Sheila Cohen feels profoundly proud: the OB anesthesiologists she has trained and mentored have been enormously successful; the Stanford OB anesthesia group has achieved national leadership; she has improved the care of pregnant women; and the field of anesthesia has won its equal place among medical specialties. Cohen attributes her success to persistence and leading by example: “Attend all meetings, be a squeaky wheel, make changes incrementally, be patient, smile, forge relationships, build trust, take initiative, and develop mutually beneficial cross-disciplinary collaborations.”

Born in Manchester, England, Cohen moved as a child to Brynmawr, Wales, a small mining town, returning to Manchester for high school. She always wanted to become either a doctor or a television anchor, although girls were discouraged from entering medicine. Despite this fact, Cohen’s mother, encouraged Cohen to become whoever she wanted to become. The family’s female doctor became Cohen’s first physician role model. Later, Cohen’s high school headmistress, knowing of Cohen’s ambition, discovered a medical school scholarship, which Cohen was awarded, a benefit she remains hugely grateful for.

While a medical student at Manchester University, the young, adventurous Cohen did a summer hospital externship in Englewood, NJ, and toured the entire US via bus. Later, as an anesthesia resident in London, she met doctors who had worked in Stanford’s Department of Anesthesia. In 1973, Chair John Bunker invited Cohen to Stanford, where she found OB anesthesia an orphan area. The subsequent chair, Phil Larsen, invited Cohen to stay, urging her to develop an excellent clinical service, including provision of 24-hour OB anesthesia coverage, using both Stanford and community anesthesiologists. Cohen soon became interested in clinical research, because she felt compelled to answer questions that arose in her daily practice, answers that would improve OB anesthesia care for thousands of women.
mentoring, and building a powerful group. In the 39 years of Cohen’s career, her commitment to relieving pain in childbirth and improving maternal and newborn outcomes transformed OB anesthesia, not only at Stanford but also nationally and worldwide.

An Out-of-the-Box Thinker-Researcher

Cohen possessed the right stuff to become an original researcher, but she also had some outstanding mentors. Soon after Cohen’s arrival at Stanford, Sol Shnider, a world-famous father of OB anesthesia and Chief of Obstetric Anesthesia at UCSF, took her under his wing. In 1973, her compelling delivery of an invited talk at the annual UCSF Sol Shnider OB Anesthesia Meeting kicked off her academic career. Shnider introduced Cohen to key people, included her in his group’s nightly dinners at medical meetings, and made her feel she belonged to a cadre excited about furthering discovery and improving clinical care.

Her other key mentor was the man she married in 1975, Richard Mazze, whose own research career had sky-rocketed. According to Mazze’s cousin, Aubrey Maze, CEO, Valley Anesthesiology Consultants, Phoenix, AZ, and an early trainee of Cohen’s, “Dick helped Cohen view clinical events through a researcher’s eyes.”

Cohen took to research and soon made foundational, practice-changing discoveries, described in more than 70 papers. Her wide array of colleagues shared these comments:

- Ed Riley, Cohen’s resident, fellow, and subsequent faculty colleague, says “Cohen insisted your research question and observations had to pass the ‘so what?’ test. The initial questions must matter, and the investigator examining the observations should ask, ‘What doesn’t jibe with dogma? What is new, different?'”

- Mike Finster, Columbia University, compares Cohen to the famous chef and cookbook author, Julia Child. Over the years, “I followed Sheila’s growing recognition as an outstanding clinician, a dedicated teacher, and a productive researcher. Her studies were always well-designed, carefully executed, and elegantly presented. Sheila studied numerous combinations of drugs to achieve optimum spinal and epidural analgesia during labor and delivery. Her search for the best recipe and best ingredients to improve maternal and newborn outcomes earned her the sobriquet “The Julia Child of Anesthesia.”

- Lawrence C. Tsen, Harvard University, states, “Virtually every important question within OB anesthesia has Sheila’s commentary…. Her early work evaluated the use of morphine for post-cesarean analgesia, which virtually every pregnant woman now receives when undergoing a neuraxial technique for cesarean delivery. Another important discovery was how much the soft tissues relax around an epidural catheter after its placement, and the need to allow relaxation to occur before taping the catheter in place. This discovery was a simple, but elegant observation…. As my own work in research and mentoring matured, I appreciated the way she had built such a powerful group putting out great research.”

- Steve Lipman, another former resident, fellow and faculty colleague, credits Cohen and Riley with encouraging him to pose research questions in the context of simulation—a forward-thinking idea in 2001. “Her passion for improving maternal safety inspired me…. Writing a manuscript and having Sheila review it is unforgettable…. The synergy of her analytic intelligence, superb grammar, and work ethic compel an author to ‘learn to love the color red.’ I smile thinking of the superb edits and embedded comments she included. She takes scholarship seriously and thinks about how to improve the product.”

Since becoming emerita in September 2006, Cohen continued her involvement in clinical research until 2011, collaborating with

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1 Several of Cohen’s discoveries were previously written about in “Obstetric Anesthesia Research at Stanford, a distinguished history and bright future” by Ed Riley, MD, Anesthesia News 2008 and in “Being Born,” by Becky Oskin, Stanford Anesthesia, 2010.
anesthesiologists Lipman and Carvalho and Drs. Druzin and Daniels from the Department of Gynecology and Obstetrics, publishing key papers about managing obstetric emergencies and maternal cardiopulmonary arrest. Together, they found in situ simulation drills in Labor and Delivery invaluable, not only for training the care team but also for discovering institutional barriers to effective resuscitation, as described below.

- Cohen’s group surveyed anesthesiologists, obstetricians, and emergency medicine physicians to identify their knowledge deficits about maternal cardiopulmonary resuscitation. Many were unaware that delivery must occur within five minutes to manage maternal cardiac arrest. (Cohen SE, Andes LC, Carvalho B. Assessment of knowledge regarding cardiopulmonary resuscitation of pregnant women. *Int J Obstet Anes* 2008;17:20-25.)

- Labor and Delivery simulation drills that involved obstetricians, anesthesiologists, neonatologists, and delivery room nurses, confirmed multiple deficiencies in the teams’ “hands-on” management of maternal cardiac arrest. (Lipman SS, Daniels KI, Carvalho B, Arafeh J, Harney K, Puck A, Cohen SE, Druzin M. Deficits in the provision of cardiopulmonary resuscitation during simulated obstetric crises. *Am J Obstet Gynecol* 2010;203:179 e1-5.)

- In a study of simulated maternal cardiopulmonary arrest, investigators compared time-to-incision in perimortem cesarean delivery performed in the labor room (just over four minutes) vs. in the OR (eight minutes). Whereas 57% of stationary “mothers” were delivered within five minutes; only 14% of those moved to the OR were delivered within five minutes (Lipman SS, Daniels K, Cohen SE, Carvalho B. Labor room setting compared with the operating room for simulated perimortem cesarean delivery: A randomized controlled trial. *Obstet Gynecol* 2011;118:1090-4.)

- In a recent, simulation-based study, investigators compared the quality of CPR performed on stationary vs. transported patients. They found that during transport multiple interruptions in chest compressions occurred, and the quality of CPR deteriorated markedly. (Lipman S, Wong JYA, Arafeh J, Cohen SE, Carvalho B. The quality of cardiopulmonary resuscitation in simulated maternal cardiac arrests decreases significantly during transport from the labor room to the operating room. *Anesth Analg* 2012. In press.)

These findings resulted in institutional practice changes that should improve maternal and neonatal outcomes. In addition, the findings will contribute to a national consensus statement (whose contributors include Cohen, Carvalho, and Lipman) on cardiopulmonary resuscitation in pregnant patients.

A Nurturing Teacher, Mentor, Friend, and Builder

Cohen is a born teacher, mentor, and builder. Without seeking the limelight, she has inspired others’ aspirations and fostered their professional and personal growth, hewing to her belief, “When one of us succeeds, we all succeed.” She taught hundreds of residents, mentored 30 clinical research fellows, and advised faculty colleagues, nurturing and stretching them by being interested, becoming their friends, suggesting lines of research, editing their work, and recommending service opportunities. Over time, she built a premier, internationally respected OB anesthesia group.

- Tsen remarks, “Many of her fellows and faculty became great friends of mine, and they related how nurturing Sheila is. She has been a role model for developing talent in my own practice. Today, I still appreciate her abilities in faculty development, and, most recently, my conversations with her on helping faculty members at different points in their career.”

- Maze remembers Cohen as “…an outstanding teacher and mentor. She teaches technical skills and a compassionate approach to patient care, often one-on-one. She made me say out
loud my rationale for an answer. She made me want to be a teacher, too.”

- Andrea Fuller, University of Colorado, a junior faculty under Cohen, remembers Cohen’s familial approach and her strength as a role model for women, “At conferences those connected to Sheila and her group enjoy a large ‘family’ dinner. …She is from the cohort of female physicians who did their best to balance work and family life, when few working professional mothers existed. We who have come later have physicians like her to thank for paving the way for us.”

- Lipman says Cohen’s “influence on my career has been staggering. She is a superb and tireless mentor, who continues to guide me on extra-clinical projects and challenging clinical situations.” He adds, “However, her influence on my personal maturation and growth has been just as powerful.”

- Alex Butwick, also Cohen’s former resident and fellow and current faculty member, concurs, “Sheila has been a phenomenal mentor throughout my formative years as a junior clinical investigator. She guided me into my chosen research areas and has been pivotal in providing career-development advice. Her mentorship of the OB anesthesia group has resulted in our division’s being internationally renowned. Her life advice always emphasizes the importance of work-life balance. I call Sheila my American ‘Mum,’” because she is such a loyal, kind, generous friend.”

- Carvalho came to Stanford for a one-year, OB anesthesia fellowship and joined the faculty, largely because of Cohen. “During my fellowship, she was a great role model of a patient-centered clinician. She molded and cemented my interest in clinical research, and she helped launch my academic career.”

A Master Clinician Builds a Premier Obstetric Anesthesia Service

For Cohen, clinical research and OB anesthesia practice are inseparable. Committed to relieving pain in childbirth and improving maternal and newborn outcomes in real people, she is careful, kind, and warm when working with patients and colleagues. Cohen and Riley, her successor as division chief, encouraged interdisciplinary clinical care and regular, interdisciplinary meetings to coordinate high-risk cases and run a high-risk consultation clinic—innovative ideas at the time.

- According to Maze, “Families never forgot her involvement in their care, which is unusual for an anesthesiologist.”

- Riley emphasizes Cohen’s high standards: “Everyone, including residents, must deliver high-level care to all patients on a service.”

- Fuller describes Cohen’s approach: “The first thing that I noticed was her kind, humble manner interacting on Labor and Delivery, placing epidurals herself, talking to nurses and family, and teaching. I was immediately at ease and able to learn. I have modeled my own practice on her team approach.”

- Yasser El-Sayed, Stanford’s Associate Chief, Maternal-Fetal Medicine, says “She taught me to think outside my specialty, to incorporate anesthetic considerations into my obstetrical practice. She helped nuance and refine my patient counseling and management. She is both a sophisticated clinical investigator and a master clinician—a larger-than-life figure.”

- When Maurice Druzin, Stanford’s Chief of Maternal-Fetal Medicine, first met Cohen, he was convinced the OB anesthesia service was in excellent hands. “Her dedication to women’s health is profound. I was confident I could safely accept the most complex pregnant patients and build our high-risk obstetrical service. She is an outstanding clinician, with an amazing ability to deal with any weird, difficult situation calmly and methodically, always putting the patient first….. She also pioneered our working as a multidisciplinary team in the clinic and in research. More than anyone else, through her collaborations and dedication to SOAP, she has advanced the safety of pregnant women.”
An OB Anesthesia Leader in the Region, Nation, and World

Receiving SOAP’s Distinguished Service Award in 2004

Cohen’s leadership began early and flourished over the decades. In 1975 she was appointed Assistant Professor and Co-director of OB Anesthesia at Stanford Hospital; then, after being appointed professor in 1986, she served until 2002 as Director of the OB Anesthesia Service at both the Stanford and Lucile Packard Children’s hospitals, concurrently serving as Division Chief of Obstetric Anesthesia within the Department of Anesthesia.

Over 35 years, Cohen played multiple roles: member of four editorial boards; ABA examiner; member or chair for ASA’s Obstetric Anesthesia Committee; committee and board member, scientific chair, and president, for SOAP; member of ACOG’s Committee for Maternal-Fetal Medicine; ASA delegate to WFSA; and member of the California Maternal Quality Care Collaborative (CMQCC) Maternal Mortality Review Committee. Cohen considers her membership on this last committee, consisting of “leading clinical experts in maternal and perinatal health and public health from around the state,” as one of her most worthwhile endeavors.

Determining the causes of maternal mortality in California has led the committee to recommended quality improvements in maternity care, educational initiatives, and public-health strategies designed to prevent maternal deaths.

Among Cohen’s honors are the Barrie Fairley Faculty Teaching Award, the Nils Lofgren Award, the Ellis N. Cohen Achievement Award, and SOAP’s Distinguished Service Award.

The Department honored Cohen by establishing The Sheila E. Cohen Lectureship in Obstetric Anesthesia upon her becoming Emerita.

Family Perspectives

Dick—“Sheila is the glue that binds our family and makes it a better place.”

Sheila—”I am proud of having become and grown into being a step-mother to three children and mother to one. We are exceptionally close to our family, which plays an increasingly large role in our lives. Our lives together [Dick’s and mine] have fused home and family life, anesthesia, and the Stanford department, without clear borders. During 36 years of marriage, we have travelled all over the world together, combining wonderful personal experiences with our professional activities. How many people are that lucky?”

Sarah—“My mother has had an immense influence on my life. Her analytical mind and a good amount of empathy make her a problem-solver and a helper. I’ve always been extremely proud of my mother’s professional success, the care and comfort she’s given to so many women, and the example and advice she’s provided about combining a successful career with a fulfilling family life.”

Seth—“Sheila came into my life as I approached adolescence. After marriage to my father, she took up residence in our home with three teenagers and undertook a mission that others, less courageous, wouldn’t contemplate. She
doesn’t shy away because she thinks a challenge may be too difficult; if she decides to take it on, she will work very, very hard, to succeed.”

Susan—“Sheila has been my step-mom since I was 15 years old—the absolute toughest age to parent. I give her immense credit for winning me over. With Sheila in my life, I never imagined limits to what a woman can accomplish. She also became my personal role model when I, too, became a step-mother to teens. I could always call her for support and sound advice and know she truly understood.

Sheila pulls our family together for an amazing, annual reunion. We are much closer because of her. And whenever I visit Stanford, I observe women approaching Sheila, saying how grateful they are for her care during their delivery. It’s like being with a rock star!”

DEPARTMENT’S NEW MEDICAL WRITER AND EDITOR
BY MAUREEN DONOHUE

I am delighted to begin my tenure as the Department of Anesthesia’s medical writer and editor with the first 2013 issue of the quarterly Gas Pipeline. It has given me an opportunity to meet many of you and I look forward to meeting more of you and working together on a variety of publications.

I would particularly like to thank the previous editor, Patricia Rohrs, for her support in publishing this issue of the newsletter. Her always-cheerful guidance, suggestions, and help have been invaluable.

Before you can trust me with your publications, you deserve to know a little bit about me and my qualifications.

Maureen Donohue

I began my career as a science writer and editor at the Lawrence Livermore National Laboratory. While there I was privileged to write for many of the world’s preeminent physicists, chemists, biologists, and engineers in a spectrum of scientific fields, including laser and magnetic fusion energy, earth sciences, biomedicine, and the nuclear test program.

I attended several underground nuclear tests at the Nevada Test Site and served as an official Russian/English interpreter at the first—and only—joint Soviet-American test. One of my most unusual memories is of standing high on a desert mesa with a group of the leading Soviet nuclear scientists, looking down into Nellis Air Force Base and watching several of our most advanced fighter jets racing low along the uneven contours of the desert floor, strafing the terrain as they flew.

I couldn’t help but wonder what the Soviets were thinking as they watched “the enemy” at work.

After 12 years at the Lab, on a whitewater rafting trip through the Grand Canyon, I met a biomedical engineer from W.L. Gore & Associates (manufacturers of Gore-Tex™ medical products) in Flagstaff, Arizona, who urged me to
give him a copy of my resume at the end of the trip because Gore had an opening for a medical writer.

Sure, I thought. I always bring stacks of resumes with me on whitewater rafting trips.

However, because medicine had always interested me more than the other sciences, I crafted a resume, applied, and began my career as a medical writer in 1991. Since then I have been a medical writer for three medical device firms as well as the Arizona Heart Institute, the UC Davis Cancer Center, and the Sutter Institute for Medical Research in Sacramento.

In each of these positions, my primary responsibility was writing and editing journal articles and abstracts, posters, and oral presentations for physicians. Articles that I wrote have appeared in such publications as the American Journal of Surgery, Fertility and Sterility, Circulation, Catheterization and Cardiovascular Diagnosis, Laparoscopy and Endoscopy, and others.

I also wrote or edited textbook chapters, grant applications and produced brochures, videos, and patient-education materials.

In addition, I spent several years as a medical journalist and bureau chief for the International Medicine News Group, publishers of Internal Medicine News, Pediatric News, Rheumatology News, among others. In this capacity I attended medical meetings approximately two weeks out of each month and reported on those meetings the other two weeks.

I have degrees in Russian and Spanish and remain fairly fluent in each, despite years of disuse. I also speak some German, Italian, Portuguese, and French. I still have a dream of someday serving on a medical mission in some capacity that would use my language skills and familiarity with medicine.

As for activities and interests outside of work, I have always loved travel, reading, movies, theater, ornithology and all things avian, and art. And in my younger, thinner, more agile days I was addicted to whitewater rafting. I never met a rapid too big or a waterfall too high. Except those that were mandatory portages.

I have a very simple philosophy about my capacity as a medical writer and editor: my job is to preserve your voice while helping you look as good as you can, to help make you shine on paper.

I suppose I would be remiss if I didn’t mention my very first job. I was an intelligence analyst on the Soviet/Eastern European Desk in covert operations at the CIA. I could tell you more, but then I’d have to kill you.

FROM THE CHAIRMAN
RON PEARL, MD, PhD
RICHARD K. AND ERICKA N. RICHARDS PROFESSOR

Just over half a century ago, the Stanford Department of Anesthesia was created as the obvious evolution of the division of anesthesia within the Department of Surgery. This year we are in the process of changing our name to the Department of Anesthesiology, Perioperative and Pain Medicine. Although Shakespeare’s Juliet argued that changing the name does not by itself change the person, names do have significance, and the change in our departmental name reflects the evolution of our specialty throughout the past five decades.

What’s in a Name? Anesthesia is defined by the dictionary as “loss of sensation.” This describes the state that we produce in our patients, rather than describe what we do or value. In contrast, the specialty of anesthesiology, defined as the medical study and application of anesthetics,
describes what we do on a daily basis and does emphasize our mission and some of our core values. Although anesthesia and anesthesiology may superficially seem similar, the concepts are profoundly different.

**Perioperative Medicine**—Perioperative medicine is our department’s past, present, and future. Stanford has been a national leader in perioperative medicine for many decades. From the earliest days of the department, Bill Forrest demonstrated the value of a preoperative visit. Under the leadership of Steve Fischer, Stanford created the concept of the modern preoperative assessment clinic, demonstrating the benefits in terms of improved patient outcomes, decreased cancellations, and decreased costs. As we have with other important Stanford innovations, we taught anesthesia departments across the country and throughout the world how to develop such clinics. When some departments closed their clinics due to cost, we continued to expand ours, both at Stanford and at the VA.

**Critical Care Medicine**—Similarly, with the recruitment of Mike Rosenthal to Stanford in 1975, Stanford became a leader in critical care, demonstrating the value of primary management of critically ill patients by a dedicated intensive care team. Importantly, we demonstrated the ability of anesthesiologist-trained intensivists to care for medical as well as surgical patients. Stanford continues to be the model for such primary, multidisciplinary, critical care in the United States, and our department now has 18 critical care physicians and 8 anesthesia critical care fellows participating in 8 ICU services in our 4 hospitals.

**Examples of Expanded Perioperative Care**—Beyond performing roles in the PACU and the ICU, we have expanded our services as follows:

- Our regional anesthesia and pain management services actively manage patients throughout their perioperative stays and even after discharge.
- The new perioperative service at the VA follows patients throughout their hospital stays.
- Our obstetrical anesthesia service works with Maternal-Fetal Medicine and Obstetrics to plan and coordinate the management of high-risk patients.

We are developing the routine use of transthoracic anesthesia in the ICU and throughout the perioperative period, and we are collaborating with surgeons and hospitalists to develop new models for the surgical home.

**Pain Medicine**—In 1978, Lorne Eltherington established the pain management clinic at Stanford. Under the current leadership of Sean Mackey, every aspect of pain medicine has markedly expanded, and Stanford is recognized nationally for the robust clinical, educational, and research programs in this area. The move to the Redwood City location several years ago tripled the pain clinic space, and has allowed an increase to 25 full-time and adjunct clinical faculty responsible for over 6,000 patient visits per year. The Stanford Comprehensive Interdisciplinary Program (SCIPP), the only academic, inpatient program in the Western United States, is a model for multidisciplinary pain management. The inpatient acute pain service is responsible for a complex set of postoperative and chronic pain patients. The pain management fellowship is multidisciplinary in its composition and teaching. On the research side, NIH grants to the pain division exceed the total research funding of the majority of entire anesthesia departments in the country, and there are multiple collaborations with other departments in the medical school and throughout the university. Similarly, on the pediatric side, the pain management division under the leadership of Elliot Krane has had dramatic growth on both the inpatient and outpatient side and has multiple stories of miraculous impact on children with profound pain syndromes.

The field of anesthesia is rapidly evolving across the country, with anesthesiologists being responsible for increasingly complex surgical patients while expanding their involvement throughout the spectrum of medicine. The renaming of our department to the Department of Anesthesiology, Perioperative and Pain Medicine appropriately recognizes our past, our present, and our future.
What are the most significant advances affecting anesthesia since that time? As a clinician in private practice, I’ve personally administered more than 20,000 anesthetics in the past quarter-century. On the basis of my experience and observations, I’ve assembled my list of the Top-Ten most useful advances and my list of the Five Most Overrated advances that have occurred between 1987 and 2012.

The Top-Ten Most Useful Advances (1987–2012)

10. The cell phone (replacing the beeper). Cell phones changed the world, and they changed anesthesia practice as well. Before the cell phone, you’d get paged while driving home and have to search to find a payphone. Cell phones allow you to be in constant contact with all the nurses and doctors involved in your patient’s care at all times. No one should carry a beeper anymore.

9. Ultrasound use in the operating room. The ultrasound machine aids peripheral nerve blockade and catheter placement and intravascular catheterization. Nerve block procedures used to resemble “voodoo medicine,” as physicians stuck sharp needles into tissues in search of paresthesias and nerve stimulation. Now we can see what we’re doing.

8. The video laryngoscope. Surgeons have been using video cameras for decades. We’ve finally caught up. Although there’s no need for a video laryngoscope on routine cases, the device is an invaluable tool for seeing around corners during difficult intubations.

7. Rocuronium. Anesthesiologists long coveted a replacement for the side-effect-ridden, depolarizing muscle relaxant, succinylcholine. Rocuronium is not as rapid in onset as succinylcholine, but it is the fastest non-depolarizer in our pharmaceutical drawer. If you survey charts of private-practice anesthesiologists, you’ll see rocuronium used 10:1 over any other relaxant.

6. Zofran. The introduction of ondansetron and the 5-HT3 receptor-blocking drugs gave anesthesiologists our first effective therapy to combat postoperative nausea and vomiting.

5. The Internet. The Internet changed the world, and it has changed anesthesia practice as well. With Internet access, clinicians are connected to all known published medical knowledge at all times. Doctors have terrific memories, but no one remembers everything. Now you can research any medical topic in seconds. Some academics opine that the use of electronic devices in the operating room is dangerous, akin to texting while driving. However, monitoring an anesthetized patient is significantly different from driving a car. Much of OR monitoring is auditory. We listen to the oximeter beep constantly, which confirms that our patient is well-oxygenated. A cacophony of alarms sound whenever vital signs vary from norms. An anesthesia professional should never let any electronic device distract him or her from vigilant monitoring of the patient.

4. The ASA Difficult Airway Algorithm. Anesthesia and critical care medicine revolve around the mantra of “Airway-Breathing-Circulation.” When the ASA published the Difficult Airway Algorithm in Anesthesiology in 2003, it validated a systematic approach to airway management and to the rescue of failed airway situations. It’s an algorithm that we’ve all committed to memory, and anesthesia practice is safer as a result.
3. **Sevoflurane.** Sevo is the volatile anesthetic of choice in community private practice, and it is a remarkable improvement over its predecessors. Sevoflurane is as insoluble as nitrous oxide, and its effect dissipates significantly faster than isoflurane. Sevo has a pleasant smell, and it has replaced halothane for mask inductions.

2. **Propofol.** Propofol is wonderful hypnotic for induction and maintenance. It produces a much faster wake-up than thiopental and causes no nausea. Propofol makes us all look good when recovery rooms are full of wide-awake, happy patients.

1. **The laryngeal mask airway.** What an advance the LMA was! We used to insert endotracheal tubes for almost every general anesthesia case. Endotracheal tubes necessitated laryngoscopy, muscle relaxation, and reversal of muscle relaxation. LMAs are now used for most extremity surgeries, many head and neck surgeries, and most ambulatory anesthetics.

The Five Most Overrated Advances

5. **Office-based general anesthesia.** With the advent of propofol, every surgeon with a spare closet in the office became interested in doing surgery in that closet and wanted you to give general anesthesia there. You can refuse, but if there is money to be earned, chances are some anesthesia colleague will step forward with that service. Keeping office general anesthesia safe and at the standard of care takes careful planning regarding equipment, monitors, and emergency resuscitation protocols. Another disadvantage is the lateral spread of staffing required when an anesthesia group is forced to cover solitary cases in multiple surgical offices at 7:30 AM. A high percentage of these remote sites will have no surgery after 11:00 AM.

4. **Remifentanil.** Remi was touted as the ultra-short-acting narcotic that paralleled the ultra-short-acting hypnotic propofol. The problem is that anesthesiologists want hypnotics to wear off fast, but are less interested in narcotics that wear off and don’t provide postoperative analgesia. I see remi as a solid option for neuroanesthesia, but its usefulness in routine anesthetic cases is minimal.

3. **Desflurane.** Desflurane suffers from not being as versatile a drug as sevoflurane. It’s useless for mask inductions, it causes airway irritation in spontaneously breathing patients, and it causes tachycardia in high doses. Stick with sevo.

2. **The BIS monitor.** Data never confirmed the value of this device to anesthesiologists, and it never gained popularity as a standard for avoiding awareness during surgery.

1. **The electronic medical record.** Every facet of American society uses computers to manage information, so it was inevitable that medicine would follow. Federal law is mandating the adoption of EMRs. But while you are clicking and clicking through hundreds of Epic EMR screens at Stanford just to finish one case, anesthesiologists in surgery centers just miles away are still documenting their medical records in minimal time by filling out 2 or 3 sheets of paper per case. Today’s EMRs are primitive renditions of what will follow. I’ve heard the price tag for the current EMR at our medical center approached $500 million. How long will it take to recoup that magnitude of investment? I know the EMR has never assisted me in caring for a patient’s airway, breathing, or circulation in an acute-care setting. Managing difficulties with the EMR can easily distract from clinical care. Are there any data that demonstrate an EMR’s value to anesthesiologists or perioperative physicians?

As you read this, hundreds of companies and individuals are working on new products. Future *Top Ten* lists will boast a fresh generation of inventions to aid us in taking better care of our patients.

Your *Top Ten* and *Overrated Five* lists will differ from mine. Feel free to communicate your opinions to me at rjnov@yahoo.com.

Editor’s Note: Dr. Novak’s catalogue of Deputy Chief Columns and Clinical Cases for Discussion is posted at [www.theanesthesiaconsultant.com](http://www.theanesthesiaconsultant.com)
Anesthesiologists are often called upon to be a hospital’s problem solvers. In the past year, the department’s residency program has created several, innovative training programs to prepare the newest class of doctors to assume that problem-solver role.

In July, under the leadership of Pedro Tanaka, the residency program welcomed its first class of categorical interns. Those interns are already benefiting from ImPRINT (Intern Preparedness using Innovations in Teaching), an interactive teaching experience developed by senior resident Ankeet Udani in collaboration with Kyle Harrison, Larry Chu, and Charles Wang. ImPRINT includes simulations, podcasts, and discussions with faculty experts.

Such practical training has paid off. One intern wrote that he originally thought the simulations were “a great refresher for something we probably won’t see this year…or so I thought.” As he was transporting a newborn baby between units, he reported, he overheard shouting and ran to find an older woman slumped over in her chair, unconscious.

“I was the first doctor on the scene. Everything we practiced on Thursday came rushing back…I felt infinitely better prepared for the incident after just a handful of simulations through the ImPRINT program.”

The residency program is expanding other innovative training programs, including a combined pediatrics and anesthesia training program and a new 5-year combined internal medicine and anesthesia residency. The program also began offering residents a quality and safety rotation. We hope that this rotation will allow residents to have a real and meaningful impact on quality, safety, and effectiveness at Stanford and in their future careers.

Stanford residents are having an impact internationally as well. In addition to the many international clinical missions residents already undertake, Ana Crawford is building programs that allow residents to go on international teaching missions.

In association with the ASA and the Canadian Anesthesiologists’ Society International Education Foundation, Melanie Gipp, a senior resident, spent a month instructing anesthesia residents in Rwanda. Another senior resident, Vanessa Moll, was awarded a grant through the National Institutes of Health to perform an initial anesthesia education needs assessment at the University of Zimbabwe.

The residency program had other individual triumphs, as well. Jorge Caballero and Boris Heifets are both Foundation for Anesthesia Education and Research (FAER) resident scholars. Brice Gaudilliere, a senior resident, received an award from the Stanford Society of Physician Scholars for his use of mass cytometry in conducting systems analysis of the immune response to surgical trauma. Vivianne Tawfik was the first author of a manuscript about her work on glial cells, inflammation, and heat-shock proteins in cerebral ischemia. Ankeet Udani, a senior resident teaching scholar, was the American Society Regional Anesthesia and Pain Medicine “resident of the year.” In ultrasound-guided regional anesthesia Ankeet has been recognized for his study of using of head-mounted display during ultrasound-guided regional anesthesia.

Currently, 70% of residents pursue fellowships—the program’s highest rate ever—and a trend the residency program expects to see continue as the specialty continues to evolve.
Residents of the Month—Congratulations!

- August—Melanie Gipp
- September—Sam Chen
- October—Jared Pearson
- November—Natalya Hasan
- December/January—Vivianne Tawfik, Catherine Reid

Resident Graduation—Each July we bid farewell to the graduating residents. Many are beginning their careers in private practice, secure in the knowledge that they have received the finest training available. Others are pursuing fellowships, many of them here at Stanford. Please join me in congratulating the 2012 graduates of the Residency Program and take a brief look at their plans:

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<th>Name</th>
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<td>Ioana Brisc</td>
<td>Private Practice, Sacramento, CA</td>
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<td>Christie Brown Munoz</td>
<td>Regional Fellowship, UC Irvine</td>
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<td>Dora Castaneda Rodrigues</td>
<td>Private Practice, Southern California</td>
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<td>Jay Jay Desai</td>
<td>Director, Medical Affairs and Market Development at Avinger</td>
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<td>Laura Downey</td>
<td>Pediatric Fellowship, Boston Children’s</td>
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<td>Joshua Edwards</td>
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<td>Christine Jette</td>
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<td>Jody Leng</td>
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<td>Javier Lorenzo</td>
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<td>Ring Liu</td>
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<td>Bryan Maxwell</td>
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<td>David Medina</td>
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<td>Brett Miller</td>
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<td>John Peterson</td>
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<td>Rohith Piyaratna</td>
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<td>Andrew Powers</td>
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<td>Xiang Qian</td>
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<td>Andrew Wall</td>
<td>Private Practice, Fresno, CA</td>
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<td>Becky Wong</td>
<td>Pediatric Fellowship, Stanford</td>
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<td>Justin Workman</td>
<td>Regional Fellowship, Stanford</td>
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New Residents—Please join me in welcoming the newest members of the department, who began the anesthesia residency program in July 2012. As usual, these new residents join us from medical schools all over the United States.

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<td>Sarah Clark</td>
<td>Northwestern University</td>
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<td>James Flaherty</td>
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<td>Lauren Friedman</td>
<td>University of Southern California</td>
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<td>Chrystina Jeter</td>
<td>University of California, Los Angeles and Drew University</td>
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<td>Jason Johns</td>
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<td>Stephanie Jones</td>
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<td>Stephen Kelleher</td>
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<td>Kenneth Lau</td>
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<td>Cong Li</td>
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<td>Kristen Noon</td>
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<td>Anil Panigrahi</td>
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<td>Justin Pollock</td>
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<td>Christopher Press</td>
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<td>Amit Saxena</td>
<td>University of California, San Francisco</td>
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<td>Jan Sliwa</td>
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<td>Shaina Sonobe</td>
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<td>Mary Lyn Stein</td>
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<td>Meghan Tieu</td>
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<td>Rachel Wang</td>
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<td>Vicky Yin</td>
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<td>Jennifer Zocca</td>
<td>Georgetown University</td>
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Combined Pediatrics/Anesthesia Residency Program

Gavin Hartman | University of Missouri
Adam Was | Harvard University

Chief Residents for 2013-2014—We are very pleased to announce that Marie McHenry, Jorge Caballero, and Matthew Wagaman have been elected as chief residents for the 2013-14 academic year. Please join me in congratulating them and thanking the current chief residents for a job very well done.
I am pleased to announce that Drew Patterson assumed the role of Division Chief for Critical Care within the Department on January 1, 2013, replacing Fred Mihm, who has served as our critical care division chief for the past eight years.

Fred has provided outstanding leadership to the division, fostering advances in clinical care, education, research, and administration. Our department is now actively involved in multidisciplinary care services, serving patients on all four ICU services at Stanford and the consolidated ICU service at the VA. Under Fred’s leadership and mentorship, we have partnered successfully with the other critical care groups at Stanford to develop processes to improve patient care and education. We currently have eight anesthesia critical care fellows, possibly the largest such program in the country. The change in division leadership is planned. The Department’s approach is that change in division leadership is healthy, and it provides opportunities for other faculty to advance. Fred will continue to be a valued full-time faculty member. He remains active in the ICU and OR and in his educational and scholarship activities (including new applications of technology to anesthesia and critical care). He has cared for the largest collection of pheochromocytoma patients undergoing anesthesia.

Drew trained in anesthesiology at Massachusetts General Hospital and then completed a fellowship in critical care in 1996. Following his move to Stanford, he obtained his PhD on functional aspects of beta-adrenergic receptors with Brian Kobilka, who received this year’s Nobel Prize in chemistry. During a productive laboratory research career, Drew’s research has increasingly focused on clinical translational studies, and he is actively collaborating with several groups in North America. He has had multiple institutional and national positions, including chair of several SCCM committees and the recent program co-chair of this year’s SCCM annual meeting. He is currently one of the 12 directors of the American Board of Anesthesiology, one of only two such directors from California since Mike Rosenthal served on the Board. Drew has a leadership position in developing the new board examination process, which will begin in several years. Drew has been active in medical student education and is currently responsible for the cardiovascular physiology block. Our departmental policy is to perform a national search for new division chiefs, but we waive that policy when an internal candidate is the obvious choice, as occurred with Drew.

Please join me in thanking Fred for his multiple contributions during his time as Division Chief for Critical Care and in welcoming Drew into this position, where he will focus on faculty development in order to advance patient care, resident and fellow education, and research.

**New Chief for Critical Care**

**by Ron Pearl, MD, PhD**

**Division Updates**

**Obstetric**—The Obstetric Anesthesia Division is proud to announce the publication of Alex Butwick’s Gerard W. Ostheimer Lecture, which he delivered at last spring’s meeting of the Society for Obstetric Anesthesia and Perinatology (SOAP). The lecture, given each year at the SOAP meeting in honor of the life and career of Gerard Ostheimer, comprises a review of the previous year’s obstetric anesthesia research. It was an honor for Alex to be selected, and he delivered an outstanding talk that made all of us associated with him proud. It was quite a year for Alex. In addition to delivering the lecture, he was given a post in the Medical Center Line, received a perfect score on his NIH grant, and married the love of his life in August.

Steve Lipman has a recent publication that highlights the excellent work he is doing with simulation. Steve used simulated STAT cesarean deliveries to measure how long it takes to move patients from labor rooms to the operating room and commence with surgery. This paper is important for two reasons. First, it shows that, under optimal conditions (in-house anesthesia, operating rooms on labor and delivery, etc.) it still takes a minimum of 9 minutes after making an incision for cesarean delivery to make the...
delivery. Second, during the simulations, the authors determined the obstacles to moving patients quickly and developed strategies to improve performance in the future. This paper provides a model for other services to train their teams and improve their service’s performance.

References


VA—At the VA in Palo Alto, we have instituted a progressive quality-improvement, patient-safety project to help prevent inpatient falls.

In 2011, there were 813 documented inpatient falls in eight VA medical centers that cover Northern California, Northern Nevada, and Hawaii. Etiologies for falls are usually multifactorial, making fall prevention a challenging issue, particularly for the postsurgical patient. Added risks for postsurgical patients may include the following: altered mental status; fluctuating intravascular volume status and subsequent hemodynamic instability; motor weakness from deconditioning, pain, or surgical procedures; regional anesthetic techniques; and “poly-pharmacy.” To promote fall education and awareness among patients, patients’ families, and health care providers, and to implement interventions to decrease fall risks, we recently instituted a standardized quality-improvement program in the VA Palo Alto Health Care System (VAPAHCs) for patients undergoing elective knee and hip arthroplasties.

**Fall Prevention Program**—The program was devised by a multidisciplinary team led by Eddie Kim (Director of Regional Anesthesia and Perioperative Analgesia). Serving on the team are postsurgical ward nurse-managers and designated “Fall Champion” nurses; physical and occupational therapists; and orthopedic case managers. After evaluating current fall prevention practices and devising new interventions, the team created the following five-step program:

1. **Fall Prevention Education and Agreement forms**: Before performing a regional anesthetic technique, a member of the regional anesthesia team reviews with the patient an education form that includes information about fall awareness, risk, and prevention. The patient is asked to sign the form to acknowledge fall risk, and the signed form is posted in patients’ surgical ward rooms.

2. **Morse Fall Scale assessment**: A nurse assesses a patient’s fall risk on admission to the surgical ward and documents the results in the patient’s chart, allowing all healthcare providers to know each patient’s individual fall risks.

3. **Bed alarms**: Patients are placed on a motion-detector bed that sounds an alarm when they attempt to exit the bed without assistance.

4. **Fall precaution signs**: A sign is posted across from the patient’s bed in a visible location to remind patients and family members that the patient must call for assistance when getting out of bed.

5. **Colored designation on ID wristbands**: Physical and occupational therapists place a red, yellow, or green sticker on the patient’s wristband to demarcate levels of permissible ambulation, with or without personnel assistance. The stickers, based on the therapists’ assessments, are updated after each therapy session.

**Outcomes**—Preliminary data from the initial pilot already suggest a decrease in inpatient falls. In the upcoming months, fall data at the VA Palo Alto will be evaluated before and after implementation of the Fall Prevention Program to assess its effectiveness. Ultimately, a consistent reduction in fall rates is the desired outcome. Because fall risk varies from patient to patient, finding a simple formula to decrease fall rates may be challenging. However, a standardized fall-prevention program that promotes increased fall
awareness among patients and health care providers is a step in the right direction.

**Pain**—For the second time, the Stanford Pain Division has been recognized as an American Pain Society Clinical Center of Excellence. Division leader Sean Mackey also continues to receive national recognition for his research in pain medicine. *US News and World Report* and Castle Connolly Medical Ltd. acknowledged Sean as in the top 1% of pain medicine physicians in the United States, and he received the Presidential Commendation from the American Academy of Pain Medicine for his work on the Institute of Medicine Committee—Relieving Pain in America. Sean has been appointed to serve on the NIH Interagency Pain Research Coordinating Committee (IRPCC) as well as on the NIH Pain Consortium’s Chronic Low Back Pain Research Task Force. In addition, he has been appointed as a senior editor for *Pain Medicine*.

**National Pain Registry**—On August 14, 2013, the Pain Management Center, in conjunction with the Stanford Center on Clinical Informatics, rolled out the National Pain Registry after two years of development. The registry is an open-source, centralized system to track self-reported treatment outcomes for chronic-pain sufferers. It will provide a starting point for collecting data that will enlarge our understanding of pain. Our ultimate aim is to improve the prevention, assessment, and treatment of chronic pain.

The NIH recently awarded a two-year grant to further enhance and develop the system. In addition, an executive registry committee is working with the NIH-funded Patient Reported Outcomes Measurement Information System (PROMIS) to help develop data definitions and standards.

The platform will be available free of charge to academic and community pain clinics. The goal is to provide a flexible system for clinicians and investigators to perform outcomes research, comparative effectiveness research, and point-of-care decision-making.

**Clinical Pain Psychology Fellowship**—Stanford is one of the few academic medical centers in the country that offers a postdoctoral fellowship program in adult pain psychology. Sue Gritzner, PsyD, has been awarded the fellowship for the 2012–2013 academic year. Sue received her doctorate degree from Pacific University in Oregon and completed her internship at Wayne State University in Michigan. Sue replaces the outgoing recipient of the fellowship, Jeremy Bartz, PhD, the program’s first graduate, who is currently in private practice in Southern California. Interviews are currently being held for the 2013–2014 fellowship.

**Critical Care Medicine**—The Division contributes to the attending physician staff for four intensive care units: the Medical–Surgical Intensive Care Unit at Stanford University Hospital; the Medical–Surgical Intensive Care Unit at the Palo Alto Veterans Affairs Medical Center; the Cardiovascular Intensive Care Unit at Stanford University Hospital; and the Trauma Surgery Intensive Care Unit at Stanford University Hospital.

Faculty members teach and develop curricula for medical students, residents, and fellows at the School. They also contribute in many other key roles:

- Tim Angelotti is the medical director of Stanford Hospital’s Life Flight program; he was recently appointed as an Associate Editor for *Anesthesia & Analgesia*.

- Juli Barr is the medical director of the Nurse Practitioner Program and the Respiratory Therapy Department at the Palo Alto VA. She is the director of the School of Medicine’s critical care clerkship. Juli also served as chair of the American College of Critical Care Medicine’s Pain, Agitation, and Delirium Clinical Practice Guidelines Task Force.

- Carlos Brun, a Stanford Teaching Scholar, is currently developing a basic transthoracic ultrasound curriculum. He has also been appointed as associate medical director of the Palo Alto VA Medical Center’s Medical-Surgical ICU.
Ana Crawford completed a Master’s Degree in Global Health at UCSF. She participated in the ASA/CASIEF (Canadian Anesthesiologists’ Society of International Education Foundation) teaching program in Rwanda, supervised Melanie Gipp’s 2012 participation, and will supervise Morgan Dooley’s 2013 participation.

Erin Hennessey is faculty for the School’s first-year Human Health and Diseases course. She lectures on Cardiovascular Structure, Homeostasis, and Transport; Evaluation of Volume Status; Special Circulations; and General Mechanisms of Cardiovascular Homeostasis. Erin also instructs the department’s residents and fellows within the simulator training programs.

Charles Hill is Medical Director of Stanford University Hospital’s Cardiovascular ICU. He is also faculty for the School’s first-year Human Health and Diseases course, lecturing on Cardiac and Tomographic Anatomy of the Heart, Measurements of Cardiac Function, Valve Disease, Coronary Circulation, and Ischemic Heart Disease.

Geoff Lighthall is director of the Palo Alto VA Medical Center’s emergency and code teams and a member of the Society of Critical Care Medicine’s Simulation Task Force.

Fred Mihm has served as Fellowship Program Director for the Division of Critical Care Medicine since 2005. In addition, he has served as the anesthesia team leader for three international medical missions during 2012—Oaxaca Mexico; Udaipur India; and Cumana, Venezuela.

Dr. Andrew Patterson has served as Co-Director and now director of the School’s first-year Health and Human Disease Cardiovascular Physiology course. In this capacity, he lectures on Hypertension and Antihypertensive Drugs. In addition, he is faculty and lectures on Management of Hemodynamic Insufficiency and Shock for the School’s Anesthesia 202 course, Anesthesiology and Pathophysiologic Implications for the Perioperative Patient.

Dr. Patterson is a member of the board of directors of the American Board of Anesthesiology and a member of the California Society of Anesthesiologists’ Education Programs Division.

Byers Eye Institute—The Byers Eye Institute at Stanford is a state-of-the-art facility dedicated to ophthalmology. In their aim to combat blindness and preserve sight, the 25 eye-care specialists see patients with a wide range of eye disorders. Joining the already established Vitreoretinal Center, Eye Specialty Services, and the Refractive Eye Laser Center, the Surgery Center at the Byers Eye Institute opened its doors in November 2012. The surgeries performed include cataract surgery, glaucoma treatment, oculoplastics procedures, retina surgery, and corneal transplants. Our Department provides the anesthesia services. Kimberly Valenta is the full-time Director of Anesthesiology dedicated to the Surgery Center. A satellite clinic of the Stanford Pre-Anesthesia Evaluation Program is located at the Byers Eye Institute as well, to provide patients with comprehensive perioperative care on-site.

Research—A booming area!

Perfect Score—Jennifer Hah received a perfect score of 10 on her first submission of her K23 application to NIDA entitled, “Psychological factors contributing to persistent opioid use after surgery.”
Other Awards—We also note that Divya Chander in collaboration with Paul Garcia (Emory University), Jamie Sleigh (Waikato Medical School, New Zealand), and others, won an award from the James S. McDonnell Foundation on a collaborative project entitled, “Probing the overlap between sleep and anesthesia to enhance human cognition.” Divya will be the site PI at Stanford.

Other funded grants include the following: Jarred Younger’s award from the Department of the Army entitled, “Identifying immune drivers of Gulf War Illness using a novel daily sampling approach”; Alex Butwick’s K23 grant from NICHD entitled, “Postpartum hemorrhage and anemia: Epidemiologic and cost-effectiveness analyses; and a competing renewal of Rona Giffard’s R01 grant from NINDS entitled, “Astrocytes and ischemic brain injury.”

Grant Applications—The next several weeks will be busy as many faculty are currently writing grant applications for impending February deadlines. Please remember the department's deadline for internal review of grant applications is one month before the sponsor’s deadline, and RMG’s deadline for receipt of complete grant applications is one week before the sponsor’s deadline. With so many grants going through the system at once, it will be in PIs’ best interests to submit their grants early, so that no mistakes are made and no deadlines are missed. Also, please note that we have a new contact at RMG, Mariela Abbott, who comes to Stanford from Northwestern University.

Welcome, Maureen Donohue—Maureen Donohue is the Department’s new medical writer and editor, replacing Patricia Rohrs. Maureen comes to us with more than 20 years of experience. We anticipate that she will be a strong contributor to the department. She can be reached at maureend@stanford.edu.

FARM—The Department of Anesthesia’s Fellowship in Anesthesia Research and Medicine (FARM) aims to train clinician-scientists to be the future leaders in the field. The program, which begins in CA-1, includes up to of 9 months of research time over the 3-year residency in addition to a minimum of 1 additional fellowship year devoted to research. During the fellowship year, FARM scholars’ time is divided into 80% research and 20% clinical. They work as attendings one day per week in the operating room.

The FARM Program is currently in its fifth year and has 10 residents overall, including four CA3 residents, the most in the program’s history. Following are brief biographies of each of the four senior FARM residents:

- Vivianne Tawfik is originally from Montreal, Canada, where she completed her BSc in Biochemistry at McGill University, ate a lot of sushi, and snowboarded regularly. She moved south of the border to Hanover, NH, to pursue her MD and PhD degrees at Dartmouth College. While there, Vivianne developed a love (some would call it an obsession) of the Big Green. Vivianne’s PhD work focused on the role of glial cells in neuropathic pain, and it was through this research that she became interested in anesthesiology as a clinical specialty. Along with her husband, Ian, Vivianne moved to California to join Stanford’s residency in its FARM program, for which she now serves as the resident representative. Her research in the lab of Gregory Scherrer (Anesthesia/SINTN) continues to focus on basic pain mechanisms and spinal pathways important to opioid action. After graduation, Vivianne will spend a year as a research fellow followed by a year as a fellow in clinical pain, as she continues her quest to become a physician-scientist.

- Born and raised in France, Brice Gaudilliere claims that his diet comprised only wine, baguettes, and foie gras until the age of 21. Brice studied engineering in Paris, where he developed a strong interest in space and, in particular, human space flight. Brice credits his interest in this field to his older and only brother, a fighter pilot in the French Air Force. Brice actively pursued his goal of becoming an astronaut, only to see his hopes dashed after 15 years of study when, during the 2008 European Space Agency astronaut selection process, he discovered that he was unable to differentiate his left from his right. Forced to pursue a new career and driven by...
branching interests in space biology and space medicine, Brice immigrated to Boston, where he graduated from Harvard 9 years later with an MD and a PhD in neurobiology. In 2008, Brice met his wife, Dyani, born in California and a Stanford graduate. It was Dyani who convinced Brice that Stanford was the “closest thing on earth to a cosmic paradise…’tis true, ’tis true,” Brice said.

At that time, the anesthesia department had just opened the FARM program, which Brice joined “enthusiastically.” Through the FARM program, Brice found his two mentors, Martin Angst and Garry Nolan, who “opened the gates to an amazing new field of research: the systems analysis of perioperative immunity,” he said. In his fellow FARM scholars Brice has also found what he calls “an irreplaceable set of friends and research colleagues who are always prime guests at my dinner parties with wine, bread, and smuggled foie gras.”

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• Boris Heifets calls himself a refugee from the east coast, where he attended Yale University as an undergraduate (1999) and Albert Einstein College of Medicine (2009), where he completed an MD-PhD degree program. Boris began working in neuroscience labs at age 18 and has been fortunate to work and collaborate with luminaries in the field, including EJ Nestler, Pablo Castillo, Tom Sudhof, and others, publishing several times in high-impact journals. Since arriving at Stanford, Boris has developed a project to investigate how intraoperative neuroactive drug administration could modify CNS synapses in such a way as to augment the therapeutic benefit of deep-brain stimulation for Parkinson’s disease patients. Boris is jointly mentored by M. Bruce MacIver in the Department and by Robert Malenka in the Department of Psychiatry.

For Boris, medicine is a bit of a family business. He is a fourth-generation physician, beginning with his great grandfather, who was a pediatrician in the Soviet Union; his paternal grandfather, who was an infectious disease physician specializing in tuberculosis in the Soviet Union and here in the United States; his grandmother, who was a cardiologist in the Soviet Union; and his father, who is a nephrologist in the United States. Boris would like you to know that his hobbies are sleeping and eating, and that he takes them both very seriously.

• Ankeet Udani was born in Akron, OH, but he has lived a rather peripatetic life, residing in Charlotte, NC; Rochester, NY; Bombay, India; Philadelphia; the West Indies island of Grenada; New York City; and finally, Palo Alto. Of all of these places, Ankeet calls Rochester home. Before residency, Ankeet studied at the University of Pennsylvania and attended medical school at St. George’s University on Grenada. At Stanford, Ankeet quickly developed a passion for the training applications of medical simulation. Under the mentorship of Dr. Steven Howard, he currently is studying the role of deliberate practice in medical education. In addition, as the Senior Resident Teaching Scholar, Ankeet codirects the ImPRINT (Intern Preparedness using Innovations in Teaching) program. This course is designed to use new educational modalities to teach Stanford anesthesia interns. After Ankeet completes his CA-3 next year, he will pursue a postdoc in simulation and education research while concurrently completing a master’s degree in Medical Education. Ankeet loves to ski, hike, and travel, and, like Boris Heifets, he shares a love of sleep.
EMERGENCY MANUAL UPDATES  
BY SARA GOLDBAYER-FIEBERT, MD

We announce several updates concerning use of the emergency manual during perioperative critical events at Stanford:

Accessibility—To ensure that the manuals are easily accessible and secure, our engineers have attached them to long, flexible, metal chains on hooks in all Stanford ORs. The manual is located on the side of the Pyxis® unit, near the label printer. Manuals are also being installed near or on all types of carts in the preops/PACUs: near code carts, on regional and ECT carts, and on off-site anesthetizing-location anesthesia carts. OR nurses will soon have a second copy of the manual installed near the nursing computer.

Note: You can cut the manual loose in an emergency at the plastic piece on one end of the chain. If you do this, please call the engineers and email me at saragf@stanford.edu, so the manual can be re-secured quickly. Also email me to suggest other needed emergency manual locations.

Some Applications—Simulation training is underway to familiarize OR staff, including nurses and other OR team members, with the emergency manual’s format and location and with the principles of crisis-resource-management teamwork. Practitioners familiar with the manual have found it very helpful during perioperative critical events, for debriefing after a critical event, and for educational, “what if?” exercises.

Because other practitioners and institutions have requested the emergency manual, the Stanford Anesthesia Cognitive Aid Group plans to make a pdf version available to the public. Stay tuned for more news in 2013.

Other Advice—If a nurse or other OR staff asks if you would like to see the emergency manual during a critical event, please respond courteously. If you have enough help, consider assigning someone to read aloud through the appropriate guidelines for that event.

Please notify me if you use the manual during or after an actual event so that I can be debriefed.

The Contributors—The manual was developed by the Stanford Anesthesia Cognitive Aid Group: Larry Chu, David Gaba, Sara Goldhaber-Fiebert, Kyle Harrison, Steve Howard, Sesh Mudumbai, Vladimir Nekhendzy, and Henry Rosenberg. The implementation team consists of Stanford Medical Center members Ron Pearl as leader of OR administration, Sara Goldhaber-Fiebert, anesthesia schedulers, nurse educators, and bioengineers. The VA member is Kyle Harrison, and the Santa Clara County Valley Medical Center member is Katie Ellerbrock.

The teams welcome your input during this implementation phase. For questions or suggestions, please contact saragf@stanford.edu or justin.pollock3@gmail.com at Stanford, kharriso@stanford.edu at the VA, or Katie.Ellerbrock@hhs.sccgov.org at the Santa Clara County Valley Medical Center.
In the past two decades, anesthesiologists have gained a greater understanding of how to better provide physical and psychological comfort in crucially ill patients. The development of valid and reliable bedside assessment tools to measure pain, sedation, agitation, and delirium (PAD) separately in ICU patients allows clinicians to better assess and manage these patients. An increased understanding of the clinical pharmacology of medications commonly administered to treat PAD in ICU patients has increased our insight as to both the short- and long-term consequences of prolonged exposure to these agents. How we administer these medications can also affect patient outcomes as much as can drug choice. Maintaining a light level of sedation while also ensuring patient comfort is associated with improved ICU clinical outcomes in most patients. Our understanding of the risk factors and long-term consequences of delirium in ICU patients has also expanded.

This increased understanding has led to the development of revised clinical practice guidelines for managing PAD in adult ICU patients. The Society of Critical Care Medicine (SCCM) and the American College of Critical Care Medicine (ACCM) recently published these revised guidelines in the journal Critical Care Medicine. (Barr J, et al. Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit. Crit Care Med 2013;41(1):263–306.

**Emphases**—The 2013 version of the PAD guidelines places a greater emphasis the use of valid and reliable bedside tools for assessing pain, agitation/sedation, and delirium in ICU patients. Rigorous psychometric analyses were performed for these guidelines in order to determine which PAD assessment tools were the most valid and reliable to use in critically ill patients. The use of robust assessment tools enables clinicians to better assess and treat pain, agitation, and delirium as separate entities, and helps to avoid a random poly-pharmaceutical approach to treating agitation of unclear etiology that frequently leads to over-sedation in these patients.

In contrast to the previous version, the 2013 PAD guidelines place less emphasis on recommending specific drugs for specific clinical circumstances, and focus more on evidence-based strategies for optimally managing PAD in critically ill patients. They also emphasize the importance of first optimizing pain management, then sedating ICU patients as needed (i.e., analgosedation); maintaining light levels of sedation; and using both pharmacologic and non-pharmacologic patient-management strategies. This approach helps avoid over-sedation of ICU patients and allows patients to more actively participate in spontaneous breathing trials, early mobility programs, and pain and delirium assessments. The approach also minimizes the potential complications of deep sedation. The guidelines also place greater emphasis on preventing, diagnosing, and treating delirium, reflecting our growing understanding of this disease process in critically ill patients. Finally, these guidelines emphasize a more patient-centered, integrated, and interdisciplinary approach to managing PAD in critically ill patients.

**The Change Process**—The 2013 PAD guidelines differ significantly from previous versions in terms of the methods used, their content, and scope. All statements and recommendations included in the 2013 PAD guidelines were developed using the Grading of
Recommendations Assessment, Development and Evaluation (GRADE) method (www.gradeworkinggroup.org). The GRADE Method allows for guideline recommendations to be based not only on the strength of the evidence, but also on the risks and benefits of each intervention. This process allows for strong recommendations to be based upon weak evidence, and vice versa. If evidence is insufficient or conflicting, then no recommendation is made. GRADE does not allow for expert opinion to be used in the absence of evidence, which enables us to make more robust statements and recommendations. By contrast, the 2002 version of these guidelines were developed using the Cochrane Method, which grades guideline recommendations strictly on the strength of clinical evidence, and also expert consensus opinion to substitute for evidence.

Implementation Challenges—Fully implementing these new PAD guidelines presents several challenges. Ensuring that critically ill patients are free from pain, agitation, anxiety, and delirium may directly conflict with other ICU management goals, such as maintaining cardiopulmonary stability while preserving adequate end-organ perfusion and function in patients. Also challenging are variability between ICUs in cultural, philosophical, and clinical practice norms and limited availability of manpower and resources.

Overarching Goal—The overarching goal of the 2013 PAD guidelines is to recommend evidence-based, best practices for PAD to improve clinical outcomes in adult ICU patients. Given the ubiquitous nature of these problems in ICU patients, we believe that the new guidelines will transform ICU care, perhaps even more so than the sepsis guidelines have. But the guidelines’ full impact will only be realized if they are widely adopted and implemented in an interdisciplinary and integrated fashion. The 2013 PAD guidelines are not meant to be overly prescriptive or applied to the care of critically ill patients in absolute terms; rather, clinicians should adapt these guidelines to individual ICU patient-care needs and to the available resources of their local healthcare system.

Statements and Recommendations—The statements and recommendations included in the 2013 PAD guidelines cover both short- and long-term management of pain, agitation/sedation, and delirium in intubated and non-intubated adult medical, surgical, and trauma ICU patients. The 2013 PAD guidelines are the most comprehensive critical care guidelines ever published; they include a total of 54 statements and recommendations, more than twice the number in the previous version. The ACCM is currently developing a separate set of guidelines on the management of pain, agitation/sedation, and delirium for pediatric ICU patients.

The ICU PAD Care Bundle—The statements and recommendations have been incorporated into the ICU PAD care bundle, as have corresponding metrics developed to facilitate implementation. The bundle emphasizes taking an integrated approach to assessing, treating, and preventing significant pain, over- or under-sedation, and delirium in critically ill patients. The bundle also links PAD management strategies with spontaneous awakening and breathing trials, early mobility protocols, and environmental management strategies to preserve patients’ sleep-wake cycles, in order to achieve synergistic improvements in ICU patient outcomes. Over the past two decades, a growing body of evidence has demonstrated that ventilator-weaning protocols, sedation protocols that minimize depth of sedation (using either sedation titration protocols or daily sedation holidays), and early mobility protocols can improve ICU patient outcomes. Individually, these interventions reduce the duration of mechanical ventilation, shorten ICU length of stay, and/or reduce the incidence of delirium in critically ill patients. More recent studies have shown that by linking sedation strategies that allow for light levels of sedation (i.e., daily spontaneous awakening trials or targeted sedation strategies) with spontaneous breathing trials and early mobility protocols, additional synergistic benefits can be achieved in terms of improving ICU patient outcomes.
Expected Benefits—If widely adopted, the SCCM’s 2013 PAD guidelines have the potential to broadly transform the care of critically ill patients, which could translate to significant improvements in ICU patient outcomes, such as improved pain management, a shortened duration of mechanical ventilation, a reduced incidence of delirium, and a reduced incidence of significant long-term physical and cognitive dysfunction in ICU survivors. These expected benefits may in turn reduce length of stay and mortality rates for ICU patients, improve ICU and hospital patient flow, and improve ICU patients’ functionality at the time of their hospital discharge, meaning that more ICU patients are likely to survive their hospitalization, go home sooner, and return to their previous level of functioning after discharge. The potential benefits associated with the 2013 ICU PAD guidelines can only be achieved, however, if they are widely adopted and implemented in an integrated and interdisciplinary fashion. Over the past 10 years, widespread adoption of the SCCM’s sepsis guidelines have led to significant improvements in clinical outcomes for septic ICU patients. Let this be the decade of the ICU PAD guidelines.

WHAT LOVELY PARTIES!

HOLIDAY EVENT

On December 8, 2012, the Department of Anesthesia held its annual Holiday Event at the Arrillaga Alumni Center, attended by a record 360 people.

The evening began at 6:00 PM with a reception in the Alumni Center’s living room, where drinks and hors d’oeuvres, including seafood and sushi, were served. At 7:30 PM, attendees were invited into the dining area, decorated in varying shades of green, with beautiful flower centerpieces at each table. A delicious buffet dinner was served; many returned for second and third helpings.

Dr. Pearl welcomed the guests and instructed everyone to enjoy the evening. He asked each table to submit its top-ten list of “Advice for Anesthesia in 2013.”

After dinner, Alex Butwick and Jeremy Collins entertained the group with their dulcet tones, singing Frank Sinatra’s hit, My Way (Ol’ Blue Eyes would have been jealous). OR tech Michael Anthony followed with a beautiful rendition of the song, This Christmas.

As expected, Dr. Pearl received funny suggestions (one list delivered to him via a custom-designed paper airplane). Dr. Pearl's final, compiled list of “Advice for Anesthesia in 2013” follows:

10. Provide body-hugging scrubs, spandex style.
9. Serve more lunchtime margaritas for the ASC lunches.
8. Avoid the grey midriff scrubs at the VA. Your belly button can and will show.
7. Learn how to tell Ankeet and Luis apart.
6. Put DJs in every OR.
5. Give more bonuses.
3. Don’t drop the scope.
2. Break into song and dance every once in a while.
1. Do it Gangnam style.

After the speeches and singing, the DJ played dance music until 11:00 PM. At least 30 residents and other assorted staff members danced until closing.

Photographs are located on the bulletin boards outside of the front office (H3580).

SAVE THE DATES:

A HEAPING DOSE OF CREATIVITY: MEDICINE AND THE ARTS

On May 8, 2013 the Medicine and the Arts Program will present afternoon and evening programs in the new Bing Concert Hall at Stanford University. The afternoon program beginning at 2:00 PM will feature presentations by Janice Ross, PhD, Hans Steiner, MD, and Audrey Shafer, MD, on various ways in which art and the healing arts intersect. Tickets are not required for the afternoon event.
The evening program, beginning at 8:00 PM, will be a concert/lecture by Richard Kogan, MD, on the “The Mind and Music of Beethoven,” followed by remarks from Lloyd Minor, MD, Dean, Stanford University School of Medicine. Tickets for the evening concert will be available through the Stanford Ticketing Office (availability date to be announced).

This event is sponsored by the Arts, Humanities and Medicine Program and supported by the Stanford Arts Institute and the Department of Anesthesiology, Pain, and Perioperative Medicine. For more detailed information about the upcoming program, see http://bioethics.stanford.edu/arts/heapingdose/index.html.

**THE DEPARTMENT’S ARTISTRY**

The Department’s Second Annual Arts and Anesthesia Soiree is scheduled for May 30, 2013, at 5:30 PM in LKSC Berg Hall C. Department members, family, and alumni are invited to participate and share their talents in the fine arts, including literature and poetry readings, performance (dance, music, etc.), photography, and crafting. Or simply mark your calendars to come and experience the creative talent of your department colleagues and their families. Appetizers, drinks, and desserts will be served. More information will follow in 2013 as to how you can participate in this event.

**UPCOMING GOLF TOURNAMENT BY JOHN BROCK-UTNE, MD, PhD**

The 11th Annual Stanford Anesthesia Department Golf Tournament will occur at the Stanford Golf Club on Sunday, August 4, 2013, at 1:00 PM, instead of the originally scheduled date of April 6.

The format will be the usual scramble, so there will be no significant pressure on the individual golfer. All department personnel are welcome to participate, including alumni, and you may bring one partner. You must carry your own golf bag, and sharing of clubs is not permitted.

Please advise me (brockutn@stanford.edu) if you wish to play and if you prefer to play with a specific person or persons. I pledge to honor your requests to the best of my ability.

Residents interested in playing should get onto Ann Dohn’s list for August 2013. If you are on that list, you only pay $20 per round. Otherwise, the cost per round is $60 for University faculty and $110 for everyone else.

Prizes will be awarded at the end of tournament on the patio overlooking the 18th green. Drinks and a finger supper will be provided. Make certain to mark your calendars if you wish to play.

**FACULTY CORNER AND LIBRARY BOOKS**

**PUBLICATIONS**


• Maxwell BG, El-Sayed YY, Riley ET, Carvalho B. Peripartum outcomes and anesthetic management of parturients with moderate to complex congenital heart disease or pulmonary hypertension. Anaesthesia 2012;Nov 5.


• Shafer A. The unscathed veteran and the anesthesiologist. Poem. JAMA 2012;308:1301.


• Verduzco IA, Lighthall GK. The evolving role of preoperative testing in vascular surgery patients: can a little knowledge be dangerous? Semin Cardiothorac Vasc Anesth 2011;15(3):75-84.

• Lighthall G. Use of physiologic reasoning to diagnose and manage shock states. Crit Care Res Pract 2011;article ID 105348.


• Goodnough LT, Hill CC. Use of point-of-care testing for plasma therapy. Transfusion 2012;52:56S-64S.


ABSTRACTS AND POSTERS


Dr. Andrew Patterson spoke about Assessment of homology templates and the anesthetic binding site within the GABA receptor in the Best of Basic Science abstracts session at the annual meeting of the American Society of Anesthesiologists in Washington, DC, in October 2012.

INVITED TALKS AND GUEST PROFESSORSHIPS

Ed Mariano, MD, delivered, via videoconference, the Dr. Benigno Sulit, Jr. Memorial Lecture: Emerging technology in perioperative pain medicine–ultrasound-guided continuous peripheral nerve blocks to the Philippine Society of Anesthesiologists 44th Annual Convention in Manila, Philippines on November 22, 2012.

Ed Mariano, MD, served as program chair at the 2012 CSA Fall Hawaii Seminar Program October 29-November 2, 2012, and he delivered four lectures: (1) Surface anatomy and sonoanatomy for the occasional regional anesthesiologist, (2) Continuous peripheral nerve blocks—who, what, where, why, and how?

(3) Nerve blocks beyond the “plexus,” and (4) Tips and tricks to setting up a regional anesthesia program.

Audrey Shafer, MD, Aesthetics and anesthetics: medical humanities in the operating room, survive and thrive. A Conference and Arts Festival for Heart Health and Medical Technologies, St. Cloud, Minnesota, October 27, 2012.

Alex Butwick, MD, spoke on four topics during the Three-Day Course on Obstetric Anaesthesia and Analgesia, organized by the Obstetric Anaesthetists’ Association, UK (International Meeting), in November 2012: (1) What’s new in obstetric anaesthesia 2011/2012: the key papers influencing practice—the Gerald Ostheimer Lecture; (2) Anticoagulants and regional anesthesia—a modern approach; (3) VBAC, TOLAC and more – obstetric interventions impacting on anaesthesia workload and practice; and (4) Modern non-invasive monitoring of the obstetric patient—continuous Hb monitoring to cardiac output. Improving patient outcomes.

Brendan Carvalho, MB chB, FRCA, was the keynote speaker on Labor and cesarean delivery analgesia at the Risk Management Symposium, John Muir Hospital Walnut Creek Campus, Walnut Creek, California, in November 2012.

Brendan Carvalho, MB chB, FRCA, gave four lectures at the California Society of Anesthesiologists’ Fall Seminar, November 2012, in Kona, Hawaii: (1) Strategies to optimize labor analgesia, vaginal delivery, and fetal outcomes; (2) Morbid obesity in pregnancy: anesthetic challenges and management strategies; (3) Prevention and treatment of spinal-induced hypotension during cesarean delivery; and (4) Anesthesia during pregnancy: optimizing maternal and fetal well-being.

Brendan Carvalho, MB chB, FRCA, gave three lectures at the Congress on Anesthesia in Obstetrics, Ho Chi Minh City, Vietnam, in October, 2012: (1) Labor analgesia: strategies...
to optimize maternal and fetus outcomes, (2) Prevention and managing failed blocks for cesarean delivery, and (3) Resuscitation of the pregnant patient. He also led two workshops: (1) TAP block for postoperative pain and (2) Ultrasound-guided neuraxial placement.

- Brendan Carvalho, MB chB, FRCA, delivered the plenary lecture, New techniques in anaesthesia for caesarean section, at the KK Hospital Obstetric Symposium, in Singapore, September 2012. He also gave two other lectures: (1) Morbid obesity in pregnancy: anaesthetic challenges and dilemmas, and (2) Managing the pregnant woman with cardiac disease.

- Brendan Carvalho, MB chB, FRCA, spoke about Non-obstetric surgery and anesthesia during pregnancy at the National Anaesthesia Training Program for Advanced Specialist Training, in Singapore, September 2012.

- Steve Lipman, MD, spoke about Maternal cardiac arrest for a Panel on Obstetric Hemorrhage at the ASA Annual Meeting, October, 2012 in Washington, DC.

- Steve Lipman, MD, as faculty for the “SimLive” Obstetric Simulation workshop ran the maternal cardiac arrest simulation at the ASA Annual Meeting, October 2012, in Washington, DC.

- Dr. Charles Hill lectured on three topics at the 59th Annual Brazilian Anesthesiology Congress in Belo Horizonte, Brazil, in October 2012: (1) Hemodynamic monitoring in high-risk surgery, (2) Perioperative management of left ventricular dysfunction, and (3) Perioperative management of right ventricular dysfunction.

- Dr. Sara Nikravan taught Fundamentals of Critical Care Ultrasound for the Society of Critical Care Medicine’s ultrasound course in San Juan, Puerto Rico, January 2013, and she also spoke about Management of HELLP syndrome in the ICU.

- Dr. Andrew Patterson provided an anesthesia Grand Rounds lecture on International Medical Missions.

- Dr. Geoff Lighthall lectured about Occupying Critical Care for the School’s Advances in Medicine series.

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**BOOK CHAPTERS**


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**AWARDS, HONORS, AND APPOINTMENTS**


- Grant Support just completed: Palo Alto Institute for Research and Education. Age-associated mortality risk in surgical intensive care unit patients. $50,000 (May 2011-September 2012): Principal Investigator

- Brendan Carvalho, MB chB, FRCA, was awarded the Child Health Research Institute (CHRI) Harman Faculty Scholar Award to study Pharmacokinetic and pharmacodynamic modeling of magnesium sulfate in the mother and exposed neonate. He will be Principal Investigator.

- Dr. Jarred Younger was awarded a DOD USAMRMC grant for Identifying immune drivers of Gulf War illness using a novel daily sampling approach.

- Dr. Sean Mackey was awarded a Stanford CME Grant for Safe opioid prescribing and risk evaluation and mitigation strategies (REMS).

- Dr. Kevin Johnson was awarded an NIH NIDA K23 Career Development Award to support Research training using TMS to study pain processing in long-term opioid use.

- Drs. Heather Chapin, Jennifer Hah, and Jiang-Ti Kong were each awarded an NIH T32 Training Grant Fellowship from the Department of Anesthesia.
• Dr. Sean Mackey was awarded a Supplement to his NIH NCCAM P01 Program Project Grant for the Stanford CAM Center for Chronic Back Pain, to develop an interface between the REDCap clinical research database and the NIH PROMIS outcomes system.

• Dr. Sean Mackey was awarded a Stanford Bio-X NeuroVentures pilot grant for Detection of chronic pain states in the central nervous system.

MEDICAL MISSIONS
• Andrew Patterson, MD, PhD served as the Anesthesia Team Leader for a medical mission in Gitwe, Rwanda in March, 2012.

NEW LIBRARY BOOKS

Historical Notes on Anaesthesia and Intensive Care is a fascinating book from the Australia Society of Anaesthetists (ASA) on the evolution of anaesthesiology in Australia and New Zealand. The book is a compilation of nearly three decades of covers from the Australia/New Zealand journal Anaesthesia and Intensive Care and consists of short, mostly one-page stories, vignettes, and photographs documenting the equipment and people involved in the development of anaesthesiology “down under.” Librarian Hillary Farkas and Divya Chandler both recommend that you take a look at this fascinating, highly readable book, which is located in the “History of Anaesthesiology” section (RD 78-RD 80.6). It is “well-worth the browse,” says Hillary.

Historical Notes on Anaesthesia and Intensive Care RD 80.5 B21 2012

Hillary also announces these additions and invites you to browse.


• Anesthesiology Board Review. 3rd Ed. Ranasinghe, Wahl, Harris & Lubarsky, Eds. RD 82.3 A53 2012


• Core Topics in Vascular Anaesthesia. Moores, Carl & Alastair F. Nimmo, Eds. RD 598.5 C68 2012.


• Essentials of Trauma Anesthesia. Varon, Albert J. & Charles E. Smith, Eds. RD 93.9 E76 2012.


• Morbid Obesity: Peri-operative Management. 2nd Ed. (donated by Dr. Lemmens; please return the missing original book) Brodsky & Lemmens RD 87.3 .O2 M85 2010.


Login for all books listed with ExpertConsult.com as follows:
Username: hfarkas@stanford.edu
Password: anesthes1a (Use the number 1 instead of letter i.)
Sugar and spice and everything nice…

**Jason Johns** proudly announced the birth of daughter Cate Lauren Johns, born on November 28, 2012, weighing 8 lb, 9 oz. Jason reports that both mom and baby are doing very well. “Even her big brother was excited, although there seems to be some sibling rivalry developing,” he added. Special thanks go to Alex Butwick “for the great epidural and [to] Mary Lyn Stein for the great re-dose—Mom appreciated it.”

**Ethan McKenzie** announced the arrival of Eve Katherine McKenzie, born on December 10, 2012, weighing 7 lb, 14 oz. “Mom and Eve are doing well,” Ethan said. He expressed special gratitude to Sara Goldhaber-Fiebert, Mary Lyn Stein, and Farheen Mirza for “all the expert care. We are so very much in your debt.”

Snips and snails and puppy dog tails…

Calvin Kuan is a proud new papa! Ronan David Kuartz was born on July 18, 2012, and his adoption was finalized on December 11, 2012. After an exhausting (for his parents) four months, Ronan is quickly learning the joys of sleeping through the night, and rolling over to explore the fascinating world around him. Daddy Calvin and Papa Shannon have to constantly remind big brother Duncan that Baby Ronan is not a toy.
WEDDING BELLS
On August 25, 2012, Alex Butwick was married to Lindsay Hayford, the love of his life. The bride was radiant, and the groom was clearly beaming. Our congratulations go out to the newlyweds, along with our best wishes for a lifetime of happiness together.

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