



Department of Anesthesiology Perioperative Care and Pain Medicine Residency Training Program



NEW YORK UNIVERSITY

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and Pain Medicine

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Department of Anesthesiology,
Perioperative Care and Pain Medicine

FROM THE CHAIRMAN

The Department of Anesthesiology, Perioperative Care and Pain Medicine at NYU Grossman School of Medicine has a long and distinguished history in the development of academic anesthesia. We are focused on continuing our tradition of outstanding clinical care, a commitment to resident education and concern for the patients for whom we care. Clinical teaching has always been emphasized in our program and has resulted in outstanding performance of our residents on the in-training examination and in ultimate board certification. Along with the rise in stature of the NYU Grossman School of Medicine, we continue to build on the existing strengths of our department. In addition to our clinical activities we have very active basic and clinical research programs.

The primary concern of a candidate in choosing a residency program is the clinical training they will obtain and the opportunities that are opened to them. The majority of programs offer excellent clinical training; however, it is important to consider the environment in which you will spend your next several years. At NYU you will find a department committed to resident education, one concerned with the professional and personal growth of our residents, and one where resident autonomy is encouraged in a supportive environment. Our graduates have moved on to faculty positions at prestigious institutions and are sought after at the best private practices in the country. We invite you to visit our department, see our facilities, talk with our residents and faculty, and allow us to participate in your education.



Andrew D. Rosenberg, MD

Dorothy Reaves Spatz, MD, Professor and Chairman
Department of Anesthesiology, Perioperative Care
and Pain Medicine
NYU Grossman School of Medicine



NYU LANGONE HEALTH AND AFFILIATED HOSPITALS

NYU Langone Health is one of the nation's premier centers of excellence in health care, biomedical research, and medical education. For over 167 years, NYULH physicians and researchers have made countless contributions to the practice and science of health care. The medical center consists of the NYU Grossman School of Medicine (NYUGSOM), including the Smilow Research Center and the Skirball Institute for Biomolecular Medicine; and the four hospitals of NYU Langone Health: Tisch Hospital/Kimmel Pavilion, a major tertiary care center; NYU Langone Orthopedic Hospital, a leader in musculoskeletal care; NYU Langone Hospital-Brooklyn and NYU Langone Hospital-Long Island. Its location is convenient to Manhattan's unparalleled cultural, civic, and recreational attractions.

NEW YORK UNIVERSITY AND THE SCHOOL OF MEDICINE

New York University, the largest private university in the United States, has an outstanding public service history in health, education, and the arts. NYU consists of fourteen schools and colleges at six locations in Manhattan. NYU enrolls more than 40,000 students from over 110 countries around the world. The School of Medicine, founded in 1841, enrolls about 150 students each year. The faculty of 2,700 participate in teaching, patient care, and research.

With over 50 centers, 30 academic departments, and 376,000 square feet of research laboratories, NYU Grossman School of Medicine continues to produce groundbreaking discoveries, some of which have led to Nobel prizes. The School's basic and clinical scientists

conduct dynamic interdisciplinary research to address the entire range of 21st-century biomedical science. It is one of the world's leading medical research centers, with emphasis on exploring the biomolecular roots of disease. With the NYU Langone Health Science Building, the anesthesiology house staff have an additional venue for collaborative research with world-renowned basic science faculty.

TISCH HOSPITAL

The 726-bed Tisch Hospital, the University Hospital of NYU, provides treatment for a wide variety of clinical problems in virtually every surgical specialty. Because of its unique position as a referral center and the nature of the patient population, the large number of operative procedures performed puts special intellectual demands on the clinician. This, of course, creates an outstanding environment for in-depth learning and experience. A large proportion of patients require intensive anesthetic care and monitoring, necessitating close interaction with specialists in other disciplines. Among the 60,000 procedures performed annually are 1,400 open-heart and 1,400 neurosurgical operations, 1,200 major vascular procedures, and many types of adult and pediatric reconstructive surgery as well as organ transplantation.

KIMMEL PAVILION

The Helen and Martin S. Kimmel Pavilion, opened in 2018, is a 374 bed acute care inpatient facility adjacent to Tisch Hospital. Care is provided for general and subspecialty surgical services, cardiothoracic surgery, neurosurgery, neurology, hematology, bone marrow transplant, and solid organ transplant services. We also have intensive care and step-down units for cardiology, neuroscience, and surgery; 30 operating rooms and image-guided labs; and 4 procedural rooms.

Care for children is provided on several floors dedicated to Hassenfeld Children's Hospital—34th Street, which has a Children's Hall, Family Resource Center, and private entrance and elevators.



BELLEVUE HOSPITAL CENTER

Adjacent to NYU Langone Health lies Bellevue Hospital, America's oldest public hospital (1736) with 1,232 beds. It is the flagship institution of the largest municipal hospital system in North America, with an average of 500,000 outpatient clinic visits, 120,000 emergency patients, and 26,000 in-patients each year. Bellevue is New York City's largest Level I trauma center and evaluates 1,000 patients per year with a 4:1 blunt-to-penetrating trauma case mix. The clinical experience at Bellevue includes a broad spectrum of anesthesia care for patients with a wide variety of complex multisystem problems. Here you become adept at handling complex aspects of perioperative management, including the use of sophisticated monitoring and diagnostic techniques, ultrasound-guided regional anesthesia and vascular access, and airway management devices and techniques.

While Bellevue has a worldwide reputation for trauma care, it is much more. The hospital is a full-service acute care institution that provides extensive experience in every anesthesia subspecialty including pain management and critical care medicine. The institution provides an unparalleled opportunity to develop skills in regional anesthesia, flexible and rigid fiberoptic airway management, ultrasound and echocardiography techniques, and organizational management. The "Bellevue experience" is a fundamental and fascinating aspect in the training of every NYUGSOM anesthesia resident.

NYU LANGONE ORTHOPEDIC HOSPITAL

NYU Langone Orthopedic Hospital has a distinguished tradition of medical innovation offering comprehensive treatment of musculoskeletal and neurological disorders. Since 1905, NYULH orthopedic surgeons have pioneered treatments to improve quality of life. Between the main Orthopedic Hospital and two additional outpatient locations, over 13,000 procedures are performed annually. The anesthesia department provides extensive opportunity in the use of ultrasound and other techniques for regional anesthesia.

NYU LANGONE HOSPITAL—LONG ISLAND

Located a short train ride from Manhattan, Mineola offers the best of all worlds. Combining the fast pace of real-world anesthesia practice with a large variety of patient backgrounds and operative needs, NYU Langone Hospital-Long Island provides an excellent opportunity for learning the art, skill and finesse of providing first-class anesthesia care. With recognized leaders in many specialties at NYU Langone Hospital—Long Island, this hospital is at the cutting edge of medical and surgical treatments provided for our patients.



NYU Langone Hospital—Long Island is a 591-bed medical center, with 20 operating rooms, 5 endoscopy rooms, 3 rooms for cardiac electrophysiology procedures and a busy labor and delivery floor with 3 operating rooms. It is home to Nassau County's only adult Level I Trauma Center verified by the American College of Surgeons with full adult and pediatric capabilities.

The anesthesia residents on the NYU Long Island track will rotate in Manhattan for their acute and chronic pain rotations as well as their anesthesia faculty-led critical care rotations. In addition, the residents will be able to rotate on various electives in Manhattan during their CA3 year. The anesthesia residents on the NYU Long Island track will participate in all of the virtual didactics and in person lectures in which the residents on the Manhattan and Brooklyn tracks participate.

Residents at NYU Langone-Long Island will be able to have unique leadership opportunities as the anesthesiology department is a growing department in an expanding hospital. As noted by the operating room and recovery room staff, it is one of the best hospitals for collaboration, collegialism and friendliness between the anesthesiologists and surgeons from all sub-specialties, making NYU Langone-Long Island a very pleasant place to work and learn.

NYU LANGONE HOSPITAL—BROOKLYN

NYU Langone Hospital-Brooklyn encompasses a 450-bed teaching hospital, offering a full range of services including a Level I Trauma Center, N.Y.S. designated regional Stroke Center and a Bariatric Center of Excellence.

Residents in the clinically integrated track will spend 24 months at NYU Langone Hospital – Brooklyn and 12 months at the NYU-affiliated Manhattan sites (Tisch/ Kimmel and Bellevue Hospitals, as well as offsite locations).

NYU Langone Hospital – Brooklyn provides a unique and well-rounded clinical experience for the residents with a broad range of surgical settings, encompassing trauma, stroke, invasive radiology, obstetric, neurosurgery, vascular, thoracic, oncology, orthopedic, spine, plastics, GI endoscopy, and lithotripsy. The strong regional anesthesia rotation offers training in a wide variety of ultrasound-guided peripheral nerve blocks. Residents will learn advanced airway techniques in the OR suite.

The broad range of clinical opportunity offers an outstanding learning environment and provides the necessary experience to become well-versed in managing everything from trauma or critical care patients, to complex non-operating room and office-based procedures.

VETERANS AFFAIRS NEW YORK HARBOR HEALTHCARE

One of the country's largest VA hospitals and a major teaching institution, this 201-bed facility is fully affiliated with the NYU Grossman School of Medicine. It serves 30,000 patients annually and is a referral center in several specialized areas, including cardiac surgery.

LIBRARIES

The NYU Health Sciences Library offers on-line access to over 385,000 electronic books, 75,000 electronic journals, 200 databases and mobile point-of-care resources, with free interlibrary loan and document delivery services for any items not owned or licensed by NYU. Library faculty are available for individual consultations or small group sessions.

The Lapidus Library at NYU Langone and Herman Robbins Library at NYU Langone Orthopedic Hospital are open 24/7 and provide access to over 10,000 physical books, as well as several group study rooms and over fifty public computers.

The Department of Anesthesiology, Perioperative Care and Pain Medicine

Approximately 115 house staff members and over 250 attendings work together in a friendly atmosphere of teaching, supervision and close interaction. The NYU Grossman School of Medicine Residency Training Program in Anesthesiology accepts 36 residents each year.

EDUCATIONAL OBJECTIVES AND ORGANIZATION

The goal of the Residency Program is to provide the highest quality of training and patient care in a collegial atmosphere that stimulates and nurtures professional and personal development. We strive to train well rounded physicians who are invested in advancing anesthesia practice for the benefit of our patients. To this end, our busy operating rooms provide the essential catalyst needed to form a well-rounded and highly trained anesthesiologist capable of handling any clinical situation they face. Furthermore, we promote personal health, mental wellbeing and a healthy work-life balance for our residents. All this together ultimately leads to an environment that is highly conducive to learning and excelling in the skills needed to be a motivated and highly successful anesthesiologist.

Throughout the program, we place strong emphasis on ensuring that residents attain a high level of scholarship and develop independent thought coupled with clinical competence. Residents are prepared for a lifetime of continued professional development and enabled to assume leadership roles in anesthesiology. Significant opportunities for clinical or laboratory research exist for those with special interests.

Each resident begins training under the supervision of a single attending. This provides continuity and minimizes the confusion that might accompany initial exposure to too great a variety of anesthetic methods. During the first year (CA1), residents rotate through the NYU Langone Health hospitals to gain the widest possible experience in patient care and management, utilizing a variety of anesthetic techniques.

In the second year (CA2), residents rotate through the major anesthesia subspecialties: cardiothoracic, neuro-anesthesia, pediatric, obstetric, preoperative medicine, recovery room, regional, critical care medicine and pain medicine. A rotation on the critical care service is an integral and valuable part of the training. At this time, house staff who have not already done so are encouraged to develop a clearer picture of their career plans, so that they can choose an area of sub-specialization in the third year of training.

In the CA3 year, residents may choose from subspecialty rotations or spend the entire year in the advanced clinical rotation, where the resident is involved in the most challenging cases at each hospital. Another option is a maximum six month rotation in clinical or laboratory research in such areas as vascular, obstetric, or cardiac anesthesia; pain medicine; or critical care medicine, with opportunities for publication and presentations at local, regional, or national conferences.

During CA3 year, residents are appointed team captain at Bellevue. In this capacity, they have leadership responsibility for the team of residents on call. Team captains make important decisions about patient care and management, as well as administrative decisions in recovery and delivery rooms. They also make anesthetic-related care decisions in the emergency room and other parts of the hospital. Most residents consider being a Bellevue Team Captain an extraordinary experience in preparing them for the practice of clinical anesthesiology.

Anesthesiology residents may elect to spend a fellowship year concentrating in one area of specialization. A training year can be spent in critical care medicine, cardiac anesthesia, pediatric anesthesia, trauma, obstetrics, regional anesthesia, ambulatory surgery, or pain medicine, as well as in clinical or laboratory research. This training may lead to the certificate of special competence in pain medicine, critical care, pediatric anesthesia or cardiac anesthesia under the auspices of the American Board of Anesthesiology and the ACGME.

Throughout the training period, strong emphasis is placed on developing leadership qualities and perpetuating clinical and research interests. The relationship between research and clinical practice management is stressed throughout the program. This environment has produced several department chairs and many clinical directors, specialty directors and academicians, as well as strong and confident clinicians. Graduates of the program have gained positions in some of the most prestigious medical institutions throughout the country. Physicians who complete the NYUGSOM Residency Training Program in Anesthesiology find doors open to them whether they desire an academic, clinical, or research career, or go into private practice.





DIDACTIC PROGRAM

Nearly 500 hours of conferences, seminars, case reviews, and lectures are conducted each year. These extensive didactic offerings are essential components of house staff education.

New residents begin the program with a series of introductory lectures. Also, during simulation based Boot Camp, residents participate in simulated clinical scenarios and task train in IV access, tracheal intubation, and other airway management techniques.

The regular teaching program includes:

1. Weekly Practice Based Learning and Improvement anesthesia case presentations and focused discussion. This conference includes a review of anesthesia morbidity and mortality.
2. Seminars stressing the application of basic and clinical science to the practice of anesthesia and critical care medicine, based on recommended readings and moderated by faculty or residents.
3. Early-morning clinical case conferences to discuss preoperative preparation and anesthetic management of selected patients.
4. An active visiting professor program with weekly lectures by visitors from other institutions and specialists on the NYULH Faculty. Less formal teaching sessions follow the lecture presentation.

5. During each year of residency, there are progressively challenging simulation sessions based on clinical scenarios conducted at the New York Simulation Center. We also participate in multidisciplinary obstetrical crises scenarios.
6. Specialty conferences while on rotation through each subspecialty.
7. An active medical student elective program provides residents an opportunity to lecture, lead discussions, and teach on a one-to-one basis while in the operating room.

THE SUBSPECIALTIES

Residents are introduced to and gain increasing responsibility in the major anesthesia subspecialties: cardiac, obstetric, neuro-anesthesia, pediatric, ambulatory, pain medicine, regional, and critical care medicine.

Cardiac Anesthesia

NYU Langone Health in Manhattan is a major cardiac referral center, with 8-9 cardiothoracic operating rooms running daily. The case spectrum includes CABG, valve repair and replacement, minimally invasive cardiac surgery, robotic cardiac surgery, ventricular assist device placement, heart and lung transplant, transcatheter valve replacement, and aortic surgery. We also do a wide variety of thoracic surgery and pediatric cardiac surgery. We provide anesthesia not only for surgical procedures, but also pediatric electrophysiology and pediatric cardiac catheterization procedures.

At NYU Langone Hospital—Long Island, there are typically 2-3 cardiac rooms running every day in addition to the cardiac catheterization location where anesthesia is often provided for minimally invasive valve replacement. Additionally, there is a variety of thoracic cases, a majority of which are done robotically, as well as a robust cardiac electrophysiology service with a variety of cases including ablations, left atrial appendage occlusion devices, and implants. During their time on cardiac rotations, residents will become adept at transesophageal echocardiogram evaluations, double lumen endotracheal tube placements, one lung ventilation, and management of cardiac function under anesthesia.

The formal teaching program includes reading and topical reviews, formal case discussions, staff meetings, case presentation conferences, extensive experience with echocardiography, and weekly didactic lectures. Residents are encouraged to participate in the cardiac anesthesia division's active research program. Clinical teaching in the program emphasizes:

1. Preoperative patient assessment including evaluation of myocardial functional status, interpretation of cardiac catheterization, echocardiographic and angiographic data, and reading and evaluating other diagnostic information. Strong emphasis is placed on complete preoperative evaluation and the preparation and development of sophisticated anesthetic plans to deal with intraoperative or postoperative problems. There is close collaboration with echocardiographers and electrophysiologists.
2. Intraoperative care, including transesophageal echocardiography and all major types of vascular monitoring.
3. Perioperative management, including vasoactive infusions, pacemakers and intra-aortic balloon pumps, as well as other interventions needed to maintain optimal hemodynamic status before, during, and after bypass.

Fellowship in Cardiac Anesthesia at NYU Langone

An ACGME-accredited cardiothoracic anesthesia fellowship with five positions is available. Fellows assume a more responsible role in evaluation and care of patients, concentrate on relevant issues in greater depth, and are encouraged to participate in ongoing clinical research, including clinical research in echocardiography and bench research on pathophysiology of cardiomyopathy. The program includes extensive training in the use of echocardiography leading to certification in perioperative transesophageal echocardiography.

Obstetric Anesthesia

Residents receive extensive training in obstetric anesthesia. At Tisch and Bellevue Hospitals, there are more than 6,500 deliveries per year and more than 4,000 at NYU Langone Hospital—Brooklyn, affording residents excellent opportunities to be exposed to all facets of obstetric anesthesia practice. Residents will be trained in cutting-edge techniques for labor analgesia and cesarean birth. Because the rate of regional analgesia in labor is high, there are ample opportunities for residents to gain experience with epidurals, spinals and combined spinal-epidural techniques. Residents at all of our sites will also gain experience in rapid transfusion, viscoelastic testing, and placement of advanced lines while on their obstetric anesthesia rotation.

Bellevue Hospital, a major facility for the care of the high risk parturient, provides outstanding opportunities to participate in the management of adolescent mothers and parturients with a myriad of diseases including preeclampsia, asthma, cardiac disease, and sickle cell disease. In addition, there is an active high-risk obstetric service at Tisch Hospital, and these patients provide many obstetric anesthesia challenges.



With more than 5,000 live births per year, NYU Langone Hospital—Long Island provides an enormous source of learning opportunities for obstetric anesthesia. Without doubt, residents will become highly skilled in providing epidural, spinal, and combined techniques for parturients requiring neuraxial blockade. Beyond this, with the only fetal surgery program on Long Island, residents will learn to provide anesthesia care for procedures done before birth, ensuring excellent outcomes for both the parturients and neonates.

For interested residents, there are research opportunities available in obstetric anesthesia.

Fellowship in Obstetric Anesthesia at NYU Langone

Our ACGME-accredited fellowship is focused on developing clinical expertise in the care and management of obstetric patients. As a Joint Commission-certified Perinatal Care Center, our patient population affords the fellow ample opportunity to be involved with complex obstetric cases. The fellow will be an active participant of our interdisciplinary care team, and will be exposed to the latest innovations and practices in obstetric anesthesiology. The fellow will also participate in teaching residents and medical students rotating through the Division of Obstetric Anesthesia. Research, including clinical trials and quality assurance projects, is an important component of the fellowship, with the goal of developing the skills for planning, conducting and executing research projects.



Neuro-Anesthesia

In Manhattan, the second floor of Kimmel Pavilion is dedicated to neurosurgical procedures. The eight operating rooms include two capable of intraoperative MRI. One room is dedicated to interventional neuroradiology and another capable of combined radiology and surgery procedures.

The sheer volume and variety of cases will prepare an anesthesia resident to work anywhere in the world. All of the latest robotic and navigation systems are in use on Kimmel 2, and the department makes these procedures possible and safe.

At NYU Langone Hospital—Long Island, residents will be exposed to a variety of neurosurgical cases, including stereotactic brain surgery, craniotomies, cranioplasties, deep brain and spinal cord stimulators, as well as a wide variety of spine surgery. Anesthesia residents will become highly skilled in providing care for patients requiring neuromonitoring for surgical procedures, managing multiple anesthesia infusions, and maintaining adequate anesthesia balance with a timely recovery. Throughout the training, residents will be exposed to multiple scheduled and emergent neuro- interventional procedures, including cerebral angiograms, coiling of aneurysms, and embolizations.

NYU Langone Hospital—Brooklyn has an active neuroanesthesia division providing a wealth of experience in neurosurgical anesthesia. The resident has the opportunity to evaluate and manage adult patients with brain and spinal cord lesions and intracerebral vascular anomalies. Extensive exposure is provided to all modalities of neurophysiologic monitoring. As a stroke center, NYU Langone Hospital—Brooklyn treats a large number of patients with cerebral aneurysms and arteriovenous malformations (AVM). NYU Langone—Brooklyn is also a Level I trauma center for southern Brooklyn and treats many patients with acute head and spinal cord trauma.

The division of neuro-anesthesia consists of faculty who do clinical work as well as research and administration. Residents will work one on one with faculty for the months of their neuro rotation.

At each hospital, residents will learn how to safely administer total intravenous anesthesia (TIVA) on their neuro rotation. They will also gain experience intubating patients with a fiberoptic scope as well as different video-laryngoscopes. Residents will learn how to perform awake craniotomies, and will have opportunities to care for patients having procedures done in interventional neuroradiology, using the latest neuromuscular monitors to maintain safe levels of muscle paralysis. Finally,



residents will learn to do large volume resuscitation when providing anesthetic care for patients with spinal deformities, spinal tumors and mechanical back pain.

Pediatric Anesthesia

The pediatric division of the Department of Anesthesiology in Manhattan uses the Hassenfeld Children’s Hospital as well as Tisch, Bellevue, and Orthopedic Hospitals to provide an outstanding background in pediatric anesthesia. All pediatric surgical subspecialties are strongly represented including pediatric open heart surgery and solid organ transplants. At NYULH, each year we provide anesthesia for almost 12,000 children under 12 years of age. Strong teaching of the fundamentals during the eight-week CA2 pediatric rotation at Hassenfeld, Tisch and Bellevue Hospitals is supplemented by pediatric anesthesia in the ambulatory care suite. Emphasis is placed on total perioperative care. During CA3 year, residents are assigned more challenging pediatric cases including neurosurgical, plastic and cardiac procedures. Hassenfeld Children’s Hospital is one of the largest centers for pediatric craniofacial surgery in North America.

With multiple pediatric surgery subspecialties at NYU Langone Hospital—Long Island, residents will have ample opportunities to learn the essential skills needed for managing care for a pediatric patient. This will range from managing care for preterm infants in the neonatal ICU to managing emergent surgeries for infants, toddlers, and young children. With a strong and growing pediatric anesthesia team, residents will become confident in their abilities to handle pediatric patients and will have a solid foundation for pursuing a pediatric fellowship if they so choose.

Weekly pediatric conferences and board review seminars focusing on pediatrics are conducted throughout the year. As a result of the case diversity and strong pediatric educational focus, NYULH residents are extremely confident in their ability to manage any pediatric procedure.

Fellowship in Pediatric Anesthesia at NYU Langone

Our ACGME-accredited pediatric anesthesiology fellowship offers one position each year. During their training, fellows acquire the comprehensive knowledge and psychomotor skills necessary for delivering anesthesia care to neonates, infants, children, and adolescents. They are important collaborators in the multidisciplinary teams treating our most complex patient. Fellows gain versatility by delivering anesthesia care in a wide variety of hospital settings, including the operating room, intensive care units, and imaging suites. They are mentored in research and scholarly activities devoted to the pursuit of the most optimal pediatric patients’ care.

Pain Medicine

The pain medicine division of the Department of Anesthesiology, Perioperative Care and Pain Medicine provides comprehensive training in the diagnosis and treatment of patients with acute, chronic and cancer pain. Training is patient-centered, evidence-based, and multidisciplinary. Our goal is to educate residents to optimize physical and psychosocial function of each patient by treating the underlying disease state, as well as coordinating patient education, expectation setting, nursing, psychological, nonpharmacological, pharmacological, interventional, and alternative care modalities. When necessary, inpatient care is provided.

Supervised residents perform interventional procedures, many of which employ image guidance. While on rotation, residents gain experience in a wide range of diagnostic and therapeutic modalities for treatment of acute, chronic and cancer pain, such as peripheral and axial procedures.

Residents spend eight weeks on the Pain Medicine service during CA1 and CA2 years and can elect an advanced CA3 rotation. Rotations may encompass clinical experience at the Center for the Study & Treatment of Pain consisting of pain medicine at NYU Langone Health, NYU Langone Orthopedic Hospital, Bellevue Hospital and VA Hospital Center or at NYU Langone Hospital—Brooklyn.

Patients referred to the outpatient pain program present with a wide array of complex and refractory pain problems. Availability of comprehensive resources at NYULH allows for better assessment and treatment for the patient, improving the educational experience. Residents attend and may present at pain medicine morning lectures, quality assurance and Practice-Based Learning meetings, as well as case conferences and journal clubs. Bi-weekly pain medicine grand rounds is provided to enhance the educational experience.

The department has a dedicated inpatient pain service that works with the primary service, surgical team, neurologists, physiatrists, psychiatrists, and other specialists to optimize treatment for each patient. A postoperative nerve block service enhances patient satisfaction and recovery, facilitates early rehabilitation, and helps to reduce the time patients spend in the hospital.

Many research projects are available for resident participation and afford ample publication opportunities.

Fellowship in Pain Medicine at NYU Langone

The Pain Medicine Fellowship Program is an award-winning (2018 AAPM's Pain Medicine Fellowship Excellence Award), ACGME-accredited one year fellowship leading to certification in Pain Medicine. It is open to graduates of Anesthesiology, Emergency Medicine, Neurology, Physical Medicine and Rehabilitation, and Psychiatry residency programs, who are board-eligible or certified. Training is conducted in a multidisciplinary setting, providing all elements needed for certification and practice. Ample opportunity is available to acquire skills in clinical evaluation, diagnosis, treatment, teaching, research, and administration. Exposure to a wide variety of clinical problems and treatments is enhanced with rotations at NYU Langone Health Hospitals, the Center for the Study

and Treatment of Pain, Bellevue Hospital Center and VA.

Ambulatory Anesthesia

The ambulatory surgical center at Tisch Hospital is a free-standing outpatient unit with ten ORs and 30 PACU bays. We perform roughly 7,500 cases annually and of those cases 28% are admitted, a combination of 23 hour stays and inpatient class. The remaining 72% of cases are outpatient cases, where the patient goes home the same day. The environment allows the entire staff to concentrate on ambulatory patient needs with access to the full services of the Hospitals Center. Since an ever-increasing proportion of surgery is being done on an ambulatory basis, the training in this unit is extremely relevant. Residents can elect to rotate in the ambulatory service to gain experience in the anesthetic management of both pediatric and adult patients under the supervision of faculty with special expertise in ambulatory anesthesia. The resident will learn a multitude of sedation techniques and the laryngeal mask airway. In addition, residents have the opportunity to elect an ambulatory regional rotation at the offsite ambulatory orthopedic center. On this ambulatory elective, residents become proficient in ultrasound guided blocks of both the upper and lower extremities.

The use of ambulatory surgical centers continues to expand nationwide, and at NYU Langone Hospital—Long Island, this is certainly a significant portion of patient care. The ambulatory surgery center handles many fast paced and complex patient care procedures daily, while providing the most appropriate care for patients to recover in the comfort of their own homes. Here, residents will learn to manage anesthetics while perfecting their skills and learning to provide timely and effective anesthesia care.

Critical Care Medicine

The domain of the anesthesiologist extends beyond the operating room to include the practice of critical care medicine. Perhaps nowhere in the hospital is the application of basic science principles to clinical therapy so important as in the intensive care unit. Residents encounter a varied mix of medical, surgical, cardiovascular surgical, and neurosurgical patients. The care of these patients requires fast-paced teamwork among anesthesiologists, surgeons, and many other specialists.

Trauma Anesthesia and Critical Care (TRACC)

Every resident spends eight weeks in critical care medicine as a member of the Bellevue Trauma Anesthesia and Critical Care (TRACC) team. The TRACC program at Bellevue Hospital was organized by the Department of Anesthesiology to integrate the care of injured or critically ill patients and to expand



the training experience for house staff and fellows. The TRACC Service provides immediate and continuous patient care in the Emergency Room (ER), Trauma Slot, Postanesthesia Care Unit, and Intensive Care Units (ICU). Residents encounter a diverse population of surgical, neurosurgical, and trauma patients whose care requires fast-paced, coordinated teamwork among anesthesiologists and other specialists.

The TRACC resident is part of a multidisciplinary trauma and critical care team directed by anesthesia critical care attendings. The TRACC resident is on call in-house, supervised by full-time critical care attendings. Critical care rounds with critical care attendings and the surgical teams are held twice daily. Afternoon lectures and patient management conferences are held daily. The TRACC team is separate from the anesthesia team on call for the OR.

The TRACC team is directly and primarily involved in administering bedside care to all critically ill patients in the Surgical ICU and the recovery room and is available for patient consultation in the Neurosurgical, Pediatric and Medical ICUs, and the Adult ER. The TRACC resident actively participates in all aspects of ICU patient care and management (e.g., ventilation, circulation, fluid balance, nutrition, and infectious problems) and is responsible for writing orders and progress notes. In addition to primary patient responsibility, the TRACC team offers the



following services:

- Emergency airway management such as fiberoptic intubation and difficult tracheal intubation
- Ventilator management in complex patients, e.g., ARDS, asthma, or bronchopleural fistula
- ICU pain management, including insertion of epidural and brachial plexus catheters
- Diagnostic and therapeutic fiberoptic bronchoscopy
- Insertion of arterial, central venous, and other vascular access lines
- Use of ultrasound for diagnosis, vascular access, and cardiovascular assessment
- Daily house staff lectures

Advanced Clinical Training in Critical Care Medicine

Part of a broad mission to harmonize care at NYU Langone, anesthesiology faculty support care in multiple ICUs. The Kimmel Pavilion boasts advanced ICUs to support growing surgical programs. During the CA2 or CA3 year, residents may elect to spend one to six months at Tisch Hospital on the Surgical ICU (SICU) or the Cardiovascular ICU (CVICU) service. In the SICU, critical care anesthesiologists and surgeon intensivists provide medical direction of general surgery, vascular surgery, liver transplant surgery and lung transplant surgery patients. In the CVICU, cardiothoracic anesthesiologists and critical care anesthesiologists provide medical direction of critically ill post cardiac surgery patients including heart transplants, patients on VA-ECMO, total artificial hearts and patients with Impellas. The resident assists with management of many critically ill patients with a wide variety of medical and surgical problems including septic shock, ARDS and cardiogenic shock. Residents also have the opportunity to hone their POCUS and TTE skills with a formalized curriculum.

Fellowship in Critical Care Medicine at NYU Langone

The department offers a one-year ACGME-accredited critical care fellowship at Tisch/Kimmel and NYU Langone Hospital – Brooklyn. Fellows rotate through five different adult ICUs, affording a uniquely diverse training opportunity.

The fundamental values of diversity and inclusion are inherent to our mission. In our department, diversity is not just a matter of statistics, it is a commitment we embrace to foster excellence by tapping into the knowledge, skills, and creativity of all students, faculty, house staff, and administration. Diversity in our clinical and academic community improves both the educational experience and patient care. By addressing race, ethnicity, culture, gender, gender identity, sexual orientation, religion, and other diverse qualities and identities in our education and research programs and

Regional Anesthesia

During the CA2 year, residents spend eight weeks in regional anesthesia. Residents perform a wide variety of regional techniques to block nerves of the upper and lower extremities and trunk, as well as lumbar and thoracic areas. Techniques incorporate nerve localization by landmarks, nerve stimulation, and ultrasound. Emphasis is placed on understanding relevant anatomy, use of ultrasound, local anesthetic mechanisms and toxicity, and management of postoperative analgesia.

Residents at NYU Langone Hospital-Long Island will have ample opportunities to utilize regional techniques and learn the anatomy for various nerve blocks used on a routine basis. Not only will residents have specific opportunities to learn regional techniques while on rotation, but they will also be able to find many opportunities throughout their training to practice and provide nerve blocks for a variety of surgical procedures.

Fellowship in Regional Anesthesia at NYU Langone

The department offers a one year ACGME-accredited fellowship that provides exposure to pediatric and adult regional anesthesia and acute pain as well as trauma, through rotations at a variety of NYU Health Langone sites.

Research Opportunities

Interested residents are encouraged to participate in ongoing research, or to pursue independent study in the Clinical Scientist Track. Our NIH funded researchers work in well- equipped laboratories. Areas of current research include effects of anesthetics on brain function, mechanisms of action of pain, calcium homeostasis in anesthetic action on the central nervous system, efficacy of volatile anesthetics as neuroprotectants, and the biochemical basis of Barth's syndrome.

Clinical research projects are ongoing in neuro-anesthesia, pain management, orthopedic and regional anesthesia, cardiac, pediatric, and obstetric anesthesia. At present the departmental bibliography includes over 500 refereed papers and eight textbooks.

clinical settings, we aim to cultivate a climate of mutual respect, tolerance and understanding in our department.

For a more detailed description of the program, applicants are encouraged to visit our departmental web site at <https://med.nyu.edu/anes/> The roster of visiting professors and departmental lectures is updated monthly and the departmental bibliography can also be accessed. Interested applicants are, of course, encouraged to come and pay us a personal visit.



Jose Gallegos, MD CA2

Although my path to anesthesia was non-traditional, I could not be happier with how things turned out. I was originally on the surgery path, but my interests changed and I decided to pursue anesthesia instead. When looking for programs

accepting PGY-2 applications, I was excited to see NYU had open spots. I knew they had a great reputation and I have always wanted an excuse to live in NYC. I was thrilled when I opened my match results, and I have been happy ever since. NYU provides such a comprehensive training environment and wide breadth of cases to learn from. The leadership here is resident focused and we get to learn from a very diverse and large group of mentors. I would not change a thing about my journey here.



David Rehe, MD CA1

Though there are several world-class anesthesiology training programs in New York City, for me, the decision to come to NYU for residency was an easy one. The opportunity to care for patients at both Bellevue Hospital, one of the most instantly

recognizable public hospitals in the US, as well as NYU Langone, a top-notch academic institution, is a truly unmatched training experience. Not only does this afford you exposure to a remarkable depth and breadth of clinical pathologies, but also to two highly complementary training environments that strike the perfect balance between mentor oversight and clinical independence. What really sets NYU Anesthesiology apart, however, is how friendly and approachable everyone is, from your senior residents, to your attendings, all the way up to the chair and program director. Residency has to be challenging in order for you to grow, but here we are challenged in all the right ways in a supportive learning environment where everyone has your back.



Reena Jasani, MD, MPH CA1

Even through virtual interviews, I knew NYU was the place for me with its unique clinical training and personable community. At Bellevue, the oldest U.S. public hospital, we not only get to work with a diverse patient population but also

serve as team captain in our CA 3 year, managing emergent airways, traumas, and surgeries. From my first day here I have felt welcomed and supported by faculty, senior residents, and my fellow CA 1s, who are always available for advice, assistance, or just a good time. Through my training at NYU, I am confident that I will develop the skills I need to prepare me for a career in anesthesiology (and will also have lots of fun along the way - we are in New York after all!)



Aleksandar Kiprovski, MD CA1

I ranked NYU as my number one program for a multitude of reasons. As a native New Yorker, I couldn't think of a better institution to train in! Given the multiple sites we work at, we serve an incredibly diverse patient population with complex

pathologies that train us to be excellent clinicians, especially with the strong guidance from the excellent faculty that we work with. Anesthesiology undoubtedly has a steep learning curve, but even a few months into my CA1 year, I've grown exponentially more confident in my clinical skills, all while having an appropriate and safe amount of autonomy. I have no doubt that I will look back on my training at NYU fondly!



Lisbeth Reyes-Fondeur, MD CA2

At NYU, you're not just getting the best training possible, you're getting another family. From the moment I interviewed here, I knew I wanted to be a part of that family. We stick together, we learn together and most importantly we grow together.

Between Tisch Hospital, Bellevue Hospital, the VA hospital and NYU Langone Orthopedic hospital, we see an abundance of both unique and bread and butter cases while getting early exposure to all subspecialties. An added perk of our training is the opportunity to work with a diverse population. New York City is the epitome of diversity and that's exactly what NYU gives you. I feel incredibly lucky to be a part of this academic family and I am confident my training here will set me up to excel in the field of anesthesia.



Vladislav Zhitny, MD CA1

Picking a residency program can be one of the most challenging and most important decisions of a professional career. It is also where you will spend a significant amount of time and may have a potential to sprout your newfound roots. To answer, you need

to first ask yourself the right questions. Do you genuinely want to be in a specific location for a prolonged amount of time? Does the curriculum satisfy your educational standards and academic aspirations? New York City and NYU Langone Anesthesiology was the number one dream location for me. From its strong research foundation and un-matched curricular opportunities during the day, with one of a kind supportive faculty who guide residents, state-of-the-art simulation centers and lectures, to individualized time in the operating rooms and one-on-one time with world renowned Anesthesia attendings. I ranked NYU as my number one choice because I wanted to be ready for whatever clinical challenge I could encounter after completing my residency, might I add while also enjoying the vibrant life of art deco just around the corner of NYC. Your training is complete thanks to the diverse patient group you care for, the attendings who guide you, and the various hospital settings where you practice. Choosing a residency, let alone a new home, is quite a challenge but with everything I know now, if I were to do it over again, I would always pick NYU as #1.

