Department of Anesthesiology
2011 Annual Report

Advancing the Practice of Regional Anesthesiology
and Pain Management
MISSION STATEMENT

“To achieve an international leadership role by providing the highest quality anesthetic care and pain management for patients undergoing orthopaedic surgery, to advance the science of regional anesthesia, pain management, and orthopaedic critical care through clinical and translational research, and to promote educational opportunities to all students of regional anesthesiology and pain medicine.”
By all metrics, 2011 was an exceptionally productive year in the Department of Anesthesiology. It was a year in which we solidified our position as the premier department in the world for the practice of regional anesthesia and pain medicine for orthopedics. In our 2011 Annual Report, I invite you to review some of our key clinical, scientific and educational accomplishments which are due in no small part to the exceptional team with which I am surrounded.

We base the foundations of our practice on the highest quality clinical care for our patients, the most rigorous scientific research in the field and unparalleled educational programs. The outstanding clinical outcomes of surgical patients at HSS continue to be closely linked to the anesthetic, analgesic, and perioperative care provided by members of our Anesthesiology Department. Exceptional pain control scores and the lowest infection rates are a direct result of the regional anesthetic and analgesic techniques employed by our physicians. One of our major new programs in 2011 was the recruitment of a dedicated team of critical care physicians who have been working to develop and adopt standards and protocols to care for the most complex post-surgical patients at HSS. While we aspire to be leaders in treating post-operative complications, we aim ultimately to completely prevent these complications.

Our multi-faceted Pain Medicine Division continues to be extraordinarily successful in managing and minimizing postsurgical pain. Our Recuperative Pain Management Service, the first and only service of its kind in the country, complements our Acute and Chronic Pain Services providing our patients with the highest quality of specialized pain management care. As we work continuously to decrease side effects of medications and improve the entire patient experience, our success is evident in our 99th percentile ranking in 2011 Press Ganey inpatient pain control scores.

Advancing clinical research continues to be at the core of our mission, and 2011 was our most productive year to date. Our dedicated research team completed approximately 64 publications, abstracts and poster presentations, with many of our efforts focused on the primary research themes of improving the patient experience and enhancing patient safety. Collaborations with the HSS Research Division, the Weill Medical College Department of Epidemiology and Biostatistics, and our medical and surgical colleagues at HSS led to unprecedented scientific advances into anesthetic and analgesic techniques for orthopedics.

Along with our advancements in clinical care and research in 2011, we continued to provide the most comprehensive and sought-after educational experience for students of regional anesthesia and acute pain medicine in orthopedics. As our national and international reputation grows, we have become the choice for resident and fellow education in regional anesthesia, and in 2011 we trained more residents than in any other year. Our 15th Annual Symposium entitled, “Controversies and Fundaments in Regional Anesthesia” was profoundly successful and continues to be internationally recognized as one of the finest educational experiences in regional anesthesia for orthopedics in the world.

I hope you enjoy reading about these and other Anesthesiology Department accomplishments in our 2011 Annual Report.

Gregory A. Liguori, MD
Anesthesiologist-in-Chief and Director
Improving Patient Safety through Clinical Initiatives, Quality Assessment and Performance Improvement

To ensure alignment with the Hospital’s strategic initiative to elevate quality to the highest possible level, the Department is committed to continuously evaluating our clinical programs to optimize patient safety and improve patient care. In order to do this, we maintain a robust Quality Assessment and Performance Improvement (QA/PI) program that incorporates education, research and evidence-based practice improvements such as clinical data analysis, incident reporting, benchmarking, quality indicator monitoring, systems failure mode and effect analysis. Under the direction of Chris Edmonds, MD, QA/PI Director and Maureen Stanton, RN, QA/PI Manager, we are constantly developing new initiatives to elevate quality to the highest level.

In January 2011, a highly-specialized Critical Care Team was established to perfect treatment of the complex orthopedic patient and bring contemporary intensive care to sick patients at HSS. The team, comprised of critical care trained physicians with extensive skill in cardiac, thoracic and orthopedic anesthesia and vast experience in caring for critically ill patients, allowed us to expand the level of specialty care provided by our physicians and enabled the implementation of many new critical care initiatives, including the sequential organ failure assessment (SOFA) and ventilator management pathway. Patients undergoing complex surgery and those at risk for critical illness have their physiologic status assessed using the SOFA, which assigns points for the status of the cardiovascular, pulmonary, renal, hepatic, and central nervous systems and has been validated and correlated with outcomes in critical illness. At HSS, the SOFA score initiative helps determine the acuity of patients in the recovery room, aids in the allocation of resources to critical patients and serves as a valuable research tool. The ventilator management pathway utilizes contemporary evidence for care of critically ill patients requiring intensive care in an effort to minimize complications and decrease the duration of ventilation. An extension of the ventilator management initiative is the incorporation of a care “bundle” of simple interventions that have helped prevent ventilator associated pneumonia. Ultimately, these new critical care endeavors optimize the

2011 Highlights and Strategic Accomplishments

Critical Care Team: Sean Garvin, MD, Michael Urban, MD, PhD, Kathy Jules-Elysee, MD, Stavros Mermitsoudis, MD, PhD and Michael Nurok Mb ChB, PhD (Not pictured: Thomas Quinn, MD)
perioperative care of our orthopedic patients and vastly improve patient centered outcomes.

In a collaborative endeavor with the Laboratory and Information Technology Department, we implemented the Epocal Point of Care (EPOC) blood analysis system in September 2011. Using EPOC, anesthesiologists can perform bedside testing of glucose, blood gas and hemoglobin. Results are obtained within minutes and wireless technology instantly transmits results to the lab and HSS clinical systems. This new point of care testing system enables anesthesiologists to quickly identify and treat critical values, therefore enhancing patient care and safety.

QA Committee meeting discussions led to several multidisciplinary conferences in 2011, enabling a multitude of improvements in patient care:

- The Postoperative Ileus Management Conference featured speakers Dr. Edward Parrish, HSS Rheumatology, and Dr. Carl Crawford, NYPH Gastroenterology and Hepatology. The conference provided an extensive perspective of effective changes to improve outcomes.

- The Anesthesia Q/A team met with an interdisciplinary group to discuss the need for more intensive and concerted intra-op monitoring for patients with VP shunts undergoing spine surgery.

- An interdisciplinary evaluation of patient verification of surgical side on anesthesia and surgical consent forms initiated by the QA team lead to a revision of the forms to provide a more clear indication of the correct surgical side.

- The Massive Transfusion Protocol was developed to alert the blood bank of an emergent condition enabling the rapid availability of blood products.

“The anesthesiologists were wonderful! They explained everything to me, had great bedside manner and wonderful skills. Dr. Wang, Dr. Bhagat and Dr. Maalouf helped me with my pain and checked in on me five times per day.”

Comment from Press Ganey Patient Satisfaction Survey
Pain Management: A Tradition of Caring

The Department’s Pain Management Division meets the needs of a multitude of pain conditions through our Acute, Recuperative and Chronic Pain Services. In 2011, under the direction of Seth Waldman, MD, Spencer Liu, MD, Vladimir Kramskiy, MD, and Barbara Wukovits, RN, the Division managed the care of over 29,000 patients. It was also a year of celebration as we marked the twentieth and twenty-fifth anniversaries of the establishment of the Acute and Chronic Pain Services respectively.

The success of our postoperative pain control regimens is reflected in our 99th percentile ranking in Press Ganey patient satisfaction for every quarter of 2011. Additionally, during that time, the percentage of HSS patients reporting that their pain was “always controlled” was significantly above New York and national Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey result averages.

Acute Pain Service

Since its inception, our Acute Pain Service (APS) team has treated over 137,000 surgical inpatients. In 2011, we cared for over 12,000 patients, managing 7,302 epidurals and 4,522 IV PCAs on the inpatient units. In addition to providing pain management care to our patients, we presented numerous educational programs to
HSS clinical staff and shared our expertise at local and national healthcare meetings. We also continued research efforts with our surgical colleagues, collaborating in the following areas of study:

- Use of Pregablin for the treatment of pain following posterior spine fusions, foot and ankle surgery
- Analgesia after total knee arthroplasty: peri-articular injection vs epidural + femoral nerve blockade
- Effect of local anesthetic dose on interscalene block for shoulder arthroscopy, patient satisfaction and return of handgrip strength

**RECUPERATIVE PAIN MEDICINE SERVICE**

The Recuperative Pain Medicine (RPM) Service, a service unique to HSS, is a transitional service that extends our treatment of non-routine pain management issues beyond the immediate perioperative period. The service bridges the gap between the Acute and Chronic Pain Services and helps us to maintain our place as an innovator in the treatment of post-surgical pain.

In 2011, RPM staff treated over 1,300 patients. Although the majority of these patients were inpatients, many outpatients were evaluated and treated by RPM nurse practitioners via our collaboration with the Department of Orthopaedic Surgery’s Adult Reconstruction and Joint Replacement (ARJR) Service. Treatment modalities in this collaboration included medication modifications, dose adjustments and management of side effects. Our Pain Helpline continued to be a valuable resource, as our nurse practitioners responded to the pain concerns of hundreds of patients.

The RPM team remains active in staff and patient education, maintaining leadership roles on various hospital committees, coordinating the in-service

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**PATIENT’S CHOICE AWARD**

Congratulations to Semih Gungor, MD, who received the Patient’s Choice Award from the American Registry. The award is given to physicians who receive excellent reviews from patients and high scores on various quality measures. Of the nation’s 720,000 active physicians, only 5 percent received this honor in 2011.
program on medication management for physician assistants and participating in the orientation program of all new nursing staff. Additionally, our nurse practitioners provide pain management information and guidance for all new patient education initiatives. 2011 presentations included:

- Case study “The Highly Motivated to Succeed Patient” at the Annual HSS Pain Conference
- Presentation outlining the progress of the joint RPM/ARJR pilot program at the HSS 23rd Annual Holiday Total Knee Course

**DIVISION OF MUSCULOSKELETAL AND INTERVENTIONAL PAIN MANAGEMENT**

The Division of Musculoskeletal and Interventional Pain Management, known internally as the Chronic Pain Service (CPS), provides specialized treatment to patients in need of extended pain management care. The CPS provided consults and follow-up treatment for 9,000 outpatients and 3,300 inpatients in 2011. Our pain physicians performed over 3,100 pain-relieving procedures in the Special Procedures Unit (which moved to its new location on 75th Street in late 2011).

Our pain clinic continues to offer comprehensive pain services to an underserved patient population. In 2011, the clinic moved to a new location on 72nd Street, providing a larger space to accommodate the growing needs of our patients. 450 patients were treated by Semih Gungor, MD, Donna Lawrence, NP, and clinic staff.

The CPS participated in many new and ongoing research projects in 2011. The Chronic Pain Registry, developed in 2010 with the support of an NIH grant, is well underway and data collection has begun. We continue to enroll patients into our platelet rich plasma study, which was designed to focus on the treatment of back pain with an emphasis on discogenic lumbar conditions. In addition, an electrical skin conductance study was completed in 2011 and an abstract will be presented in 2012 at the American Society of Regional Anesthesia and Pain Medicine (ASRA) Annual Meeting.
**Enhancing the Patient Experience Through Clinical Research**

Under the direction of Jacques Ya Deau, MD, PhD, Director of Clinical Research and Carey Ford, Clinical Research Manager, our physicians and research team, comprised of ten full time research staff, work to design studies that will ultimately improve our clinical practice. To achieve our goals, 2011 research endeavors focused on two main areas: improving the patient experience and enhancing patient safety. Our investigators published 33 original articles in 2011, continuing their efforts to improve the practice of regional anesthesia and pain medicine. Key to the success of our program is our ongoing multi-disciplinary collaboration with HSS surgeons, Dr. Yan Ma and the statisticians of Weill Cornell Medical College.

**IMPROVING THE PATIENT EXPERIENCE**

This past year, two of our physician investigators completed randomized control trials which evaluated optimal methods to minimize pain following orthopedic surgery. The studies were both designed to challenge traditional analgesics by comparing the traditional femoral nerve block to the newer saphenous nerve block.

Mary Chisholm, MD, studied pain after anterior cruciate ligament (ACL) reconstruction surgery. In her study entitled, “Postoperative Analgesia with the Subsartorial Saphenous Nerve Block in ACL Reconstruction,” Dr. Chisholm found that patients receiving a saphenous block had equivalent postoperative pain scores and equal narcotic use to patients receiving the femoral block, thus proving the efficacy of the newer block. Dr. Chisholm’s data was presented at the 2011 ASRA Annual Meeting and is currently being prepared for manuscript submission.

David Kim, MD, completed a study, entitled “Saphenous (Adductor Canal) Nerve Block vs. Femoral Nerve Block for Total Knee Arthroplasty: A Novel Approach for Postoperative Analgesia”, which investigated pain levels after total knee replacement surgery (TKR). Results of Dr. Kim’s study showed that patients receiving a saphenous block retained equivalent muscle strength to those receiving the femoral block. Additionally, there was no difference in pain control six to eight hours post anesthesia administration. The study was accepted for presentation and awarded as one of the top abstracts at the 2012 ASRA Meeting.

Results of both studies supported the hypothesis that a saphenous nerve block is as clinically effective as the more traditional femoral nerve block for bilateral knee and ACL reconstruction procedures.

**ENHANCING PATIENT SAFETY**

To improve patient safety and specifically address concern in the international anesthesia community that low intra-operative blood pressure may cause strokes, Jacques Ya Deau, MD, PhD, designed a study to determine if there is a connection between blood pressure and stroke during shoulder surgery in the sitting position. Although approximately half of the patients enrolled in the study had low
blood pressure during surgery, none showed any evidence of brain injury or dysfunction postoperatively. The research concluded that, under the right conditions, controlled hypotension can be recommended and is safe for patients undergoing shoulder arthroscopy. Dr. Ya Deau’s paper, entitled “Stroke, regional anesthesia in the sitting position, and hypotension: a review of 4,169 ambulatory surgery patients” was published in Regional Anesthesia and Pain Medicine.

Stavros Memtsoudis, MD, PhD, used a national database to analyze inpatient falls after hip and knee arthroplasty. The study, “In-Hospital Patient Falls After Total Joint Arthroplasty: Incidence, Demographics, and Risk Factors in the United States” analyzed trends, risk factors, complications, and hospital cost for inpatient falls. The research determined that, given the associated morbidity, mortality, and increased cost, proper resources should be allocated to minimize the risk of falls in this patient population.

Dr. Memtsoudis also collaborated with Dr. Spencer Liu on a study analyzing perioperative demographics and pulmonary outcomes of patients with obstructive sleep apnea (OSA). “Perioperative pulmonary outcomes in patients with sleep apnea after noncardiac surgery” determined that patients with OSA developed pulmonary complications more frequently than other patients after both orthopedic and general surgical procedures. The study, published in Anesthesia and Analgesia, determined that OSA is an independent risk factor for perioperative pulmonary complications; results of the study are being used to improve perioperative outcomes in this growing patient population.

Serving as the Most Trusted Educator

Under the direction of David Lee, MD, Medical Director, Education, Jonathan Beathe, MD, Director, Training Programs, and Mary Hargett, Administrative Director, Education, it is our goal to promote educational opportunities to all students of regional anesthesiology and pain medicine. In 2011, to enhance the educational
experience of our fellows, we expanded our cadaver laboratory curriculum and made significant changes to our written laboratory syllabus. In addition, we maintained significant representation at educational conferences worldwide and hosted the HSS Visiting Professor Lecture Series, presenting the First Annual Visiting Professor Lecture in Anesthesiology.

**Cadaver Laboratory Curriculum**

The Department achieved a new milestone in regional anesthesia education with the addition of a novel and comprehensive cadaver laboratory curriculum. Led by Christopher DiMeo, MD, David Kim, MD, and Carrie Guheen, MD, the laboratory is arranged into specific block modules including supraclavicular blocks (interscalene and supraclavicular), infraclavicular blocks (infraclavicular and axillary), blocks of the anterior thigh (femoral, lateral femoral cutaneous and saphenous), and blocks of the posterior thigh (sciatic and popliteal). Unlike typical cadaver courses which make use of embalmed specimens, the laboratory employs fresh frozen cadavers which replicate the look and feel of living tissue. Because these specimens are not embalmed, ultrasonography yields images that compare favorably to those found in the operating room while needle placement and local anesthetic injection mimic the proprioceptive feedback found in living tissue. Students in the laboratory therefore have the opportunity to not only dissect the anatomy relevant to a particular nerve block, but also practice regional block and catheter placement techniques in an environment free of time constraints or fear of complications. In all, our cadaver laboratory provides students of regional anesthesia the substrate and time necessary to develop the knowledge and skill critical to safe, efficacious peripheral nerve block technique.

**First Annual Visiting Professor Lecture in Anesthesiology**

In December 2011, Michael F. Mulroy, MD, participated in the HSS Visiting Professor Lecture Series, presenting the First Annual Visiting Professor Lecture in Anesthesiology. Dr. Mulroy’s Grand Rounds, “Femoral Nerve Blockade: Balancing Pain Relief with Rehabilitation Milestones”, was presented to a multidisciplinary group.
including surgeons, nurses, and physical therapists.

In his presentation, Dr. Mulroy noted that femoral nerve blockade provided excellent postoperative analgesia but was associated with an almost seven percent incidence of postoperative falls in one study. He went on to address what could be done to preserve effective analgesia while reducing patient risk and enhancing rehabilitation. In addition to presenting Grand Rounds, Dr. Mulroy also moderated a “Visiting Professor Journal Club” for the Anesthesiology staff and met with members of several disciplines of the Hospital’s leadership team to share best practice information.

**2011 Conference Highlights**

**American Society of Regional Anesthesia and Pain Medicine (ASRA) Annual Meeting**

Several members of our attending staff, fellows, and support staff participated as both faculty and attendees at the 2011 ASRA Annual Meeting in Las Vegas. Ten abstracts from the Department were accepted for presentation and we received two of the six awards presented; a considerable achievement given that over 300 abstracts were submitted.

Dr. Spencer Liu’s abstract (presented by Pamela Shaw, Assistant Research Coordinator and Co-Investigator) entitled “Uncomplicated Removal of Epidural Catheters in 4,365 Patients with International Normalized Ratio Greater than 1.4 during Initiation of Warfarin Therapy” was awarded “Best of Abstracts.” 2010-2011 Fellow Lei Li, MD, received the “Resident Travel Award” for her abstract submission entitled “Cervical Spine Disease is a Risk Factor for Persistent Phrenic Nerve Paresis following Interscalene Block for Shoulder Surgery”, a study completed under the direction of Victor Zayas, MD.

**Annual Regional Anesthesia Symposium**

The Department’s 15th Annual Symposium, “Controversies and Fundamentals in Regional Anesthesia” took place in May 2011 at The New York Palace Hotel with over 200 attendees. The event was organized and directed by Daniel Maalouf, MD, and Devan Bhagat, MD, Program Chairs, and Mary Hargett, Program Director. Registrants attended didactic sessions, problem-based learning discussions and intimate, hands-on workshops. Featured Guest Faculty were John Dilger, MD, Sandra Kopp, MD,
and Carlos Mantilla, MD, from the Mayo Clinic in Rochester, Minnesota. The entire Department attending staff contributed to the workshops with the assistance of current and alumni fellows.

**Annual Pain Awareness Program**
The Department sponsored its Fifth Pain Awareness Program, “Chronic Pain: The Journey to Understanding and Treatment” in September 2011. Over 55 attendees were presented with a cross-section of topics related to the physiologic, psychosocial, and cultural dimensions of persistent pain. The program was directed by Barbara Wukovits, RN and presented by HSS faculty including Mary Chisholm, MD, Kate DelPizzo, MD, Vladimir Kramskiy, MD, Brian Phillips, NP, and Cheryl Conwell, DNP. Guest Faculty included Lara Dhringa, MD, from Beth Israel Medical Center and Maureen Cooney, RN, from Westchester Medical Center.

**Going Lean with Information Technology Initiatives**

HSS’ has implemented the continuous performance improvement philosophy Lean, aimed at reducing sources of waste to promote greater efficiency and improve patient care. Within the Department we are utilizing Lean philosophies to streamline clinical and administrative processes. In 2011, I.T. Manager Mike Bieltz designed a number of information technology programs to eliminate waste and increase productivity:

- With the assistance of Brian Philips, NP, a new web application was developed that allows the RPM service to track patient visits from any hospital computer and easily access a multitude of information including location of patient's pain and related pain scores, hospital discharge pain medications, surgical reports and visit notes. This web application eliminated time consuming manual reporting.

- The Department’s transesophageal echocardiography (TEE) exam verifies the TEE competency of physicians for credentialing requirements. In 2011, the exam (which was previously paper-based) was placed online with a new Department electronic learning application that certifies anesthesiologist's competency in TEE as well as providing exam results and valuable reports on the learning process.

"My experience in Dr. Tom Quinn’s care was excellent – it made all the different in my recuperation – I am extremely pleased and thankful for such excellence!"

Comment from Press Ganey Patient Satisfaction Survey
The Department of Anesthesiology was proud to announce the addition of two outstanding physicians to our team in 2011:

**Naomi Dong, MD**  
**Assistant Attending Anesthesiologist**

Dr. Dong completed her residency at St. Luke’s-Roosevelt, where she served as chief resident. She then completed a Fellowship in Pediatric Anesthesiology with a six-month Pediatric Cardiac Anesthesia continuum at Children’s Hospital of Philadelphia. We welcome Dr. Dong to our pediatric anesthesia team.

**Carrie R. Guheen, MD**  
**Assistant Attending Anesthesiologist**

Dr. Guheen joined our Attending staff after graduating from our Regional Anesthesia and Acute Pain Medicine Fellowship, during which she was awarded for clinical excellence. She completed her residency in anesthesiology at NewYork-Presbyterian Hospital/Weill Cornell Medical College, serving as co-chief resident in her final year and receiving the Joseph F. Artusio Award for Outstanding Resident.

In addition to our new physicians, we added thirteen new staff members to our talented team in 2011. The Department welcomed:

- **Aris Azar, RN**  
  *Pain Medicine*
- **James Bae, MS**  
  *Research Assistant*
- **Lorna Co, CRNA**
- **Jodie Curren, RN**  
  *Research Nurse*
- **Amanda Goon**  
  *Research Assistant*
- **Bingjing Liu**  
  *Administrative Assistant, Dr. Wang*
- **Andrea Martin**  
  *LPN, Dr. Gungor*
- **Deepa Mathew, NP**  
  *Pain Medicine*
- **Shane Reid, MS**  
  *Research Assistant*
- **Paul Scott, CRNA**
- **Wendy Smart-Lazare, CRNA**
- **Geraldine Tomakin-Pilla, NP**  
  *PACU*
- **Daniel Yoo, MS**  
  *Research Assistant*
“No other anesthesiologist has ever spent so much time with us. HSS is the best!!!”

Comment from Press Ganey Patient Satisfaction Survey

We Congratulate our 2011 TEACHERS OF THE YEAR

Michael Gordon, MD, was selected as the 2010-2011 Teacher of the Year by the 2011 graduating fellows. Dr. Gordon was also the recipient of this award in 2007.

Douglas Green, MD, was chosen as the 2011 HSS Teacher of the Year by the graduating anesthesiology residents of Weill Cornell Medical College.

Staff Awards

Congratulations to Barbara Wukovits, RN, Director of Pain Services, who was presented the 2011 Gigi Viellion Scholarship Award by the HSS Alumni Association. Barbara was chosen for her clinical excellence, leadership skills, extensive research and publications. Barbara was also a recipient of the 2011 HSS Interdisciplinary Team Award, along with Gregory Liguori, MD. The two were awarded for their work on the CAUDI Bundle Team, which was created to implement evidence-based guidelines to assess urinary catheter use and develop tools to monitor the occurrence of urinary tract infections in our inpatient population.

Junior Rigby, Chief Anesthesia Technician/Supervisor, was selected as one of four recipients of the 2011 HSS Safety Champion Award. Junior was cited for his professionalism and dedication to improving the services provided by the anesthesia technical staff to ensure the highest levels of patient and staff safety.
Humanitarian Service Around the World

Kethy Jules-Elysee, MD, participated in medical missions to rural Haiti in January and July 2011. During each week-long trip, Dr. Jules-Elysee cared for approximately 500 patients from 6 months to 101 years old. Children most often presented with fever and respiratory tract infections, while adults had various conditions including asthma, superficial wound infections and blood pressures as high as 250/140.

Several members of our team volunteered their services in medical missions to Guatemala in 2011. In May, Jeffrey Ngeow, MD, on his third trip with the HOPE Mission, treated 350 Ixil Indian patients for a multitude of conditions including scabies, lice, worms, malnutrition, anemia, high blood pressure and diabetes. Richard King, MD, participated in a week long mission in June, providing anesthesia for 42 surgical procedures for the country’s indigent population. Donna Lawrence, NP, traveled with Cornerstone Christian Center in July; she assisted in treating the medical and dental needs of approximately 200 children in an orphanage.

Teambuilding at the JPMorgan Chase Corporate Challenge

In June 2011, in a fun night filled with HSS team spirit and camaraderie, 116 HSS staff members, including 17 of our Department, participated in the JPMorgan Chase Corporate Challenge, a 5K run in Central Park. As the Department coordinated and sponsored the event, it was fitting that two of our staff members, Dr. Michael Nurok and Kate Collins, NP, placed first of male and female HSS runners respectively.
We would not be the leaders we are today without the support and efforts of our dedicated support staff. As we acknowledge their role in our successes, we invite you to learn more about three members of our exceptional team:

**MARY KELLY, RN, EVENING PAIN MANAGEMENT COORDINATOR**

Role: I facilitate the pain control regimes of post surgical patients, employing multi-modal techniques to help alleviate postoperative pain. My wide scope of responsibilities include ensuring plan effectiveness and patient safety, educating patients about their treatment and working with the patient care team to ensure that a comprehensive and patient-specific pain management plan is in place.

A member of the HSS family since: May 2000

Why I love my job: I enjoy the challenges of my position because I truly believe that my contributions improve the patient’s post-operative experience. I relish my daily interactions with my HSS colleagues by whom I’ve always felt encouraged and supported.

Goals: I am currently enrolled in, and looking forward to completing, the advanced practice nursing Master’s program at PACE University. Although my goal is to remain in the Anesthesia Department, I am enthusiastic about the opportunities that will arise once I obtain my Master’s degree.

**SESLE OLSEN, CERTIFIED REGISTERED NURSE ANESTHETIST (CRNA)**

Role: I spend my days in the ORs with the anesthesiologists providing sedation and general anesthesia for patients undergoing orthopedic surgery.

A member of the HSS family since: June 2006

Why I love my job: It is truly rewarding to see my patients in recovery following surgery, doing well after both minor and complex procedures. I enjoy and respect the people I work with and the atmosphere of collegiality and professionalism that characterizes the Department.

Goals: To continue to grow professionally and further develop my clinical skills.

**DANIEL YOO, MS, RESEARCH ASSISTANT**

Role: I am responsible for the administration and coordination of the anesthesiologists’ research studies. I am involved in the entire research process including study protocol development, enrolling patients in clinical studies, data collection and analysis, manuscript preparation and editing.

A member of the HSS family since: April 2011

Why I love my job: It is exciting to be involved in what are often ground-breaking projects from inception through to publication. I enjoy the patient interaction while conducting such valuable anesthesia research. I like working at HSS because of its strong commitment to superlative patient care. Within the Anesthesia Department, I enjoy the sense of camaraderie and appreciate how the Department strives to support and help each person grow professionally.

Goals: Short-term, I would like to obtain my certification in clinical research. Long term, I aspire to combine my knowledge in acupuncture and anesthesia to explore the use of alternative medicine for the treatment of pain and post-operative nausea and vomiting.

“The anesthesia team was excellent. They did a great job of applying the anesthetic and sedative: I was able to regain feeling in my arm/hand and recover from sedation very quickly. They also did a great job of providing information regarding the procedure.”

Comment from Press Ganey Patient Satisfaction Survey
ANESTHESIOLOGIST-IN-CHIEF
AND DIRECTOR
Gregory A. Liguori, MD

ATTENDING ANESTHESIOLOGISTS
Spencer S. Liu, MD
Medical Director, Acute and Recuperative Pain Medicine Services
Nigel E. Sharrock, MB ChB

ASSOCIATE ATTENDING ANESTHESIOLOGISTS
Stephen N. Harris, MD
Stavros G. Mentsoudis, MD, PhD
Jeffrey Y.F. Ngeow, MD
Michael Nurok, MB ChB, PhD
Cephas P. Swamidoss, MD, MPH
Michael K. Urban, MD, PhD
Medical Director, PACU
William F. Urmey, MD
Victor M. Zayas, MD
Director, Pediatric Anesthesia

ASSISTANT ATTENDING ANESTHESIOLOGISTS
Jonathan C. Beathe, MD
Director, Training Programs
James D. Beckman, MD
Devan D. Bhagat, MD
Bradford E. Carson, MD
Mary F. Chisholm, MD
Kathryn DelPizzo, MD
Christopher A. DiMeo, MD
Naomi Dong, MD
Chris R. Edmonds, MD
Medical Director, Quality Assessment and Performance Improvement
Sean Garvin, MD
Michael A. Gordon, MD
Enrique A. Goytizolo, MD
Douglas S.T. Green, MD
Carrie R. Guheen, MD
Semih Gungor, MD
Medical Director, Chronic Pain Research
Michael C. Ho, MD
Kethy M. Jules-Elysee, MD
Richard L. Kahn, MD
Medical Director, Ambulatory Surgery
David H. Kim, MD
Richard S. King, MD
Vladimir N. Kramskiy, MD
Medical Director, Ambulatory Recuperative Pain Medicine
Vincent R. LaSala, MD
Andrew C. Lee, MD
Medical Director, Clinical Initiatives
David L. Lee, MD
Medical Director, Education
Yi Lin, MD, PhD
Daniel B. Maalouf, MD, MPH
John G. Muller, MD
Joseph A. Oxendine, MD
Leonardo Paroli, MD, PhD
Thomas J. Quinn, MD, MBA
Daniel I. Richman, MD
James J. Roch, MD
Lauren H. Turteltaub, MD
Assistant Director, Training Programs
Philip J. Wagner, MD
Director, Web
Seth A. Waldman, MD
Medical Director, Chronic Pain Medicine
David Y. Wang, MD, MS, MPH
Medical Director, Chronic Pain Education
Jacques T. Ya Deau, MD, PhD
Medical Director, Clinical Research

2010-2011 FELLOWS IN REGIONAL ANESTHESIOLOGY AND ACUTE PAIN MEDICINE
Cindy Chen, MD
Carrie R. Guheen, MD
Cassie Kuo, MD
Lei Li, MD
Jiabin Liu, MD, PhD
Marco Lotano, MD
Asha Manohar, MD
Dawn Yan, MD

2010-2011 ANESTHESIA RESEARCH FELLOW
Anna Maria Bombardieri, MD, PhD

2011-2012 FELLOWS IN REGIONAL ANESTHESIOLOGY AND ACUTE PAIN MEDICINE
Emilio G. Andrade, MD
Anna Maria Bombardieri, MD, PhD
Shawna M. Dorman, MD
Justo K. Gonzalez, MD
Mandip S. Kalsi, MD
Kristy M. Labib, MD
Milica Markovic, MD
Swetha Pakala, MD
Minda Patt, MD

ADMINISTRATIVE DIRECTOR
Roberta Stack, MS

ADMINISTRATION
Mary J. Hargett
Administrative Director, Education
Susan Cardamone, MBA
Assistant Administrative Director
Maureen Stanton, RN
Manager, QA/PI
“Dr. Seth Waldman is a true professional and a gentleman. His work and care is outstanding.”
Comment from Press Ganey Patient Satisfaction Survey

Ilene Bacine  
Manager, Finances

Mike Bieltz, MBA  
Manager, Information Technology

Sarah Kennedy  
Coordinator, QA/PI

Dana Libov  
Administrative Coordinator

Sheryl Stebel  
Administrative Assistant, Dr. Liguori

Ellen Segal  
Staff Secretary

**PAIN MEDICINE**

Barbara Wukovits, RN, BSNC  
Director, Pain Services

**Nursing Staff**

Aris Azar, RN  
Kaitlin Collins, MS, RN, ANP

Mary Kelly, RN, BC, ONC  
Evening Nurse Coordinator

Donna Lawrence, NP  
Deepa Mathew, RN, MS, ANP, GNP

Eileen Moynihan, RN, MA, BSN, ONC

Brian Phillips, MS, RN, FNP  
Assistant Director RPM

**Chronic Pain Staff**

Audrey Bucknor  
Office Manager, Dr Richman

Elizabeth Garden  
Office Manager, Dr Kramski

Alexandra Jacobs, RN, BSN, MA  
Dr Richman

Diane Leistman, RN  
Dr Waldman

Bingjing Liu  
Administrative Assistant, Dr Wang

Neiza Lugo  
Registrar/Billing

Cyndi Ma  
Secretary, Dr Ngeow

Lilia Macias  
Secretary, Dr Richman

Andrea Martin, LPN  
Dr Gungor

Susan Ngeow, CPA  
Office Manager, Dr Ngeow

Sandra Simpson, LPN  
Office Manager, Dr Wang

Evette Staff  
Secretary, Dr Richman

Elvi Taveras  
Office Manager, Dr Gungor

Bonnie Urquhart  
Pain Services Coordinator and Office Manager, Dr Waldman

Sherrene Wan  
Secretary, Dr Ngeow

**RESEARCH**

Carey Ford, CCRC  
Manager, Research

Pamela Shaw, CCRC  
Assistant Coordinator, Research

**Senior Research Assistants**

Valeria Buschiasso  
George Go

Jennifer Stanton Gordon

**Research Assistants**

James Bae, MS  
Amanda Goon

Dorothy Marcello  
Shane Reid, MS

Tara Thompson  
Daniel Yoo, MS

**Research Nurse**

Jodie Curren, RN, BSN, ACRN

**NURSE ANESTHETISTS**

Donna Hasil, CRNA  
Chief CRNA

Carol Bohne, CRNA

Elizabeth Caliwara, CRNA

Claire Karlick, CRNA

Sara Listokin, CRNA

Mary Maher, CRNA

Lisa Nigro, CRNA

Sesle Olsen, CRNA

Niles Perlis, CRNA

Paul Scott, CRNA

Wendy Smart-Lazare, CRNA

**PACU**

Nurse Practitioners

Cheryl Conwell, DNP, ANP-BC

Michele Mangini-Vendel, DNP, ANCP-BC, CCRN

Geraldine Tomakin-Pilla, ANP-BC

**Physician Assistants**

Christy Loughlin, PA-C  
PA Service Manager, PACU

Kelly Culot, PA-C

Michael Lichardi, PA-C

Kenneth Van Ora, PA-C

**ANESTHESIA TECHNICIANS**

Junior Rigby  
Supervisor/Chief Anesthesia Technician

Garrick Austin  
Grell Barnes

Raymond Daniels  
Raul Latchman

Hector Pineda
AWARDS AND SPECIAL RECOGNITION

James D. Beckman MD
Invited Speaker, New York State Society of Anesthesiologists’ 65th Annual Postgraduate Assembly in Anesthesiology, New York, NY

Michael A. Gordon, MD
Fellows’ “Teacher of the Year” Award, 2010-2011

Enrique Goytizolo, MD
Invited Speaker, X International Symposium: Latino-America Society of Regional Anesthesia, Lima, Peru

Douglas S. T. Green, MD
Cornell Residents’ “Teacher of the Year” Award, 2010-2011

Semih Gungor, MD
2011 Patient’s Choice Award recipient, American Registry
Invited Speaker, AnestezIstanbul Conference, Istanbul, Turkey

Richard S. King, MD
Invited Speaker, AnestezIstanbul Conference, Istanbul, Turkey
Invited Speaker, ASRA Annual Meeting, Las Vegas, NV

Andrew C. Lee, MD
Guest Speaker, 16th Annual Rhode Island Anesthesia Conference sponsored by Brown University, Providence, RI

Spencer S. Liu, MD
Best Abstract, Annual Meeting American Society of Regional Anesthesia, Las Vegas, NV
Invited Speaker, Annual Meeting American Society of Anesthesiologists, Chicago, IL
Invited Speaker, Annual Meeting International Anesthesia Research Society, Vancouver, BC
Invited Speaker, Combined meeting of Hong Kong Society of Anaesthesia, Australia New Zealand College of Anaesthesia, and Faculty of Pain Medicine, Hong Kong
Invited Speaker, Department of Anesthesiology, New York University, New York, NY
Invited Speaker, Annual meeting of the American Society of Regional Anesthesia, Las Vegas, NV
Invited Speaker, National Association of Orthopedic Nurses 31st Annual Congress, Baltimore, MD

Daniel B. Maalouf, MD, MPH
Instructor of Ultrasound-Guided Regional Anesthesia, Lebanese University, Beirut

Stavros G. Mentsoudis, MD, PhD
Invited Speaker, Weill Cornell Medical College Research Seminar Lecture Series, New York, NY
Invited Speaker, New York State Society of Anesthesiologists’ 65th Annual Postgraduate Assembly in Anesthesiology, New York, NY

Michael Nurok, MB ChB, PhD
Invited Speaker, American Society of Anesthesiologists Annual Meeting, Chicago, IL
Invited Speaker, Department of Anesthesiology and Critical Care, University of Pennsylvania, Philadelphia, PA

Michael K. Urban, MD, PhD
Invited Speaker, 6th Annual Perioperative Summit Meeting, Miami, FL
Invited Speaker, National Association of Orthopedic Nurses 31st Annual Congress, Baltimore, MD
Invited Speaker, New York State Society of Anesthesiologists’ 65th Annual Postgraduate Assembly in Anesthesiology, New York, NY

William F. Urmey, MD
Invited Speaker, ASA Annual Meeting, Chicago, IL
Invited Speaker, ASRA Annual Meeting, Las Vegas, NV
Invited Speaker, 65th Post Graduate Assembly of the New York State Society of Anesthesiologists, New York, NY
Invited Speaker, 4th SIMPAR San Matteo International Meeting on Pain Research, Pavia, Italy
Invited Speaker, AnestezIstanbul Conference, Istanbul, Turkey

Jacques T. YaDeau, MD, PhD
Invited Speaker, ASRA Annual Meeting, Las Vegas, NV

Victor M. Zayas, MD
Invited Speaker, ASRA Annual Meeting, Las Vegas, NV

LEADERSHIP POSITIONS AND APPOINTMENTS

Jonathan C. Beathe, MD
Member, ASA Advisory Council

Semih Gungor, MD
Symposium Chair, International Anesthesia Symposium, Istanbul, Turkey

David L. Lee, MD
Member, Medical School Admissions Committee, Weill Cornell Medical College

Spencer S. Liu, MD
Examiner, American Board of Anesthesiology Chair, Committee for ASRA AQI Clinical Registry

Jeffrey Y. E Ngeow, MD
Advisory Board Member, New York Society of Interventional Pain Practice
Member, Review Committee for Grant Application, Cornell Clinical and Translational Science Center

Member, Pain Committee, New York State Society of Anesthesiologists
Honorary Member, Chinese American Society of Anesthesiologists

Michael Nurok, MB ChB, PhD
American Society of Anesthesiologists: Committee on Ethics
Chair, International LAM Registry

William F. Urmey, MD
Board of Directors, American Society of Regional Anesthesia and Pain Medicine
Chair, Distinguished Service Award Committee, American Society of Regional Anesthesia and Pain Medicine

Seth A. Waldman, MD
Secretary, New York State Society of Interventional Pain Physicians

EDITORIAL APPOINTMENTS

Jonathan C. Beathe, MD
Scientific Reviewer: Journal of Clinical Anesthesiology
Scientific Reviewer: Journal of Clinical Orthopedics and Related Research

Gregory A. Liguori, MD
Editor: Anesthesia and Analgesia
Associate Editor: Regional Anesthesia and Pain Medicine

Spencer S. Liu, MD
Editor: Regional Anesthesia & Pain Medicine
Section Editor: Pain Medicine: Anesthesia & Analgesia

Stavros G. Mentsoudis, MD, PhD
Scientific Reviewer: Annals of Internal Medicine
Scientific Reviewer: Annals of Thoracic Surgery
Scientific Reviewer: Anesthesiology
Scientific Reviewer: Anesthesia and Analgesia
Scientific Reviewer: Cleveland Clinic Journal of Medicine
Scientific Reviewer: Clinical Anatomy
Scientific Reviewer: Critical Care
Scientific Reviewer: HSS Journal
Scientific Reviewer: Journal of Clinical Anesthesiology
Scientific Reviewer: Journal of Clinical Orthopedics and Related Research
Scientific Reviewer: Journal of Critical Care Medicine
Scientific Reviewer: Regional Anesthesia and Pain Medicine
Scientific Reviewer: The Journal of Thoracic and Cardiovascular Surgery

Michael Nurok, MB ChB, PhD
Scientific Reviewer: Cochrane Review Group
SELECTED PUBLICATIONS

Original Articles


Memtsoudis SG, Kirskay M, Ma Y, Chiu YL, Mazumdar M, Pumberger M, Girardi F.


**Abstracts and Poster Presentations**

Bombardieri AM, Girardi FP, Ma Y, *Memtsoudis SG*. Comparative effectiveness of centrally versus peripherally transduced venous pressure monitoring in the perioperative period in spine patients. Society of Critical Care Anesthesiologists (SOCCA) 2011 Annual Meeting, Chicago, IL


Liu JB. Analgesia after Total Knee Arthroplasty: Peri-articular Injection vs. Epidural plus Femoral Nerve Blockade, a Prospective Randomized Controlled Clinical...
Trial. Hospital for Special Surgery Fellow Research Presentations, 2011


Lotano M. Postoperative Analgesia with the Subsartorial Saphenous Nerve Block in Anterior Cruciate Ligament Reconstruction. Hospital for Special Surgery Fellow Research Presentations, 2011


Esposito A, Chiu YL, Mantilla C, Parvizi J, Mazumdar M, Memtsoudis SG. Bilateral knee arthroplasties: Have they become safer? 65th Postgraduate Assembly in Anesthesiology, December, New York, NY


Sun X, Mazumdar M, Memtsoudis SG. The utilization of critical care services among patients undergoing total hip and knee arthroplasty. 65th Postgraduate Assembly in Anesthesiology, December, New York, NY

Walz JM, Memtsoudis SG, Urban MK, Girardi FP, Barton BA, Soller BR, Heard SO. Tissue oxygenation in response to intraoperative homologous blood transfusion in complex spine surgery. Society of Critical Care Anesthesiologists (SOCCA) 2011 Annual Meeting, Chicago, IL


Book Chapters


About Hospital for Special Surgery
Founded in 1863, Hospital for Special Surgery (HSS) is a world leader in orthopedics, rheumatology and rehabilitation. HSS is nationally ranked No. 1 in orthopedics, No. 2 in rheumatology, No. 19 in neurology, and No. 16 in geriatrics by U.S. News & World Report (2011-12), and has received Magnet Recognition for Excellence in Nursing Service from the American Nurses Credentialing Center, and has one of the lowest infection rates in the country. From 2007 to 2011, HSS has been a recipient of the HealthGrades Joint Replacement Excellence Award. A member of the NewYork-Presbyterian Healthcare System and an affiliate of Weill Cornell Medical College, HSS provides orthopedic and rheumatologic patient care at NewYork-Presbyterian Hospital at New York Weill Cornell Medical Center. All Hospital for Special Surgery medical staff are on the faculty of Weill Cornell Medical College. The hospital’s research division is internationally recognized as a leader in the investigation of musculoskeletal and autoimmune diseases.