MISWEEK 2024 PLENARY SESSIONS

THURSDAY SEPTEMBER 26, 2024:

ARTIFICIAL INTELLIGENCE: IMPLICATIONS AND INDICATIONS IN MIS SURGERY AND ROBOTICS
7:45 am – 9:00 am
Director: Paul G. Toomey, MD
Co-Director: Robert B. Lim, MD
Faculty: Andrew J. Hung, MD; Eric Singer, MD, MS

Artificial Intelligence (AI) refers to the science and engineering of making intelligent machines and intelligent computer programs to mimic human decision-making and problem-solving capabilities. Machine learning is a subfield within AI that trains algorithms on data to gradually improve their accuracy in a manner that imitates how humans learn. The expansion and use of such technologies continues to increase since the FDA first approved robotically assisted minimally invasive surgical procedures in 2000. AI-assisted technology has the potential to greatly mitigate the global burden of disease by improving access to necessary medical and surgical care. The most frequent use of AI-assisted technology is in preoperative planning and intraoperative guidance. Use of autonomous surgical technology is currently in its infancy and is the subject of clinical trials in urology, gynecology, spine, and GI surgery. AI technology has many potential benefits, particularly in increasing access to and availability of necessary surgical care. Surgery will continue to integrate these evolving technologies preoperatively, intraoperatively, and postoperatively. At the same time the known risks of bias incorporated in AI programs and the risk of data breaches could perpetuate social inequality and patient harm. It is conceivable that robots will be able to perform surgery relatively independently, with minimal assistance in the future. This session will explore current and future applications of AI in surgical disciplines and will discuss some of the controversies and issues in the adoption of these technologies.

THE GLOBAL REACH OF TELESURGERY
9:00am – 10:00am
Director: Sharona Ross, MD
Co-Director: Richard M. Satava, MD
Faculty: Martin A. Martino, MD; Ross F. Goldberg, MD

The so-called Lindbergh operation was the world's first complete telesurgical procedure. Professor Jacques Marescaux and his team from the IRCAD (Institute for Research into Cancer of the Digestive System) successfully performed a laparoscopic cholecystectomy on September 7, 2001 on a 68-year-old female patient in surgical ward A in Strasbourg Civil Hospital, in Eastern France. Dr. Michel Gagner controlled the arms of the robot from New York City, accomplishing the procedure in 45 minutes. This proof of concept ushered in a new era and opportunity to expand the reach of minimally invasive surgery and its benefits globally. Telesurgery has been used to successfully execute MIS procedures in areas without the resources or local expertise to accomplish them as well as a vehicle to provide operative assistance, coaching and mentoring and monitoring of the technical conduct of surgeries. Innovations in each of these areas are

ongoing. This session will discuss issues and requirements for a successful telesurgical program, the growth of third parties as intermediaries and vendors of telesurgical technologies and connectivity, regulatory and ethical considerations and responsibilities of surgeons engaging in telesurgery.

Agenda

9:00am-9:10am	Telesurgery 101: Definitions and Challenges Richard M. Satava, MD
9:10am-9:20am	Implementation of Telesurgery: Hospital and Patients Perspectives Sharona Ross, MD
9:20am-9:30am	Patient Advocacy: Safety, Consenting and Responsibility Ross Goldberg, MD
9:30am-9:40am	Hospital Implementation and Credentialing for Telesurgery Martin A. Martino, MD
9:40am-10:00am	Q & A

FRIDAY SEPTEMBER 27, 2024

BUILDING HEALTH EQUITY: MAKING SURGERY ACCESSIBLE IN LOW RESOURCE
7:45am - 8:45am
Director: Jessica Opoku-Anane, MD, MS
Co-Director: Ian A. Hodgdon, MD
Faculty: Tiffany E. Chao, MD, MPH, FACS, FCS (ECSA); Peter Melchert, MD

Five billion people lack access to safe, timely, and affordable surgical care, with the vast burden concentrated in low-to-middle income countries. The striking gap between the availability and need for surgical expertise that is projected to worsen over the next decade. There is growing interest in global surgery and increasing numbers of opportunities to participate. The aims of any project undertaken must be focused on addressing local priorities based on needs assessments, and in conjunction with local stakeholders. Participants have an obligation to be familiar with the language, customs, and standards of their destination prior to travel, in order to engage in respectful and culturally competent care. Site-specific preparation must be undertaken including a thorough review of the current resources, infrastructure, and training paradigm at the hosting institution. With respect to clinical care, visitors must defer to the needs and educational requirements of local trainees. Deployment of expertise-guided technologies will increase the ability of practitioners and their teams to safely reach competency in MIS procedures. These technologies will dramatically improve outcomes in the developing world and have the potential to improve patient care globally. This session will discuss the practical complexities and ethical challenges of global surgery, explore the breadth of available opportunities, and provide vignettes of the experiences of surgeons participating in global surgical programs.

HEALING HANDS, BREAKING BARRIERS: TRANSFORMING THE FACE OF SURGERY
8:45am - 9:45am
Director: Radha Syed, MD, FACOG
Co-Director: Jessica Ybanez-Morano, MD, MPH
Faculty: John E. Morrison, MD; Sharona Ross MD

The effects of structural issues like racism, sexism, and classism can dehumanize and be damaging in any institutional space including in medicine. Data suggests that the field of surgery has much work to do to make its environments and the health care provided to patients diverse and inclusive. Underrepresented in Medicine (URiM) surgeons enter academic surgery in fewer numbers, have the lowest rates of promotion and are less likely to remain in academia. The American Association of Medical Colleges (AAMC) acknowledge that appropriate representation among both student and faculty requires academic leaders to reflect on their own biases, while also reviewing institutional policy for systemic bias that sustains historical barriers. Increasing cultural competency among the highest level of academic surgical leaders will precipitate a more diverse, equitable, and inclusive workforce that is more reflective of the communities it serves. It can also serve the unique needs of that community through the co-constructed understanding of diverse surgical professionals. Surgeons understanding the thread that runs through their student-centered medical education toward a provider-centered approach to practice can eventually yield the outcome of increasing patient-centered service and unprecedented improvements in community health.

Equitable faculty representation in medical education can enable underrepresented students to experience optimal person-environment fit while gaining a sense of comfort and belonging, and access to faculty mentors whose goals and achievements can be familiarized and more readily emulated. Similarly, the representation of surgeons in underrepresented communities creates trust relationships that bridge historical divides and create strong patient partners in community practice. This session draws on the professional experiences and observations of the faculty and will examine and explore strategies and practices to foster equitable spaces for learning and practice and provide recommendations and strategies for implementation in practice.

Objectives:

- Explore concepts around professional development, faculty development, and leadership development focused on structural issues that create institutional barriers.
- Explore how systemic biases manifest in both workplace and learning environments, and approaches to address them.
- Explore the growing evidence regarding the relationship between provider work environments, patient outcomes and organizational performance.
- Identify strategies to promote diversity, equity and inclusion across medical education, surgical practice and community health spaces and progress toward eliminating structural and institutional barriers for students, faculty, providers and patients.
- Discuss strategies for navigating career development and clinical practice.

Agenda:

8:45am-8:47am	Introduction Radha Syed, MD, FACOG
8:47am-8:59am	URIM: Improving Diversity and Role Models Across the Surgical Enterprise Radha Syed, MD, FACOG
8:59am-9:11am	Creating Change in Work Culture: Addressing Microaggression Toward Women in Medicine Jessica Ybanez-Morano, MD, MPH, FACOG
9:11am-9:23am	How Women Surgeons Are Transforming the Face of Surgery Sharona Ross, MD, FACS
9:23am-9:35am	Navigating a Career in Surgery: The Role of Mentoring Residents and Junior Faculty John E. Morrison, MD
9:35am-9:45am	Concluding Remarks and Q&A