

AUGUSTA UNIVERSITY
**MEDICAL
PARTNERSHIP**
UNIVERSITY OF GEORGIA



Simulation Center Annual Report

2022-2023

medicalpartnership.usg.edu

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Guiding Principles

The mission of the AU/UGA Medical Partnership Simulation Center is to promote excellence in patient care by working collaboratively with all educational stakeholders to offer safe, realistic, team-centered, interactive educational experiences utilizing the latest technology to develop, grow, and maintain the clinical proficiency of our students and the health care practitioners of our community.

Learning Environment

The Simulation Center is an integral component of experiential learning in promoting safe and proficient healthcare along the continuum of professional training and practice.

Introduction

I am pleased to share with you the annual report of the AU/UGA Medical Partnership Simulation Center for the Academic Year 2022-2023. Within these pages, you will find a comprehensive overview of the significant milestones, accomplishments, and initiatives that have defined our progress over the past year.

We are committed to providing excellence in healthcare simulation, fostering an environment that cultivates proficiency, compassion, and collaboration among our students, faculty, and the broader healthcare community.

Our accomplishments are a testament to the dedication and expertise of our team, the unwavering support of our faculty, and the enthusiasm of our students. Together, we are ensuring that our graduates are equipped with the skills, knowledge, and empathy needed to excel in their future roles as healthcare professionals.

Thank you for your continued support, partnership, and commitment to the AU/UGA Medical Partnership Simulation Center.

Simulation Center Team Members:

Campus Director of Simulation: Aimee Martin, MD, CHSE

Campus Director of Ultrasound: Kimberly Rathbun, MD, PhD, MPH

Campus Lead for Procedures: Thomas Howdieshell, MD

Simulation Educator: Len DeRamus, MPAS, PA-C

Simulation Coordinator: Kim Hill, MS, RRT, RRT-NPS, RPFT

Simulation Technician: Michael Croyle

Simulation Center Oversight Committee:

Dr. Aimee Martin, MD

Dr. Tresa Chappell, MD

Dr. Kimberlee Giffen, PhD

Dr. Andrew Morris, MD

Dr. Casey Bassett, PhD

Dr. John Norris, MD

Leonard DeRamus, MPAS, PA-C

Faculty Participating in Preclinical Activities

Simulation

AU/UGA Medical Partnership Clinicians

Tim Brown, PharmD
Tresa Chappell, MD
Len DeRamus, MPAS, PA-C
Tom Howdieshell, MD
Carrie Kelly, MD
Kate Meixner, MD
Bobby McClowry, MD
Laurel Murrow, MD
John Norris, MD, PhD
Kim Rathbun, MD, PhD, MPH
Scarlett Schneider, MD, MPH
Don Scott, MD, MHS
Toby Tally, MD
Melanie Wooten, MD

AU/UGA Medical Partnership Scientists

Amy Baldwin, PhD
Casey Bassett, PhD
Matt Boegehold, PhD
Thom Gaddy, PhD
Eve Gallman, PhD
Kimberlee Giffen, PhD
Kearney Gunsalus, PhD
Jaya Pamidimukkala, PhD
Clive Slaughter, PhD

UGA College of Pharmacy

Larry Aull, PharmD
Suzanne Avant, PharmD
Trisha Branan, PharmD
Kay Brooks, MEd, RPh
Joshua Caballero, PharmD
William Huang, PharmD
Blake Johnson, PharmD
Devin Lavender, PharmD
Beth Phillips, PharmD
Brian Seagraves, PharmD
Susan Smith, PharmD
Robin Southwood, PharmD
Rebecca Stone, PharmD
Randall Tackett, PhD

Ultrasound

Len DeRamus, MPAS, PA-C
Kimberlee Giffen, PhD
Tom Howdieshell, MD
Carrie Kelly, MD
Aimee Martin, MD
Kimberly Rathbun, MD, PhD, MPH
Scarlett Schneider, MD, MPH
Toby Tally, MD
Ariel VanLeuven, PhD

Procedural Skills

Molly Bond, MD
Tresa Chappell, MD
Len DeRamus, MPAS, PA-C
Mark Ellison, MD
Tom Howdieshell, MD
Aimee Martin, MD
Kim Rathbun, MD, PhD, MPH
Theresa Rohr-Kirchgraber, MD
Don Scott, MD, MHS
Toby Tally, MD

Participating Faculty in Clerkship Activities

Procedural Skills and Simulation Activities

Tresa Chappell, MD
 Len DeRamus, MPAS, PA-C
 Lara Hart, MD
 Tom Howdieshell, MD
 Ryan Katz, MD
 Carrie Kelly, MD
 Jon Marti, MD
 Julie Martin, MD
 Toby Tally, MD

Patient-Centered Learning (PCL)

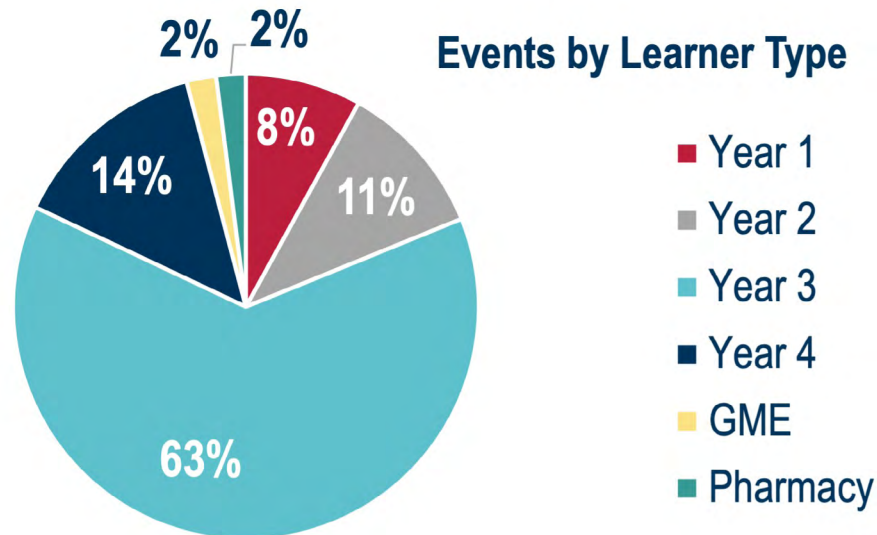
Jo Albritton, MD
 Molly Bond, MD
 Lara Hart, MD
 Tom Howdieshell, MD
 Ryan Katz, MD
 Aimee Martin, MD
 John Norris, MD, PhD
 Michael Petzar, MD
 Kimberly Rathbun, MD, PhD, MPH
 Theresa Rohr-Kirchgraber, MD
 Don Scott, MD, MHS
 Melanie Wooten, MD

Clinical Progression Assessment (CPA)

Brett Atchley, MD
 Mary Bond, MD
 Tresa Chappell, MD
 Jean Chin, MD
 Bryson Greenwood, MD
 Lara Hart, MD
 Tom Howdieshell, MD
 Carrie Kelly, MD
 Kate Meixner, MD
 Laurel Murrow, MD
 Kim Rathbun, MD, PhD, MPH
 Theresa Rohr-Kirchgraber, MD
 Michael Petzar, MD
 Toby Tally, MD
 Les Watters, MD
 Melanie Wooten, MD

Metrics

During the academic year 2022 (July 1, 2022–June 30, 2023) the Simulation Center hosted 348 educational events with 3967 learners (not discrete).



348

Educational Events

223 Educational Events
in AY 21-22

549

Curricular Hours

381 Curricular Hours
in AY 21-22

1955

Room Hours

1069 Room Hours
in AY 21-22

2429

Faculty Hours

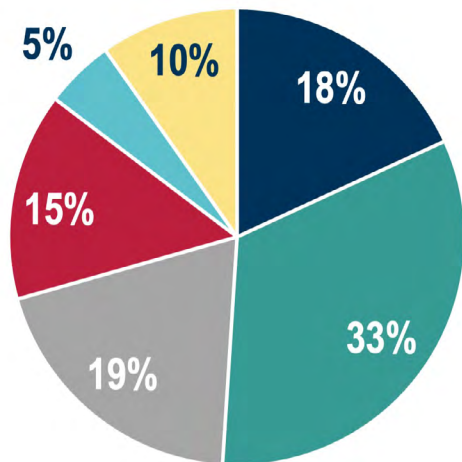
1232 Faculty Hours
in AY 21-22

7814

Participant Contact Hours

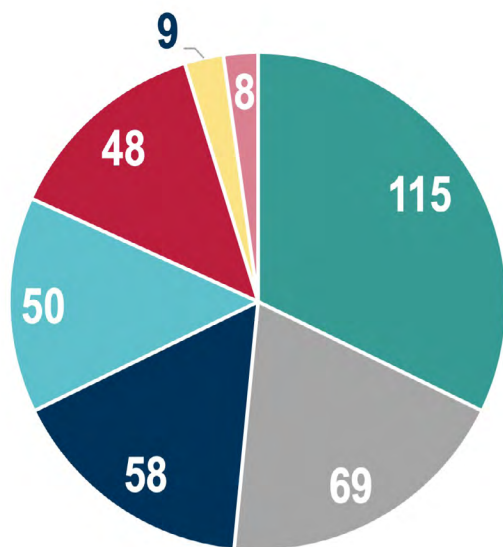
3771 Participant Contact Hours
in AY 21-22

Metrics, continued.



Events by Clerkship

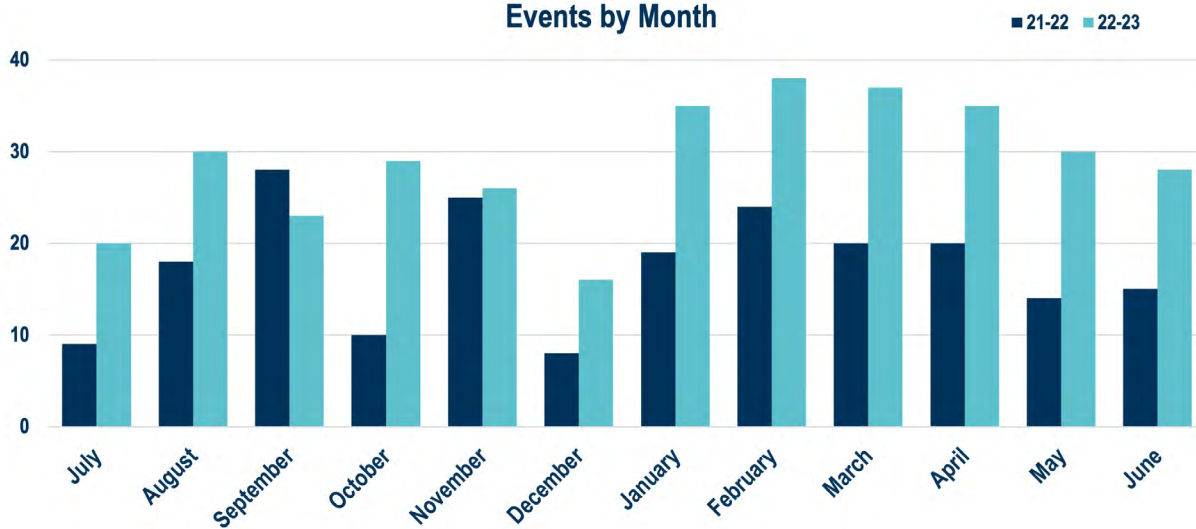
- Emergency Medicine
- Pediatrics
- OB/GYN
- General Surgery
- Family Medicine
- Internal Medicine



Event Type

- Simulation
- Ultrasound
- Procedural Skills Training
- Student Interest Groups
- Special Event/Tour/Mini-Med Camp
- Faculty Training
- Training

Events by Month



UME Program Accomplishments & Additions

A Harvey Cardiopulmonary Simulator® was acquired in 2022 with funds awarded from a UGA Technology Fee Grant. Since then, Harvey has been integrated into the curriculum in both large group demonstrations and small group clinical skills practice, and is available to students for independent self-guided practice. Additionally, Harvey has been used during demonstration sessions for UGA undergraduate learners and Mini-Med Campers. Harvey resides in Room 115 of Russell Hall on a custom mobile table designed by Michael Croyle.

UMedic Cardiology, a multimedia computerized software program that can be accessed online, was acquired in 2022 with a UGA CTL Learning Technologies Grant and provides students further avenues of independent study of cardiac physiology and pathology.

The Simulation Center purchased additional Butterfly IQ+™ ultrasound units to update the current technology and to accommodate the Medical Partnership's increased class size. The units are loaned to M3 and M4 students for performance of point-of-care imaging during their 3rd and 4th year clerkship rotations.

Simulation:

Year 1 and Year 2 Pre-clerkship Activities

- Year 1 students participated in a simulation orientation escape room and three simulated patient cases over the course of the year, introducing them to working as a part of a healthcare team, forming clinical questions at the bedside, identifying information resources to retrieve information and evidence, and the rapid assessment of acutely ill patients.
- Year 2 students participated in a total of six simulated patient cases over the course of the year. These experiences built upon the skills introduced in the first year and include practice prioritizing a differential diagnosis, recommending and interpreting diagnostic tests, initiating evaluation and management of a patient requiring emergent care, collaborating as members of an interprofessional healthcare team, and practicing providing a patient handover to transition care. UGA School of Pharmacy faculty and students participate in these patient cases.

Year 3 Clerkship Activities

- Year 3 Orientation:
Sim Center faculty provided a procedural skills refresher in airway management and IV placement.
- Pediatrics:
Included weekly patient case simulations and procedure training during each six-week block.
- General Surgery:
Included a patient case simulation, procedure training and ultrasound training each six-week block.
- Internal Medicine:
Two patient case simulations each six-week block.
- OB/GYN:
Procedural training, including standard gynecology exams and newborn delivery using high-fidelity manikins each six-week block
- **NEW** Patient-Centered Learning (PCL) simulations
PCL simulations occur once a week in the simulation center and once per block during the Family Medicine, Internal Medicine, Pediatrics, Obstetrics/Gynecology, and Surgery Clerkships.

PCL simulations assess longitudinal student progression in the 13 Entrustable Professional Activities (EPAs). They consist of Standardized Patient (SP)-based simulation cases, bedside clinical procedural skills, and ultrasound integration.

Year 4 Clerkship Activities

- Emergency Medicine:
Weekly procedure and ultrasound training and one patient case simulation each four-week block.
- **NEW** Critical Care NICU:
Procedural training and one patient case simulation each four-week block.
- **NEW** Medical Simulation Elective:
A four-week elective will teach students the principals of simulation in healthcare education, and provide them the opportunity to develop and pilot a simulated case.
- **NEW** Clinical Progression Assessment (CPA) simulations:
The CPA is a requirement for graduation, and occurs after completion of all Year 3 Clerkships to assess students for residency-readiness. Conducted in conjunction with Clinical Skills.

Procedural Skills:

Year 1 and Year 2 Pre-clerkship Activities

Year 1 students attended four procedural skills sessions during the year, including injections, phlebotomy, non-invasive airway management and ECG lead placement.

Year 2 students attended four procedural skills sessions during which they learned peripheral IV placement with and without ultrasound guidance, nasogastric tube placement, urinary catheter placement, sterile gloving, and local anesthesia administration.

Ultrasound:

Year 1 and Year 2 Pre-clerkship Activities

Year 1 students attended six ultrasound workshops over the course of the academic year. Topics are integrated with the anatomy course and include:

- Introduction to Ultrasound
- Musculoskeletal (Knee)
- Ocular and Neck Vessels
- Cardiac
- Abdominal (RUQ, LUQ)
- Pelvis & OB

Year 2 students attended four ultrasound workshops over the course of the academic year.

- FAST Exam review and Deep Veins of the Lower Extremity
- Cardiac
- Aorta and Gallbladder
- RUSH Exam

Year 2 students also perform ultrasound examinations during two Clinical Skills SP encounters. These sessions were developed in collaboration with the Clinical Skills program.

Student Interest Groups:

The Simulation Center facilities are used by many Student Interest Groups (SIGs) for faculty-assisted, student-run simulations, procedural demonstrations and hands-on activities.

Sessions have included weekly Surgery Interest Group Suture Clinics, an Emergency Medicine Interest Group Splinting Workshop, and an Anesthesia Interest Group Airway Simulation.

Surgery Interest Group ▶

Students utilize a specialized knot-tying set-up designed by Simulation Technician Michael Croyle.



Emergency Medicine Interest Group (EMIG) ▼

EMIG - Cast workshop - 3/17/23



GME Program Accomplishments & Additions

St. Mary's Internal Medicine Residents utilize the Simulation Center on a regular basis for additional training in procedural skills and patient resuscitation, including Intern Orientation, central line placement, arterial line placement, endotracheal intubation, joint aspiration/injection, NGT insertion, non-invasive airway management, and ACLS-based simulations.

MP simulation center faculty partner with the residency faculty to provide these training sessions.

Faculty Education & Training

Ongoing training for faculty occurs throughout the year, including:

- American Heart Association Basic Life Support Recertification



- Faculty training in ultrasound prior to each ultrasound workshop.
- Simulation educator operator training & practice
- Peer review of simulation educators' debriefing practices
- Harvey® Training
- New Faculty Simulation Educator Orientation

Engagement with other UGA Schools/Departments

1. UGA University Health Center: 25 clinicians and nurses from the UGA University Health Center attended a simulation training event in June. Cases were modeled after typical emergencies seen in the health center to provide teamwork skills training



2. UGA Grady College of Journalism and Mass Communication student film project recorded in the Simulation Center.
3. UHC Administrative Retreat, April 14, 2023: Administration and department heads participated in an Escape Room along with a tour of AU/UGA Medical Partnership's Russell Hall, including the Simulation Lab, Small Group Learning classrooms, and Anatomy Lab. A demonstration of the features of our patient simulators was also presented.

Community Programs

Demonstrations and Tours:

- UGA Federal Relations Congressional Staff
- Demonstration of Sim Suite – Prospective New Faculty
- Simulation in Healthcare Week Open House
- Georgia Military Officers Association of America (MOAA)
- Vice President & Associate Deans for Community Outreach and Service
- UGA Vet School
- VIP, Chancellor, Dean, UGA President, Board of Regents Executives
- UGA Film and Theater
- Brenau University
- UGA Student National Medical Association
- UGA Pre-Medical Interest Group
- Mercer University Faculty
- UGA Genetics Club
- UGA University Health Center Support Services

Foothills Area Health Education Center (AHEC):

Sim Center Tour and Escape Room – May 2023

AU/UGA MP partners with Foothills AHEC to provide the Pathway to Medicine Program, an intensive summer program for undergraduate pre-medical students attending Georgia institutions who plan to stay in state for medical school and practice primary care in Georgia.

Participating students toured the Simulation Center and engaged in a simulation escape room activity.

Mini Medical Camp

The Augusta University/University of Georgia Medical Partnership's Mini-Med Camp is a fun and engaging, week-long camp where kids can learn about the human body, what it's like to be a medical student, and what it's like to be a doctor.

Campers ages 8-17 are introduced to the field of medicine through team-based learning, hands-on projects, games, and crafts to learn about different body systems.

Participants in the Mini Med camp have access to the unique labs, technology, and teaching resources at the Medical Campers learn how to take a patient's health history, practice lab skills during dissection, and work as a team during a simulated medical situation in the state-of-the-art Sim Center.

Led by current medical students at the AU/UGA Medical Partnership who've collaborated with

faculty and staff, Mini Med Camp with its immersive, application-based curriculum aims to engage and inspire the next generation of physicians.

Mini-Med Camp attendees spent time reviewing cardiac anatomy and using Harvey® to listen to normal and abnormal heart and lung sounds. Campers were also able to palpate common pulses and look at carotid/venous/precordial pulsations.



Events:

Simulation in Healthcare Week

In September the Simulation Center celebrated Healthcare Simulation Week, sponsored by the Society for Simulation in Healthcare (SSH), with the purpose of raising awareness about the use of simulation to improve the safety, effectiveness, and efficiency of healthcare delivery.

A self-guided tour of the Simulation Center provided demonstrations of various patient simulators and equipment.



New Equipment & Acquisitions

Donated:

- Non-invasive positive pressure (NIPPV) machine
- Adult Mechanical Ventilator
- Disposable respiratory therapy equipment for NIPPV, mechanical ventilator, and oxygen administration devices.
- Newborn infant warmer and bed

Center Upgrades:

- Soundproofing and gaming headsets were added to the control room to improve the operator experience during simulations involving multiple stations at one time.
- Computers were installed outside of each of the five simulation bays to allow for student login for standardized formative and summative events, and improving coordination with events shared by Clinical Skills and Simulation
- Mobile racks for improved storage and transport of human patient simulators
- Custom cabinet for Harvey® use and transport

Conferences & Grants

Conferences

Dr. Aimee Martin – IMSH (International Meeting on Simulation in Healthcare) sponsored by SSH, January 21 – 24, 2023, Orlando, FL.

Michael Croyle – SUN (Simulation User Network) Conference hosted by Laerdal, September 12 – 15, 2022, Houston, TX.

Kim Hill – American Association for Respiratory Care (AARC) International Congress – November 8 – 11, 2022, New Orleans, LA.

Grants

UGA Student Technology Fee Award in the amount of \$142, 853 covered the cost of 61 new Butterfly Ultrasound units and an upgrade to the Sonosim® software