

Department of Surgery

Westchester Medical Center

Westchester Medical Center Health Network





Surgical Critical Care Fellowship Training



Westchester Medical Center and New York Medical College

Trauma/Surgical Critical Care Fellowship Training

Thank you for your interest in our ACGME accredited Surgical Critical Care Fellowship (SCCF) Program at Westchester Medical Center (WMC), a 920-bed guaternary care and academic hospital. The SCCF at WMC was established by Dr. Louis R.M. Del Guercio (one of the founders and past presidents of the Society of Critical Care Medicine) and Dr. John Savino. The program has a long tradition and is one of the oldest Surgical Critical Care fellowships in the United States, This rich academic tradition, that we cherish tremendously, has trained a number of Surgical Critical Care leaders in the world and continues to be an ideal Surgical Critical Care training program. Westchester Medical Center is an American College of Surgeons (ACS) and New York State designated Level I Trauma Center, serving the entire Hudson Valley (north of the Bronx, up to Albany, New York) with over 50 ICU beds, a state-ofthe-art Telehealth Center, and 24/hours e-ICU coverage of all ICU beds. For over 30 years, Westchester Medical Center and New York Medical College have a rich history of training surgeons in the fields of Trauma and Surgical Critical Care with an accredited fellowship training program in Surgical Critical Care. We are proud to have graduated several notable leaders in the fields of Trauma and Surgical Critical Care (please see list of notable alumni in the ensuing pages). We are committed to training the best and most talented young surgeons for an academic career in Trauma and Surgical Critical Care and to prepare our graduates for successful careers in future national and international leadership roles.

Each of our faculty is board-certified in both General Surgery and Surgical Critical Care and has years of experience in teaching and training medical students, house staff, and fellows as part of New York Medical College. The college is a member of the Touro College and University System, which houses an LCGME accredited allopathic medical school and an ACGME residency training program in General Surgery. We are committed to providing a supportive educational environment that fosters the best in patient care plus new and innovative research that furthers the disciplines of Trauma and Surgical Critical Care.

As the only ACS Level I Trauma Center in the Hudson Valley Region of New York, we take care of patients with a high degree of complexity and acuity. As a fellow in our training program, you will be exposed to a wide variety of pathology in both critically ill trauma and general surgery patients which will prepare you well for your future careers. The opportunity to care for and operate on critically ill surgical patients will help hone your technical and critical care skills. In addition, with recent advances and ongoing efforts in tele-health and cutting edge research, you will have the opportunity to further advance your academic skills, publish your research in top academic journals, and present at national/international conferences. Our structured educational program (please see ensuing pages) includes didactic lectures, board preparation, a critical care journal club, weekly research meetings, and participation in weekly international tele-grand rounds that will enrich your fellowship experience.

We invite you to explore our fellowship and ask any questions that you may have so that we can share the many strengths of our training program with you.

Thank you for choosing to interview for our fellowship training program.

Sincerely Yours,

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Honoring
the Past
Building
the future

Training Program Curriculum

1. Rotations

Surgical/Trauma Intensive Care Unit (8 months)

Medical Intensive Care Unit (2 months)

Burn Surgery Intensive Care Unit (1 month)

Vacation (4 weeks)

Surgical/Trauma Intensive Care Unit (8 months)

Eight months of the fellowship program will be devoted to rotating in the Surgical/Trauma Intensive Care Unit (STICU) and the SICU/Surgical Progressive Care Unit, where fellows will become competent in the skills required to function as a surgical intensivist. Fellows will be exposed to a wide variety of trauma and general surgical (transplant, bariatric, vascular, and emergency general surgery, plastic and ENT surgery) pathology with patients of high complexity and acuity. Each of these units is staffed by a board certified intensivist on a weekly basis (7 days). Fellows will be supervising a combination of surgical housestaff, rotating housestaff from the Departments of Anesthesiology, Emergency Medicine, Neurosurgery and Orthopedics, as well as physician extenders (physician assistants and nurse practitioners). Fellows will be expected to function at the level of a junior attending and will be responsible for leading daily work rounds, creating daily care plans and goals for individual patients, and supervision of housestaff and physician extenders in the performance of all bedside procedures (including but not limited to bedside abdominal explorations, bronchoscopies, tracheostomies, pulmonary artery catheterizations, and central venous catheterizations). In addition, fellows will benefit from our close collaboration with Neurosurgery in the management of severe traumatic brain injuries. Westchester Medical Center is one of a handful of trauma centers across the country that practices multimodality neurophysiologic monitoring and goal-directed therapy, including brain oxygen tension, cerebral microdialysis and near infrared spectroscopy.

The duties of the fellow on-call will also include serving as the trauma team leader for all trauma activations and performing operative general surgery and trauma cases at the level of a junior attending/teaching assistant.



Medical Intensive Care Unit (2 months)

Two months of the fellowship program will be devoted to rotating in the Medical Intensive Care Unit (MICU) where fellows will become versed in the care of complex medical patients with critical care needs. This rotation will augment the fellows' education in pulmonary and critical care medicine as it relates to cardiovascular disease, hepatic and renal failure, and toxicology. Fellows will work under the supervision of board certified medical intensivists to lead daily team rounds, formulate plans of management, and perform bedside procedures in addition to teaching medical housestaff and physician extenders.

Burn Surgery Intensive Care Unit (1 month)

One month of the fellowship program will be devoted to rotating in the Burn Center/ICU of Westchester Medical Center. The Westchester Burn Unit is the region's only Burn Center caring for both adult and pediatric burn victims. The unit is staffed by board certified Burn/Critical Care Surgeons specializing in Plastic and Reconstructive surgery in addition to the specialized care of burn victims. Fellows will become familiar in the resuscitation and management of burn patients, wound care (including performance of escharotomies and debridement) and burn prevention. The unit is staffed by highly trained critical care nurses, physician extenders and rotating house staff.

2. Didactic Curriculum

Each week, all fellows, rotating house staff, and allied health professionals will be provided with a one hour didactic lecture, with protected time away from clinical duties, focusing on the essential topics in Trauma and Surgical Critical Care to prepare fellows in the practice of Surgical Critical Care and the American Board of Surgery Certifying Exam in Surgical Critical Care.

The lecture schedule will be distributed at the beginning of the academic year and will be correlated with an assigned reading schedule. Lectures will be given by the core teaching faculty of the Surgical Critical Care fellowship program. A sample schedule for the second half of the year is listed below.

| Date | Topic | Faculty | Assigned Reading |
|------|---|-----------|--|
| | The management of the patient in the Trauma Bay | | ACS Surgery 6th Ed 1502-15; Civetta 4th Ed 155-198 |
| | Cardiovascular Physiology | | Modern Surgical Care 3rd Ed Vol 2 649-75; Civetta 4th Ed 682-98 |
| | Hemodynamic Monitoring: arterial blood pressure, CVP, FlowTrac, and PAC. | | Civetta 4th Ed :155-197 |
| | Shock States: Identification and treatment. Resuscitation fluids | | ACS Surgery 6th Ed 1476-1501; Civetta 4th ED 609-30; 813-948 |
| | Inotropes and vasopressor | | Marino The ICU Book 3rd Ed 297-361 |
| | Neck Trauma | | Current Therapy Trauma and Surgical Critical Care Pg 197-226 |
| | Blunt and penetrating thoracic injuries | | Current Therapy Trauma Pg 227 -340 |
| | O2 derived variables and principles of Early Goal Directed Therapy | | Perioperative Fluid Therapy Marini's Chapter |
| | Pulmonary physiology, ABGs and principles of mechanical ventilation | | Civetta 4th Ed 631- 648; 666 – 681; 1907- 1938 |
| | Abdominal Trauma | | Current Therapy Trauma and Surgical Critical Care Pg 341- 436 |
| | ALI, ARDS, TRALI. | | Civetta 4th Ed 2061 – 2080; ACS Surgery 6th Ed 1532 - 49 |
| | Peripheral vascular injuries | | Current Therapy Trauma and Surgical Critical Care Pg 467-496 |
| | Extremity and pelvic fractures | | Current Therapy Trauma and Surgical Critical Care pg 497-546 |
| | Trans-thoracic and trans-esophageal echography. | | Civetta 4th Ed 237-270 |
| | Advanced Mechanical Ventilation: Dual modes, PAV, Bi-level, APRV, HFJV, Osc | illators. | Civetta 4th Ed 1959 – 1973; 2029 – 42; 2081 – 86 |
| | Traumatic Brain Injury | | Current Therapy Trauma and Surgical Critical Care Pg 147-174 |
| | Compartment syndromes | | Trauma Practice Management Manual |
| | Acid-base disorders | | ACS Surgery 6th Ed 1563 – 75; Civetta 4th Ed 631 – 48; Marino The ICU Book 3rd Ed 531 - 78 |
| | Weaning and withdrawing mechanical ventilator support | | Civetta 4th Ed 1991 – 2028; Marino The ICU Book 3rd Ed 511- 530 |
| | Wound ballistics | | Handout |
| | Trauma in Pregnancy | | Current Therapy Trauma and Surgical Critical Care pg 559-64 |
| | Endocrine Crisis in the ICU | | Marino The ICU Book 3rd Ed 871–84; Civetta 4th Ed 2411 – 64; ACS Surgery 6th Ed 1593 – 99. |
| | Hematological problems in the critically ill patients. Transfusion practices in traur ROTEM | ma. | Civetta 4th Ed 2503 – 36;2561 – 74. Marino The ICU Book 3rd Ed 659- 96 |

3. Journal Club

The Department of Surgery holds a monthly journal club at a local restaurant for all house staff, nursing staff, faculty, fellows and allied health professionals. The surgical critical care fellows are expected to attend and participate. In addition, the Division of Trauma, Burns, Surgical Critical Care and Emergency General Surgery holds a monthly journal club focused on critical care during which fellows are expected to review assigned articles for presentation. The Critical Care journal club is an invaluable component of the fellowship experience because it hones critical reasoning and thinking skills, encourages on-going review of the most current advances in evidenced-based medicine, and fosters a collegial environment amongst all critical care providers.

In addition, our division participates in a weekly International Trauma Tele-Grand Rounds, during which all critical care staff participate via live video feed with trauma centers from around the world as we discuss interesting trauma/surgical critical care cases and review the pertinent literature. Fellows will be expected to participate and present cases on a rotational basis.

4. E-ICU

Westchester Medical Center is at the forefront of telemedicine, providing 24 hours/7 days a week coverage of all intensive care units via telemedicine. The tele-health /e-ICU center is staffed around the clock by board certified intensivists who provide patient-centered and quality-driven support. There exists a close and collaborative working relationship between the e-ICU and all intensive care units to foster best practices and provide layers of support to the care of our critically ill patients. Fellows will have the opportunity to provide daily sign-out to the e-ICU staff and to work within the e-ICU to further their knowledge and skills in telemedicine, which will be invaluable in the rapidly evolving field of surgical critical care.

5. Research

The Division of Trauma, Burns, Surgical Critical Care and Emergency General Surgery has a robust research program as part of the overall mission of research and innovation of the Department of Surgery, focusing on trauma and general surgery clinical outcomes research, translational research and research in injury prevention. A list of sample recent publications and presentations from national and international meetings is attached. A strong research infrastructure in the form of the Department of Surgery Clinical Research Unit (DSCRU) directed by a full-time clinician researcher and supported by epidemiologists, full-time research coordinators and international research scholars to assist the research process beginning with formulation of research questions, grant writing and IRB submissions, and culminating with manuscript preparation. This infrastructure allows fellows, faculty and residents to design and implement clinical studies, and to report the findings in leading trauma and surgical journals, in addition to presenting our findings at national and international meetings.

All fellows will be assigned a research mentor for the duration of the fellowship and will choose a research project with the expectation that research performed will lead to the publication and presentation of innovative research. All fellows will have the opportunity to attend a major national meeting (i.e. EAST, AAST) to present their accepted poster or podium presentations.

Manuscripts Published in Peer-Reviewed Journals 2015 - 2017

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