limit will be strictly enforced.
- A brief summary of the study must be included with the submission and, for abstracts that are accepted, will be published in the 2001 Annual Meeting Program book. The summary will not be considered when the abstracts are being graded. The September supplement to *Anesthesiology* will consist of a CD-ROM containing the full text and graphics of all accepted abstracts.
- A maximum of two figures and/or tables will be permitted in each abstract. Tables will be constructed from within the submission program. Figures will be submitted on paper for scanning by Marathon Multimedia to ensure high-quality reproduction. Authors will indicate figure size and placement during submission so that space calculations will be accurate.
- The use of scientific characters and common style elements such as bold, italic and underline will be permitted. Font specification, with some limitations, will be available.

The ASA Web site contains more complete information regarding the process for submitting abstracts.

2001 RVG and CROSSWALK™ Available in Print and on Disk

The 2001 ASA Relative Value Guide (RVG) has been published and is available from the ASA Executive Office for $15 per copy.

In addition to the booklet format, the RVG can be obtained on disk (for both Windows- and Macintosh-based systems). It is in ASCII format, ready for use with any software program that imports ASCII files. The cost for the electronic version is $100 for members and $125 for nonmembers, which includes a copy of the printed version. Check with your data processing professional to ensure compatibility with your software.

Included in the 2001 RVG are changes in terminology and Current Procedural Terminology™ Fourth Edition (CPT-4) codes approved through ASA's process for code development. Additionally, the RVG contains changes in code numbers and descriptors approved by the American Medical Association CPT-4 Editorial Panel.

The "Radiological Procedures" section of the guide has been extensively revised. The revisions have been submitted to CPT for approval, but for the year 2001, the ASA RVG and the CPT Manual are vastly different regarding coding for radiologic procedures. A new code for transesophageal echocardiography (TEE) has been added. The descriptor for this code was crafted to better describe common usage of TEE in the intraoperative setting. Finally, a new code has been added to the "Intrathoracic" section of the guide relating to anesthesia incorporating one-lung ventilation. The code is numbered 00541 in the 2001 RVG. It does not appear in the 2001 edition of CPT.

The 2001 CROSSWALK™ document, which relates current procedural terminology between surgical and anesthesia codes, will soon be available from the ASA Executive Office. The CROSSWALK document may be purchased at the price of $75 for a hard copy or on a computer diskette for $150 ($250 for nonmembers), which includes a hard copy.

Those purchasing the 2001 edition of CROSSWALK should keep in mind that it is not an official document of ASA and represents only the collective best judgment of the ASA Committee on Economics. Furthermore, it should be noted that these judgments may not necessarily be accepted by Medicare or other payers.

Nicholas G. DePiero, M.D., 1915 - 2000

The world of anesthesia lost an innovator last November. After years of unparalleled service to medicine, Nicholas G. DePiero, M.D., died on November 14, 2000. He was 84.

An ASA member since 1944, Dr. DePiero served as Treasurer from 1960-66 and was President in 1967.

He was born in New Castle, Pennsylvania, in 1915. He graduated from New Castle High School in 1933 and earned a B.S. degree from Geneva College, Beaver Falls, Pennsylvania. In 1942, he received his M.D. from Hahnemann University School of Medicine, Philadelphia, and interned at Huron Road Hospital in Cleveland, Ohio, in 1942-43. After a year of anesthesia training there, he joined the 10th Armored Division and served through three campaigns in the European Theater during World War II, receiving two Bronze Stars and a Purple Heart.

In 1947 he returned to Huron Road Hospital as a member of the active staff. He then completed postgraduate work at Temple University, the University of Pennsylvania and New York University. In 1950 he became a Diplomate of the American Board of Anesthesiology and a Fellow of the American College of Anesthesiologists. That year also saw him move from Huron Road Hospital to Marymount Hospital in Cleveland, where he served as Director of the Anesthesiology Residency Training program from his arrival until 1974. He was Director of the Department of Medical Education from 1962-83 and was elected President of the Marymount Hospital Medical Staff in 1976. In 1994 he became that hospital's Medical Director of Quality Management.

Nicholas G. DePiero, M.D

Dr. DePiero's persistent interest in quality assurance for medical care led him to be certified by the American Board of Quality Assurance and Utilization Review Physicians in 1983. The following year, he became a Fellow in the American College of Medical Quality.

Dr. DePiero was a pivotal figure in anesthesiology in Ohio. From 1948-52, he served as Secretary-Treasurer of the Cleveland Society of Anesthesiologists and was its President in 1952-53. From 1952-64, he was Secretary-Treasurer of the Ohio Society of Anesthesiologists (OSA), was its President in 1964-65 and returned to his Secretary-Treasurer post from 1968-88, for a total of 32 years in that capacity. His dedication and commitments were not bound by geography, however. In addition to serving ASA as Treasurer from 1960-66 and as President in 1967, he also served as a Trustee and President (1980-88) of the Anesthesia Foundation.

For younger members of OSA, Dr. DePiero was the embodiment of what that society stood for, the pillar by which they judged their own growth and commitment to the field. For the world of medicine, his record of innovation and his presidencies in four major organizations are a testament to the respect and trust given to him by his peers. In recognition of unyielding service to OSA and the specialty as a whole, OSA in 1988 created the "Nicholas G. DePiero Lectureship" through which an outstanding speaker would be represented at its annual meeting.

Dr. DePiero is survived by his wife, Marion, three grown children and four grandchildren.

Reconsidering Spinal Anesthesia in Orthopedic Surgery

I was pleased to see the May 2000 *NEWSLETTER* focus on the functional outcomes in geriatric anesthesiology and, in particular, the timely commentary by Jeffrey H. Silverstein, M.D.[1] The knowledge in this area indeed does continue "to increase exponentially," as evidenced by two newly published large trials reflecting information with regard to anesthetic technique — one by our research group[2] and one by some close associates.[3] Our study, a prospectively collected, noninterventional trial of hip fracture patients, followed patients for up to two years with detailed physiatric examinations and use of a portable gait/balance apparatus to measure long-term functional outcome.

Interestingly, choice of the anesthetic was one of the few significant predictors of long-term outcome: Those receiving spinal anesthetics demonstrated significant impairments in several activities of daily living or other functional outcome measurements through two years postoperatively as compared to those patients receiving general anesthesia. Similarly, O'Hara[3] found no short-term saluatory effects of spinal (as compared to general) anesthetics, as did we.

Therefore, although preferred historically and for many other reasons, spinal anesthesia may not necessarily be the universal solution for surgical procedures in the geriatric population. Whether this is due to direct compressive or toxic effects of local anesthetics (or other subtle nerve injury) is not clear. Hopefully, future studies will provide greater insight into this evolving area of anesthesiology.

Timothy B. Gilbert, M.D.
Baltimore, Maryland

References:

1. Silverstein JH. Functional outcomes for elderly patients: The new frontier. *ASA Newsl.* 2000; 64(5):8-15.
2. Gilbert TB, Hawkes WG, Hebel JR, et al. Spinal anesthesia versus general anesthesia for hip fracture repair: A longitudinal observation of 741 elderly patients during 2-year follow-up. *Am J Orthop*. 2000; 29:25-35.
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Kudos for Compassionate Care of 'Charles'

Although retired for 16 years, I always look forward to reading "Ventilations" in the *ASA NEWSLETTER*. Your comments are invariably timely, accurate and appropriate.

I only hope that should I ever be in "Charles'" position (August *NEWSLETTER*), my attending physicians will have your understanding and compassion.

Keep up the good work!

John S. Carson, M.D.
Rosemont, Pennsylvania

Death Not the Enemy in End-of-Life Care Issues

As a former anesthesiologist who is now a hospice medical director, I am pleased whenever I see any discussion on end-of-life issues. Your August 2000 "Ventilations" and the response by Lawrence D. Egbert, M.D., (September 2000) are hopeful signs that physicians in all specialties are facing up to the challenge of helping patients and families through difficult times, even when the outcome is certain.

Death is not the enemy. Painful, lonely death is our real adversary. Thanks for bringing the subject, literally, to the front page.

J. Bruce Laubach, M.D.
College Station, Texas

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.*

It's All in the Translation

The article, "Our Society's Seal: Its History and Significance," by Fred Spielman, M.D., in the September *ASA NEWSLETTER*, reminds me of the high point of a British-Irish meeting in Dublin long ago. The meeting was opened by the Lord Mayor of Dublin who brought down the house when he translated the motto, *In Somno Securitas*, as *There's Money in Anesthesia*. Of course, that really was long ago.

LeRoy Misuraca, M.D.
Long Beach, California

Article Bombs History Lesson on Fire Hazards

The September 2000 *NEWSLETTER* reviews some of the people involved and their standards upon which a very solid base for today's Society was begun. But still, as I read it cover to cover, I kept wondering, "What was I doing then, and why no mention of my colleagues at this or that event (Dripps, Lamont, Dumke, Knight, Geo, Thomas, Foldes)?"

Almost everybody then was anesthetized with flammable agents and in operating rooms certified *safe* by various laws. And although halothane was first synthesized in 1951, it was not until 1966, with the publication of the National Halothane Study, that the reader is left with the names of many early users and students of anesthesia methods and agents of that era. One is left with an incomplete picture if the great strides in understanding the hazards of *static electricity* by George Thomas, M.D., are neglected. His "explosive" efforts to get national standards, while even some of our leaders urged construction of new O.R. suites safe for open drop ether usage, are notable. Dr. Thomas is not even mentioned in the Kim Turner, M.D., article "Fires and Explosions."

In the review by Jess Weiss, M.D., of the 1975 antitrust suit, imagine the chagrin of a new President-Elect (yours truly) in the summer of 1975 asking the Administrative Council who was the best lawyer in the United States to help us defend ASA, only to be told in his presence, "I am," said John Lansdale, and so even those exciting vignettes will be missed from our otherwise good history lesson.

There was a lot of daily history being made from 1945 to 1965, in anesthesia as well as in national offices and as reported in journals attempting to move it forward. Should we not also, when presenting history, be sure to promote a broader picture, such as adding the views also of a few "has-beens?" I can never forget Dr. Thomas sitting on an O.R. stool while giving his lecture and upon raising up to point to a chart, hearing the darndest explosion you ever heard. I then went back into the O.R. to use a new experimental Dupont nonflammable flourine agent, which caused other major scares from uncontrolled arrythmias.

John W. Ditzler, M.D.
San Diego, California

A Misunderstanding Is Born...

This letter is in direct response to the article, "AWHONN Guidelines and Obstetric Anesthesia Practice," by James P. McMichael, M.D., in the October 2000 *ASA NEWSLETTER*. I appreciate the concerns expressed. However, the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) "Standards and Guidelines for Professional Nursing Practice in the Care of Women and Newborns" (1998), are not quoted accurately in this article. In fact, the quote is incomplete.

In Dr. McMichael's article, three important phrases within the AWHONN guidelines describing nursing responsibilities related to the care of laboring patients receiving neuraxial analgesia by catheter technique were omitted. The following is the full text of the quote with omissions italicized:

> "Catheter redosing includes the rebolus of an epidural catheter by manual syringe injection, the continuous infusion of pharmacologic agents via continuous pump infusion and increasing the rate of continuous pump infusions. Catheter dosing is performed only by a licensed anesthesia provider. The perinatal nurse may *monitor the mother and fetus*; replace empty infusion syringes or infusion bags (for continuous pump therapy) with premeasured, prepackaged solutions; stop the infusion in an anesthetic emergency; *and initiate maternal resuscitation measures when complications arise. The nurse notifies the primary anesthesia care provider immediately for the medical management of emergencies.*"

Correction of the aforementioned omissions is critical since the role of the nurse caring for this group of patients extends beyond replacing infusion bags and stopping infusions. The perinatal nursing role includes ongoing assessment of maternal-fetal well-being relative to *all* aspects of labor, including pain management and intervention to manage problems in collaboration with the primary obstetric and anesthesia care provider.

It is important for your readers to know that the current position statement, "The Role of the Registered Nurse (RN) in the Management of the Patient Receiving Analgesia by Catheter Technique," is the official position of the association regarding the nursing management of such patients. We encourage your readers to download the complete position statement from the AWHONN Web site at <www.awhonn.org>.

AWHONN, like ASA, is committed to ensuring that the care women receive during labor is safe for the maternal-fetal dyad. AWHONN is also committed to defining safe and appropriate practice for professional nurses engaged in this discipline.

Gail G. Kincaide
AWHONN Executive Director

…Please Don't Let Me Be Misunderstood: Dr. McMichael Responds

The quotations cited from the AWHONN "Standards and Guidelines for Professional Nursing Practice in the Care of Women and Newborns" were obviously not complete, but are accurate excerpts from longer statements, and indicated so by the use of an ellipsis (" …"). My decision to extract statements was in no way meant to minimize or demean the range of nursing care provided to women in labor. In fact, I think the following comments [from the letter] demonstrate our awareness and appreciation of the absolute importance of the duties and responsibilities of OB nurses:" … the relationship with and dependence on the (OB) nurse [by anesthesiologists] during labor and delivery is perhaps more intense than in any other patient care area. Mutual understanding, trust and respect are essential as both groups of professionals provide care at this very special time in the lives of women" and "Patient safety and quality of care is of primary importance to both anesthesiologists and labor and delivery nurses."

Although the primary concern of an anesthesiologist providing neuraxial analgesia to women during their labor is indeed pain relief, we too are mindful of and involved in the "ongoing assessment of maternal-fetal well being relative to *all* aspects of labor …." We are keenly aware and appreciative of the scope of the nursing care provided by labor and delivery nurses, which is essential to the care we provide.

The purpose of the article was to educate anesthesiologists about AWHONN and suggest strategies to accommodate to AWHONN's "Standards and Guidelines." Measures to enhance both the quality and safety of pain management provided by anesthesiologists to women in labor include the statement, "Anesthesiologists caring for women during labor and delivery must be involved in the development of institutional nursing education programs and must continuously monitor the effectiveness of those educational efforts." To quote another point made in the article, "ASA, through the Committee on the Anesthesia Care Team, has established a formal liaison with AWHONN. It is hoped that through this relationship, nursing practice standards can be developed that will allow for timely and safe interventions involving neuraxial techniques by obstetric nurses."

The desire of ASA is to both continue and nurture the relationship between our organizations. While we may have differences of opinions on a variety of issues, understanding and perhaps resolving some of those issues can only be accomplished by continuing our dialogue and working together.

James P. McMichael, M.D.
ASA Liaison to AWHONN

Erudite Editor Lauded: In Other Words, Good Work!

I must give you my hearty thanks and congratulations for an absolutely superb issue of the *ASA NEWSLETTER* in October 2000.

I was the editor of my local medical society journal and built it up from a throw-away to a sought-after, anticipated journal filled with original contributions and humanistic

articles by volunteer physicians and community leaders. It consumed me.

So, as a nearly retiring anesthesiologist in Shreveport, Louisiana, I applaud your efforts and tell you that I especially look forward every month to your insightful, erudite, pertinent, literary editorials. You never let us down. I am deeply appreciative.

Warmest regards to you for a continued successful and fulfilling practice and private life.

Dayne D. Hassell, M.D.
Shreveport, Louisiana

Take This Job and Shrug It

I could not agree more with your October editorial, "Medicine — the Next Potemkin Village." I am 56 and have been an anesthesiologist since 1970. Every day I go to work is an unpleasant ordeal. I plan to no longer practice medicine in a couple more years. Atlas has shrugged. It will take a lot more doctors than us older guys to provide all of the mandated health care of the future. The American public will get just what they deserve [for not paying attention to their health care needs] — and I doubt it will be very good.

Thanks for writing such great editorials. They should go beyond the *ASA NEWSLETTER*.

Anthony R. Palmer, M.D.
Arlington, Texas

Doulas: Delivering Life, Changing Lives

In the ASA October *NEWSLETTER*, William Camann, M.D., wrote an article regarding doula care and epidurals. I am part of a hospital-based doula service in South Carolina. The article was very well worded. However, I have some more thoughts to share about the subject.

When I read the article, I thought to myself that we were really ahead of the rest of the country. Our doulas are trained in regard to obstetric anesthesia. Our doula epidural rate is about the same as our nondoula epidural rate.

However, our cesarean section rate is lower with doula-attended deliveries. We are able to help a lot of mothers regardless of their pain management choices. Working within an on-call system, our patients are very diverse in their background. Not only are we helping the mother who has chosen not to have an epidural, but also the 16-year-old who is scared beyond belief. We have requests to attend scheduled cesarean sections. Doula care is not completely about pain management unless the mother wants it that way; it is about nurturing and protecting the childbirth memory.

Since a traumatic childbirth is on the list of causes of post-traumatic stress disorder, we need to give it its just due. It is important how she is treated. Kindness and respect for the laboring woman will carry past the birth. It changes her forever. Thank you for your insight. It was greatly appreciated.

Cindy Kerbs R.N.C., C.D., Doulas of North America
Lexington Medical Center, West Columbia, South Carolina

Where Have All the Academicians Gone?

Your October 2000 *ASA NEWSLETTER* "Ventilations" section was superb. The meshing of today's present state of medical practice with that of the historical perspective and synthesis of future expectations is something upon which all practicing physicians and policy-developing politicians must reflect. The sooner our profession takes an active role in developing and evaluating our own practice protocols, the sooner we will be placed into a position to coordinate our own destiny.

One aspect that was touched upon but not elaborated in "Medicine — The Next Potemkin Village" is the frustration and sacrifice that academic anesthesiologists endure for the principle and consequence of both clinical and scientific research endeavors. Far too many talented and endowed practitioners have been defeated by the dynamic contravention of the present operational structure.

I agree that "traditional practice paradigms are changing," but I am concerned about the well-being of our physician population. If there is some surreptitious agenda by our governmental regulators, backed by the managed care organizations to limit support for teaching institutions, then this may have extended depredation on advances in med-

ical growth in order to achieve short-term cost containment. This tactic may prove to be catastropic to the delicate balance of quality patient care and for advances in medical science.

Thomas M. Halaszynski, M.D.
Branford, Connecticut

The Global Village Is Weary, and There's No Rest in Sight

I write to you knowing from your editorials that you are a thoughtful and caring physician and leader and hopefully a patient one as well.

First, thanks for continuing some attention in the *ASA NEWSLETTER* to the issues of stress and fatigue. Accordingly, I am enclosing part of a newspaper called "The Trucker."[1] It contains a letter on the subject of "tired doctors." I think you will also appreciate the spirit of the section on "Trucker Heroes." Every profession has its pride and tradition.

Second, I applaud your series of editorial opinions, including the "Potemkin Village" one (October 2000). I would like to add to it the suggestion that if we physicians actually had a fully staffed and functioning medical system here in the United States, our ignoring of the impending medical threats of causes like nuclear weapons, militarism, global climate change, environmental destruction and poverty would make that system a Potemkin village, too.

Finally, I can tell you that knowing about these systemic issues and where they are heading is even more stressful, beyond the threat to one's own person and family, when concern about them is not shared by one's professional colleagues, organizations or other social groups — such as religious ones — which should be sources of strength, guidance and collaboration.

Arthur V. Milholland, M.D.
Silver Spring, Maryland

[1] **Editor's Note:** *In a printed letter, a Texas truck driver states: " …all these people are worried about the truckers being tired because they might cause a crash. But what happens if they do? The ambulance picks that person up, takes them to the hospital and they are worked on by a doctor that has been up longer than the trucker has even thought about."*

— M.J.L.

The Ant and the Grasshopper: A Parable for 2001

The review of "Hopkins 24/7," by John A. Cooley, M.D., (November *ASA NEWSLETTER*) was interesting, but not at all surprising. We work in an area of medicine that can best be described as the "general practice" of anesthesiology. We attempt to be an anesthetic specialist in all surgical areas as well as pain management and critical care. We sometimes dilute our expertise to a point that it may be possible for a well-trained nurse anesthetist to practice with equal success. We occasionally allow the nurse anesthetist to do preoperative medical evaluations, regional anesthesia, routine line placements as well as managing the patient in the surgical suite. We truly believe the physician is better qualified to medically evaluate and direct the care of anesthesia, so we must recognize areas that should only be provided by the physician. We should subspecialize in more areas and develop a level of expertise that can benefit the patient and be still respected by our colleagues.

We helped to create the medical world we practice in, and we will continue to be ignored as specialists until we change how we practice anesthesiology. I see some groups aggressively recruiting more nurse anesthetists than physicians in order to medically supervise instead of practice. We must remember that unused knowledge and abilities soon become useless knowledge and inabilities. If we expect to convince the insurance companies, government agencies and patients of our value, we must first change the way we manage our specialty and subsequently hire more physicians to practice in the operating room.

I know there are many anesthesiologists who work hard, but there are some that want to maintain the status quo. I hope young physicians like Dr. Cooley will be more aggressive and will change anesthesiology to a specialty that will be viewed with respect by our patients, surgical colleagues and especially by the American Association of Nurse Anesthetists.

David L. Douglas, M.D.
Prospect, Kentucky

Fifth Vital Sign? Not Yet

Pain assessment becomes the fifth vital sign beginning this year. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) mandates pain assessment in every patient encounter with the care provider. The November issue of the *ASA NEWSLETTER* dealt with most of the issues on the subject. Sadly, not one member of the Committee on Pain Medicine expressed concern about the lack of an objective reproducible measure of pain. I am very concerned.

To offer an analogy, could hypertension be effectively treated based solely on the patient's history? How many patients will be wrongly labeled "drug abuser" or "addict" because of a purely subjective pain score? It will behoove specialists to develop clear strategies dealing with drug-seeking behaviors to help those not too well versed with pain management. Inadequate pain management reflected in the pain score in the medical record could conceivably lead to an increase in lawsuits.

Many drug companies are waiting in the wings to release new pain medicine, just as the patents for the current ones approach their expiration dates. As in the case of muscle relaxants, newer drugs being marketed are not necessarily better than the ones currently available. Since the physician leadership appears to have accepted this fifth vital sign, I wonder if the American Medical Association truly supports the marketing by pharmaceutical companies? And now it seems JCAHO wants the two of them to take their act into the accredited facilities!

I strongly agree that pain should be treated most aggressively, but it should not be mandated as a vital sign until a reproducible objective measure is developed.

Honorato F. Nicodemus, M.D.
Washington, D.C.

Editor's Note: *The fifth vital sign acknowledges the importance of assessing and treating pain rather than quantifying pain intensity on a universal scale. Actually, I helped to draft the letter that was sent to JCAHO by June Dahl and Dave Joranssen in behalf of 46 organizations, including ASA. It is time to take pain management out of the guideline phase and into the implementation phase.*

— M.J.L.

The Cyclical Nature of Dress

I absolutely agree with your articles regarding dress and what is appropriate or not (December 2000 *NEWSLETTER*). I was brought up by my parents with the attitude toward grooming and appearance in that one must "look sharp, be sharp; you can't afford not to!"

However, take an anesthesiologist like myself who has taken up cycling over the last few years. I ride five to six miles into work and will go to the O.R. locker room in cycling attire to shower and put on scrubs and proceed smartly about my day, change into cycling clothes and head home at the end of it (usually the long way). I was curious, what are your thoughts on that?

M.A. Hensien, M.D.
L.C.D.R., M.C., U.S.N.

Editor's Note: *I think that if a physician is obviously promoting good health and "looks the part," the attire is acceptable. One must take care to look appropriately dressed as a runner, biker, etc. The President is occasionally seen jogging, and he still looks both professional and in command.*

— M.J.L.

Clothes Do Make the Wo(man)

Thank you, thank you, thank you for your comments regarding professional attire (December 2000 "Ventilations"). I do fear that you and I are in the minority on this issue, but it is refreshing to know that at least one other anesthesiologist shares my opinion. When I trained at Peter Bent Brigham, we were also required to shed scrubs and wear appropriate attire and a white coat when we made rounds on the wards.

Appearance does make a difference in our patients' perceptions of us. I hope that your message finds fertile ground, and I commend you for having the courage to express your opinion.

Patricia I. Carella, M.D.
Attleboro, Massachusetts

A FAER Representation of Anesthesiology's Brightest – Part Two

This article represents part two of FAER's award recipients. Two other winners, Hilary P. Grocott, M.D., and Warren Sandberg, M.D., Ph.D., were featured in the January ASA NEWSLETTER.

The Board of Directors of the Foundation for Anesthesia Education and Research (FAER) is pleased to announce the latest award recipients from the August 15, 2000, application submission. FAER is grateful for the generous support and contributions from ASA, its individual members, component societies, subspecialty societies and corporations. The funding of FAER grants is made possible by these donations.

FAER is particularly thankful to the following societies and corporations that have co-sponsored the awards: AstraZeneca Pharmaceuticals, Inc., Baxter Healthcare Corporation, the American Geriatrics Society, the Association of University Anesthesiologists, the Society for Ambulatory Anesthesia, the Society of Cardiovascular Anesthesiologists and the Society for Pediatric Anesthesia. FAER also wants to thank the applicants for their interest in the awards and research and for submitting such high-quality proposals. The following project summaries were provided by the recipients.

New Investigator Award — Basic Science

Zhiyi Zuo, M.D., Ph.D., University of Virginia Health System, Charlottesville, Virginia: "Inhalational Anesthetics and Glutamate Transporters."

Glutamate is a major excitatory messenger molecule in the central nervous system. Glutamate uptake by proteins named glutamate transporters is the only mechanism to remove glutamate from extracellular space, securing an efficient message transmission and preventing harmful cell over-excitation. Based on literature and my preliminary data, I hypothesize that inhalational anesthetics significantly enhance the function of one or more glutamate transporters and these effects reduce glutamate-mediated neurotoxicity. These hypotheses will be tested using cultured rat neurons, glial cells or glial-neuronal co-cultures. The expression and activity of glutamate transporter proteins in these cells will be studied. Anesthetic effects on the activity of each type of glutamate transporter will be studied. Glutamate neurotoxicity will be determined with different combinations of anesthetics and glutamate transporter inhibitors. These studies will define inhalational anesthetic effects on glutamate transporters, with important implications both for mechanisms of anesthetic action and defining new agents for anesthesia or neuroprotection.

Research Starter Grant – Clinical

Shu-Ming Wang, M.D., Yale University School of Medicine, New Haven, Connecticut: "Postoperative Nausea and Vomiting in Children: An Alternative Treatment Modality."

Despite dramatic changes in anesthesia practice and development of new antiemetics, the incidence of postoperative nausea and vomiting (PONV) has remained constant for the past 30 years. The high cost and associated side effects of newer antiemetics have prompted researchers to search for cost-effective alternatives. In 1997, a National Institutes of Health panel agreed that acupuncture is effective in preventing nausea and vomiting related to anesthesia and surgery. This consensus statement was based on a relatively large number of adult studies which indicated that acupuncture is effective for the treatment of PONV. To date, however, there are a paucity of data regarding the use of acupuncture for PONV in children. To address this issue, a proposal has been developed consisting of a randomized controlled trial that seeks to establish whether acupuncture can be used to prevent PONV in young children.

[More award recipients will be featured in the next "FAER Report."]