

DEPARTMENT OF EMERGENCY MEDICINE

2017 ANNUAL REPORT





CONTENTS

Message from the Chair	3
Our Mission	3
Our Values	3
Appointments/Hires	4
Promotions	4
Awards/Recognitions/Accreditations	4
Retirements	5
Department Initiatives and Outreach/Community Activities	5
Clinical Emergency Department (ED)	7
Geriatric Emergency Medicine Care at Community Campus	8
Wound Care Center (WCC)	8
Hyperbaric Medicine (HBO) Center	9
Upstate Golisano After Hours Care	10
Upstate NY Poison Center (UNYPC) and Toxicology Consult	10
EM Department Academic Activities	11
American Heart Association Life Support Programs	16
Public Access Defibrillation Program (PAD)	17
EMSTAT Simulation Center Activities	17
Emergency Medical Services (EMS) Education Programs	19
International Programs	22
Annual Department Teaching Days – 2018 Dates	22
Outreach/Community Activities	23
Research Division	24
Journal Articles	30
Text Books and Chapters	33
Presentations	33
EM Department Faculty	36
Advanced Practice Providers	37
FM Department Staff Listing	37



MESSAGE FROM THE CHAIR

It is my pleasure to present the 2017 Annual Report for the Department of Emergency Medicine. Our department continues to serve the University through primary and tertiary emergency care, medical education at many levels, and robust academic work. Our department strongly supports all four years of the medical school as well as EM residency training, prehospital provider programs, and eight different fellowship training programs. Our contribution to the knowledge base of emergency medicine includes more than 50 publications and presentations. Our combined emergency departments treat over 100k patients and are the primary gateway for inpatient care at University Hospital and specialty care for our region. In short, the Annual Report outlines the efforts of over 100 employees working to support our mission and our values.

OUR MISSION

The Department of Emergency Medicine at SUNY Upstate Medical University exists to promote the specialty of Emergency Medicine and related specialties through excellence in patient care, education, and research.

OUR VALUES

- 1. Quality emergency care is a fundamental, individual right and is available to all who seek it; and we practice this in our own ED.
- 2. There is a body of knowledge unique to Emergency Medicine that requires continuing refinement and development. We strive to acquire skills and resources for research to advance it. We strive to be its exemplary role models and teachers.
- 3. Board-certified, credentialed emergency physicians best practice quality Emergency Medicine, and we train our students and residents to do the same.
- 4. The best interest of the patient is served when emergency physicians practice in a fair, equitable, and tolerant environment supportive of diversity.
- 5. We value each practitioner's professional and personal growth, and acknowledge the need to balance both.
- 6. The emergency physician has the responsibility to play the lead role in the definition and evaluation of quality emergency care.
- 7. Patients deserve compassion and preservation of dignity in the care they receive.
- 8. A respect for diversity is one of our core values. We are committed to recruiting and supporting a rich community of outstanding faculty, staff and residents/fellows.

APPOINTMENTS/HIRES:

- Tyler Greenfield, MD appointed Pediatric EM Medical Director
- Full Time Physician/Faculty Members:
 - · Umair Sheikh, MD
- Part Time Physicians:
 - Susan Demartini, MD (Pediatric EM and After Hours)
 - Sarah Marsh, MD (After Hours)
 - Deepali Sharma, MD, MCS
- Advanced Practice Providers:
 - Maia Czarnecki, PA
 - Mark Suchowiecki, PA
- Staff:
 - Maresa Folds, MHA (EMS Programs & Fellowship Coordinator)
 - Joshua LaDuke, BS, EMTP (Paramedic Program Lead Instructor)

PROMOTIONS:

Susan Wojcik, PhD was promoted to Director of Research in August 2017. She has been
an active faculty member since 2000. In this position she is responsible for strategic
planning, administration, and operational execution of research initiatives for the
department.

AWARDS/RECOGNITIONS/ACCREDITATIONS

- Vincent Calleo, MD was the recipient of three awards:
 - EM Resident Award for Excellence in Medical Student Education
 - GME Resident Award for Teaching
 - Humanism and Excellence in Teaching Award (Arnold Gold Foundation)
- Christopher Fullagar, MD received the 2017 Michael Jastremski, MD Award of Excellence
 in EMS from CNY EMS. As Vice Chair of the Collaborative Protocol Committee, he was
 instrumental in developing new protocols that will be in 15 regions. Not only did he work
 to develop the protocols, but he insisted on creating high quality educational materials to
 support the rollout.
- Alison McCrone, MD was recognized on December 1, 2017 by Dr. Lucinio for her work
 and dedication to Upstate. Recognition criteria included a faculty member who makes a
 difference everyday in the lives of patients, students and staff without seeking the limelight
 or fanfare.





- Anne Peer was recognized with an Upstate "Superstar" Campus Staff Award which recognizes and celebrates the accomplishments and excellence of those employees who consistently exemplify Upstate's Values and Mission.
- Gary Johnson, MD was recognized with an Upstate "Superstar" Healthcare Provider Award.
- recipient of the 2017 President's
 Employee Recognition Award for
 "Campus Employee of the Year". This
 award recognizes an employee who
 has gone above and beyond her job
 responsibilities by exhibiting a strong
 work ethic, creative problem solving and
 sustained excellence in her job.
- Maureen Corcoran, Angela Scalise and Diane Hartzog were all were recognized in June for achieving 25 years at Upstate!





RETIREMENTS:

William D. Grant, EdD, Professor (30 years of service)

DEPARTMENT INITIATIVES AND OUTREACH/ COMMUNITY ACTIVITIES

ECMO: Extracorporeal Membrane Oxygenation — is a medical technology that helps a variety of patients, including premature babies and adults whose hearts and/or lungs can heal better if a machine temporarily pumps their blood and oxygen. Chris Tanski, MD from our department along with Robert Dunton, MD, (Thoracic Surgeon) created this new service at Upstate University Hospital. Certain patients suffering from trauma, drug overdose or cardiac arrest may be recommended for ECMO as part of their care.

Syracuse Veterans (VA) Medical Center: Our department provides physicians to staff the VA ED and teach rotating EM Residents and medical students. Joint initiatives are being explored with the VA to provide simulation activities on palliative care scenarios and point of care ultrasound for the upcoming year. The VA ED serves approximately 14,500 Veterans a year with a 30% admission rate.

Development of On-Line Video Podcast Program: Dr. Richard Cantor took a 6 month sabbatical in 2017 to develop this program addressing specific chief complaints in Pediatric Emergency Medicine. Over forty 10-minute presentations will be made available through online services through the Institution as well as global distribution in iTunes and YouTube. Distribution date is summer 2018.

Advanced EMT Course Offered: A new course was offered in 2017 and it was one of the first to be delivered in New York State utilizing the National Education Standards. This new level of NYS certification replaces the AEMT-Intermediate and the AEMT Critical Care Course.

Upstate Medical University Paramedic Program Achieves Accreditation: Initial accreditation was awarded by the Commission on Accreditation of Allied Health Education Programs (CAHHEP) at their December board meeting based on recommendation of the Committee on Accreditation of Educational Programs for Emergency Medical Services Professions (CoAEMSP).

Memberships: We participate in the ED Benchmark Alliance (EDBA), the Academy of Administrators in Academic Emergency Medicine Survey Committee (SAEM-AAAEM), and the Ed Practice Management Association (EDPMA). Our participation in these groups allows us to exchange information, make comparison to our peers and share ED initiatives.

EM Resident Volunteer Activity: Dr. Louise Prince and several EM Residents served breakfast at the Syracuse Samaritan Center in October. Maureen Corcoran, Janice Harvey and Randy Klein also volunteered in June.



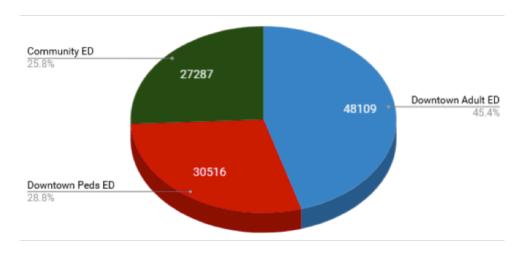
EM Department Community Service:

- Collection of Back Pack/Back to School supplies for school children
- Emmaus collection of toiletries for the homeless
- Christmas Toy Drive for Team Upstate
- Eye glasses collection for the Lions Club
- EM Department teams for AHA Heart Walk and ACS Strides Walk

CLINICAL EMERGENCY DEPARTMENT (ED)

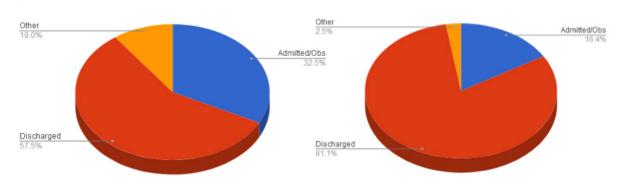
We are an urban, level 1 trauma and tertiary care center staffed by resident physicians, advanced practice providers, and board-eligible/board-certified emergency attending physicians. Our Downtown Campus ED is comprised of both adult and pediatric emergency units while our Community Campus ED is unique that it has a separate Geriatric Emergency Medicine Care unit. The department is a major referral center with a catchment area of 19 counties for many medical and surgical services such as trauma and pediatrics.

In 2017, the department treated 105,912 patients in the EDs:

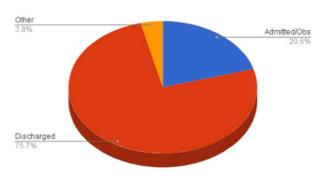


Visits Downtown Campus, Adult ED

Visits Downtown Campus, Pediatric ED



Visits Community Campus ED



GERIATRIC EMERGENCY MEDICINE CARE AT COMMUNITY CAMPUS

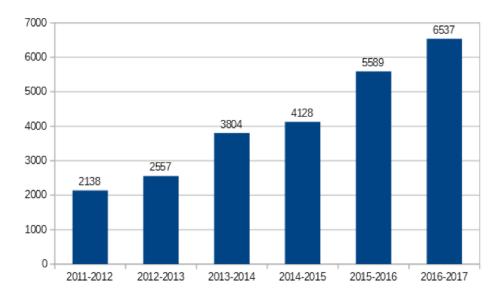
Goal of Geriatric Emergency Medicine (GEM) Care is to decrease the admission rate of seniors. This is accomplished through extensive ED evaluation. Pharmacists evaluate the medication regimen for appropriate dosing and risks of side effects. They also provide consultation to providers on appropriate medication choices. Social Workers evaluate the home and family support, investigate for elder abuse, and counsel the patient and family. Case Management, assisted by Social Work, set up outpatient services (such as visiting nurses or home health aides) as needed, and can help to arrange for follow up.

The 2017 admission rate of patients over the age of 85 is down 8 percentage points since the start of GEM Care in 2013.

WOUND CARE CENTER (WCC)

The WCC has seen year over year growth in volume. We are now at maximum capacity with our current space. There is ongoing weekly collaboration with the inpatient wound care team to assure patient continuity and patient follow-up upon discharge.

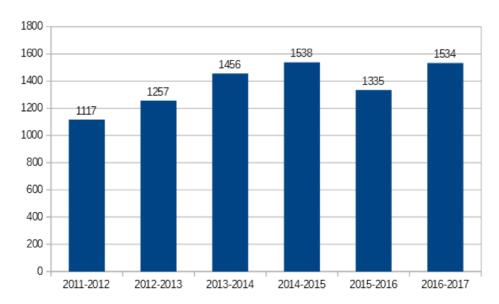
WOUND CARE CENTER VISITS:



HYPERBARIC MEDICINE (HBO) CENTER

Our HBO volumes have been at maximum capacity since 2013-2014. A new proposal for hyperbaric monoplace expansion and wound care center renovation/expansion was approved and preparations have begun for this expansion. We continue to provide the only 24/7 HBO coverage in all of central and western NY. We are the only Divers Alert Network facility in all of Central and Western NY.

HYPERBARIC CENTER VISITS:



Teaching: EM department hosts a regional symposium on WC&HBO on February 10, 2018. We will provide an HBO teaching day for the EM residence in March 2018 for the 4th year in a row. We host the EM-1 residents for a 2 week rotation in HBO/WC, host 4th year medical students, and resident electives. We have also established an outpatient specialty clinic rotation for IM-2/IM-3 residents with Internal Medicine. They rotate with the WCC Mon-Fri mornings, complete wound care consultations, and see follow-up patients. HBO faculty presented nationally at the SAWC/WHS meeting in San Diego in April 2017 (largest national wound care meeting), UHMS NE Chapter Meeting in October 2017, and ACCWS Annual Symposium in September 2017.

Research: EM department supports 3 prospective clinical trials active in HBO/WC. One of the prospective studies is supported by an industrial grant. There were 2 published manuscripts, 4 published abstracts, and 2 published book chapters from HBO/WC in 2017. There were 4 abstract poster presentations at the UHMS Scientific Meeting in June 2017.

Service: HBO faculty serve on hospital committees, lead national committees, and serve on the board of national wound care and hyperbaric medicine organizations and as an assistant editor and reviewers for wound care and hyperbaric medicine journals.

UPSTATE GOLISANO AFTER HOURS CARE

Two new faculty were recruited and a total of 6,331 patients were seen in 2017.

UPSTATE NY POISON CENTER (UNYPC) AND TOXICOLOGY CONSULT

Provides poison center services for 54 counties within Upstate New York with a population of 7.42 million. Staffed 24/7 by staff, certified in Poison Information.

Boarded clinical and medical toxicologists provide real time oversight and consultation in defined or requested cases. Also provides education and outreach, research and consultative services to healthcare learners. The center is a rotation site for more than 60 learners each academic year and provides support and collaborative service to the public in the form of public education and policy consultations. The center also participates in public health partnerships with local, state and national departments of health and collaborates with law enforcement and other governmental agencies.

Center

Upstate

GOLISANO AFTER HOURS CARE

SELECTED STATISTICS:

UNYPC Call Volume 2017:	53,496
UNYPC Call Volume 2017 for Human Exposures:	45,301
Number of Emergency Medicine Resident Rotators:	11
Number of Pediatric and Medicine Rotators:	6
Number of Pediatric EM Fellow and PA Fellow Rotators:	6
Number of MSIV Rotators:	22
Number of PharmD Candidate Rotators:	17
Number of PharmD PGY-1 Resident Rotators:	4

Summary of Educational Activities with Toxicology Faculty:

- Quarterly core content lectures to SUNY Buffalo EM residents
- Toxicology Blog: https://upstatenypoisoncenter.wordpress.com/
- Organize and host Annual Toxicology Teaching Day (past 21 years)
- Teach 1/2 day toxicology teaching days to EM residents with participating toxicologists in **Buffalo and Albany**
- Participate in EM Department teaching days
- Organize a quarterly series called Combined Toxicology Grand Rounds which is a joint conference with Onondaga County Medical Examiner's Office and Toxicology Lab to integrate and collaborate clinical and forensic toxicology

EM DEPARTMENT ACADEMIC ACTIVITIES

GRADUATE MEDICAL EDUCATION (GME)

Residency – William Paolo, MD, Program Director

Clinical Overview

The emergency medicine residency was established in 1992 and is now recruiting for its 28th class of emergency medicine residents. The department consists of 33 residents. (11 x 3 years) who take care of a combined total of > 100,000 ED patient visits/year ($\sim 70,000$ at Downtown Campus and $\sim 30,000$ at Community Campus) covering all ages of life from the specialized pediatric emergency department to the geriatric emergency department at Community Campus. The residents come from a diverse medical school background and have gone on to become chairs, program directors, and leaders in the field of emergency medicine.

Educational Programs

The department of emergency medicine and its residency host and produce a multitude of educational programs for the residents, medical students, fellows, and allied health professionals who it serves. Our 33 residents spend 5 hours per week in a multimodal learning environment in order to become prepared to be excellent emergency physicians. Training includes small group breakout sessions, simulation, case-based learning, and small group year specific learning. In 2016 the department moved to a more advanced format with 1 hour of online asynchronous content followed by all integrated simulation, procedural laboratories, and case based/problem based learning replacing traditional didactic lectures.

Our department hosts a quarterly grand round series inviting national leaders in the field of emergency medicine to speak on diverse topics from healthcare reform to basic clinical skills and interactions. Our speakers have been from a vast array of national bodies including the board of directors of American Board of Emergency Medicine, board of directors of American Academy of Emergency Medicine, and national American College of Emergency Physicians. In addition our residents participate directly in medical student education with multiple residents serving as primary instructors in both the practice of medicine course as well as the foundations of reasoning in medicine course.

Research Activities

All residents are required to perform scholarly activity, a Quality Initiative (QI) project, and provide 4.5 hours of didactic content during their time at SUNY Upstate (1 hour Teaching to Learn/Learning to Teach lecture, 1 hour journal club, 1.5 hours of core content, 1 hour of Morbidity/Mortality). Residents work with our research group as well as QI officers in order to accomplish these goals. We have presented at national and international meetings and continue to produce new research projects each year. Our format is unique allowing the residents to work directly with our OI officer to identify real-time issues within the emergency department and develop and implement novel solutions.

National Leadership

Our residents serve on multiple national committees as well as serve in leadership positions in various organizations. Our residents various roles have included president of NYACEP residents association, counselor to national ACEP, members of the governmental affairs committee as well as the educational committee for NYACEP, and EMRA representative to national meetings. In addition some of our residents have completed the ACEP teaching fellowship and presented their curricular development projects at national meetings.

FELLOWSHIP PROGRAMS

Pediatric Emergency Medicine (PEM) Fellowship

Richard Cantor, MD, Director

With the opening of the new Pediatric Emergency Department in 2016, our patient volume has increased dramatically over the past year. Our PEM Fellowship program was one of the first nationally to accept the emergency medicine pathway applicants, starting in 1980's. Currently there are 4 PEM Fellows which will increase to 5 Fellows in the next academic year. This will augment our clinical coverage with fellows to a seven day a week staffing encompassing the hours of 8am-12mn. Current fellows are: Rhonda Philopena, MD, William (Ben) Prince, MD, Vincent Calleo, MD and Sunny Kuldip Kainth, MD.

Undersea & Hyperbaric (UHM) Medicine Fellowship

Marvin Heyboer, MD, Director

The UHM fellowship continues to maintain ACGME accreditation in good standing. We have maintained a 100% pass rate. We are currently in our 7th year with a fellow and have graduated 6 fellows. We have successfully recruited a fellow for 2018-2019. Fellows are provided with weekly didactic teaching, self-directed learning of core content with quarterly board like prep exams, and simulation training. Current fellow is Tanner Boes, MD.

EMS & Disaster Medicine Fellowship

Derek Cooney, MD, Director

EMS Medicine Live is a monthly webinar series providing educational content for EMS Fellows and both community and academic EMS Physicians. Webinar course directors are Dr. Christian Knutsen and Dr. Derek Cooney from our department and Dr. Brian Clemency from the University of Buffalo. The goal is to offer both interesting topics and EMS board prep reviews. Webinars can be viewed at: http://www.upstate.edu/emergency/education/fellowships/ems-live.php

Wilderness & Expedition Medicine Fellowship

Jeremy Joslin, MD, Director

The program offers emergency physicians specialized training in order to gain the education, independence and leadership required to deliver high-quality, situational-appropriate medical care in the world's most austere environments. The fellow is exposed to illness and injury common in the wilderness or expedition environment and is given opportunities to gain operational comfort and competence while taking on the role of a medical director for outdoor endurance events, search and rescue teams, and commercial expeditions. All activities are grounded by a didactic backbone, relevant research activity and local and national conference attendance. Three fellows have graduated from the one year fellowship. Current fellow is Andrea Ferrai, MD.

Medical Toxicology Fellowship

Ross Sullivan, MD, Director

There are currently two fellows in this 2 year fellowship. One will graduate in June 2018. The fellowship runs an Opioid Treatment Clinic that sees patients that present to the ED in opioid withdrawal or post overdoes. In 2017, the clinic saw approximately 200 patients with approximately 80% of them being successfully bridged to other community addiction resource centers. Current fellows are Brett Cherrington, MD and Hiroko Furo, MD.

Physician Assistant (PA) Fellowship

Brian Kloss, DO, Director

The PA Fellowship in Emergency Medicine is now in its fourth year and is actively recruiting participants for our fifth class. In December 2017, Anthony "TJ" Rotello and Stephanie Brannan both completed their fellowship training and passed the Certificate of Advanced Qualification (CAQ) in Emergency Medicine from the NCCPA. TJ will be relocating to Alaska in March of 2018 to be closer to his wife and has secured fulltime EM employment with the Professional Performance Development Group. Stephanie began fulltime employment at Highland Hospital in January of 2018.

Our newest fellow, Claire Wilsey, is learning to navigate the world of Emergency Medicine and has taken a special interest in Wilderness and Remote Medicine. In February, Claire participated in the Wilderness Medicine Society Medical Student and Resident Elective. She is the first physician assistant to have been given this privilege.

Our program has continued to grow each year and feedback from our graduate fellows has been very positive. We boast a 100% first time pass rate for the NCCPA CAQ Examination and are pleased that so many of our fellows have chosen to stay on board after graduation.

International Emergency Medicine (IEM) Fellowship

Jay Brenner, MD, Director

Dr. Inna Lozanovskaya served as the IEM Fellow from December 1, 2016-November 30, 2017. She traveled to Peru for an Ultrasound course, Baltimore for the Health Emergencies in Large APopulations course at John Hopkins, Barcelona for a Travel Medicine course, and Trivandrum, India for an immersion experience at the Kerala Institute of Medical Science hospital. She completed an 11-milestone Journal Club focused on Global Health competencies and took courses in Epidemiology and Policy in the CNYMPH program. Along with Dr. Brenner, Dr. Lingappa Amernath, Dr. Eric Shaw, Dr. Paul Ko, Dr. Mark Polhemus, and Dr. Christopher Morley are faculty for the fellowship.

Emergency Ultrasound Fellowship

Kevin Gaskin, MD, Director

In April 2017 our department started offering this one-year program to train future leaders in Emergency Ultrasound. Dr. Elizabeth Nicholas is our first fellow. The fellowship includes 8 clinical shifts a month, 5 scanning shifts a month, weekly QA session, monthly ultrasound lecture to residents and faculty and an original research project.

Fellowship Seminar Series

This seminar series focuses on the development of a stronger foundation for conducting independent research and effective interpretation of published research for all of the department's fellowship programs. The series covers topics ranging from understanding the effective design of research projects, research compliance, study implementation, data preparation, data analysis with IBM SPSS, and conducting peer reviews. This year's series has been updated to a total of 32 contact hours (20 hours Small Group Discussion and 12 hours of Asynchronous Learning Modules)

UNDERGRADUATE MEDICAL EDUCATION (UME)

Matthew Sarsfield, MD, Medical Director

Practice of Medicine (MSI and MSII):

Several EM faculty and residents taught as POM small group preceptors during 2017 including:

Dr. Tyler Greenfield
Dr. Risa Faber-Heath
Dr. Alison McCrone
Dr. Kelsey Stack
Dr. Vincent Calleo
Dr. Elizabeth Nicholas
Dr. Eric Hojnowski
Dr. Christine Courtney
Dr. Camille Halfman

In 2017, approximately 300 POM I and II students have shadowed in the ED with our faculty. Every POM I and II student completes sessions in the EMSTAT simulation lab.

Emergency Medicine Clerkship (MSIII)

The required Emergency Medicine Clerkship started in 2008 and has always been a student favorite. This year, we have continued to hone and rework our required three-week clerkship. Our recently added sessions on ultrasound use in the ED and opiate addiction have been very successful. This year our "nursing shift" was revamped to a more interactive, inter-professional experience for our students. Every third-year medical student comes to EMSTAT during the academic year to complete orientation and simulation training regardless of the clinical campus they have been assigned. Students have expressed continued appreciation for the two teaching attendings that are available to them throughout the clerkship from the department. Two new teaching attendings were added to our group.

Dr. Matthew Sarsfield Dr. James Mangano
Dr. Lindsay MacConaghy Dr. Elizabeth Nicholas
Dr. Jennifer Campoli Dr. Risa Farber-Heath
Dr. Thomas Lavoie Dr. Leah Bennett

Dr. Kevin Gaskin

Quotes from EM Clerkship Students:

"This clerkship was very well organized and very educational. I especially enjoyed the simulation sessions and I wish that we could do more of these throughout the year! I found it very valuable that attending physicians (Dr. Campoli and Dr. Sarsfield) were able to devote so much time to working closely with us. Overall, Emergency Medicine is a great specialty for us to rotate through during our third year because it allows us to practice working through differential diagnoses and allows us to see a breadth of patients with a variety of medical conditions."

"This clerkship was well thought through and organized. I liked that it was front-loaded in the EMSTAT with lots of simulations to get everyone prepared. I found the nursing shift extremely helpful for learning a lot of the basics, even for simple things on where to find supplies and how to move a bed around; the earlier the better for these shifts. The residents were also very accommodating and I definitely felt less like a burden then I have on other residencies."



Acting Interns or Al's (MSIV – Adult and Pediatric EM Rotations):

In 2017, 37 students completed the Adult AI, 12 of which were visiting from other institutions. The students work shifts in the ED and have a didactic lecture/simulation series one day per week taught by our EM faculty. Our Adult and Pediatric Acting Internships continue to be very popular electives with our Upstate students. We had 25 students completed the Pediatric AI.

Quote from AI Student

"Fantastic experience. I got to see two different EDs with two different patient populations. I got to see many different patient problems. I had lots of independence and responsibility, but with as much help from the residents and attendings as I needed. Everyone was great with teaching. The other staff I worked with were very friendly, supportive, and also taught me a lot."

Medical Student Research

The EM undergraduate education group was active in educational research. We completed a patient experience project with the Al students, the abstract was accepted as an oral presentation at the CORD-EM annual meeting in Fort Lauderdale. We have also submitted an abstract for this year's annual meeting on MS3 students participating in a more robust patient experience curriculum.

Electives (MSIV)

Our department continues to offer addition electives that have been very popular with our fourth year students. These include Teaching and Simulation (1), Clinical Toxicology (31), Ultrasound (10), EM Research and Hyperbarics (1).

Emergency Medicine Interest Group (EMIG) MSI – MSIV Students:

The EMIG has been very busy over the last year. Activities have included lectures from Dr. Gary Johnson and Dr. William Paolo, as well as an IV insertion clinic. The group organizes shadow shifts with our physicians in the ED and ride along shifts with local EMS.

Emergency Medicine Student Advisement

Our group is very active in student advising. Each year, we have a strong showing of faculty at sessions held by the medical school. Students interested in EM also meet frequently with Dr. Sarsfield. Additionally, we hold an annual question and answer session with the students which Drs. Johnson, Sarsfield and Paolo attend. Last year, we had 20 students from the Class of 2016 successfully match into EM.

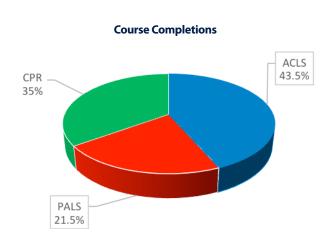






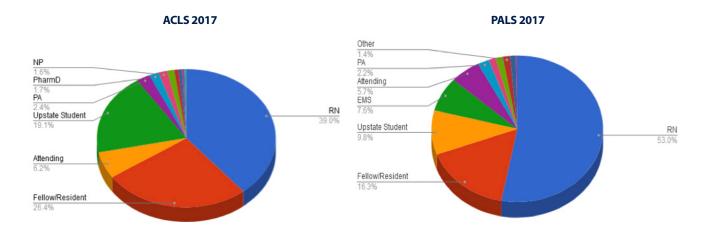
AMERICAN HEART ASSOCIATION LIFE SUPPORT PROGRAMS

The EMSTAT center continues to expand its advanced life support training using the American Heart Association courses. These courses include Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and CPR HeartSaver.





In 2017 we conducted a total of 63 ACLS and PALS classes to Registered Nurses, Physicians, Physician Residents, Physician Assistants, Nurse Practitioners, Pharmacists, Respiratory Therapists, Medical Students, Paramedics, and Paramedic Students. Over 1400 people were certified. The majority of these students are Registered nurses that work in Upstate's critical care units.



There were a total of 58 CPR classes taught to SUNY Upstate non-licensed individuals; a total of 598 individuals.

There have two significant improvements that were accomplished in 2017 for PALS and ACLS classes in both the Provider (original), and Refresher classes. The first is the introduction of a Teamwork module. The Teamwork module asks the students to perform and interact in real time on a simulated critical patient. These kinds of skills stations are routinely done with a focus on

AHA's algorithmic learning points. The Teamwork station focuses on how the group interacts, communicates, solves human problems in addition to the medical emergency that they are presented. This is a more interactive and reflective learning technique that has been well received by the students.

The second improvement that has been accomplished by the EMSTAT AHA instructor cadre was the teaching of ACLS to all of the Upstate MSIII (beginning their intensive clinical rotations) over two days. This consisted of classroom time followed by a long day of skills development and scenario exercises. We believe this gave the medical students a good foundation at the beginning of their rotations versus half of the group getting this kind of training in the back half of their clinical rotations. This also opened up the opportunity for them to additional clinical experiences during their Emergency Medicine Clerkship rotation.



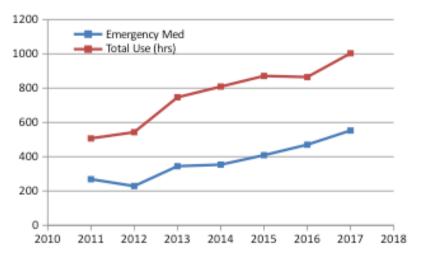
PUBLIC ACCESS DEFIBRILLATION PROGRAM (PAD)

The Public Access Defibrillation Program (PAD) serves the SUNY Upstate community from offices in Massena to the Syracuse area, and the Binghamton Campus. Since 2015 we have gone from 82 deployed AED's to 94. We continue to train people in the HeartSaver CPR class. Additional locations include the New Academic Building, Cord Blood Bank, and the expansion of Sarah Logan Center.

In 2017 the PAD program worked with LeMoyne College computer science students to develop a smartphone app that assists the user to locate the closest AED. As part of a class project, the students developed a user friendly system that enables the program administrator to make changes as needed. The goal of this app is to get the right tools to the right place in the right period of time so as to improve the odds of patient survival in the event of a cardiac arrest on the SUNY campus in a non-clinical area.

EMSTAT SIMULATION CENTER ACTIVITIES

The EMStat Simulation Center has experienced a continuous increase in utilization since 2012. As is shown in the graph below, the Total Hours of Use significantly increased between 2012 and 2013 with a more moderate and steady increase since 2013. The Emergency Medicine utilization of the Simulation Center during the same time period had a slight decrease between 2011 and 2012, but has moderately increased since 2012.



EMSTAT Utilization (in hours) between 2011 and 2017. The Total Hours are indicated by the square boxes and Emergency Medicine hours are represented by the diamonds.

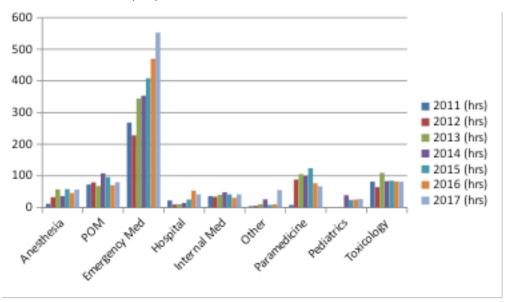
During 2012, there was a decrease in EM use of the Sim Center across multiple learner group activities. Both the MS3 Clerkship and Residency Program had decreased utilization. The MS3 Clerkship Track schedule was revised by the College of Medicine in 2012 and thus Emergency Medicine had fewer students during that year. At the same time, the EM Residency education had a change in curriculum, resulting in a moderate decrease in utilization. In all cases, EM utilization since 2012 has rebounded and increased. There were several changes in 2017, creating a shift in utilization of the Simulation Center. The College of Medicine added ACLS to the orientation week for all 3rd year medical students, creating surge in utilization. Also, the EM Residency program continues to include more simulation in the curriculum resulting in greater utilization.

The Simulation Center works with the Upstate Nurse Residency Program to develop simulation cases that increase the confidence of new nurses as they transition from student to practice. Together, we have developed simulations that utilize the resources of other groups and hospital initiatives such as stroke care, chest pain, and in hospital cardiac arrest. We have also developed cases that deal with hospital policies and procedures such as patient falls. The Nurse Residency Program strives to create a supportive environment for the new-to-practice graduate registered nurses with the simulation center providing a safe space for each nurse to learn from each other while also learning new patient care skills from other hospital units.

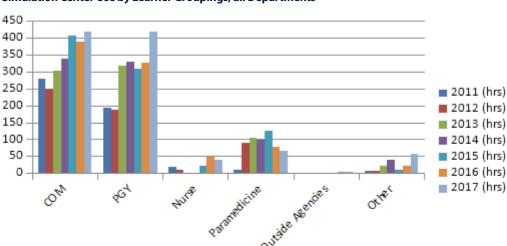
Other avenues for EMStat to lead the way are 3D Holographic Tables, Augmented Virtual Reality, and integrating the community surrounding the field of Emergency Medicine with better opportunities for Interprofessional Education (i.e. GEM Care, ElderCare, Refugee, Limited English Speaking Persons, Nursing, Pediatrics, etc.)

The EMStat Sim Center is not yet at capacity and can handle significant increases in utilization without sacrificing quality. The challenge continues to be to increasing the availability of quality educators and preceptors well into the future.

Simulation Center Use by Department and Year



The Simulation Center is heavily utilized by Emergency Medicine and its ancillary and affiliated programs (i.e. Paramedicine and Toxicology) far above any other group. Other departments utilized the EMStat Sim Center much less, but fairly consistently over several years. We are looking to an increase in utilization by other departments in 2018.

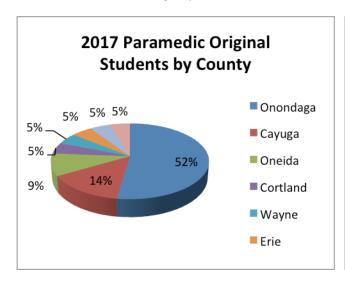


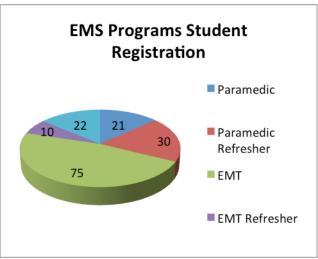
Simulation Center Use by Learner Groupings, all Departments

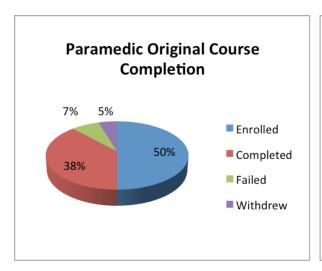
In this graph, the single largest learning group utilizing the Simulation Center is the College of Medicine across all four years of medical school. The 2nd largest learning group is residents from all of the programs throughout the hospital. Both groups will continue to increase their utilization in coming years.

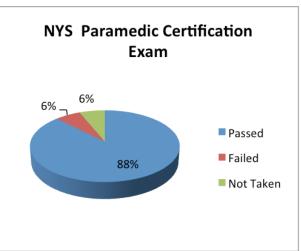
EMERGENCY MEDICAL SERVICES (EMS) EDUCATION PROGRAMS

During 2017 our Emergency Medical Services (EMS) Education Programs offered 11 New York State Department of Health Bureau of EMS Certification Programs. Included among these were numerous original certification and recertification courses for Emergency Medical Technician, Advanced Emergency Medicine Technician, and Paramedic.



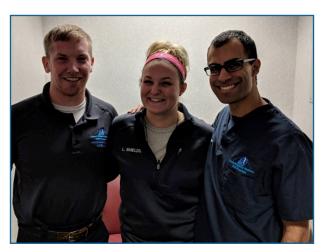






Through the generous donation of the Weinstein & Johnston Families, in partnership with the CNY Community Foundation, the Department of Emergency Medicine has created a sustainable scholarship for paramedic students and an ongoing sustainable lecture series in memory of Gail Weinstein, former Paramedic Program Director.

2017 Gail Weinstein Memorial Scholarship Award Recipients were: Sean Cooley, Laura Shields and Justin Bhatla



THE WEINSTEIN EMS LECTURE SERIES:

2 Minute 12 Leads was an 8 hour CME workshop presented by John Bray, MA, NRP, CCEMTP for advanced level EMS providers intended to build upon their foundational knowledge base. Attendees learned to recognize common pitfalls that interfere with EKG interpretation while refining a systemic approach to EKG interpretation and assessment of the complex medical case.

Comments from attendees

"I learned how to diagnose STEMI in the presence of confounding factors and treat electrolyte disturbances"

"This class was extremely informative and applicable to the EMS practice"

2017 WE ARE ONE PREHOSPITAL MEDICINE & TRAUMA TEACHING DAY:

Annual EMS conference was held in conjunction with EMS Week at the Lodge at Welch Allyn, with tracks for advanced and basic life support providers. The day event culminated with an evening reception and leadership discussion. The teaching day drew 167 people.

2017 PARAMEDIC STUDENTS DURING RESCUE OPERATIONS - VEHICLE EXTRICATION:



EMERGENCY MEDICAL SERVICES (EMS) LIAISON:

Doug Sandbrook is the EMS Liaison for University Hospital. He serves on standing quality committees for Adult and Pediatric Trauma and Stroke. He represents EMS at University Hospital systems meetings for adult and pediatric trauma. He is a member of CNY's Regional Trauma Advisory committee (RTAC), serving fourteen counties in central New York. This committee of prehospital providers and community hospitals work with area and regional trauma centers to improve the care of victims of trauma. The RTAC is responsible for trauma systems development and quality improvement.

In 2017, University hospital took the lead in NYS with the development of the first Regional Stroke Advisory Committee (RStAC) for prehospital providers along with community hospitals and stroke centers to improve care to the victims of stroke.

In 2017, Doug was appointed to McMahon Ryan Child Advocacy Center's Onondaga County Pediatric Fatality Review Team. This team meets monthly and the mission of the team includes:

- To conduct a comprehensive, multidisciplinary review of unexpected child deaths in Onondaga county
- Better understand how and why children die
- Analyze the patterns of child deaths
- Use findings to take action to prevent other child deaths, illness and injury
- Keep children healthy, safe and protected

INTERNATIONAL PROGRAMS

PHYSICIAN EXCHANGE PROGRAM WITH KERALA INSTITUTE OF MEDICAL SCIENCE

For the past several years our department has run a very successful physician exchange program with the Kerala Institute of Medical Science (KIMS) in Trivandrum, India. The program allows for a collaborative exchange of information, technology and culture between our department and the KIMS EM residency in Kerala. Every quarter an Upstate physician travels to India to provide didactic lectures and clinical observation. In their senior year, Indian residents are offered the opportunity to come to Upstate for a month to witness healthcare delivery in the US. The residents participate in Wednesday lectures and rotations in: adult and pediatric EM, toxicology, hyperbarics, and wound care. The residents love their time here in Syracuse and many of the faculty have hosted them for home cooked meals, dining out, movies, pumpkin carving and of course, laser tag.

This past year, Drs. Brenner, Kloss, and Lozanovskaya made the annual pilgrimage to India to share their didactic teaching and offer clinical guidance to our friends in Kerela. Faculty interested in this unique experience should reach out to Dr. Johnson and/or Anne Peer to check availability. Dr. Brian Kloss, Dr. Amernath, and any of the faculty that went previously will be more than happy to share their experiences and answer any questions you may have. In 2018 Dr. Kloss will be making his fifth visit to KIMS.

ANNUAL DEPARTMENT TEACHING DAYS - 2018 DATES

Upstate Wound Care and Hyperbaric Medicine Symposium

February 10, 2018, 8:00 AM - 12:30 PM; New Academic Building

8th Annual Contemporary Issues in Emergency Medicine

March 21, 2018, 1:00 - 5:00 PM; Genesee Grande Hotel, Syracuse

6th Annual Northeast Wilderness Medicine Conference

April 11, 2018; Genesee Grande Hotel, Syracuse, NY

We Are One: 5th Annual Upstate Pre-hospital Medicine & Trauma Teaching Day May 21, 2018

17th Annual Pediatric Emergency Medicine Assembly

September 12, 2018; 1:00 - 5:00 PM; Genesee Grande Hotel, Syracuse, NY

22nd Annual Toxicology Teaching Day

November 7, 2018; Genesee Grande Hotel, Syracuse, NY

OUTREACH/COMMUNITY ACTIVITIES

MEDICAL COVERAGE FOR CARRIER DOME EVENTS

Our physicians provide medical coverage for spectators at all major dome events.



MEDICAL COVERAGE DURING NEW YORK STATE FAIR

During the Great New York State Fair, the Department of Emergency Medicine is instrumental in the public safety, health and wellbeing of fairgoers. We manage the staffing of the 24-bed Fair infirmary with Registered Nurses, Physicians, EM Residents, and Paramedic Students. Our capabilities at the infirmary include managing and treating a broad range of medical conditions from soft tissue injuries to identifying cardiac and neurologic emergencies that would require transport for in-hospital specialty care. The 2017 Great New York State Fair (TGNYSF) was a record year in attendance. An additional day was added to the Fair duration.

Mild temperatures were instrumental to the total number of patients that we treated at the Infirmary. The previous two years – 2015 and 2016 – we treated 650 and 550 patients respectively. This year, the seasonable cool weather resulted in our Emergency Medicine Staff treating 360 patients. We continue to treat patients so that they can return to the Fair which is 74% of the time.

Our Physicians are at the patient's side within two minutes and the patient is typically treated and discharged in under 45 minutes.

Future efforts for the Infirmary during the Fair are likely to see patient volumes of 700-800 patients for the duration of the Fair due to high Fair attendance and the return of typical summer weather.

CAMPUS MEDICAL EDUCATION FOR DIVERSE STUDENTS (MEDS) PROGRAM

2017 EMSTAT participated in the Campus MEDS program by teaching local high schools student's patient assessment, CPR, and breath and lung sounds. This was about 45 students under the supervision of medical students and school chaperones.



CNY ELDER JUSTICE PROGRAM

We are also very active in the Central New York Elder Justice program out of Vera House. This program advocates for those in our community who are retired and they may need assistance due to neglect or abuse. We hope that Elder Justice will participate in our future simulation training exercises at our Community Campus Gem Care center.

RESEARCH DIVISION

OVERVIEW

The emergency medicine research division provides support to investigative efforts ranging from the subcellular to populations and from emergent care to chronic care. Working as a resource center, the Division provides guidance and support for development, design, implementation and/or reporting of research investigations. These services are provided to all levels of learners and faculty.

Specific services include:

- Assistance with IRB applications
- Sourcing grant/foundation funding
- Study design
- Data collection
- Statistical analysis
- · Assistance with manuscript writing and submission

NEW PROJECTS

Strategies to Innovate EmeRgENcy Care Clinical Trials Network—SIREN

William Paolo, MD - Site PI; Susan Wojcik, PhD - Co-Investigator; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

SIREN is a new NIH-funded network and serves as a nationwide effort to fill a need for multi- institutional emergency and trauma education and research network organization. The network is a cooperative award for five years and can be renewed. Temple University will serve as 1 of the 11 clinical hubs—located all across the U.S. The Temple-SIREN clinical hub will coordinate the efforts of a large group of academic medical centers and emergency medical systems throughout the metro Philadelphia area, across Pennsylvania, New Jersey, and New York. Department of Emergency Medicine at Upstate will participate as a sub-spoke through SUNY Downtown Medical Center.



2. Acute Urticaria

Jay Brenner, MD - Site PI; Jeremy Joslin, MD, Susan Wojcik, PhD - Co-Investigators; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

This is a multi-center randomized, controlled phase III clinical trial sponsored by JDP Therapeutics, Inc. to evaluate the non-inferiority comparing 10mg Cetirizine injection to 50mg Diphenhydramine injection for the treatment of acute urticaria. The sponsor anticipates that enrollment will be completed in March 2018 for a total enrollment of 256 subjects across all sites. Many of our ED faculty serve as sub-investigators on this study. In 2017, this project was funded \$31,750.00 by JDP Therapeutics, Inc.

3. Opioid Emergency Department Survey

Jay Brenner, MD - Site PI; Ross Sullivan, MD, Susan Wojcik, PhD - Co-Investigators; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

A research collaboration with Nathan Kline Institute for Psychiatric Research has been established to jointly conduct opioid related research. Our first project is a survey of ED and Bridge Clinic patients to assess the social and demographic profile of individuals who use heroin and non-medically prescribed opioids; and assess the sociodemographic and opioid use behaviors/ experiences associated with perceptions of overdose risk and naloxone awareness/ acquisition/use. This project was funded \$40,000.00 by the Research Foundation for Mental Hygiene.

4. Increasing Medical Student Awareness of Patient Centered Care

Vincent Calleo, MD - PI (Fellow); David Andonian, MD, Lindsay MacConaghy, MD, Matthew Sarsfield, MD, Louise Prince, MD, Susan Wojcik, PhD - Co-Investigators; Matthew Camara-Resident; Kara Welch - Clerkship Coordinator

A new patient centered care (PCC) curriculum has been developed as part of the emergency medicine clerkship rotation consisting of patient centered care orientation, standardized patient encounter, patient shadowing shift and a debriefing session. The impact of this new curriculum on students' view of PCC will be assessed using the Patient-Practitioner Orientation Scale (Krupat, 1999).

5. Laceration Repair in the Pediatric Emergency Department

William Prince, MD - PI (Fellow); David Sadowitz, MD, Peter Aiello, PharmD, Susan Wojcik, PhD - Co-Investigators; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

This study is a prospective observational study in the pediatric emergency department to compare the effectiveness of intranasal Versed to intranasal Precedex utilized as standard of care during laceration repair. Differences in success of sedation, time to effect of medication and need for re-dosing will be assessed. In addition, the child's parent/guardian will be asked to document the child's level of anxiety using a 5-face image scale anchored with descriptors ranging from no distress to very severe at various time points throughout the procedure. Both the parent/guardian and the laceration proceduralist will complete an evaluation of overall satisfaction with the anxiolysis.

6. Citalopram and Escitalopram Overdoses

Brett Cherrington, MD - PI (Fellow); Ross Sullivan, MD, Michael Hodgman, MD, Susan Wojcik, PhD-Co-Investigators; Kayla Dueland, MD - Resident

The Poison Center Toxicall® database will be used to complete a multi-center retrospective chart review to identify patients with citalopram or escitalopram overdoses from January 1, 2001 through December 31, 2016. Patients' medical records will be abstracted for key clinical, laboratory, EKG findings, and treatments to evaluate whether or not there is a subset of patients who can safely be discharged after only a 6-hour observation in lieu of the current practice of a 24-hour observation.

7. Toxicity of Sodium Channel Blockers on EKG Manifestation

Brett Cherrington, MD - PI (Fellow); Supa Niruntarai, MD (Fellow), Susan Wojcik, PhD - Co-Investigators

The Poison Center Toxicall® database will be used to identify patients who presented to Upstate University Hospital with sodium channel blocker overdose from January 1, 2006 through June 30, 2017. A retrospective chart review will be conducted to evaluate whether toxicity from other sodium-channel blockers can cause EKG change similar to those found in TCA toxicity.

8. Efficacy of Focused Assessment with Sonography in Trauma

Elizabeth Nicholas, MD - PI; Julienne Yamamoto, MD - Resident, Susan Wojcik, PhD - Co-Investigators; Theodore Robak- Medical Student

A retrospective review will be conducted to measure the efficacy of the focused assessment with sonography in trauma (FAST) exam at University Hospital ED of images taken between July 1, 2016 and June 30, 2017. The findings will be used to identify ways to improve patient care as well as educational opportunities for providers using the FAST exam at University Hospital.

Open-label Post-marketing Study of KamRAB Administered as a Single Dose with Active Rabies Vaccine in Children Exposed to Rabies

Embika Eranki, MD - PI (Infectious Disease); Peter Sadowitz, MD - EM Investigator; Lauren Pacelli - EM Research Coordinator

Upstate Emergency Department is being utilized as a location to execute an investigational vaccine trial to confirm the safety of KamRAB, a human rabies immune globin, in children ages 0 months to <17 years, when administered as part of post exposure prophylaxis. This study is funded by Kamada Ltd.

10. Prospective Cohort Study of ClearEdge Assessment System and Saliva Biomarkers in Concussion Injury

Christopher Neville, PhD, PT - PI (CHP); Susan Wojcik, PhD - EM Investigator; Lauren Pacelli - EM Research Coordinator

The Upstate Emergency Department is being utilized as one of the locations to enroll subjects with concussions in this prospective cohort study. The aims of this project are to: measure postural stability, cognitive skills, and presence of unique saliva markers in individuals at baseline (prior to concussion) and then in those who have sustained a recent concussion. This study is funded by Quadrant Biosciences.

ONGOING PROJECTS

The following projects implemented in the Upstate Emergency Department, Hyperbaric Oxygen and Wound Care Clinic, and Department of Emergency Medicine are ongoing and data is continuing to be collected and inputted by our research coordinators Lauren Pacelli and Christine Podolak.

Hyperbaric Oxygen and Wound Care Clinic

- Wound Vision, Pl: Marvin Heyboer, III, MD
 In 2017, this study was funded \$4,500.00 by WoundVision, LLC.
- Effect of HBO on Glucose Levels in Non–Diabetics, PI: Marvin Heyboer, III, MD
- HBO and its Effect on Radiation Induced Long Term Side Effects, PI: Marvin Heyboer, III, MD

Department of Emergency Medicine

 Emergency Medical Services Medical Director Workforce Assessment, Pl: Christian Knutsen, MD, MPH

In 2017, this project was funded \$32,253.82 by National Association of EMS Physicians

COMPLETED PROJECTS

1. Historical Features and Rates of UTI in Children 3 months - 2 Years of Age

William Paolo, MD - PI; Susan Wojcik, PhD- Co-Investigator; Vincent Calleo, MD - Fellow; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

A prospective study was completed with the scientific purpose of potentially altering the standard of care and move it away from the indiscriminate routine urinary collection on febrile children presenting to the emergency department.

2. Early Discharge of Patients with Presumed Opioid Overdose

William Eggleston, PharmD - Site Pl; Susan Wojcik, PhD - Co-Investigator; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

A multi- centered research project was completed in collaboration with University at Buffalo. The purpose of this research was to establish best practice recommendations for the observation of patients in the emergency department following opioid overdose with naloxone reversal. In order to determine whether a four hour observation period post-naloxone administration was necessary for the safe discharge of patients after opioid overdose, a published decision rule on early discharge was validated.

3. A Usability Assessment of Intramuscular, Atomized Intranasal, and Nasal Spray Administration of Naloxone by Untrained Community Members

William Eggleston, PharmD - PI; Susan Wojcik, PhD, Martin Kim, MD- (Resident), Vincent Calleo, MD (Fellow) - Co-Investigators; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

A single-site, open-label, randomized project was completed to determine successful time to administration of three methods of naloxone (atomizer, intra-muscular injection, and nasal spray) with no prior training. Proper administration of naloxone utilizing that particular method was taught to the individual after their attempt at simulated

administration using a mannequin. This endeavor will help public health providers and educators to better tailor public health educational initiatives regarding opioid overdose and rescue medication to NYS residents.









4. Exercise-Associated Hyponatremia in Post-Race Ultramarathon Athletes

Jeremy Joslin, MD - PI; Susan Wojcik, PhD - Co-Investigator; Dana Finch, MD - Resident; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

A randomized, controlled trial was completed at the 2017 KEYS100 Ultramarathon as a pilot study. Athletes who completed the race and who were enrolled in the study had their blood drawn to test sodium levels before and after a beer (common post-race beverage) or non-alcoholic beer intervention. It was hypothesized that the free water diuresis caused by drinking an alcoholic beverage should be enough to clinically improve an athlete suffering from exercise associated hyponatremia. Similar studies are planned to be conducted at future ultramarathon events.









5. Utilizing the Clock Draw Method to Predict Exercise-Associated Hyponatremia in Post-Race Ultramarathon Athletes

Jeremy Joslin, MD - PI; Susan Wojcik, PhD, Andrea Ferrari, MD (Fellow) - Co-Investigators; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

A clock draw test was administered to 2017 Keys100 Ultramarathon athletes enrolled in the study. Athletes who finish an ultramarathon are known to be exhausted, and can sometimes display lassitude. This symptom is present in benign exhaustion, but may also be a clinical sign of exercise associated hyponatremia (EAH) and may mask an underlying cognitive deficit suggestive of EAH. A convenient field test for detecting a cognitive deficit is the clock-drawing test and it was utilized to compare results of serum sodium levels collected to see if it is an accurate surrogate test to predict sodium abnormalities.

6. Insight and Task Performance in Simulated Suborbital Spaceflight; Implications for Informed Consent

Rebecca Blue, MD, MPH - PI; Emily Stratton, DO - Resident

External Collaborators: Johnene Vardiman, MS; Charles Mathers, MD, MPH; Tarah L. Castleberry, DO, MPH; Frederick Bonato, PhD; Andrea Bubka, PhD; Kimberly Seaton, PhD; and James M. Vanderploeg, MD, MPH

This study was completed to understand how minimally trained laypersons would perform during a simulated emergency during centrifuge-simulated suborbital spaceflight. The research team evaluated participant insight regarding their own performance and their perceptions of the efficacy of the training they received. 148 individuals participated in one of four centrifuge training programs of varied complexity and duration, culminating in two simulated suborbital spaceflights. This may highlight an opportunity to better educate future SFPs on risks imparted by vehicle occupants, personal responsibility, and similar factors that may significantly alter the risk profile of commercial spaceflight.

7. Perceptions of Narcan Use and Availability

William Grant, EdD - PI; Alan Shum, BS (Medical Student), Susan Wojcik, PhD - Co-Investigators; Christine Podolak, MS, Lauren Pacelli - Research Coordinators

An Opiate addition and Narcan/Naloxone Survey was administered to adults and visitors in the ED. This survey sought to better understand Emergency Department views and opinions regarding prescription painkillers and heroin use in their communities and in New York State.

8. Carbon Monoxide Transfers and Time to Hyperbaric Oxygen Treatment

Marvin Heyboer, III, MD - PI; Deepali Sharma, MD, Susan Wojcik, PhD - Co-Investigators

A retrospective chart review of patients treated with hyperbaric oxygen between October 1, 2010 and February 28, 2017 was completed to assess whether or not treatment of hyperbaric oxygen was received by a patient presenting with moderate to severe carbon monoxide poisoning within 6 hours of initial ED arrival. Hyperbaric oxygen therapy has been demonstrated to decrease neuro-cognitive sequelae in patients with carbon monoxide poisoning and receiving treatment within the 6 hour window is the maximum benefit thought to occur.

9. Patient Experience in Emergency Medicine Al Rotation

Louise Prince, MD - PI; Susan Wojcik, PhD, Vincent Calleo, MD (Resident) - Co-Investigators

A new patient experience curriculum was incorporated as part of the emergency medicine AI rotation to determine if this experience had any impact on students' patient centeredness. The previously validated Patient-Practitioner Orientation Scale (PPOS) was being used to determine if there was a difference between pre and post patient experience scores.

GRANTS SUBMITTED

"Exercise- Associated Hyponatremia in Post-Race Ultramarathon Athletes"- Jeremy Joslin, Susan Wojcik, Christine Podolak, Lauren Pacelli, Wilderness Medical Society Hultgren Research Grant Proposal, \$10,000.00

"Exercise- Associated Hyponatremia in Post-Race Ultramarathon Athletes"- Jeremy Joslin, Susan Wojcik, Christine Podolak, Lauren Pacelli, Ultra Sports Science Grant Proposal, \$5,000.00

JOURNAL ARTICLES:

Joslin J, Biondich A, Walker K, Zanghi N. A Comprehensive Review of Hirudiniasis: From Historic Uses of Leeches to Modern Treatments of Their Bites. *Wilderness & Environmental Medicine*. 2017 Dec 1;28(4):355–61.

https://www.ncbi.nlm.nih.gov/pubmed/29030099 https://doi.org/10.1016/j.wem.2017.08.002

Papadopoulos EA, Cummings KR, Marraffa JM, Aldous KM, Li L, Ahmad N. Reports of adverse health effects related to synthetic cannabinoid use in New York State. *Am J Addict*. 2017 Dec;26(8):772–5. https://www.ncbi.nlm.nih.gov/pubmed/29105968

https://doi.org/10.1111/ajad.12636

Suresh R, Blue RS, Mathers CH, Castleberry TL, Vanderploeg JM. Dysrhythmias in Laypersons During Centrifuge-Simulated Suborbital Spaceflight. *Aerosp Med Hum Perform*. 2017 Nov 1;88(11):1008–15. https://www.ncbi.nlm.nih.gov/pubmed/29046176 https://doi.org/10.3357/AMHP.4910.2017

Eggleston W, Marraffa JM, Nacca N. In response to: "Loperamide metabolite-induced cardiomyopathy and QTc prolongation." *Clin Toxicol (Phila)*. 2017 Nov;55(9):1023. https://www.ncbi.nlm.nih.gov/pubmed/28617054 https://doi.org/10.1080/15563650.2017.1334917

Nacca N, Hodgman MJ, Lao K, Elkins M, Holland MG. Can elevated lactate and LDH produce a false positive enzymatic ethanol result in live patients presenting to the emergency department? *Clin Toxicol (Phila)*. 2017 Aug;56(3):189–92.

https://www.ncbi.nlm.nih.gov/pubmed/28812382 https://doi.org/10.1080/15563650.2017.1357825

Thornton MD, Cicero MX, Mccabe ME, Chen L. Automated External Defibrillators in High Schools: Disparities Persist Despite Legislation. *Pediatric Emergency Care* [Internet]. 2017 Oct 31. https://www.ncbi.nlm.nih.gov/pubmed/29095383

https://doi.org/10.1097/PEC.000000000001335

Lorenzo MP, MacConaghy L, Miller CD, Meola G, Probst LA, Pratt B, et al. Impact of a Combination Antibiotic Bag on Compliance With Surviving Sepsis Campaign Goals in Emergency Department Patients With Severe Sepsis and Septic Shock. *Ann Pharmacother*. 2017 Oct 1;10.

https://www.ncbi.nlm.nih.gov/pubmed/29078714

https://doi.org/10.1177/1060028017739324

Alfandre D, Brenner J, Onukwugha E. Against Medical Advice Discharges. *J Hosp Med.* 2017;12(10):843–5.

https://www.ncbi.nlm.nih.gov/pubmed/28991952

https://doi.org/10.12788/jhm.2796

Reyes DP, Brinley AA, Blue RS, Gruschkus SK, Allen AT, Parazynski SE. Clinical Herpes Zoster in Antarctica as a Model for Spaceflight. *Aerosp Med Hum Perform*. 2017 Aug 1;88(8):784–8. https://www.ncbi.nlm.nih.gov/pubmed/28720190

https://doi.org/10.3357/AMHP.4450.2017

Suresh R, Blue RS, Mathers C, Castleberry TL, Vanderploeg JM. Sustained Accelerated Idioventricular Rhythm in a Centrifuge-Simulated Suborbital Spaceflight. *Aerosp Med Hum Perform*. 2017 Aug 1;88(8):789–93.

https://www.ncbi.nlm.nih.gov/pubmed/28720191

https://doi.org/10.3357/AMHP.4896.2017

Antonson E, Bayuse T, Blue RS, Daniels V, Hailey M, Hussey S, et al. The Risk of Adverse Health Outcomes and Decrements in Performance due to In-Flight Medical Conditions. *National Aeronautics and Space Administration* 2017; TR: NASA/TR-2017-0004604 https://ntrs.nasa.gov/search.jsp?R=20170004604

LaMantia J, Yarris LM, Sunga K, Weizberg M, Hart D, Farina G, et al. Developing and Implementing a Multisource Feedback Tool to Assess Competencies of Emergency Medicine Residents in the United States. *AEM Education and Training*. 2017 Jul 1;1(3):243–9.

https://doi.org/10.1002/aet2.10043

Blue RS, Bonato F, Seaton K, Bubka A, Vardiman JL, Mathers C, et al. The Effects of Training on Anxiety and Task Performance in Simulated Suborbital Spaceflight. *Aerosp Med Hum Perform*. 2017 Jul 1;88(7):641–50.

https://www.ncbi.nlm.nih.gov/pubmed/28641681

https://doi.org/10.3357/AMHP.4807.2017

Gosselin S, Lavergne V, Stork C, Hoffman RS. Letters to the Editor. *AACN Adv Crit Care*. 2017 Jun 20;28(2):133–4.

https://www.ncbi.nlm.nih.gov/pubmed/28592470

https://doi.org/10.4037/aacnacc2017454

Heyboer M, Sharma D, Santiago W, McCulloch N. Hyperbaric Oxygen Therapy: Side Effects Defined and Quantified. *Adv Wound Care* (New Rochelle). 2017 Jun 1;6(6):210–24.

https://www.ncbi.nlm.nih.gov/pubmed/28616361

https://doi.org/10.1089/wound.2016.0718

Hodgman M, Marraffa JM, Wojcik S, Grant W. Serum Calcium Concentration in Ethylene Glycol Poisoning. *J Med Toxicol*. 2017 Jun;13(2):153–7.

https://www.ncbi.nlm.nih.gov/pubmed/28083813

https://doi.org/10.1007/s13181-017-0598-4

Koester L, Brenner JM, Goulette A, Wojcik SM, Grant W. Inmate Health Care Provided in an Emergency Department. *J Correct Health Care*. 2017 Apr;23(2):157–61.

https://www.ncbi.nlm.nih.gov/pubmed/28421890

https://doi.org/10.1177/1078345817699595

Worthing RM, Percy RL, Joslin JD. Prevention of Friction Blisters in Outdoor Pursuits: A Systematic Review. *Wilderness Environ Med*. 2017 Jun;28(2):139–49.

https://www.ncbi.nlm.nih.gov/pubmed/28602272

https://doi.org/10.1016/j.wem.2017.03.007

Thornton MD. Lower-Extremity Weakness in a Teenager Due to Thyrotoxic Periodic Paralysis. *J Emerg Med*. 2017 Apr;52(4):e133–7.

https://www.ncbi.nlm.nih.gov/pubmed/27955984

https://doi.org/10.1016/j.jemermed.2016.11.006

Marco CA, Brenner JM, Kraus CK, McGrath NA, Derse AR, ACEP Ethics Committee. Refusal of Emergency Medical Treatment: Case Studies and Ethical Foundations. *Ann Emerg Med*. 2017 May 27; https://www.ncbi.nlm.nih.gov/pubmed/28559033/https://doi.org/10.1016/j.annemergmed.2017.04.015

Clemency B, Martin-Gill C, Rall N, May P, Lubin J, Cooley C, et al. Association between EMS Question Bank Completion and Passing Rates on the EMS Certification Examination. *Prehosp Emerg Care*. 2017 Aug;21(4):498–502.

https://www.ncbi.nlm.nih.gov/pubmed/28339308 https://doi.org/10.1080/10903127.2017.1294225

Clemency B, Tanaka K, May P, Innes J, Zagroba S, Blaszak J, et al. Intravenous vs. intraosseous access and return of spontaneous circulation during out of hospital cardiac arrest. *Am J Emerg Med*. 2017 Feb;35(2):222–6.

https://www.ncbi.nlm.nih.gov/pubmed/28288774

https://doi.org/10.1016/j.ajem.2016.10.052

Siegler J, Kroll M, Wojcik S, Moy HP. Can EMS Providers Provide Appropriate Tidal Volumes in a Simulated Adult-sized Patient with a Pediatric-sized Bag-Valve-Mask? *Prehosp Emerg Care*. 2017 Feb;21(1):74–8.

https://www.ncbi.nlm.nih.gov/pubmed/27690714

https://doi.org/10.1080/10903127.2016.1227003

Hoffman MD, Joslin J, Rogers IR. Management of Suspected Fluid Balance Issues in Participants of Wilderness Endurance Events. *Curr Sports Med Rep.* 2017 Apr;16(2):98–102.

https://www.ncbi.nlm.nih.gov/pubmed/28282356

https://doi.org/10.1249/JSR.000000000000344

Joslin JD, Lloyd JB, Copeli N, Cooney DR. Adherence to Follow-Up Recommendations by Triathlon Competitors Receiving Event Medical Care. *Emerg Med Int.* 2017;2017:1375181.

https://www.ncbi.nlm.nih.gov/pubmed/28203462

https://dx.doi.org/10.1155/2017/1375181

Andonian DO, Seaman SR, Josephson EB. Profound hypotension and bradycardia in the setting of synthetic cannabinoid intoxication - A case series. *Am J Emerg Med*. 2017 Jan 12;

https://www.ncbi.nlm.nih.gov/pubmed/28238395

https://dx.doi.org/10.1016/j.ajem.2017.01.011

Johnson G. Management of Sickle Cell Disease Super Utilizers. *West J Emerg Med.* 2017 Feb;18(2):251–2.

https://www.ncbi.nlm.nih.gov/pubmed/28210360 https://dx.doi.org/10.5811/westjem.2016.12.33224

TEXT BOOKS AND CHAPTERS

Marshburn TH, Cole RW, Blue RS. Space Medicine: The Next Frontier. In: Auerbach PS, Cushing TA, Harris NS, editors. *Auerbach's Wilderness Medicine*. Elsevier Health Sciences; 2016.

PRESENTATIONS

IN OUR COMMUNITY

"ORN Mandible & Adjunctive Hyperbaric Oxygen Therapy." Heyboer, M. Presented at Onondaga County Dental Society Annual Meeting, Syracuse, NY. March 2017.

"Heroin and Opioids." Ross Sullivan. Presented at SUNY Emergency Medicine - Contemporary Issues Symposium, Genesee Grande Hotel, Syracuse, NY. April 2017.

"Tick Borne Illnesses Illustrated." Kloss, Brian. Presented at Contemporary Issues in Emergency Medicine, SUNY Upstate Medical University Department of Emergency Medicine, Syracuse, NY. April 2017.

"Effective Use of Simulation in Health Education." Lynn Cleary, Elliot Rodriguez, Sandra Banas, Leah Kaufman, Andreas Meier. Presented at Upstate Medical University Faculty Educator Development Seminar Series, Syracuse, NY. June 2017.

"Upstate Emergency Medicine Bridge Clinic - A Solution to our Emergency Departments' Opioid Patients." Ross Sullivan. Presented at Transitions in Care Symposium, Syracuse, NY. June 2017.

"Upstate Emergency Medicine Bridge Clinic - A Solution to our Emergency Departments' Opioid Patients." Ross Sullivan. Presented at OASAS NYS Substance Use Disorder Symposium: An Opportunity for Partnership, Syracuse, NY. June 2017.

"Health Care Providers Must Lead Us Out of the Opioid Epidemic." Ross Sullivan. Presented at Onondaga County Health Department: Opioid Epidemic in our Community A Public Health Crisis, Marley Education Center at Crouse Health, Syracuse, NY. August 2017.

AT OTHER INSTITUTIONS

"Buprenorphine License Training." Ross Sullivan. Presented at NYS - DOH - Buprenophine Training, Syracuse, NY. April 2017.

"Naloxone Prescribing." Ross Sullivan. Presented at NYS - DOH - HIV Institute - Naloxone - a community physician forum, Rochester, NY. May 2017.

"Buprenorphine Prescribing." Ross Sullivan. Presented at NYS - DOH - HIV Institute - Buprenrophine, Rochester, NY. May 2017.

NATIONAL/REGIONAL/STATE CONFERENCES AND EVENTS

"Syncope: What You Don't Know Can Kill Your Patient." Kloss, Brian. Presented at PAAV 35th Annual CME Conference, Manchester Village, VT. January 2017.

"Toxicology and Addiction Round Table." Ross Sullivan. Presented at NYSAM Conference, New York City, NY. March 2017.

"Hyperbaric Oxygen Therapy: Myths and Truths in Patient Selection." Heyboer, M. Presented at Improving Wound Care 2017, Buffalo, NY. March 2017.

"Prospective Randomized Clinical Trial Comparing Ultraporous Beta-Tricalcium Phosphate with Bone Marrow Aspirate to Combined TCP with Calcium Sulfate in Curetted Benign Cavitary Tumor Lesions." Damron TA, Grant WD, Craig T, Inzinna, J Cohen H. Presented at Orthopaedic Reserch Society, San Diego, California. March 2017.

"Syncope: What You Don't Know Can Kill Your Patient." Kloss, Brian. Presented at New Jersey State Society of Physician Assistants 20th Annual CME Conference, Princeton, NJ. March 2017.

"Illustrated Toxicology 101." Kloss, Brian. Presented at NYSOMS Regional Osteopathic Conference, Hauppauge, NY. April 2017.

"Hyperbaric Oxygen Therapy: Myths and Truths in Patient Selection." Heyboer M. Presented at SAWC 2017, San Diego, CA. April 2017.

"The Patient Experience Shift: Enhancing Medical Student Attitudes Toward Patient-Centered Care." Vincent Calleo (presenter), Louise Prince, Susan Wojcik, and Kara Welch. Presented at 2017 CORD Academic Assembly, Fort Lauderdale, FL. April 2017.

"Identifying Strengths And Weaknesses In 3rd Year Clerkships Through Patient Evaluations And Self-Reflection." Kara Welch (presenter), Lisa Kelly, and Paul Ko. Presented at 2017 CORD Academic Assembly, Fort Lauderdale, FL. April 2017.

"Update on Synthetic Drugs of Abuse." Kloss, Brian. Presented at AAPA 45th Annual CME Conference, Las Vegas, NV. May 2017.

"Pit Stop to Stroke Unit, or Foundation of Stroke Care? The Role of the Emergency

Department in Acute CVA." Joslin, Jeremy. Presented at RUSH 2017 Neurovascular Conference,
OnCenter, Syracuse, NY. May 2017.

"Considerations in Pre-Participation Screening." Joslin, Jeremy. Presented at 4th Annual International Congress on Medicine & Science in Ultra-Endurance Sports, Denver, CO. May 2017.

"Carbon Monoxide Exposure and Timely Hyperbaric Oxygen Therapy." Sharma D, Heyboer M, Murugan K, Wojcik S. Presented at UHMS Annual Scientific Assembly, Naples, FL. June 2017.

"Failed Flap Successfully Treated with Hyperbaric Oxygen." Sharma D, Jennings S, Morgan M, Santiago W, Gonzalez L, Heyboer M. Presented at UHMS Annual Scientific Assembly, Naples, FL. June 2017.

"Trailing Hyperbaric Oxygen Treatments for Inner Ear Decompression Sickness." Sharma D, Jennings S, Morgan M, Santiago W, Mariani P, Heyboer M. Presented at UHMS Annual Scientific Assembly, Naples, FL. June 2017.

"Maxillary Osteoradionecrosis and Flap Reconstruction Successfully Treated with Adjunctive Hyperbaric Oxygen Therapy." Sharma D, Jennings S, Morgan M, Santiago W, Tatum S, Heyboer M. Presented at UHMS Annual Scientific Assembly, Naples, FL. June 2017.

"HBO Side Effects - Where Do We Stand?" Heyboer M. Presented at ACCWS 7th Annual Symposium, Dayton, OH. September 2017.

"Use of In-Chamber TCOM to Determine Optimal Treatment Pressure." Heyboer M. Presented at ACCWS 7th Annual Symposium, Dayton, OH. September 2017.

"Nutrition and Wound Healing." Heyboer M. Presented at ACCWS Back to Basics, Dayton, OH. September 2017.

"Opioid Bridge Clinic." Ross Sullivan. Presented at ASAP Conference, Buffalo, NY. September 2017.

"HBO Side Effects - Quantifying Risk." Heyboer M. Presented at UHMS NE Chapter Meeting, Harrisburg, PA. October 2017.

EM DEPARTMENT FACULTY

Gary Johnson, MD, FACEP, Associate Professor and Chair

Elliot Rodriguez, MD, FACEP, Associate Professor and Vice-Chair

Patrick Adcock, MD, Assistant Professor

Lingappa Amernath, MD, Assistant Professor

David Andonian, MD, Assistant Professor

Leah Bennett, MD, MPH, Assistant Professor

Rebecca Blue, MD, Assistant Professor

Jay Brenner, MD, Associate Professor

Jennifer Campoli, DO, Assistant Professor

Richard Cantor, MD, FAAP, FACEP, Professor

A. James Ciaccio, MD, FACEP, Assistant Professor

Derek Cooney, MD, FF/NREMT-P, FACEP, Associate Professor

Norma Cooney, MD, FACEP, Assistant Professor

Christine Courtney, MD, Assistant Professor

Susan Demartini, MD, Assistant Professor

Mary Lee DiRubbo, MD, Assistant Professor

William Eggleston, PharmD, Assistant Professor

Risa Farber-Heath, DO, Assistant Professor

Christopher Fullagar, MD, FACEP, Assistant Professor

Kevin Gaskin, MD, Assistant Professor

Tyler Greenfield, DO, Assistant Professor

Erin Hanley, MD, Assistant Professor

Marvin Heyboer, MD, FACEP, FUHM, FACCWS, Associate Professor

Michael Hodgman, MD, Assistant Professor

Eric Hojnowski, MD, Assistant Professor

Michael Holland, MD, FACEO, FACOEM, FACMT, FAACT, Professor

Samantha Jones, MD, Assistant Professor

Jeremy Joslin, MD, FACEP, FAWM, Associate Professor

Priyanka Kaul, MD, Assistant Professor

Anthony Klimek, MD, Assistant Professor

Brian Kloss, DO, JD, Associate Professor

Christian Knutsen, MD, MPH, FACEP, Assistant Professor

Paul Ko, MD, FACEP, Associate Professor

Albert Krisch, MD, Assistant Professor

Thomas Lavoie, MD, Assistant Professor

Lindsay MacConaghy, MD, Assistant Professor

James Mangano, DO, Assistant Professor

Sarah Marsh, MD, Assistant Professor

Deborah Mann, MD, Assistant Professor

Peter Mariani, MD, FACHM, FAPWH, Emeritus

Jeanna Marraffa, PharmD, DABAT, FAACT, Associate Professor

Alison McCrone, MD, FAAP, Assistant Professor

John McCabe, MD, FACEP, Professor

Monica Morgan, MD, Assistant Professor

Nicholas Nacca, MD, Instructor

Elizabeth Nicholas, MD, Assistant Professor

William Paolo, MD, Associate Professor

Lauren Pipas, MD, Assistant Professor

N. Heramba Prasad, MD, FACEP, Emeritus

Louise Prince, MD, FACEP, Associate Professor

David Reed, MD, FACEP, Emeritus

Peter David Sadowitz, MD, Associate Professor

William Santiago, MD, Assistant Professor

Matthew Sarsfield, MD, FACEP, FAAEM, Assistant Professor

Naveen Seth, MD, Assistant Professor

Deepali Sharma, MD, Assistant Professor

Eric Shaw, MD, FACEP, FAAEM, FAWM, Assistant Professor

Umair Sheikh, MD, Assistant Professor

Kelsey Stack, DO, Assistant Professor

Christine Stork-Medicis, PharmD, DABAT, FAACT, Associate

Professor

Ross Sullivan, MD, Assistant Professor

Christopher Tanski, MD, MSEd, EMT, Assistant Professor

Asalim Thabet, MD, Assistant Professor

Matthew Thornton, MD, Assistant Professor

David Wirtz, MD, MPH, Assistant Professor

Susan Wojcik, PhD, ATC, Associate Professor

ADVANCED PRACTICE PROVIDERS

Stephanie Brannan, PA Anthony Rotello, PA

Karl Elsner, NP Kelley Serens, NP

Maia Czarnecki, PA Jennifer Smith, PA

William Linsky, FNP, MS, DNP Mark Suchowiecki, PA

Valerie Reap, RN, MS, FNP-C Lisa Evans Westcott, NP

Victor Rodriguez, PA Jamie Winslow, PA

EM DEPARTMENT STAFF LISTING

Frances Barry, Administrative Coordinator

Maureen Corcoran, RHIT, Medical Coder

Michelle DeBellis, RHIT, Medical Coder

 ${\it Maresa Folds, MHA, EMS Fellowship and EMS Programs}$

Coordinator

Rodney Freeman, Manager Simulation Center

Stan Goettel, MS, EMT-P, Manager of Life Support & AED/PAD

Programs

Tisha Hanson, Administrative Specialist

Diane Hartzog, Residency Program Administrator

Janice Harvey, MBA, Administrator/Business Manager

Deborah Hermann, MS, Director of Operations

Kristy Holcomb, RHIT, Medical Coder

Robert (Randy) Klein, BBA, Assistant Business Manager

Naomi Krebs, EMT-P, EMS Programs Clinical Coordinator

Joshua LaDuke, BS, EMTP, Paramedic Program Lead Instructor

Mary Lewis, PEM and HBO Fellowship Coordinator &

Administrative Assistant

RoseMarie More, Conference and Life Support Programs

Coordinator

Lauren Pacelli, BS, EDRA Program Coordinator & Assistant Research

Coordinator

Jennifer Patrick, RHIT, Medical Coder

Anne Peer, Senior Administrative Assistant to Chair

Christine Podolak, MS, Associate Research Coordinator

Elaine Pohl, RHIT, Medical Coder

LaToya Pointer, RHIT, Medical Coder

David Rothman, Information Technology Associate

Douglas Sandbrook, MA, NREMT-P, EMS Liaison and EMS Programs

Director

Angela Scalise, Accountant III

Cynthia Sidari, Residency Administrative Specialist

Trina Skeele, RN, BSN, Director of Patient Safety

Cindy Spuches, CPC, Medical Coder

Lisa Vogtle, International EM & Wilderness Medicine Fellowship

Coordinator

Kara Welch, Undergraduate Medical Student & PA Fellowship

Coordinator

Mildred Williams, RHIT, Medical Coder

