



HANNAFORD CENTER FOR SAFETY, INNOVATION &

SIMULATION

WHERE THE BEST IN HEALTH CARE
GO TO GET EVEN BETTER

ANNUAL REPORT 2022

MAINEHEALTH REGIONS

REGIONAL ENTITIES

MAINEHEALTH ACCOUNTABLE
CARE ORGANIZATION

MAINE BEHAVIORAL HEALTHCARE

MAINEHEALTH CARE AT HOME

NORDX

FRANKLIN COMMUNITY
HEALTH NETWORK

MAINEGENERAL HEALTH*

COASTAL HEALTHCARE ALLIANCE
WALDO COUNTY GENERAL HOSPITAL
PEN BAY MEDICAL CENTER

LINCOLNHEALTH
MILES CAMPUS
ST. ANDREWS CAMPUS

ST. MARY'S HEALTH SYSTEM*

MID COAST-PARKVIEW HEALTH

WESTERN MAINE HEALTH

SPRING HARBOR HOSPITAL
(MAINE BEHAVIORAL HEALTHCARE)

NEW ENGLAND REHABILITATION
HOSPITAL OF PORTLAND**

MAINE MEDICAL CENTER

MEMORIAL HOSPITAL

SOUTHERN MAINE HEALTH CARE

SMHC MEDICAL CENTER – BIDDEFORD
SMHC MEDICAL CENTER – SANFORD

*AFFILIATES
**JOINT VENTURE PARTNER

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MEDICAL DIRECTOR'S LETTER:

This annual report has become a milestone, providing a moment for our team to pause amidst a busy event schedule to reflect on a year's worth of excellent work but also to look ahead. The reflection part is incredibly satisfying. With a capable and positive team, the body of work to highlight never fails to impress. And, speaking of "positive," this year we added three new faces to our team; Beth Gray and Bruce Carleton joined as simulation specialists and Karissa Hannifan joined as administrative specialist. All three come from diverse professional backgrounds that further enrich our simulation program. Each brings positive energy, good humor, and a strong work ethic that have made a great team even better.

Each year we seek to better align with the priorities of our health system. In 2022, we are proud to have further advanced our Simulation-based Clinical Systems Testing (SbCST) work to improve patient safety. We produced 20 in-situ events — nine at MMC and 11 at other MaineHealth hospitals — nearly doubling the number of SbCST events from 2021. These do not even include the innovative monthly neonatal resuscitation "telesimulation" programs launched at LincolnHealth and progressing to quarterly "maintenance" phase at Franklin Memorial Hospital. This program offers an example of how we can expand local simulation capabilities at our community hospitals and expand the reach of simulation across the MaineHealth system.

Other examples include the work of our Standardized Patient team is doing with Diversity, Equity and Inclusion experts to develop training modules for communication in gender-affirming care. We are looking forward to launching this program in early 2023. Our next new mission-driven focus will be to use simulation to improve interprofessional training to better manage behavioral emergencies and patient agitation, as we work in collaboration with others to address workplace violence.

In November, we were pleased to collaborate with the Department of Emergency Medicine and MITE for the Third Annual John R. Darby Simulation Grand Rounds. Dr. Ambrose Wong from Yale University spoke about his work using simulation to create behavioral health response teams at Yale New Haven Hospital's emergency department. We were very happy Dr. Wong could present in-person.

We are so fortunate to have world-class simulation programming and such a fantastic team of individuals and faculty *working together so our communities are the healthiest in America*. I hope you enjoy the sampling of this good work presented in this annual report.

LEAH MALLORY, MD

MEDICAL DIRECTOR, THE HANNAFORD CENTER FOR SAFETY, INNOVATION AND SIMULATION
PEDIATRIC HOSPITALIST, THE BARBARA BUSH CHILDREN'S HOSPITAL AT MAINE MEDICAL CENTER
ASSOCIATE PROFESSOR OF PEDIATRICS, TUFTS UNIVERSITY SCHOOL OF MEDICINE



REGIONAL MEDICAL DIRECTOR'S LETTER:

Thank you for joining us on our simulation journey of 2022. Like me, I hope you will feel inspired by the work of our outstanding simulation team and our MaineHealth hospitals' dedication to their patients and communities. Through our partnership with them, our regional simulation program successfully advances our health system's vision by providing a forum for educating our caregivers and investigating ways to improve patient care.

Our MOMS (Maine Obstetric Medical Simulation) program entered its second year in 2022. Through the generosity of additional anonymous donors in addition to an initial round of philanthropic funding from the Hearst Foundation, we attained full funding for this successful program, which will allow us to reach all MaineHealth hospitals by 2023. Partnering with our Women's Health service line educators and clinical teams at four MaineHealth hospitals, we practiced high-risk obstetric emergencies, focusing on teamwork, diagnosis and treatment, and systems testing. Coupled with a robust Healthcare Failure Mode & Effects Analysis (HFMEA) report, our community hospitals have tools to advance the care they provide their communities. Through ongoing collaboration, we have seen some hard work from our community birthing hospitals, successfully closing latent safety threats discovered during their training on including post-partum hemorrhage, eclampsia, and shoulder dystocia.

Our Children's Health service line continues to see enormous success with the Neonatal Resuscitation Program, helping our birthing hospitals' clinical teams maintain and improve neonatal resuscitation skills. The improvements gained an initial day-long interprofessional simulation training on-site are sustained by monthly telesimulation events by our MOOSE (MaineHealth Ongoing Outreach for Simulation Education) program. Because this program has been so successful, we are partnering with an academic simulation collaborative to create a national program for other simulation centers to offer their community hospitals. This certainly marks an exciting new phase of this program and its potential to impact newborn care throughout the country.

Thanksgiving is approaching as I write this letter. I am grateful for a simulation team and community partners that strongly collaborate and are dedicated to the patients we serve. Our innovative programming focuses on successfully translating our simulation lessons to the bedside so that what we do matters for our patients.

JEFFREY A. HOLMES, MD

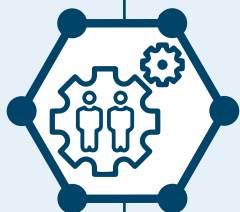
REGIONAL MEDICAL DIRECTOR, HANNAFORD CENTER FOR SAFETY, INNOVATION AND SIMULATION
EMERGENCY MEDICINE ATTENDING, MAINE MEDICAL CENTER
ASSISTANT PROFESSOR OF EMERGENCY MEDICINE, TUFTS UNIVERSITY SCHOOL OF MEDICINE

MEET THE TEAM

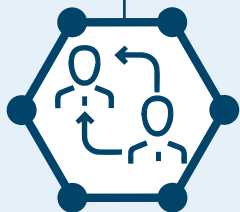
All of the good work you're reading about in this publication wouldn't be possible without the 15 individuals (who combined have more than 100 years of simulation experience!) who make up the staff at the Hannaford Center for Safety, Innovation & Simulation. The key front-line simulation positions are:



EDUCATION SPECIALISTS — Concentrating in either high-fidelity manikin- and skill-based curriculum or standardized patient curriculum, the education specialists are responsible for collaborating with teaching faculty and other hospital stakeholders on the development, maintenance, and revision of simulation activities. They ensure the appropriate simulation modality is selected, that learning objectives are clear and measurable, serve as a centralized checkpoint so that curriculum is created to benefit the maximum number of learners, and ensure the clinical fidelity of our simulation activities.



SIMULATION SPECIALISTS — Simulation specialists implement and deliver high-fidelity simulation activities using manikins and skills trainers. Collaborating with faculty and the Sim Center's education specialists, they are responsible for "bringing the show to life" with voice acting and special effects makeup that allow learners to suspend their disbelief. They are also technically savvy in knowing how to program, run, and troubleshoot simulation equipment and the clinical equipment that is found in actual patient care environments. Our simulation specialists are extremely innovative, including creating proprietary 3D models for difficult airway and pessary trainers and a synthetic replacement for animal tissue.



SIMULATION TRAINING SPECIALISTS — Simulation training specialists are experts in the use of standardized patients (SP) in the delivery of high-fidelity simulation activities. Often confused with actors, SPs are real people who are trained to portray a myriad of clinical conditions and provide feedback to learners. Simulation training specialists recruit, train, and cast SPs, and collaborate with faculty and education specialists to edit scripts and manage precise minute-by-minute schedules that only the best event planner could appreciate. They also provide evaluations and mentorship to more than 70 SPs in our pool. Innovations include creating a system-wide telehealth simulation activity in response to Covid-19 and converting nearly all of the SP curriculum to a virtual platform using Zoom.

The frontline team described above is supported by two physician directors, an administrative director, operations manager, systems analyst, and administrative specialist.

Note: opposite page credentials —

CHSOS = Certified Healthcare Simulation Operations Specialist

CHSE = Certified Healthcare Simulation Educator



Shelly Chipman, MSN, CCRN, CHSE
Simulation Nurse Education Specialist



Beth Bongiolatti Gray, MA, CPM
Simulation Specialist



Bruce Carleton, BS, EMT-P
Simulation Specialist



Jeff Holmes, MD
Regional Medical Director



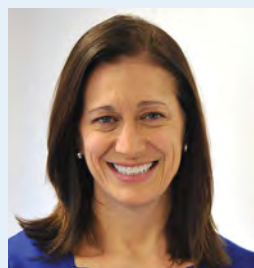
Tyler Johnson
Simulation Specialist



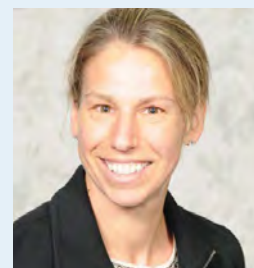
Tracie Knight, CHSOS
Simulation Specialist



Susie Lane, CHSOS
Simulation Specialist



Christine Mallar, BA
Standardized Patient Education Specialist



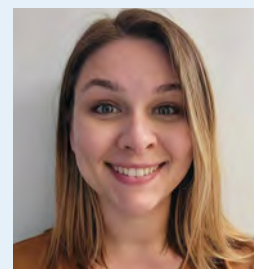
Leah Mallory, MD
Medical Director



Christyna McCormack, MBA
Administrative Director



Bethany Rocheleau
Simulation Training Specialist



Karissa Hannifan, BA
Administrative Specialist



Mike Shepherd, BS, CHSE
Operations Manager



Erin Siebers, MS
Simulation Training Specialist



Mariah Wheeler
Associate Systems Analyst

BY THE NUMBERS

CAPACITY

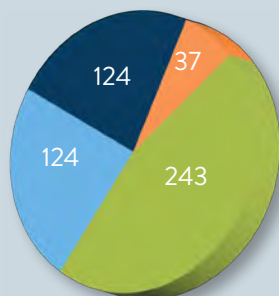
Following two years of reduced operations due to the COVID-19 pandemic, Sim Center activity rebounded in 2022, exceeding pre-pandemic levels in every measurable category and surpassing 20,000 learner contact hours for the first time. Data on this page showcases annualized throughput since 2019 (top) and how events in the most recent Academic Year (AY) break down by modality, location, and learner group (bottom).

THROUGHPUT	AY19-20*	AY20-21	AY21-22
EVENTS	375	461	528
LEARNERS	3,025	3,689	4,646
INTERPROFESSIONAL EVENTS	23%	26%	26%

*Regular simulation operations were suspended at the start of the pandemic resulting in reduced throughput for the year.

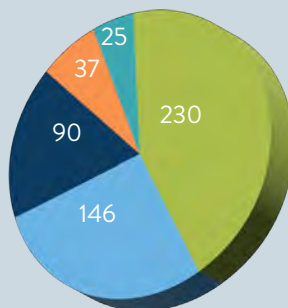
EVENTS BY MODALITY

MANIKIN-BASED	243
SKILLS TRAINING	124
STANDARDIZED PATIENT	124
COMBO/HYBRID**	37



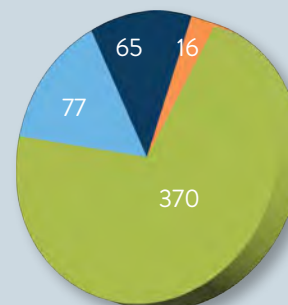
EVENTS BY LEARNER GROUP

RESIDENTS & FELLOWS	230
MMC CLINICAL TEAMS	146
MEDICAL STUDENTS	90
SIMULATION EDUCATION PROGRAMS	37
MAINEHEALTH CLINICAL TEAMS	25



EVENTS BY LOCATION

SIMULATION CENTER AT BRIGHTON	370
TEAM TRAINING FACILITY AT BRAMHALL	77
TELESIMULATION	65
IN SITU	16



** These events utilize more than one modality to meet learning objectives.

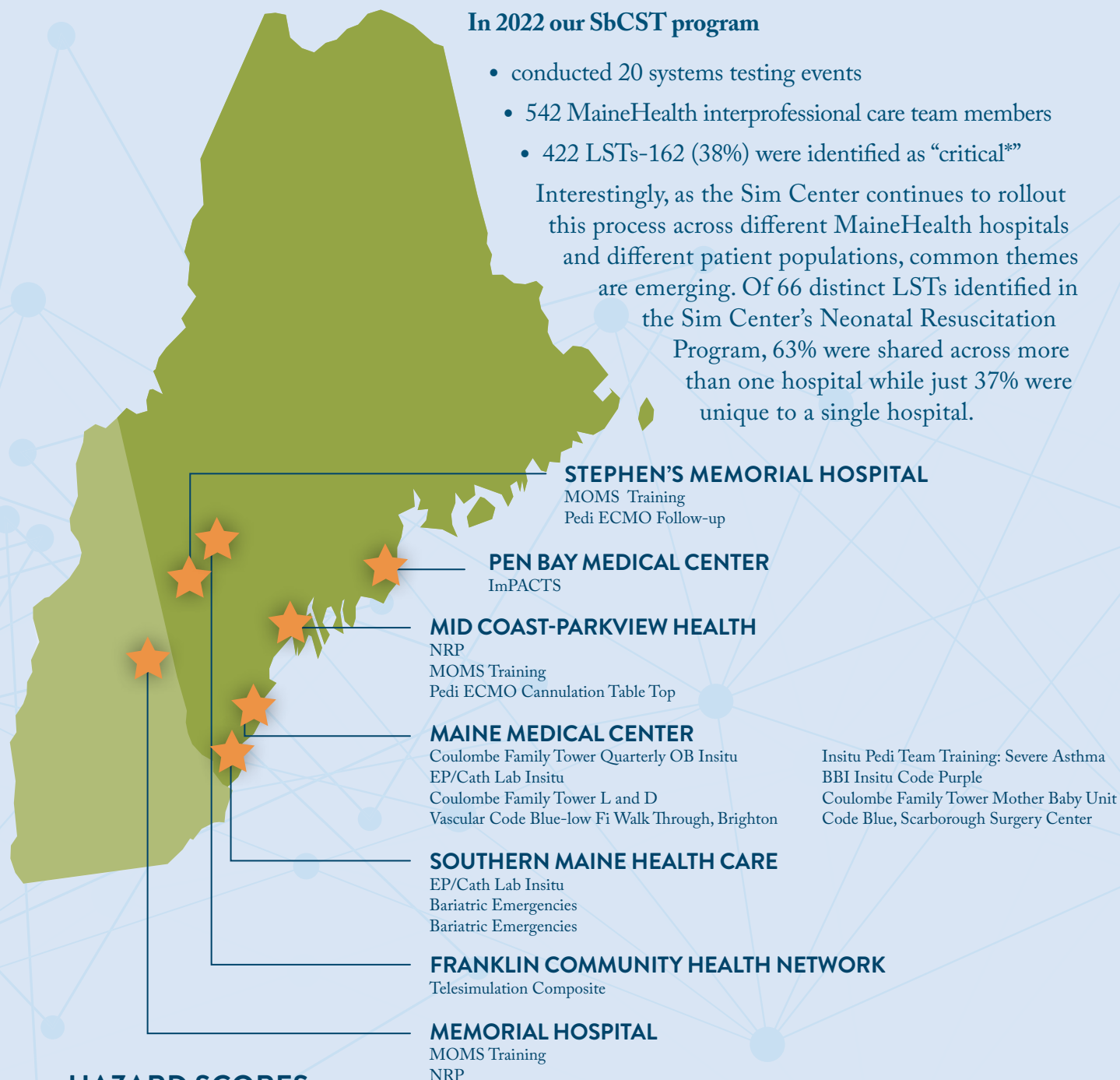
SIMULATION-BASED CLINICAL SYSTEMS TESTING

Healthcare Failure Modes and Effects Analysis (HFMEA) was created by the Veterans' Affairs National Center for Patient Safety to prospectively identify latent safety threats (LSTs) within teams and systems. HFMEA used with in situ simulation is a powerful patient safety tool. The resulting synergy provides for LSTs to be categorized, scored, and prioritized for remediation.

In 2022 our SbCST program

- conducted 20 systems testing events
- 542 MaineHealth interprofessional care team members
- 422 LSTs-162 (38%) were identified as "critical"

Interestingly, as the Sim Center continues to rollout this process across different MaineHealth hospitals and different patient populations, common themes are emerging. Of 66 distinct LSTs identified in the Sim Center's Neonatal Resuscitation Program, 63% were shared across more than one hospital while just 37% were unique to a single hospital.



HAZARD SCORES

PROBABILITY	SEVERITY				
		CATASTROPHIC (4)	MAJOR (3)	MODERATE (2)	MINOR (1)
	FREQUENT (4)	16	12	8	4
	OCCASIONAL (3)	12	9	6	3
	UNCOMMON (2)	8	6	4	2
	REMOTE (1)	4	3	2	1

*The LST Hazard Score is calculated by multiplying Severity and Probability ratings (1-4 scale). Any LST scoring > or = 8 is deemed "critical."

PATIENTS



Simulation is a powerful patient safety tool. This type of programming, designed to prospectively identify latent safety threats, is called Simulation-based Clinical Systems Testing. SbCST uses simulation to recreate clinical scenarios to probe teamwork, communication, equipment, and protocols to identify latent safety threats without risk of harm to real patients or staff. This work typically occurs with interprofessional care team members in their native clinical environments, so-called in situ simulation.

CARDIAC ELECTROPHYSIOLOGY LAB AT MMC AND SMHC

As MaineHealth evolves to better integrate care across our system, capacity for services such as interventional cardiology may be developed at several sites. This is the case for sophisticated electrophysiology (EP) procedures, which occur both at Maine Medical Center and Southern Maine Health Care. In March, the EP team asked the Sim Center to help test system readiness for rare procedural emergencies. MMC's highly skilled interprofessional team tested protocols to manage emergent pericardial tamponade in an anti-coagulated patient. A month later, the same event repeated at SMHC. This is an excellent example of MaineHealth using simulation to ensure alignment of best practices across system-wide clinical service lines.

CODE BLUE AND EMERGENCY BLOOD TRANSFUSION AT SCARBOROUGH SURGERY CENTER

The Scarborough Surgery Center is an important part of the MaineHealth system. SSC offers an efficient and patient-centered experience for surgical procedures not requiring an inpatient stay. As the health system optimizes care, SSC has expanded capacity to offer more procedures to increasingly complex patients. As part of efforts to ensure the highest levels of patient safety, the interprofessional teams at SSC tested and optimized protocols for Code Blue response and emergent blood transfusion.



PATIENTS

“

It has been years since a pediatric patient has been cared for on ECMO in the PICU and even longer, if ever, since one was cannulated. We wanted to test the systems in place to see what roadblocks were preventable and, ultimately, ensure we can take on the sickest patients in a safe manner.

— pediatric intensivist Michael Ferguson

PEDIATRIC ECMO AT THE BARBARA BUSH CHILDREN'S HOSPITAL

Pediatric ICU and cardiothoracic surgery clinical teams participated in the first of several pediatric ECMO simulation events in preparation for the launching this highly-specialized service at the Barbara Bush Children's Hospital. MMC's adult ECMO teams regularly use simulation to train new members; and the pediatric ECMO team developed a similar training program. In November, the PICU successfully implemented ECMO on the first pediatric patient, bringing experiential simulation-based training to the bedside to provide complex high acuity care.



PEOPLE



Medical Education has been a core part of the Sim Center mission from its inception. We utilize state of the art technology and educational methods to provide safe and immersive learning experiences for learners across the continuum of health professions providing care to MaineHealth's patients. Below is a sampling of the many different ways the Sim Center supports MaineHealth's academic mission.

INTERPROFESSIONAL “SURVIVING SEPSIS” PROGRAM

The Adult Medicine service line is in the midst of a Clinical Transformation Project aimed at improving the workflows related to the early recognition of hospital-acquired sepsis. In 2022, the program implemented an interprofessional simulation-based training at the Hannaford Team Training Facility on MMC's Bramhall campus. The training included an evolving sepsis case scenario and provided opportunities for interprofessional teams to work together using established workflows, early detection tools, and standard EHR documentation templates.

One participant shared in post-encounter feedback. “There is a lot of work nurses do that we don't see.”

A debrief followed after each scenario, which was facilitated by a hospitalist and at least one nurse. One debrief objective included fostering communication and the use of common language with regard to early recognition of sepsis and a heightened awareness of the EHR tools. Interprofessional teams included residents from two programs, APPs, and nurses.



“

There is significant value in seeing how nurses work and think differently than doctors, and vice versa. There is a lot of work nurses do that we doctors don't see. Nurses and providers work together, so why shouldn't we train together?



CORE CLERKSHIP OBJECTIVE STRUCTURED CLINICAL EXAMS

This year marked the beginning of core clerkship OSCEs for Family Medicine and Internal Medicine, which was both an exciting but considerable endeavor for our SP team. These carefully crafted experiences offer opportunity for faculty to assess students in a standardized fashion performing key competency skills. Introduction of OSCEs to all core clerkships is a part of Tufts University School of Medicine curricular reform. These OSCEs remain formative this year but will eventually become a summative assessment of competence.



TUSM MAINE TRACK – END OF CORE CLERKSHIP OSCE

ECCO, formerly End of Third-Year Assessment, involves four all-hands-on-deck days where 40+ Maine Track medical students rotate through “a day in the clinic” consisting of 11 summative clinical encounters. This requires an orchestra of organization, training and casting 13 standardized patients per day, and keeping everyone rotating on schedule and in order.

MEDICAL STUDENT 2ND YEAR PHYSICAL DIAGNOSIS SESSIONS

A new series of themed opportunities for medical students to refine physical exam skills with standardized patients launched this year. These sessions focus on both teaching physical exam technique in partnership with faculty and also providing important feedback on patient experience of physical exams.



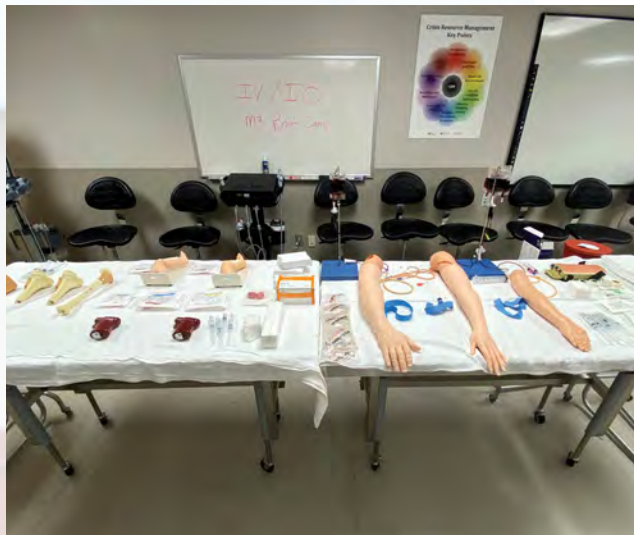
PEOPLE



BOOT CAMP

BOOT CAMPS, AKA “JUST-IN-TIME” TRAINING

In the weeks just before medical students enter their clinical clerkships or newly graduated medical and nursing students begin residencies or clinical placements, the Sim Center is afurry with activity. It leverages an arsenal of skill-specific simulators and volunteer faculty to allow hands-on opportunities to learn and practice key clinical procedures, including lumbar puncture, venipuncture, scrub training and intra-osseous access. In our SP lab, learners practice physical skills including hand hygiene, breast and pelvic exams, and ultrasound.



POPULATION



There is perhaps no better example of MaineHealth's vision of working together so our communities are the healthiest in America in action than the Sim Center's regional programming. Through simulation, clinical best practices are identified, refined, aligned and implemented throughout MaineHealth's communities. By evaluating teams and systems, the regional program fosters local empowerment through regional support that enhances institutional relationships and optimizes well-coordinated care. The results are measurable and lasting.

MAINE OBSTETRIC MEDICAL SIMULATION (MOMS)

The MOMS program launched in March with a day-long event at Memorial Hospital in North Conway, New Hampshire. With funding from the Hearst Foundation supplemented by a generous donation from Muriel's Fund, the Sim Center, and our OB sim instructors are partnering with interprofessional obstetric teams at MaineHealth hospitals to practice and protocol test obstetrical emergencies. In this program, simulation enables community hospitals with lower birth volumes to remain prepared to manage rare but high morbidity emergencies when they arise. Thus far, the MOMS program has successfully launched at Memorial, Stephen's Memorial, Mid Coast, and Pen Bay hospitals.



IMPACTS (IMPROVING PEDIATRIC ACUTE CARE THROUGH SIMULATION)

We continued the MaineHealth rollout of the national program at Pen Bay Hospital. The interprofessional care team at Pen Bay utilized this structured multi-institution simulation quality improvement research project to prepare and improve protocols to manage critically ill pediatric patients. The single day, interprofessional simulation based testing and training preceded weekly educational content to bolster their knowledge, skills, and system readiness to manage emergencies covered during the simulation.

MAINE ON-GOING OUTREACH SIMULATION EDUCATION (MOOSE) FOR NEONATAL RESUSCITATION

In 2021, Franklin Memorial piloted monthly neonatal resuscitation telesimulation training where on-duty teams in delivery rooms participate in one-hour resuscitation simulation. Neonatologists at MMC use telehealth technology to observe the simulation and participate in the debriefing. Pilot data showed impressive steady improvement in both NRP adherence and team performance over the year. In 2022, this program expanded to LincolnHealth-Miles Memorial Hospital while Franklin teams moved to quarterly simulations. This variability in frequency will help determine the appropriate training frequency necessary to maintain skills.



As the Sim Center continues to expand scope through growth, it remains aware of the responsibility to optimize efficiency of our internal operations. By ensuring wise stewardship of resources, we maximize our value to MaineHealth in many ways. This includes, by not limited to, practicing good governance, identifying new sources of revenue, and contributing to simulation's growing body of scholarly work.



SIMULATION GOVERNANCE COMMITTEE

- Leah Mallory, MD — Medical Director, Simulation
- Susan Ahern — Vice President, Innovation
- Sharon Baughman, DNP, MSN, BSN, RN — MaineHealth Chief Nursing Officer
- Brandy Brown — Senior Program Manager; Diversity, Equity & Inclusion
- Samantha Caprari — Operations Manager, Academic Affairs
- Linda Chaudron, MD — Vice President, Medical Education
- Shelly Chipman, MSN, RN, CHSE — Simulation Nurse Educator
- Tim Fox, MD — Associate Vice President, Medical Affairs
- Jen Hayman, MD — UME Curriculum Director, Medical Education
- Jeff Holmes, MD — Regional Medical Director, Simulation
- Liz Jacobs, MD — Vice President, MaineHealth Institute for Research
- Christine Mallar — Standardized Patient Educator, Medical Education
- Christyna McCormack, MBA — Director, Medical Education
- Nathan Mick, MD — Vice President, Medical Affairs
- Mary Ottolini, MD — Chief, Children's Health Service Line
- Mark Parker, MD — Vice President, Quality & Safety
- Mike Shepherd — Simulation Operations Manager, Medical Education
- Kneka Smith — Operations Vice President, Academic Affairs
- Maureen Van Benthuyzen — Senior Vice President, Clinical Services
- Kalli Varaklis, MD — Designated Institutional Official
- Paula White, MSN, RN — Senior Director, Center for Clinical & Professional Development



SIM CENTER SCHOLARLY ACTIVITY

PUBLICATIONS

- **Zanno A, Melendi M, Cutler A, Stone B, Chipman M, Holmes J, Craig A.** Simulation-Based Outreach Program Improves Rural Hospitals' Team Confidence in Neonatal Resuscitation. *Cureus*. 2022 Sep 1;14(9):e28670. doi: 10.7759/cureus.28670. PMID: 36196287; PMCID: PMC9525099.
- **Frey-Vogel, A; Ching K; Dzara K; Mallory L.** The acceptability of Avatar Patients for teaching and assessing pediatric residents in communicating medical ambiguity. *Journal of Graduate Medical Education*; 9.27.2022 accepted for publication.



ORAL PRESENTATIONS AND WORKSHOPS

- International Meeting for Simulation in Healthcare (IMSH) annual conference
 - **Alison Zanno, Misty Melendi, Shelly Chipman, Leah Mallory, Jeffrey Holmes, Alexa Craig, on behalf of the MOOSE Research Team.** "A Novel Telesimulation Program, Maine Ongoing Outreach Simulation Education (MOOSE) Improves NRP Skills in a Rural Hospital". International Meeting on Simulation in Healthcare, January 16, 2022, Los Angeles, CA.
 - **Shelly Chipman, Leah Mallory.** "Everyone Engaged! A Qualitative Debriefing Study of Pediatric Interprofessional Simulation-based Team Training". International Meeting on Simulation in Healthcare, January 17, 2022, Los Angeles, CA.
 - **Michael Ferguson, Mary Ottolini.** "Augmented Reality Technology for Neonatal Resuscitation Simulation" SimVentors — New Innovation Workshop. International Meeting on Simulation in Healthcare, January 16, 2022, Los Angeles, CA.
- Association of Standardized Patient Educators (ASPE) annual conference
 - **Bethany Rocheleau, Susie Lane, Christine Mallar, Shelly Chipman, Erin Siebers, Mike Shepherd.** "Code Blue! When a Simulation Isn't a Simulation Anymore." Oral presentation. 2022 Association of Standardized Patient Educators Annual Conference, June 28, 2022 New Orleans, LA.
 - **Christine Mallar, Bethany Rocheleau, Shelly Chipman, Mike Shepherd, Erin Siebers.** "Implementing a Uniform Curriculum to Increase Efficiency and Access to Simulation." Oral presentation. 2022 Association of Standardized Patient Educators Annual Conference. June 29, 2022 New Orleans, LA.
 - **Mike Shepherd, Grace Gephardt, Christine Mallar.** "Capacity Analysis: Using a Simple Metric to Tell Your Story." Invited pre-conference workshop. 2022 Association of Standardized Patient Educators Annual Conference, June 28, 2022 New Orleans, LA.

- International Network for Simulation-based Pediatric Innovation, Research, and Education (INSPIRE) annual conference
 - **Leah Mallory.** “A Decade Later — Progress and Next Steps for Pediatric Simulation Research” Invited Presentation (virtual). 2022 International Network for Simulation-based Pediatric Innovation, Research and Education. June 10, 2022 St. Petersburg, FL.
- MaineHealth 11th Annual Faculty Development Conference
 - **Shelly Chipman** and **Leah Mallory.** “Using technology to extend the reach of Interprofessional Simulation”. 11th Annual Faculty Development Conference. MaineHealth Institute for Teaching Excellence. September 28, 2022, Portland, ME.

POSTER PRESENTATIONS



- International Meeting for Simulation in Healthcare (IMSH) annual conference
 - **Alison Zanno, Misty Melendi, Jeffrey Holmes, Shelly Chipman, Anya Culer, Samantha Prio, Abby Gilbert, Sarah Gabrielson, Leah Mallory, Mary Ottolini, and Alexa Craig.** *A Simulation-Based Outreach Program Improves Rural Hospital Team Confidence in Neonatal Resuscitation.* International Meeting on Simulation in Healthcare, January 16, 2022, Los Angeles, CA.
- MaineHealth Lambrew Research
 - **Bethany Rocheleau, Susie Lane, Christine Mallar, Shelly Chipman, Erin Siebers, Mike Shepherd** “Code Blue! When a Simulation Isn’t a Simulation Anymore”.
 - **Christine Mallar, Bethany Rocheleau, Shelly Chipman, Mike Shepherd, Erin Siebers** “Implementing a Uniform Curriculum to Increase Efficiency and Access to Simulation”
 - **Erin Siebers** “Thinking Inside Out: Using a Virtual Platform to Overcome Barriers to Interprofessional Education”.
- Association of Standardized Patient Educators annual conference
 - **Erin Siebers** Catherine Lyden. “Thinking Inside Out: Using a Virtual Platform to Overcome Barriers to Interprofessional Education” Poster presentation. 2022 Association of Standardized Patient Educators Annual Conference, June 28, 2022 New Orleans, LA.



DISTINGUISHED SERVICE TO PROFESSIONAL ORGANIZATIONS

- **Erin Siebers** sits on the board of directors for the Association of Standardized Patient Educators.
- **Leah Mallory** completed a 3-year term on the International Network for Simulation-based Pediatric, Innovation, Research and Education (INSPIRE) executive board and is an Innovation Center Clinical Coach.
- **Mike Shepherd** is a member of the planning workgroup for the New England Healthcare Simulation Consortium and serves on the Society for Simulation in Healthcare Hospital Section metrics workgroup.
- **Tracie Knight** is a conference planning co-chair for the Society for Simulation in Healthcare's SimOps annual conference, for which she received a challenge coin from SSH President Haru Okuda.



GRANTS AND PHILANTHROPIC GIFTS

- **Misty Melendi** and **Alison Zanno**. COBRE in Acute Care Research and Rural Disparities Pilot Award. Maine Ongoing Outreach Simulation Education (MOOSE), *neonatal resuscitation telesimulation*, \$50,000
- **Jennifer Hayman**, Wollie Agmas, Shelley Cohen Konrad, **Leah Mallory**, **Linda Chaudron**. Association of American Medical Colleges HealthProfessional Education Curricular Innovations Grant Program: Kickstarting Strategies for Addressing Health Misinformation, *Interprofessional Education and Collaborative Learning: a Novel Training Tool for Addressing COVID-19 Health Misinformation*, \$24,300
- The **Sim Center** received an anonymous donation of \$75,000 to support the MOMS program.



MEDICAL STUDENT SUMMER SIMULATION INTERNSHIPS

- This summer the simulation research internship resumed following a two-year pandemic-induced hiatus. This competitive program provides a funded opportunity for a student to participate in a simulation-based research project and spend a summer at the Sim Center participating in our activities. Past student simulation interns include:
 - 2022 Bryce Larson
 - 2019 Richard Byrnes
 - 2018 Campbell Belisle-Haley
 - 2017 Laura Getchell
 - 2016 Adrianna Eurich
 - 2015 John Gilboy
 - 2014 Jack Vernamonti
 - 2013 Louis Eubank
 - 2012 Erica Brown
 - 2011 Bethany Bartley

COLLABORATION

WITH MITE, THE MAINEHEALTH INSTITUTE FOR TEACHING EXCELLENCE

MITE SCHOLARS (WITH SIMULATION-BASED PROJECT)

BRITTANY LACHANCE, MD

As a MITE Scholar, Dr. LaChance, a new faculty member in the Department of Neuro Critical Care, will continue her work in the Society for Simulation in Healthcare's Virtual Scholars program. Her project, "Simulation-based mastery learning to improve performance of declaration of death by neurologic criteria," will launch with GME learners from Internal Medicine and Neurology in 2023.



MITE AWARD FOR SIMULATION EDUCATION, LEADERSHIP, AND MENTORSHIP



SHELLY CHIPMAN MSN, RN, CHSE

This award is given to an individual who has made a significant impact on learners using simulation methodology. This individual excels at the core principles of simulation education (pre-briefing and debriefing, relevant and appropriate learning objectives, evaluation) and is a mentor for other simulation educators. Most importantly they consistently provide a learning environment where reflection on action occurs in a psychologically safe manner.



She is the single greatest, most passionate teacher I have come across in simulation. I am fortunate to see her working on every level of simulation from creation to execution to delivering exquisite debriefs and even probing for nuggets of info that learners acquired while doing the simulation.

SIMULATION INSTRUCTOR COURSE

Our annual Simulation Instructor Course provides instruction for faculty new to simulation as well as those looking to enhance their abilities in simulation-based education. This immersive 2.5-day course introduces educational theory, skills related to good scenario development, guidance on how to create high quality simulated events whether the focus is skills training, clinical decision-making, and enhanced communication or systems testing. This year's course had 13 participants from four professions — medicine, nursing, respiratory, and social work.



THE 3RD ANNUAL JOHN R. DARBY SIMULATION GRAND ROUNDS

The Sim Center's annual grand rounds honors the Sim Center's founding medical director, Dr. John R. Darby. This year, in collaboration with the Department of Emergency Medicine and MITE, **Dr. Ambrose Wong, MD, MSEd, MHS**, Associate Fellowship Director for Medical Simulation at Yale School of Medicine, presented, *Patient Agitation, Mental Health Crises, and Workplace Violence: Applying Healthcare Simulation and System Science*. It was both timely and inspiring as MaineHealth looks to make advances in the Workplace Violence and Prevention arena.



COLLABORATION

WITH MAINEHEALTH CENTER FOR INNOVATION





ARTFORMS (AUGMENTED REALITY TECHNOLOGY FOR MEDICAL SIMULATION)

Drs. Michael Ferguson and Mary Ottolini have worked with the Innovation Center and Case Western Reserve University to develop 'HoloBaby,' a mixed-reality simulator. Wearing Hololens goggles, users train on a realistic neonate hologram projected onto a basic manikin to enable neonatal resuscitation training.

This innovative technology holds tremendous promise to use technology to extend simulation training to rural areas or hospitals without access to simulation. This year, the team has tested and refined the prototype based on input from MaineHealth NICU teams. The prototype and qualitative research assessing it will be submitted for publication in 2023.

ARTforMS was featured in [HealthySimulation.com](https://www.healthySimulation.com), a leading resource for simulation news and information. [Click here](#) to read the article, which quotes from Drs. Mary Ottolini, Michael Ferguson, and Leah Mallory.



BEHIND THE SCENES



STANDARDIZED PATIENTS

ONBOARDING NEW AND EXISTING SPS

Standardized Patients are real people trained to portray case history and symptoms, but they are so much more than just actors. SPs play a unique role in educating future and current clinicians by providing critical real-time feedback to learners in a safe environment. Until this year, SPs worked as independent contractors. For a variety of reasons, not the least of which is the value SPs provide, MaineHealth determined SPs should be employed. Months of planning and hundreds of staff hours went into ensure a mostly seamless onboarding process for approximately 75 existing SPs. The Sim Center always considered SP part of its family. Now they really are!

In addition to the existing SPs who became employs this year, the Sim Center ends this year currently orienting 14 new SPs into our program and preparing to onboard eight more. To have 22 new SPs is thrilling but we can always use more. **We would love to hear from you** if who know anyone who might be a good fit, especially individuals with a diverse background.

SP APPRECIATION

After more than two years, the SP team was very excited to host an in-person SP Appreciation event in 2022. SPs enjoyed lunch at OTTO Pizza and received an embroidered fleece blanket as a small gift.

“I hope you realize how much SP Appreciation means to us,” said SP Joyce Haley. “I often say, ‘I am happiest when I’m in the SP Lab!’ That has never wavered because of gestures like these.”

This year’s appreciation event was extra special because we recognized the retirement of two long-time SPs – Roxanna Brophy and John Urquhart. Both received a signed photo album to commemorate their contributions to our program.

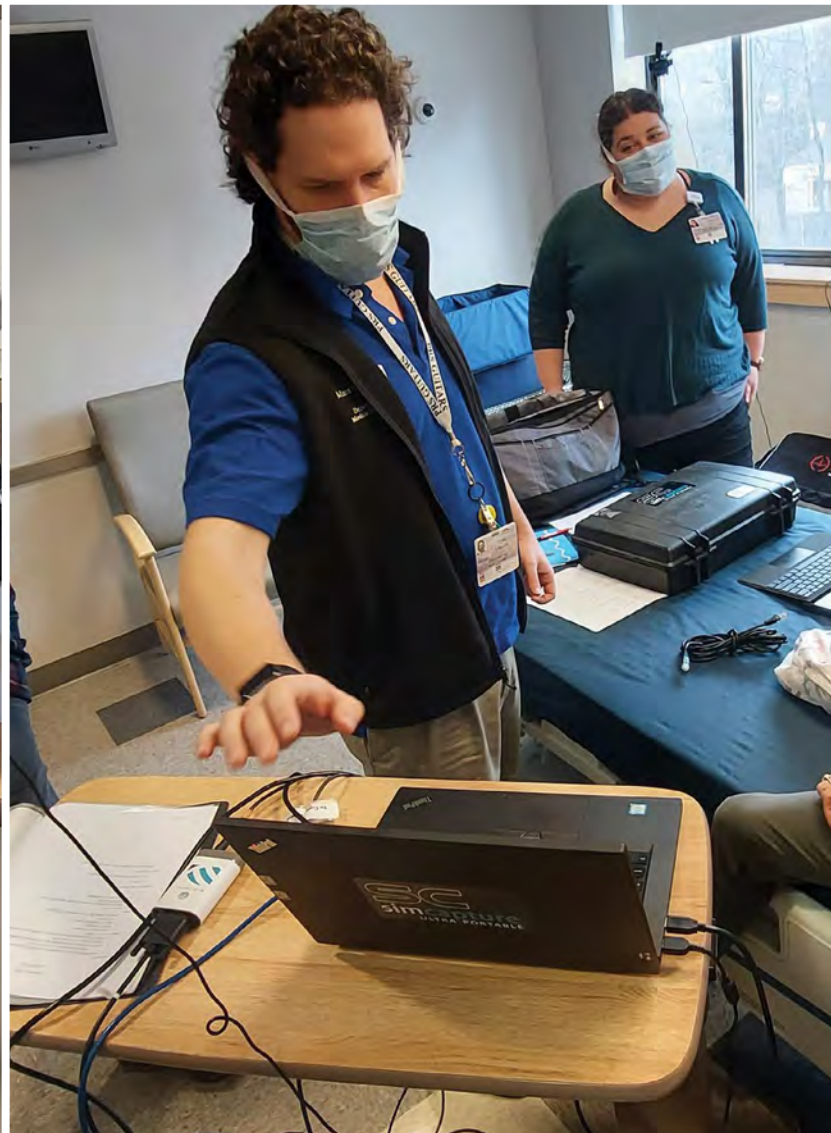
“The fleece will be handy on winter evenings and the book will remind me of the many friends I made doing SP work,” John said. “As we navigate a post-COVID world, SP events is needed now more than ever!”

BEHIND THE SCENES

TRAINING NEW STAFF

Onboarding continued to be the “behind the scenes” theme this year. In addition to onboarding so many SPs, the Sim Center also welcomed three new colleagues. Beth Bongiolatti Gray and Bruce Carleton joined us as simulation specialists at the start of the year. Beth, a certified midwife, and Bruce, a former paramedic, are both educators at heart and bring diverse clinical experience to the Sim Center’s operational profile.

Karissa Hannifan joined in the spring as our new administrative specialist. Karissa, currently pursuing an advanced degree in industrial organizational psychology, has already increased the relational connectedness of the team while reworking inefficient processes and systems to keep the Sim Center running as efficient as possible.



STAFF RETREAT AT ROUX INSTITUTE

In April, the Sim Center staff visited Northeastern University's Roux Institute for a team retreat. We celebrated accomplishments of the previous year while looking ahead to the next as we checked in on our strategic plan progress. Small group exercises were utilized to brainstorm innovative ways to extend simulation across our regional healthcare system, which you are reading about in this annual report.



BEHIND THE SCENES

TAKING A BREAK FOR FUN!





AXE THROWING

After a productive and focused “working retreat,” the Sim Center pivoted to a recreational retreat in May with an afternoon of throwing axes at the Axe Pit.

HALLOWEEN PARTY

If you work in a Sim Center and don’t celebrate Halloween, do you really even work in a Sim Center? Thanks to a free afternoon on Halloween, the Sim Center hosted a festive spook-tacular Halloween party. We’re actually not sure why we hadn’t done this before!

A ROCKIN’ GOOD TIME

It’s not uncommon to find simulationists with musical talents, and that’s no different with us. For the past several years, simulation specialist Tyler Johnson has played lead guitar and vocals for local classic rock band Nouveau Redneck, which played its last show on a Friday night in November. A small group of Sim Center staff and a few significant others met up for a rockin’ good time!



SIMULATION

SAFETY | TEAMWORK | EDUCATION

@MMCSIMULATION

If you would like more information about how you can further support The Hannaford Center for Safety, Innovation & Simulation at Maine Medical Center, please call 207-662-2669.

OUR MISSION

Our mission is to utilize experiential learning techniques of health care simulation to educate the caregivers of tomorrow, optimize the clinical teams of today, and bolster the safety of our systems and spaces to ensure Maine's communities are the healthiest in America.

OUR VISION

Our vision is to become a primary tool of MaineHealth to improve patient safety, develop and optimize a clinical workforce, and disseminate best practices in order to advance the science of health care simulation through data-driven research on effectiveness and become a differentiating factor for MaineHealth in the marketplace.

