As the Chairman of our Department, I am very proud to introduce the second issue of Penn State Anesthesiology News expertly edited by Dr. Sonia Vaida and Jennifer Swierczynski, who should receive all of the credit for keeping the momentum in publishing.

We set out to be a Model Academic Department of Anesthesiology, and in this issue we highlight the cutting edge Genomics research that Dr. Piotr Janicki, our Vice Chair for Research, has been conducting with many collaborators in our Department over the last five years or so. In addition, we highlight again one of our high performing divisions, namely the Chronic Pain division led by Dr. Vitaly Gordin and focus on one of our most important educational initiatives, spearheaded by Dr. Len Pott in setting up an educational and research program in Airway Management. The PACU has become a very important clinical arena for quality improvement assessment, led by Dr. Jansie Prozesky and is also highlighted in this issue.

Key Events...

We are very pleased to announce that Dr. Jill Eckert has now become the Program Director for Anesthesiology since November 2008. Jill was a graduate and Chief Resident of our program, and completed a Pain Fellowship before joining us as Faculty. She has served as the Associate Program Director for the previous three years while Dr. Stephen Kaiman was the Program Director. We congratulate Stephen on his promotion to Vice Chair of Education in Anesthesiology at the Cleveland Clinic; a position he will take on in March of 2009. Stephen was also a graduate and Chief Resident in our program. Following a Pediatric Fellowship, he rejoined us as an Assistant Professor, and became the Associate Program Director six years ago (under Dr. Kim Walker). He became the Program Director three years ago. We welcome Dr. Arne Budde as the new Associate Program Director and appreciate the work of our further two Assistant Program Directors, Dr. Ken Saliba and Dr. Khaled Sedeek in maintaining the high standards of our residency program.

Further congratulations are in order to Dr Victor Ruiz-Velasco on his renewal of his NIH RO1 entitled “Coupling mechanisms of NOP receptors and calcium channels.” This renewal, in one of the toughest funding environments in recent history, speaks to the outstanding internationally recognized work that Victor and his collaborators have done in this issue. (Continued on page 2)

Genomics Research

Piotr K. Janicki, MD, PhD,
Vice Chair for Research; Professor of Anesthesiology

Current research focuses on the advances in human genomics that might identify patients at increased risk for anesthesia and surgery. This field (coined perioperative genomics) has the potential to establish a firm rationale behind many currently unexplained risks related to anesthesia and surgery. My work with collaborators aims to analyze a number of associations between DNA sequence variations common in the population (single nucleotide polymorphisms, or SNP) and important clinical outcomes in perioperative medicine. The challenge will be to move from these intriguing statistical correlations to an operational understanding of how genetic variability can be used in a practical manner to guide therapy, predict outcome, and improve patient care. Some examples of the genetic variability currently investigated in my lab involve genetic polymorphisms in the μ-opioid receptor (MOR), which is the number one target for all perioperatively used opioid analgesics, genetic variability of the cytochrome P450 isoform2D6 (CYP2D6) involved in the metabolism of many drugs commonly used during the perioperative period (e.g., antiemetics, analgesics, beta-blockers, etc.), as well as genetic polymorphism in the NOS1AP gene involved in the cardiac electrophysiological response produced by many drugs used during the perioperative period. The research approach used by my research group relies on genotype screening of the patients undergoing anesthesia and surgery, detecting the mutations in the analyzed region of the genome, and analyzing the selected aspects of the physiological response to surgery and anesthesia during the perioperative period. The most exciting approach, re-
Message from the Chairman

(Continued from page 1)

have been performing in our laborato-
tories over the last five years. Special mention must be made of the retirement of Donna Shultz who has served the Department for over 21 years. In recognition of her selfless support, we have named the Outstanding Service Award which is conferred by annual election by faculty in her honor. This will now be named the Donna L. Shultz Outstanding Service Award. Donna is highlighted in a new section “Getting to Know you” which will highlight department members. This excellent idea for a section in “Anesthesiology News” was suggested by Pam Myers.
We also recognize and thank Joanne Spangler who will also retire this year for her many years of service to our department.

Thankful For...
We look forward to the arrival of a number of new Faculty in July; two of our own and one from further afield.
Drs. Carolyn Barbieri and Mia Mathewson will join us as pediatric anesthesiologists after completing their pediatric anesthesia fellowships with us. Dr. Jonathan Anson will join us as a Clinical Instructor after completing his residency at the University of Pennsylvania.

Finally, while we live in unprecedented economic times, the Department of Anesthesiology has never been busier; at the time of writing, we are well on our way to providing a budgeted 33,000 anesthetics annually and are ahead by 1500 cases when compared to this time last year. May I wish all of our readers a joyful spring and summer, I look forward to the Fall edition in the future.

Please Welcome our New Faculty...

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<tr>
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<tr>
<td>DeAngelo, Nicholas A.</td>
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<td>Sathishkumar, Subramanian</td>
<td>Visiting International Assistant Professor (9/15/2008)</td>
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<tr>
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Division Highlight: Post Anesthesia Care Unit (PACU)

Jansie Prozesky, MB, ChB

PACU Director: Assistant Professor of Anesthesiology

The PACU (Post Anesthesia Care Unit) is a very important part of the perioperative care for patients undergoing interventions or surgery at the Hershey Medical Center. Our professional, highly trained recovery nurses take care of a wide spectrum of patients, from the very sick premature babies waiting to be transport to pediatric ICU to the geriatric patients coming for joint replacement surgery. We have a dedicated PACU resident as well as an attending anesthesiologist available at all times for the PACU.

Over the last couple of years, the number of patients receiving surgery/interventions has significantly increased. To accommodate the increasing number of patients, the PACU is currently being expanded to provide 39 new PACU beds. This expansion is scheduled to be completed in September 2009 and will improve the patient care environment for both patients and caregivers.
Division Highlight: Chronic Pain

Vitaly Gordin, MD
Pain Medicine Director; Associate Professor of Anesthesiology

Pain Medicine is a rapidly growing multidisciplinary field in which physicians, such as anesthesiologists, neurologists, physiatrists, and psychiatrists in conjunction with specialists including psychologists and physical therapists and others, treat patients with various chronic pain conditions. The Pain Medicine Division of the Department of Anesthesiology at Penn State Hershey Medical Center has four faculty members. The multidisciplinary nature of the specialty is reflected by the fact that our division has two anesthesiologists and two neurologists. Dr. Vitaly Gordin and Dr. Jill Eckert have their primary training in anesthesiology, while Dr. Yakov Vorobeychik and Dr. David Giampetro are neurologists. All of our physicians are fellowship-trained in Pain Management. The physicians work closely with Mrs. Virginia Thompson, Certified Registered Nurse Practitioner, who brings a wealth of experience in health care and has an active role in patient education.

As with any other division in the Department of Anesthesiology, we have three main missions: patient care, training of residents and fellows, and research.

Over the past ten years, our Division has seen a steady growth of referrals, requiring a gradual increase in the number of physicians from two to four as well as the addition of a nurse practitioner. We provide care to nearly 8,000 patients per year who are referred to us internally and from as far 100 or more miles away.

Our philosophy regarding patient care consists of establishing a cordial and compassionate environment, empowering our patients by educating them about their condition, and presenting them with a wide range of treatment options. These include interventional pain management procedures, medical management, directing our patients toward a healthy lifestyle, behavioral modification, and engaging them in self-directed home exercise programs. Our Interventional Pain Management Program is headed by Dr. Vorobeychik, who has established a lecture series for the fellows and residents and is leading an ongoing discussion on evidence-based support of interventional pain procedures. We offer a variety of X-ray-guided procedures, both therapeutic and diagnostic, for spine-related disorders and other conditions such as neuropathic pain, cancer-related pain, and other chronic pain conditions. We also perform trialing and implantation of drug delivery systems and spinal cord stimulators for both chronic pain and spasticity. Recently, our physicians became involved in the multidisciplinary Spine Center, working closely with neurosurgeons, orthopedic surgeons, physiatrists, and interventional radiologists.

Our Clinic has made substantial progress in improving patient satisfaction. In 2006, our Clinic was recognized for obtaining the largest increase in Press-Gainey scores among all outpatient sites. This achievement took a concerted effort by the entire staff of the Clinic, and we are continuously working to improve our patients’ experience. This, and many other tasks, are masterfully performed by our Head Nurse, Cindy Baer, who has been in this position for the past nine years.

Our Division offers an ACGME-accredited one-year fellowship, and we are currently approved for three positions. Over the last ten years we have been enjoying a very strong and ever-growing fellowship applicant pool, including candidates from our own Anesthesiology Residency Program and from institutions such as Cleveland Clinic, Columbia-Presbyterian Hospital, Mount Sinai Hospital, and many others. We have been ranked as one of the top programs in the country based on the feedback from the fellowship applicants. Until recently, the fellowship was directed by Dr. Gordin. Since July 2008, Dr. Giampetro has assumed this role and has been applying his vast knowledge and enthusiasm to maintain the high standing of our program. An integral member of our Division is Mrs. Connie Williard, who assists the faculty by skillfully coordinating our didactic and clinical missions. Our Division has a well-established didactic program with weekly lectures, case presentations, journal clubs, and a phantom-based procedure skills course. In collaboration with Dr. Bosseau Murray, Dr. Lisa Sinz, and Sally Rudy, RN, from the Simulation Lab, we have created an annual Crisis Resource Management Course based on scenarios which can be encountered while performing interventional pain management procedures.

We have trained graduates from both anesthesia and non-anesthesia residency programs, and our current fellowship class is a good reflection of this trend. Dr. Shabeera Husain graduated from Anesthesiology at Penn State Hershey Medical Center, Dr. Saloni Sharma is a graduate of Thomas Jefferson Physiatry Program, and Dr. Janak Vidyarthi came to us after completing an Internal Medicine Residency at Penn State Hershey Medical Center. Having fellows from different fields of medicine enhances our didactic program and positively affects patient care.

Over the past several years, the visibility of our faculty has increased considerably within the Department of Anesthesiology, the Medical Center, and on the national arena. After performing an excellent job for several years as Residency Co-Director, Dr. Eckert has been recently promoted to Residency Director. Dr. Gordin, along with physicians from other departments, has been intimately involved in establishing the Spine Center and has been appointed its Medical Director. He also serves as Chair of the Education Programs Committee for the American Academy of Pain Medicine. Our faculty have been presented lectures at Grand Rounds for the Departments of Orthopedics, Neurology, Neurosurgery, and Internal Medicine here at PennState Hershey. Dr. Vorobeychik was invited as a guest speaker to Massachusetts General Hospital and another teaching hospital in Boston, and his presentations were rated as “excellent” at both institutions. Additionally, our faculty have published articles and book chapters in reputable journals and textbooks, and have present at national meetings. All of our physicians are actively working on clinical research projects in collaboration with Drs. Piotr Janicki and Keith Elmslie, who provide expertise and guidance.

Over the past several years, the Pain Medicine Division, as a group, has been successful in creating a work environment conducive to providing quality patient care and achieving our academic mission, and we are determined to strive towards continuing our success.
Airway Management

Leonard Pott, MB, ChB
Associate Professor of Anesthesiology

Airway management is the A in the ABC of patient care and resuscitation, and is a core skill of any anesthesiologist. While every medical doctor must be competent at basic airway management skills, an anesthesiologist is expected to be competent at a significantly higher level. The Penn State Department of Anesthesiology takes the training of residents in both basic and advanced airway management skills very seriously. Our department has an integrated model for airway training, which means that residents do not rotate through a dedicated airway rotation but learn and practice their skills throughout their residency training period.

As juniors, the residents are expected to gain competency at what we consider the basic skills, skills which will enable them to safely manage a routine intubation, and an intubation which proves to be unexpectedly difficult. Our department’s airway management is based on an algorithm which is based on the Difficult Airway Society recommendations, and in turn based on the ASA Difficult Airway Algorithm. These basic skills include: bag-mask-ventilation (BMV), direct laryngoscopy using the Macintosh blade, the use of the Eschmann bougie, laryngeal mask airways (LMA’s) and an intubation which proves to be unexpectedly difficult. Our department’s airway management is based on an algorithm which is based on the Difficult Airway Society recommendations, and in turn based on the ASA Difficult Airway Algorithm. These basic skills include: bag-mask-ventilation (BMV), direct laryngoscopy using the Macintosh blade, the use of the Eschmann bougie, laryngeal mask airways (LMA’s) and the intubating LMA, fiberoptic intubation in the asleep patient, and cricothyroidotomy. Residents receive formal lectures, attend simulation training sessions, and receive personal instruction in the operating rooms from experienced faculty. Assessment of competency is also vitally important, and our department uses two different techniques. Firstly, the resident completes...
Airway Management

(Continued from page 4)

a self-reporting airway audit for each case requiring airway management, which records the technique used and if the resident could manage the airway without requiring assistance from the faculty. Statistical analysis of the residents’ data provides an objective record of competency. Secondly, the residents take an annual airway management Object Structured Clinical Examination (OSCE) in their Clinical Base year and their CA1 year.

During their CA2 and CA3 years the residents are encouraged to develop skills with other, more advanced techniques. At this stage of their training, residents should be skilled at manipulating the fiberoptic scope in the asleep patient and it is time to perform awake fiberoptic intubations. In addition, our department is also very fortunate to have a variety of indirect laryngoscopic intubation techniques such as the GlideScope, both the classic and the Cobalt models, the McGrath Video Laryngoscope and the Shikani Optical Stylet. These skills are also assessed using the self-reporting technique. By the end of their residency training, the residents should be skilled at using at least one technique from each class of instrument. Not surprisingly, the department has a large number of faculty very interested in airway research, and this area has resulted in a number of publications and letters and continues to be an area for much fruitful research. We are fortunate to be practicing anesthesiology during a period when advances in technology have lead to major new developments in airway management. The whole class of supra-glottic devices is only about 20 years old, and new airway equipment is being developed continuously. Indirect techniques have been revolutionized by the development of miniature video cameras which do not require expensive and fragile fiberoptic equipment. What will be developed over the next few years is still uncertain, but what is certain is that these new techniques will lead to a comprehensive re-evaluation of airway management, both in the routine case as well as in cases which are currently considered difficult to intubate. To be sure, our department will continue to be at the leading edge of teaching and research in this exciting field.

Recent airway management publications:


Khalid AN, Murray WB. Simulation of the airway. Operative Techniques in Otolaryngology 2007 ;18:134-139.


The 5th Annual Department of Anesthesiology Resident Research Competition is scheduled to be held on Wednesday, April 22, 2009, from 4:00 – 6:00 p.m. in the Department of Anesthesiology Library (C2860).

Submissions can be made in either of two categories: Original Research (clinical, basic, or education/simulation) or Case Report. A faculty review panel will judge entries. All submissions will be presented briefly to a gathering of faculty, residents, and medical students, followed by presentation of the awards and a reception in the library. First place winners in the two categories will be selected at the end of the competition. Monetary awards will be given for the submission judged best in each of the two categories.

The award recipient’s for 2008 included Dr. Richard Month with a case report on “Spinal Anesthesia for Cesarean Section in a Patient with Cerebral Venous Sinus Thrombosis.” This case report was subsequently presented at the 2008 ASA meeting and published in the Canadian Journal of Anaesthesia. Dr. Sarah Rebstock received an award for her basic research on “MOR1 Gene Variant A118G and Biobehavioral Responses in Preterm Infants.”

Some residents who present research at our annual competition also choose to present their work at the annual Pennsylvania Anesthesia Residents Research Conference (PARRC). For instance, Dr. Denny Orme, who presented a case report at the 2008 PARRC on “Complication of Retrobulbar Block under General Anesthesia, Presenting as Pseudo Stroke after Scleral Buckle Surgery,” won third prize.
Getting to Know You...

When did you start working at the Hershey Medical Center?
I started working at The Milton S. Hershey Medical Center in October 1970, a few weeks before the Hospital opened.

Please tell us about your role(s) and positions at HMC.
I was trained as a Patient Care Clerk to work with all the Department of Medicine physicians to schedule their patient clinical visits and all testing and ancillary services that were needed. I did that job for 9 1/2 years before leaving the Medical Center and moving to Colorado. After 4 years, I moved back to Pennsylvania and started at HMC again as a secretary in the Department of Medicine, Division of Pulmonary Medicine. After 4 years, I applied for a job as Dr. Donald Martin’s secretary in the Division of Clinical Anesthesia in October 1988. I feel very fortunate that he chose me because that was the beginning of my wonderful association with Anesthesia and where I stayed for 21 years. Would you say I liked it there? Dr. Martin trained me for the job as his secretary. Working in Anesthesia was totally different for me because I had always worked in the Department of Medicine. As time went on, Dr. Martin trained me in scheduling the residents and CRNAs for the operating room and ancillary services. Dr. Martin eventually took a six-month sabbatical and gave me the additional responsibility of scheduling the faculty. That was quite a responsibility, but I was up for the challenge. That is how it all began. Scheduling was my new job and eventually a promotion came with it. Years went by and I was moved to a new office under the Chairman’s direction. When Dr. Russell became Chairman, I was promoted to Coordinator of Clinical Services which included supervising the Administrative staff.

After a few years, I decreased my time to four days per week and decided to give up the supervisory portion of my job. Eventually, I further reduced my workdays to three days per week, giving up the clinical schedule responsibilities, and assisted with finance and other duties as assigned.

Then my health changed. Beginning in October, 2006 after many tests, I was diagnosed with ALS (Lou Gehrig’s Disease). Beginning July 1, 2007, I started working PRN, but due to my disease I retired in January 2009.

What awards/recognition have you received?
In November 2002, at Anesthesia Grand Rounds, I was presented with the Employee of the Month Award for the Hershey Medical Center. That was a wonderful and rewarding surprise.

In June 2007, I was awarded the Non-Faculty Outstanding Service Award for the Department.*

(*This award is designed to recognize a non-faculty member of the Department who has made a major contribution and made everyone’s life better. Going forward, this award has been renamed to the “Donna L. Shultz Non-Faculty Outstanding Service Award” —see Chairman’s Corner section on page 1)

Is there anything else that you would like to share with us?
My husband John and I have been married 21 years. We have 4 children between us. I have a son Tom (deceased) and a daughter Sherri. John has a son John and a daughter Jennifer. We have 9 grandchildren ranging in ages from 17 to a newborn.

Current Research

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<th>Principal Investigator</th>
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<td>Structural Determinants of Closed-state Inactivation of N-type Calcium Channels. PA Tobacco Settlement Fund (TSF)</td>
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<td>Janicki, P</td>
<td>A Randomized, Double-blind, Doubledummy, Doseranging, Active and Placebo Controlled Study of Single-dose Oral Rolapitant Monotherapy for the Prevention of Postoperative Nausea and Vomiting (PONV); Schering-Plough Corporation</td>
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<td>Assessment of Learning with the Mobile Intubating Video Laryngoscope (MIVL) in Endotracheal Intubation; University of Nebraska</td>
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</table>
Thank you for all of the valuable contributions to the first edition of the Anesthesiology News. I invite you to consider an original entry for an upcoming edition. Please forward any information to me via email.

Sonia Vaida
svaida@hmc.psu.edu

Forthcoming in the next edition...
New Residents & Fellows for 2009-2010

From the Editor...
Thank you for all of the valuable contributions to the first edition of the Anesthesiology News. I invite you to consider an original entry for an upcoming edition. Please forward any information to me via email.

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svaida@hmc.psu.edu