

ACS/Bulletin

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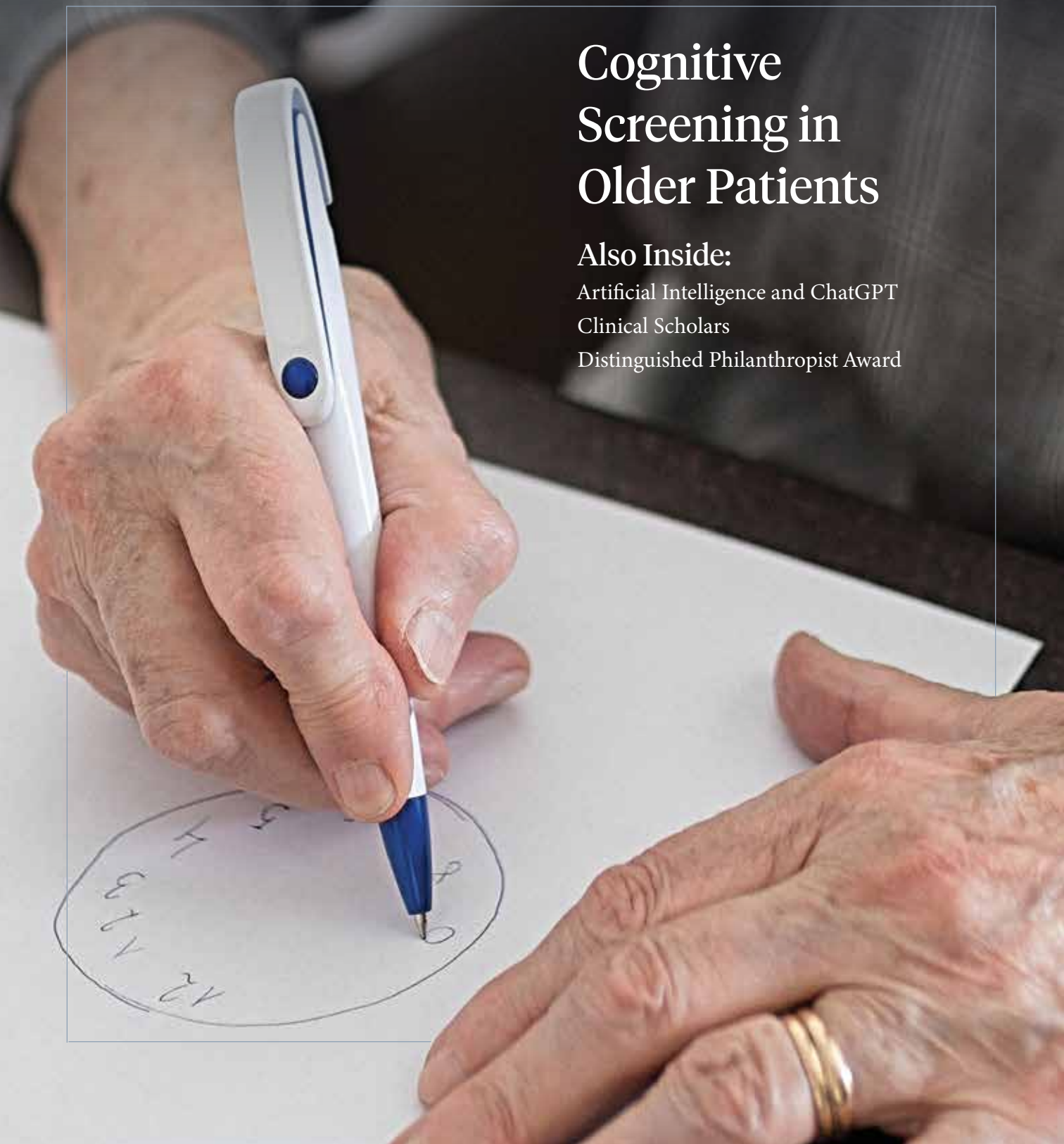
Cognitive Screening in Older Patients

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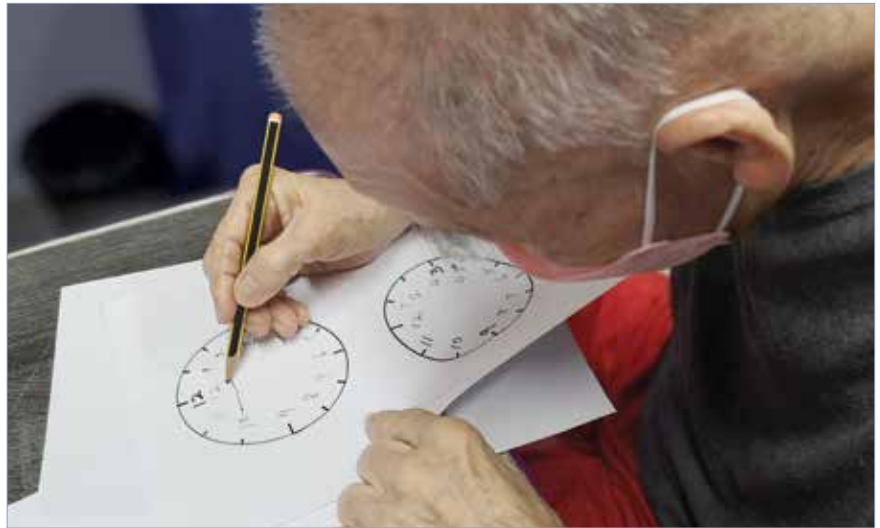


Cover Story

8

Cognitive Screening in Older Patients May Help Optimize Outcomes

Xane Peters, MD, Mark Katlic, MD, FACS, Thomas N. Robinson, MD, FACS, and Sevdener Cizginer, MD, MPH



Features

16

Human Engagement, Prompts, and Bias Recognition Are Ingredients for Successful AI, ChatGPT Use

Wardah Razaqat, MBBS, May Abiad, MD, Haytham M. A. Kaafarani, MD, MPH, FACS, and Carla M. Pugh, MD, PHD, FACS

24

Clinical Scholars in Residence Benefit from Research, Impact, and Friendship

M. Sophia Newman, MPH

32

Distinguished Philanthropist Award Recipients Are Doers and Donors

Tony Peregrin

Commentary

6

Executive Director's Update: How the ACS Can Help Surgeons Address Workplace Violence

Patricia L. Turner, MD, MBA, FACS

38

Viewpoint: In-Person Meetings Still Matter

Sharmila Dissanaikie, MD, FACS

Reports

42

NAPRC Stays the Course
in Quest to Improve
Rectal Cancer Care

Steven D. Wexner, MD, FACS

44

Stolen Heart: DeBakey-Cooley
Controversy Beats On

Craig A. Miller, MD, FACS

News

48

Pediatric Surgeons Meet with
White House Advisors on
Fetal and Maternal Health

49

Annual Business Meeting
of Members

50

Trauma Summit to Advance
Equity Research
Convenes in Chicago

52

In Memoriam: Dr. John
Ochsner Gage, ACS Past-
Secretary and DSA Recipient

54

Member News

16



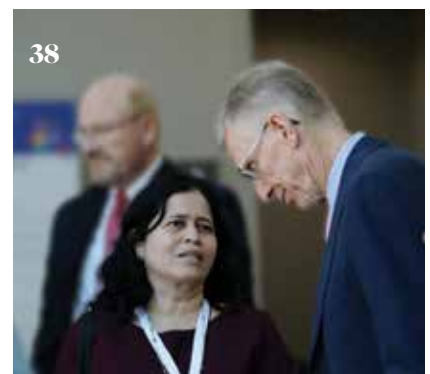
24



32



38





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Bulletin of the American College of Surgeons (ISSN 0002-8045) is published monthly by the American College of Surgeons, 633 N. Saint Clair St., Suite 2400, Chicago, IL 60611-3295. It is distributed without charge to Fellows, Associate Fellows, Resident and Medical Student Members, and Affiliate Members. Periodicals postage paid at Chicago, IL, and additional mailing offices. POSTMASTER: Send address changes to *Bulletin of the American College of Surgeons*, 633 N. Saint Clair St., Suite 2400, Chicago, IL 60611-3295. Canadian Publications Mail Agreement No. 40035010. The American College of Surgeons headquarters is located at 633 N. Saint Clair St., Suite 2400, Chicago, IL 60611-3295; tel. 312-202-5000; toll-free: 800-621-4111; email: postmaster@facs.org; website: facs.org. The Washington Office is located at 20 F Street NW, Suite 1000, Washington, DC 20001-6701; tel. 202-337-2701.

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Printed in the USA.

How the ACS Can Help Surgeons Address Workplace Violence

Patricia L. Turner, MD, MBA, FACS

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AS THE EXECUTIVE DIRECTOR and CEO of the ACS, I focus on supporting surgeons throughout their careers. I also attend to the broader system around us, including the colleagues who help us deliver surgical care every day. I worry about all clinical professionals, because throughout healthcare, there is a troubling pattern of hostility and violence from patients and the public toward physicians and other members of the healthcare team.

According to the US Bureau of Labor Statistics, 73% of all nonfatal workplace injuries and illnesses requiring time away from work occur in healthcare facilities. Roughly

half of healthcare workers report experiencing verbal abuse and physical violence. These pervasive difficulties are punctuated by rare but shocking incidents, such as bomb threats to Boston Children's Hospital in 2022 and four separate incidents in which patients shot and killed surgeons.

No matter the severity, workplace violence is always unacceptable. We at the College are working to help surgeons and those who work in healthcare in several ways.

1 Learn More About Protecting Yourself

This year's Clinical Congress, in Boston, Massachusetts, will include a presentation of "Surgeon Safety: When a Patient Becomes a Threat" (October 25, 4:15–5:45 pm). The session will provide information on institutional responsibilities to protect healthcare employees, appropriate involvement of law enforcement, and methods to safely separate your professional life from personal activities.

2 Manage a Source of Reactive Violence

We know most of the hostility patients and their families express toward clinicians is reactive and affective, not preplanned or predatory. Some

emotional flareups that end in abuse may be ameliorated by careful approaches to difficult conversations. To learn more, read "Delivering Difficult Patient Conversations Is a Skill to be Learned, Practiced" from the February *Bulletin*, and join us for "Doc, Please Do Everything! We Are Waiting for a Miracle: Mastering Difficult Conversations in Acute Care Surgery" at Clinical Congress (October 24, 4:15–5:45 pm). This session will use didactic presentations and practice rounds with trained actors to help surgeons learn to deliver emotionally challenging news.

3 Reinforce Your Well-Being

Patient hostility and workplace violence can harm healthcare professionals' emotional health. While the blame for abuse never belongs to the targeted person, it is a priority and a responsibility of each of us to maintain our own well-being, including after such difficult experiences. Our resources for surgeon well-being address trauma, suicide prevention, and mental health awareness, to help you and your colleagues recover after workplace violence or in other moments of need. You can find them at facs.org.

4 Explore ACS Resources for Mass Shooting Response

While most workplace violence in healthcare does not involve serious injury, firearm violence has occurred, including the murder of four surgeons (see sidebar). Surgeons who had provided care after mass shootings published a *JACS* article in January 2023, “Mass Shootings in America: Consensus Recommendations for Healthcare Response,” with lessons learned and recommendations for care. As with all violence, my hope is for no one to need this information—but I applaud those who use it amid crises.

5 Learn How to Address IPV in the Surgical Workforce

Violence can also appear in the workplace via the intimate partners of colleagues (see sidebar). In October, the ACS Task Force on Intimate Partner Violence (IPV) will publish a series of *ACS Brief* articles on how surgeons can address this. Please read them to learn about this important topic.

6 Unite with Us on Well-Being

The ACS has formed the Surgeon Well-Being Coalition, a group of surgeons and surgical organizations aiming to design and enact wellness practices that benefit all surgeons, patients, and families. More than 40 organizations have already signed on, and the first public meeting will be at Clinical Congress on October 23, 1:30–3:30 pm. We hope to see you there.

7 Stay Tuned for the ACS Workplace Violence Statement

We are working on a workplace violence statement to further address the multifaceted

challenges healthcare professionals face. Whether the issue is gun violence, verbal abuse, or threats to clinicians providing evidence-based care for gender-nonconforming patients, the ACS understands that workplace violence is unacceptable and a threat to many surgeons’ well-being and careers. Please look out for that statement in the near future.

In 2015, after Michael Davidson, MD, FACS, a cardiothoracic surgeon at the Brigham and Women’s Hospital in Boston, Massachusetts, was murdered by a patient, Lisa Rosenbaum, MD, memorialized him in a *New England Journal of Medicine* article. The essay recounted part of the eulogy by Dr. Davidson’s best friend, a Chicago neurosurgeon. He said that the day after Dr. Davidson’s death, the fiancée of a deceased patient showed up at his clinic unexpectedly. He was alarmed, given Dr. Davidson’s experience—but the woman was waiting with flowers and hugs to thank him for his care.

As we work to address violence in healthcare facilities, please know I wholeheartedly wish for each of you not only to experience safety and satisfaction in your workplace, but also to receive gratitude for your vital work in surgery. If there is more you would recommend the ACS do to address workplace violence, please reach out to me at executivedirector@facs.org.

Clinical Congress

Clinical Congress offers much to surgeons. Please join us October 22–25 for 4 educational, fulfilling, restorative days filled with up-to-the-minute insights on many aspects of surgery. Register at facs.org/clincon2023 and plan your schedule at www.abstractsonline.com/pp8/#!/10669.

Surgeons Murdered



Benjamin M. Mauck, MD (1980–2023)
Orthopaedic surgeon
On staff at the Campbell Clinic in Collierville, Tennessee (murdered at work)



Preston J. Phillips, MD (1962–2022)
Orthopaedic surgeon
Employed at St. Francis Health System in Tulsa, Oklahoma (murdered at work)



Todd Graham, MD (1960–2017)
Orthopaedic surgeon
Partner in South Bend Orthopaedics in Mishawaka, Indiana (murdered at work)




Sherilyn Gordon, MD, FACS (1968–2017)
Transplant surgeon
Employed at Houston Methodist Hospital in Texas (murdered via IPV)

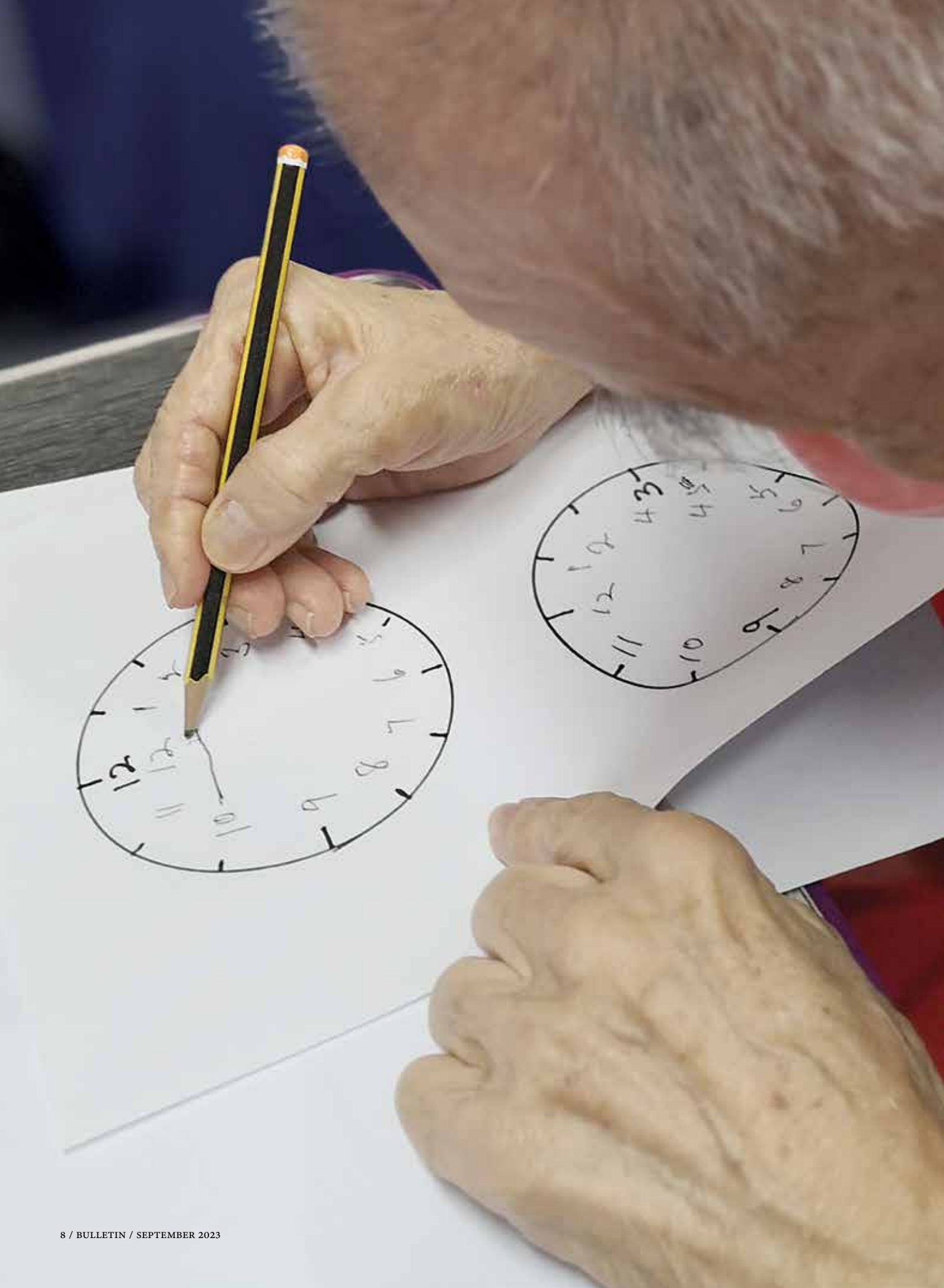


Michael Davidson, MD, FACS (1970–2015)
Cardiothoracic surgeon
Employed at Brigham and Women’s Hospital in Boston, Massachusetts (murdered at work)

TQIP Conference

Registration for the 2023 Trauma Quality Improvement Program conference opens this month. Join us in Louisville, Kentucky, December 1–3 for sessions on quality programs, trauma survivorship, and more. Register at facs.org/tqip. 

Dr. Patricia Turner is the Executive Director & CEO of the American College of Surgeons. Contact her at executivedirector@facs.org.



A close-up photograph of an elderly person's face, focusing on the nose and mouth area. The person is wearing a white surgical mask with white elastic straps. A red fabric, likely a hospital gown or blanket, is visible at the bottom left. The background is a dark, textured surface, possibly a hospital bed or pillow. The overall tone is clinical and focused on the subject of elderly patients.

Cognitive Screening in Older Patients *May* Help Optimize Outcomes

Xane Peters, MD
Mark Katlic, MD, FACS
Thomas N. Robinson, MD, FACS
Sevdeur Cizginer, MD, MPH

Among older surgical patients, cognitive impairment prior to surgery is prevalent. It is detected in up to 37% of noncardiac elective surgery patients and in 50% of emergent surgery patients 60 years of age or older.¹

PREOPERATIVE COGNITIVE impairment substantially increases the risk of costly and serious postoperative complications and further cognitive decline, underscoring the importance of comprehensive risk assessment prior to surgery. This neurocognitive dysfunction introduces crucial factors into the surgical decision-making process and perioperative care planning, which has a wide-ranging impact on surgeons, patients, caregivers, and other members of the healthcare team.

What Is Cognitive Impairment?

Cognitive impairment is characterized by dysfunction in cognitive abilities, including memory, attention, language, problem-solving, and decision-making skills. It encompasses a range of neurocognitive disorders that significantly impact a considerable portion of older adults and potentially an even larger proportion of surgical patients.

Mild cognitive impairment represents an intermediate state between normal cognitive function and dementia, and it is characterized by cognitive deficits that do not impede patients' independence in daily activities.

Dementia, on the other hand, is a severe form of cognitive impairment that hampers the patient's social and/or occupational function. Alzheimer disease is the most prevalent form of dementia, with other forms including vascular dementia and Lewy body dementia.

Currently, around 50 million people worldwide live with dementia, and this number is projected to surpass 150 million by 2050.² Dementia

predominantly affects older adults, a growing population that undergoes a disproportionate number of operations annually.³ As a result, the surgical community needs to improve its understanding of the unique clinical needs of patients with dementia undergoing major operations.

Implications for Patients, Surgeons, and Healthcare Systems

Cognitive impairment and dementia substantially increase the risk of postoperative adverse events both during the hospital stay and after discharge. This includes a higher risk of surgical site infection, pneumonia, intensive care unit admission, prolonged length of stay, nonhome discharge and long-term functional decline.^{4,5}

Preoperative cognitive impairment is the preoperative risk factor most closely associated with the development of postoperative delirium, an acute decline in cognitive function that can lead to prolonged hospitalization, functional decline, long-term cognitive decline, and development of dementia. These adverse outcomes may be attributed, in part, to challenges encountered by patients with cognitive impairment in effectively communicating and participating in preoperative care, postoperative rehabilitation, and recovery activities such as wound care, pulmonary exercise, and ambulation.⁵ These factors underscore the critical need for risk assessment, risk mitigation strategies, and effective navigation of goals-of-care discussions for patients with preoperative cognitive impairment.

Patients with preoperative cognitive impairment

may have difficulty comprehending instructions and actively engaging in perioperative care. Undetected cognitive impairment prior to surgery can lead to ineffective communication with the patient, potentially resulting in avoidable serious complications and unsafe care transition planning.

In cases of severe cognitive impairment like advanced dementia, the patient's capacity to engage in the decision-making process before and after surgery may be affected. This can create a complex communication dynamic among surgeons, patients, and families/caregivers throughout their surgical care journey.

Preoperative cognitive impairment necessitates thorough planning and allocation of additional resources to ensure the coordination of safe postoperative care and discharge planning for these patients. This reality places additional considerations and burdens on healthcare providers, families, and healthcare systems.

Validated Screening Tools for Preoperative Cognitive Impairment

Surgeons may wonder how cognition screening fits into the scope and workflow of their practice and how cognitive impairment may go undiagnosed before the preoperative visit.

It is important to recognize that patients may arrive at the surgical clinic without a prior diagnosis of cognitive impairment or dementia for various reasons. Symptoms of cognitive impairment can be misinterpreted by patients, family members, or primary care physicians as normal processes.

Patients also may delay seeking evaluation or downplay symptoms due to concerns about the associated stigma. When assessing a patient for cognitive impairment symptoms, obtaining input from trusted family members becomes crucial to gain insights into the patient's daily routine, mood, and behavior over time.

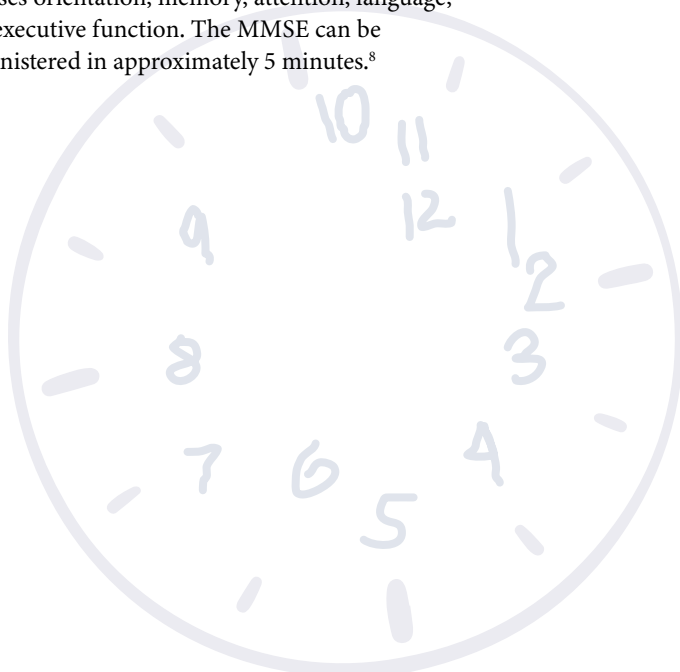
Cognitive impairment in this population can be subtle enough for patients to pass the initial evaluation in the exam room often referred to as the "eyeball test," which relies solely on clinical observation. Hence, the use of validated screening

tools is essential to detect subtle yet clinically significant deficits.

Although cognitive impairment or dementia may be commonly associated with memory decline, it is important to recognize that other cognitive domains, including visuospatial, language, executive function, problem-solving, or social cognition, can only be identified through comprehensive cognitive assessment.⁶

In the preoperative context, there are several validated screening tools available that address multiple cognitive domains. These tools are convenient for surgeons and their supporting staff because they can be completed in 15 minutes or less. Some of the available validated tools include:

- Montreal Cognitive Assessment (MoCA) is a widely used tool to assess cognitive function. It evaluates various cognitive domains, including short-term memory, visuospatial ability, executive function, attention, language, and orientation. The MoCA can be completed in approximately 10 minutes and is available in paper, digital, or telephone formats.⁷
- Mini-Mental State Exam (MMSE) is another frequently used cognitive screening tool that assesses orientation, memory, attention, language, and executive function. The MMSE can be administered in approximately 5 minutes.⁸





Preoperative Questions a Surgeon Should Consider

What additional resources may be necessary for a safe discharge for the patient?

Does the patient/family understand their role in preventing delirium?

What strategies can prevent associated adverse outcomes?

Does this surgical procedure align with the patient's overall health goals?

Are the patient and family informed about the associated adverse outcomes?

Should we include a family member or friend to assist the patient with decision-making, perioperative care, and discharge planning?

- Mini-Cog is a brief cognitive screening tool that involves a three-word recall task and a clock-drawing test that evaluates visuospatial ability. It can be administered in under 5 minutes, making it a time-efficient option to assess cognitive function.⁹
- Saint Louis University Mental Status is another cognitive screening tool that is readily available and can be administered in fewer than 10 minutes.¹⁰

Although each screening tool has its own strengths and weaknesses, they all share the advantage of requiring minimal time investment while providing substantial benefits to patients, families, and care teams. However, it is important to acknowledge that patients may exhibit variable performance on these screening tests due to differences in their cultural, linguistic, and educational backgrounds.

Implementation of a screening process requires thoughtful evaluation of available resources and careful consideration of how it can be seamlessly integrated into regular preoperative surgical practice. This integration may be achieved through the administration of a preoperative screening test in the clinic waiting room by clinic support personnel. Participation in the ACS Geriatric Surgery Verification Program provides a practice-based approach to successfully integrate cognitive screening instruments, mitigate risks, and enhance the decision-making process in the care of older surgical patients.

What Can I Do If a Patient Screens Positive?

As a surgeon, there are several steps you can take when a patient screens positive for preoperative cognitive impairment:

Communicate Effectively

Adapt your communication style to accommodate the patient's cognitive impairment. Use clear and simple language, allow extra time for comprehension, and consider providing visual aids like pictures or videos. Encourage questions from the patient and their family members.

Involve the Patient's Support System

Engage family members or caregiver(s) in the decision-making process and ensure they are well-informed about the patient's condition. These individuals can provide valuable insights and assistance in managing the patient's care. Consider providing additional resources and shifting responsibilities to family and other support mechanisms.

Risk Assessment and Goals-of-Care Discussion

Just like you discuss increased risk of perioperative cardiac events for patients with underlying cardiac disease, talk about increased risk of delirium, related consequences (e.g., loss of function), and other adverse postoperative outcomes associated with cognitive impairment.

Discuss the patient's treatment preferences and potential risks to ensure the expected outcomes of surgical intervention match your patient's health-related goals and quality-of-life objectives. Allocate extra time and resources for in-depth discussions to facilitate informed and meaningful decision-making regarding the necessity, potential benefits, and risks of the proposed operation.

Additionally, explore alternative pathways and treatment options, considering the individual circumstances and preferences of each patient. Established values and preferences documented before surgery can serve as a valuable reference and

Implementation of a screening process requires thoughtful evaluation of available resources and careful consideration of how it can be seamlessly integrated into regular preoperative surgical practice.

can guide future decision-making processes in the event that a patient develops postoperative delirium and/or loses the capacity to make decisions.

Collaborate with Other Healthcare Professionals

Consult with geriatricians, neurologists, or other specialists experienced in managing cognitive impairment. Involve a case manager and social worker teams if needed. Their expertise can help guide the perioperative care plan and address specific needs or concerns.

Optimize Perioperative Care

- Counsel patients and families on their critical roles in prevention, identification, and management of postoperative delirium.
- Activate and inform perioperative care teams to implement evidence-based delirium prevention strategies to minimize the occurrence of postoperative delirium and the associated deleterious outcomes. This approach may include appropriate medication management, maintaining a familiar environment, frequent reorientation, maintenance of normal sleep-wake cycles, opioid-sparing multimodal pain regimens, regular mobilization, and immediate return of sensory aids postoperatively.

- Inform anesthesiology team members to avoid agents with high anticholinergic burden during surgery and minimize opioids in the perioperative recovery care unit.
- Provide instructions to surgical recovery team members about placing patients with preoperative cognitive impairment near windows and involving family members immediately after surgery to help with efficient orientation and maintenance of normal sleep-wake cycles.
- Review all home medications and decrease anticholinergic burden through dose adjustment or deprescribing with expert input.

Coordinate Postoperative Care and Support

Collaborate with the healthcare team to ensure a smooth transition from the hospital to postoperative settings. Provide appropriate referrals for rehabilitation, social workers, home care, or cognitive support services as needed.

Follow up and Monitor

Schedule regular follow-up appointments to assess the patient's recovery and cognitive function. Monitor for any changes or complications that may require further intervention.

It is important to note that formal diagnosis for cognitive impairment is established through rigorous testing, including patient interviews and questionnaires, neurological examination, and neuropsychological tests—all of which lie outside the time constraints and clinical scope of a practicing surgeon. Patients with positive screens for cognitive impairment should follow up with a geriatrician or neurologist in addition to the action items listed here.

By taking these proactive measures, surgeons can optimize care and outcomes for patients who screened positive for cognitive impairment.

Preoperative cognitive screening is a crucial component of preoperative assessment in older surgical adults, similar to preoperative cardiac and pulmonary assessments.

The presence of cognitive impairment prior to surgery significantly increases the risk of undesirable postoperative outcomes and impacts patients' ability to participate in their surgical decision-making and perioperative care, necessitating careful considerations for





perioperative care. Therefore, preoperative cognitive screening is essential to identify patients at high risk for adverse postoperative outcomes and those who require more comprehensive care planning, additional resources, and thoughtful discussions about the goals of care throughout both preoperative and postoperative periods.

By identifying patients with preoperative cognitive impairment, surgery team members can implement strategies to prevent adverse outcomes associated with cognitive impairment in the surgical setting. This proactive approach enables care teams to plan for a successful recovery and ensure a safe transition of care. Overall, preoperative cognitive screening empowers the care team to take appropriate measures to optimize outcomes and provide comprehensive care tailored to the specific needs of older surgical adults with cognitive impairment.

For more information, listen to episode 18 of the House of Surgery podcast series, “Cognitive Impairment Screening,” hosted by Dr. Xane Peters, at facs.org/houseofsurgery. 

Dr. Xane Peters is a general surgery resident at Loyola University Medical Center in Maywood, IL, and currently an ACS Clinical Scholar working with the College’s Division of Research and Optimal Patient Care.

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Human Engagement, Prompts, and Bias Recognition



Are Ingredients for Successful AI, ChatGPT Use

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From voice and face recognition on smartphones to self-driving cars, advanced technology—specifically artificial intelligence (AI)—is quickly becoming a part of our daily lives.

AI MODELS analyze large amounts of data, learn from this information, and then make informed decisions. In healthcare, AI has the potential to execute complex tasks, including diagnostic problem-solving and decision-making support, and will revolutionize medicine in the years to come.¹

In surgery, there are compelling uses of AI, including risk predictive analytics through machine learning, and the use of AI to assist with real-time intraoperative decision-making and support through image recognition and video analysis (see Figure 1, page 19).

AI and Predictive Analytics

The use of AI for predictive analytics in surgery has had significant success. Surgical risk is seldom linear, and the presence or absence of certain risk variables affects the impact of others. AI has the ability to detect these nonlinear relationships.

The Predictive OpTimal Trees in Emergency Surgery Risk

(POTTER) tool is one of several AI risk calculators developed over the last few years. Created by Dimitris Bertsimas, PhD, and colleagues, POTTER uses novel machine-learning algorithms to predict postoperative outcomes, including mortality, following emergency surgery.² For more information about POTTER, read the February 2023 *Bulletin* article, “Mobile Device Application Helps Predict Postoperative Complications.”

Similarly, the Trauma Outcome Predictor (TOP) is another machine-learning AI tool that predicts inhospital mortality for trauma patients.³ Both applications have been validated, and user-friendly smartphone interfaces were developed to facilitate use at the bedside by surgeons.

In a recent study published in *The Journal of Trauma and Acute Care Surgery*, POTTER outperformed surgeons in predicting postoperative risk, and when provided to surgeons, enhanced their judgment.⁴ By accounting for nonlinear interactions among variables,

these AI risk-assessment tools are proving to be useful for bedside counseling of patients.

The use of AI intraoperatively is heavily reliant on techniques to annotate and assess operative videos. Using annotations and machine learning, researchers assessed disease severity, critical view of safety achievement, and intraoperative events in 1,051 laparoscopic cholecystectomy videos.⁵ These results were compared to manual review by surgeons, and researchers found that AI-surgeon agreement varied based on case severity.

Despite the variance, AI-surgeon agreement was consistently greater than 75% to 99% for intraoperative events. Another study found that an AI model trained to identify the Parkland grading scale used in laparoscopic cholecystectomies was reliable in quantifying the degree of gallbladder inflammation and predicting the intraoperative course of the cholecystectomy and, as such, had serious potential for real-time surgical performance augmentation.⁶

AI and Healthcare Inequities

One of the serious concerns regarding the use of AI in healthcare in general and in surgery specifically, is the risk of encoding unnoticed bias especially with the use of black box uninterpretable models. For example, if the data used to train an AI model to identify risk of malignancy in skin lesion images do not include patients of all colors and skin tones, its output will fail to adequately perform in those patient populations.

In an effort aimed at early identification of trauma patients who will need discharge to rehabilitation, the use of a national dataset led the AI models to encode race as the

second-most important factor upon which to decide whether patients need rehabilitation, likely reflecting existing disparities in the healthcare system that the algorithm inadvertently learned.⁷ This risk of bias recently led President Biden to secure commitment from several leading AI companies to include safety measures to decrease bias in training and output of AI models.⁸

The mathematics in transparent or interpretable AI have the potential, if used wisely, not only to identify bias in our training datasets and disparities in our existent care, but also to mitigate and remedy them in its derived decision-support algorithms if we prompt it to do so.⁹

ChatGPT and NLMs in Surgery

OpenAI's ChatGPT and GPT-4, Google's Bard, and Microsoft's Sydney are examples of recent developments in AI technology and warrant our attention in surgery.

These natural language models (NLMs) operate by training with large amounts of data, identifying patterns in the data that are not discernible to the human eye or mind, and generating statistically probable outputs. NLMs have been described as a revolutionary technology and "the biggest innovation since the user-friendly computer."¹⁰ ChatGPT alone had 1.6 billion visits in June 2023.¹¹

Since their public release, these models have been used for a range

Figure 1.
Potential Preoperative, Intraoperative, and Postoperative Uses of Artificial Intelligence in Surgery



Preoperative
Patient Mortality &
Morbidity Risk Prediction



Intraoperative
Detection of Intraoperative
Events via Annotation



Postoperative
Drafting Operative Notes
and Discharge Summaries



of applications, including writing poetry, making mnemonics, and most importantly, sifting through vast and sometimes incomprehensible data from a variety of text sources to answer the user's questions in an engaging and simple manner.

In healthcare, NLMs already have been used to write discharge summaries,¹² simplify radiology reports,¹³ take medical notes,¹⁴ and even write scientific manuscripts and grant applications.^{15,16}

Tests evaluating the medical knowledge of GPT-4 using the US Medical Licensing Examination have shown that it answers questions correctly 90% of the time, and recently, it has been recommended for assisting bedside clinicians in medical consultation, diagnosis, and education.¹⁴

The potential use of NLMs for drafting the operative note and reducing the administrative burden on surgeons recently was assessed.¹⁵ Researchers evaluated the operative notes created by ChatGPT using a 30-point tool generated using recommendations from the Getting It Right First Time (GIRFT) program.

GIRFT is an organization that partnered with the National

Health Service in the UK to improve surgical documentation guidelines. The authors found that ChatGPT scored an average of 78.8%, surpassing the compliance of surgeons' operative notes to a similar set of guidelines from the Royal College of Surgeons of England.

Similarly, investigators described advanced applications of ChatGPT in cardiothoracic surgery, particularly in creating predictive models to identify patients requiring intensive treatment plans or therapeutic targets for lung and cardiovascular diseases by processing extensive datasets.¹⁷

ChatGPT also has been described as a potential tool to provide clinical information such as research findings and management protocols in a concise, prompt, and contextually appropriate manner to surgeons pressed for time in order to enhance patient care.¹⁸

Despite the potential use of NLMs in surgery, surgeons need to be aware of some of their limitations, including the potential for inaccurate information that is not present in the training data—a phenomenon known as “hallucination” or “absence of factuality.”¹⁹⁻²¹

These inaccuracies often are stated in a convincing tone that could mislead those seeking information, potentially pivoting or even compromising their judgment and decision-making. For example, researchers found that ChatGPT-generated discharge summaries included information about the patient's compliance with therapy and a postoperative recovery course that was not found in the training data.¹²

Another study revealed that 9% of the translated radiology reports contained inaccurate information, and 5% had missing information.¹³

Such inaccuracies may pose significant patient safety risks initiating anchor and confirmation bias that can lead to significant patient harm. The risk for hallucination has led to suggestions that national organizations such as the US National Institutes of Health should promote the preferential use of NLMs for simple and less-risky healthcare administrative and patient communication tasks that do not require extensive training or expertise and are easily validated.²²

Such limitations, however, can be mitigated by creating NLMs

trained with contextualized and subject-specific (e.g., surgery) data and information that improve the model's fidelity. Specifically, surgeons should learn and get facile with designing prompts that enable the model to give the most reliable and accurate response (i.e., "prompt engineering").

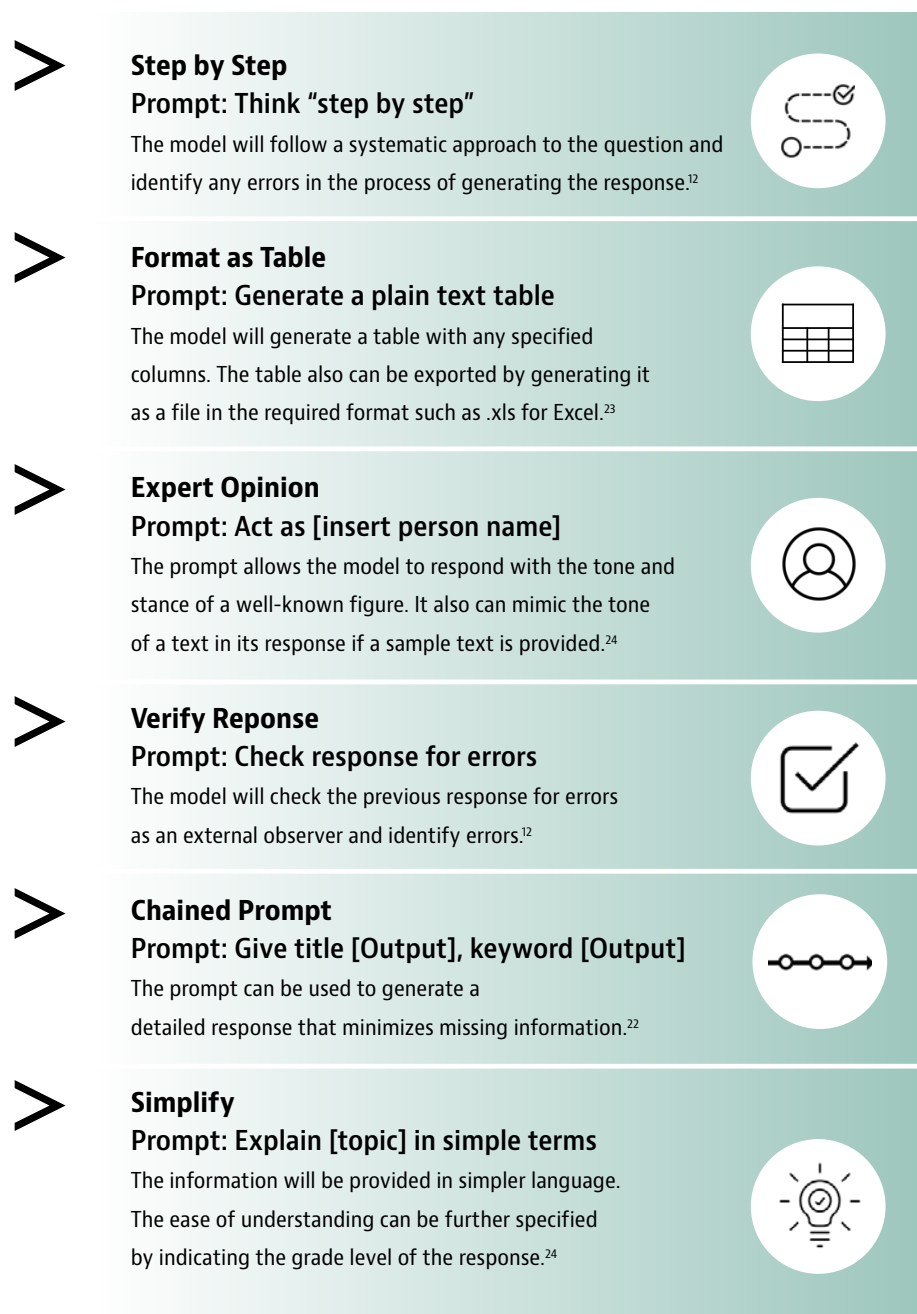
The content of the prompt as well as its tone can impact the results provided by the model, and thoughtful, purposeful prompts can significantly enhance the usefulness of the output.²³⁻²⁵

Figure 2 on this page shows select examples of prompts that can help surgeons make the best use of these models.

Another shortcoming of NLMs is their inability to understand the causality between actions. While NLMs can "memorize" data to describe an action or predict its outcome with high accuracy, they most often cannot provide a causal explanation for it. This limitation was described in a recent article as the inability of the model to conjecture that an apple falls due to the force of gravity and conclude that all objects would fall due to gravity.²⁶

Since NLMs are not constrained by the information from which

Figure 2.
Prompts to Improve Output from ChatGPT



they can learn, these models often are not restricted by ethical principles and are incapable of moral thinking. Moral thinking is crucial if NLMs are to be used as interfaces for patient communication. To overcome this, restrictions may be placed on the subject matter and language used by the model. However, not only are these restrictions circumventable with the use of detailed prompts, but they also can cause the model to assume an apathetic indifference to ethical dilemmas.²⁶

Overall, the use of AI in image recognition and predictive/prescriptive analytics promises to be an era of remarkable precision, workflow optimization, and elevated patient well-being in


surgery. The NLM models such as ChatGPT also indicate an unprecedented era of machine-learning-dependent healthcare and surgical care.

There has already been reproducible success in using AI and ChatGPT in the postoperative phase of surgical care to predict outcomes. In addition, there are a growing number of advancements toward enabling real-time intraoperative capabilities.

While AI can identify patterns in data that are not discernable to the human eye and has been shown to have greater than 75% accuracy for numerous applications, the risk of encoding bias and the risk of hallucination require human

engagement to mitigate and minimize negative effects.

As such, there is a significant need for surgeons and healthcare teams to become familiar with this technology and critically evaluate and make strategic and purposeful use of AI in patient care.

AI is here to stay, evolve, and improve, eventually shifting the tasks of healthcare workers toward the areas that cannot be automated such as patient connectedness, reassurance, and comfort.²⁷ 

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Overall, the use of AI in image recognition and predictive/prescriptive analytics promises to be an era of remarkable precision, workflow optimization, and elevated patient well-being in surgery.

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Clinical Scholars in Residence Benefit from Research, Impact, and Friendship

M. Sophia Newman, MPH

AMONG THE MANY STORIES told about the famous friendship of researchers Daniel Kahneman, PhD, and Amos Tversky, PhD, is this tidbit: In the 1970s, the two cognitive psychologists were so close that they would draft papers while seated shoulder to shoulder at a single typewriter. “We were sharing a mind,” Kahneman would later say, per *The Undoing Project: A Friendship That Changed Our Minds*, a book about the pair.¹

Their devoted partnership generated extraordinarily impactful research, directly creating the entire field of behavioral economics and leading to the 2002 Nobel Prize in Economics for Kahneman.² (Tversky died in 1996; the Nobel Prize is not given posthumously.)

But apart from their fame, perhaps the connection between Tversky and Kahneman is not so rare. Coauthorship is standard in research, and the ever-evolving networks of collaborating scholars have certainly included other close and prodigiously productive pairs.

One wonders: Could there be many small groups of researchers, less well-recognized but just as prolific, who are achieving personal successes, launching big projects, and inspiring intriguing changes?

In fact, could that be happening at the ACS right now?

Clinical Scholars in Residence Program

Clinical Scholars in Residence is a program of the ACS that invites surgical residents to work for 2 years within the Division of Research and Optimal Patient Care on surgical outcomes research, health services research, healthcare policy, diversity, equity and inclusion, and quality improvement.

The program gives its Scholars access to leaders in surgery and healthcare, plus mentorship in clinical, statistical, and health services research and the opportunity to participate in the Master of Science in Clinical Investigation program at Northwestern University. The goal is to give surgical residents research and health policy experience as they advance toward academic surgery careers.

On the day each Scholar starts working at the ACS Headquarters in Chicago, Illinois, they are welcomed to cubicles located next to other Scholars’ cubicles. For a long stretch of the program’s 17-year history, per alumna Julia Berian, MD, MS, FACS, the Scholars sat in an arrangement closer to Tversky and Kahneman’s single desk and typewriter. “We didn’t even have cubicles. We just all sat at one long desk,” she said.

Of course, Tversky and Kahneman chose to sit side by side after becoming acquainted. The surgical residents joining Clinical Scholars in Residence,



Access video content at facs.org/bulletin



Left to right: Drs. Bruce Hall, Chelsea Fischer, Sanjay Mohanty, Jason Liu, Kristen Ban, Clifford Ko, Michael Wandling, and Mehul Raval

in contrast, arrive as strangers and are told where to sit—and they do not share a single keyboard, of course.

While the program offers mentorship, it has no specific goal of creating peer-to-peer collaborations. Rather, Scholars can become involved with many ACS projects, ranging from geriatric surgery to firearm injury prevention, and interests that diverge from those of fellow Scholars will naturally inhibit collaborations.

View from PubMed

Searching the National Institutes of Health (NIH) database *PubMed.gov* makes it immediately clear that research collaborations originating in the Clinical Scholars in Residence program are many in number and often thriving.

A quick analysis of all the PubMed-indexed output of all program alumni, plus Division of Research and Optimal Patient Care Director Clifford Y. Ko, MD, MS, MSHS, FACS (who has worked with all Scholars since the program's 2006 inception), allows a look at who has published together and for how long. That overview shows partnerships of surprising strength.

Of the 1,271 PubMed-indexed articles that Clinical Scholars in Residence alumni have published, 309 (24.3%) were coauthored with at least one other Scholar. All alumni have collaborated with at least one other alumnus, and the median number of Clinical Scholars in Residence-affiliated collaborators per Scholar was six.

Some of these collaborations have occurred in brief, productive clusters, the way one would expect from a program that retains each Scholar for about 2 years. For example, Angela Ingraham, MD, MS, FACS, and Mehul V. Raval, MD, MS, FACS, the second and third Scholars (both starting in 2008), have collaborated on 10 PubMed-indexed papers. All but one were published in 2010 or 2011.

Similarly, Dr. Berian, who began her time as a Scholar in 2012, and Kristen Ban, MD, MS, who began in 2015, have written six PubMed-indexed papers together, all of which were published between 2016 and 2020.

But some partnerships have been remarkably long-lasting. For example, Karl Bilimoria, MD, MS, FACS, and Ryan Merkow, MD, MS, FACS, have published 87 PubMed-indexed articles together over the past 16 years. As attending surgeons, both also held mentor or faculty advisor roles within the Clinical Scholars in Residence program. Through these roles, they have published with many other Scholars. Some of these connections are prolific; with one Scholar, Ryan J. Ellis, MD, MS, they coauthored 14 of their 87 papers. Separately, Drs. Bilimoria and Ellis wrote another 25 papers together; Drs. Ellis and Merkow, another 21.

Overall, connections made during tenures as Clinical Scholars have tended to endure. A sample of the work of 12 Scholars showed that a median of 52.8% of their PubMed-indexed papers with Scholar coauthors were published after their time with the program had ended.

Connections Beyond the Bylines

Of course, PubMed is not the full story of any career. Setting aside that it omits some peer-reviewed journals, papers still in press, and conference materials, it also leaves out much of the program piloting and health policy work that Clinical Scholars often do—not to mention connections between people. All of these can be highly meaningful for Scholars' careers.

Ask Sanjay Mohanty, MD, MS, about his experience as a Clinical Scholar and he will do what nearly everyone interviewed for this article did: smile and call it transformative.

"I've traced all the successes I've had, especially on the research side, from that time in Chicago," he said.

Dr. Mohanty has published eight papers with five other alumni of the program. Calling this output "below average," although an accurate reflection of the Scholars' robust collective research statistics, belies his output as a Scholar, which included creating perioperative guidelines and running a pilot for the ACS's National Surgical Quality Improvement Program (NSQIP®).

It also downplays his many subsequent successes. Now an attending colorectal surgeon at Indiana University in Bloomington, he holds a K23 grant from the NIH. Nearly a decade after finishing his time at the ACS, he is planning to jointly pursue research on postoperative delirium with Dr. Berian, who is a colorectal surgeon based at the University of Wisconsin in Madison.

Dr. Berian, who also holds a K23 NIH grant, noted, "He's one person with whom I am starting up a collaboration, so the content overlap in our research is strong enough to create a future collaboration, even if we didn't have a lot of time to publish together as Scholars."

The transformational aspects of the Clinical Scholars in Residence program may apply irrespective of specific output. Dr. Merkow, who began his time as a Scholar in 2010 and is now a surgical oncologist and the director for surgical cancer quality at The University of Chicago, said: "I learned not only the very basic skills on writing, but how to develop a project, work with other stakeholders, and see it to its completion. Without that foundation as a Clinical Scholar, it would have been more challenging to do that. I look back on that as setting the groundwork for everything I've been able to do since."

Atop Foundations, Entire Programs

In addition to attributing their successes to the Clinical Scholar program, Drs. Mohanty and Merkow (and many other Clinical Scholars) share another similarity: both have a connection to the Surgical Outcomes and Quality Improvement Center (SOQIC), a program modeled on the Clinical Scholars in Residence program that trains medical students, surgical residents, and postdoctoral fellows in surgical outcomes and quality improvement research. SOQIC was founded by Dr. Bilimoria at Northwestern University, and for a few years, it and Clinical Scholars in Residence operated as "kind of sister programs," said Dr. Ko.

During that time, Dr. Merkow, by then already a program alumnus, worked with SOQIC scholars as a mentor. SOQIC is now based at Indiana University, where Dr. Bilimoria has been chair of the Department of Surgery and the Jay Grosfeld Professor of Surgery since 2022. Dr. Mohanty serves as a faculty mentor there.

Other alumni also are involved with programs similar to and interconnected with Clinical Scholars in Residence. Dr. Raval, the second-ever Clinical Scholar, is now a pediatric surgeon at Lurie Children's Hospital of Chicago, as well as the head of the Raval Research Lab at Northwestern University. His laboratory focuses on surgical outcomes and quality improvement research. He said, "I actually have my own research scholars program now. It is modeled very closely on how our

"I've traced all the successes I've had, especially on the research side, from that time in Chicago."

—Dr. Sanjay Mohanty

Collaboration Statistics

1,271

Total papers published by all alumni, per PubMed only

962 (75.7%)

Papers published by one alumni without a Clinical Scholar coauthor

309 (24.3%)

Papers published by two or more Clinical Scholar coauthors

6 (on three separate papers)

Maximum number of Clinical Scholar coauthors on a single paper

112

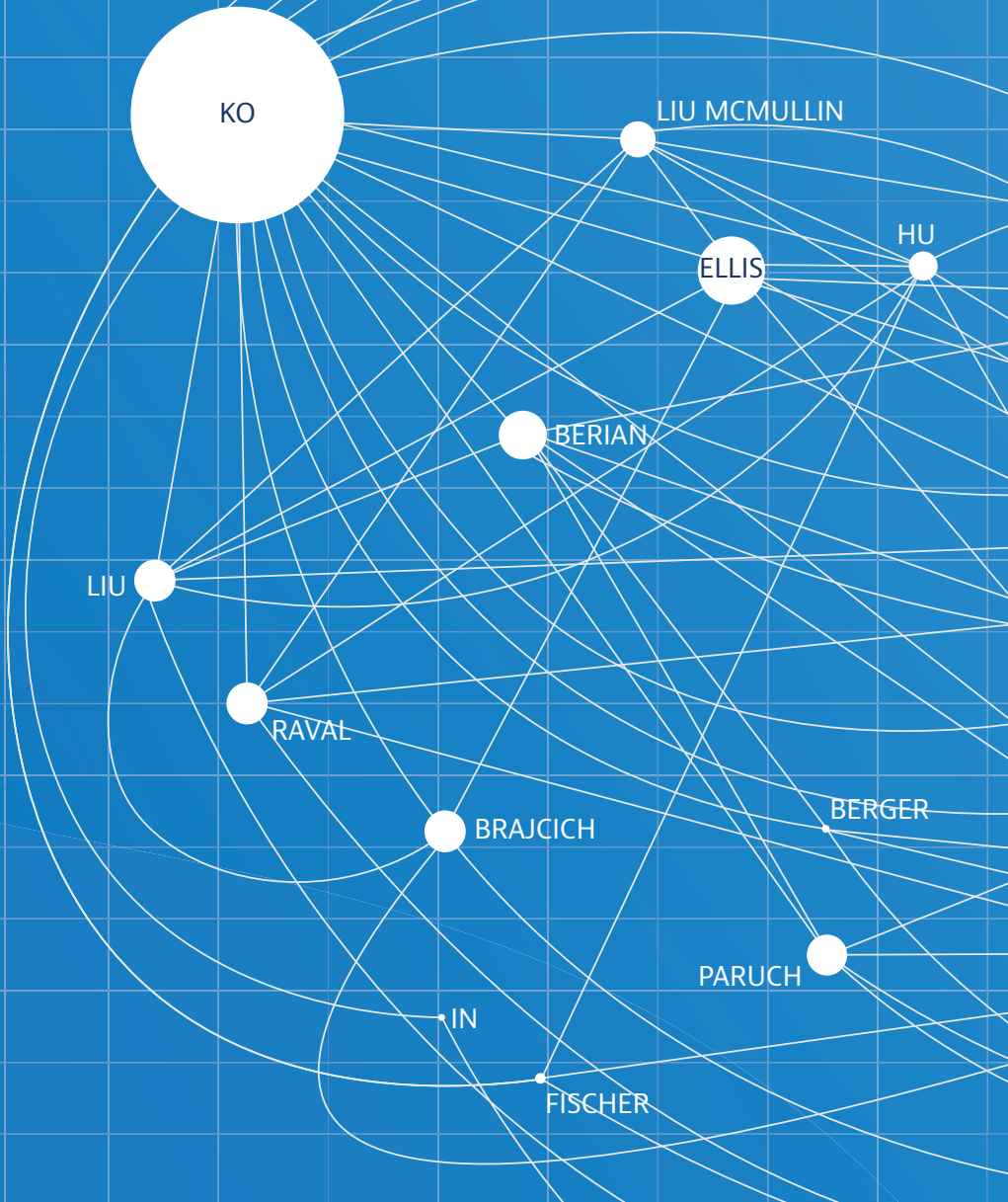
Most papers authored by any pair of collaborators 112 (Karl Bilimoria, MD, FACS, and Clifford Y. Ko, MD, MS, MSHS, FACS, FASCRS)

16 years

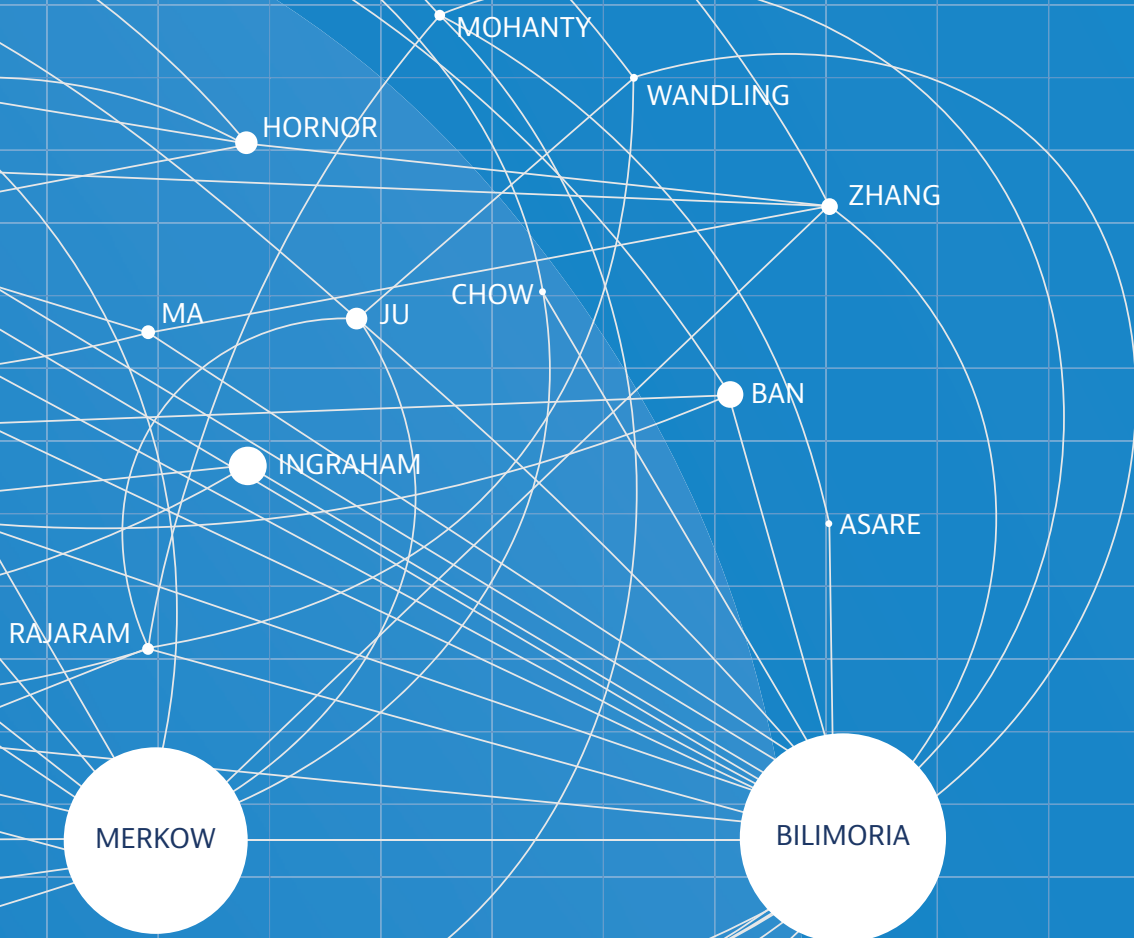
Longest-running partnership, per PubMed-accessible publication record (Karl Bilimoria, MD, FACS, and Ryan Merkow, MD, MS, FACS; 2007-present)

6

Median number of Clinical Scholars in Residence collaborators per Scholar alumnus/alumna



This informal social network analysis graph depicts published research collaborations between all pairs of past Clinical Scholars, plus Division of Research and Optimal Patient Care Director Clifford Y. Ko, MD, MS, MSHS, FACS, per PubMed citations only. Nodes represent each surgeon, lines between nodes represent collaborations between linked surgeons, and sizes of nodes vary by research output size. All research involving fewer than two Clinical Scholars and/or Dr. Ko is not shown.



“I actually have my own research scholars program now. It is modeled very closely on how our ACS Clinical Scholars program is set up.”

—Dr. Mehul V. Raval

ACS Clinical Scholars program is set up, but very focused on children’s surgery-related topics”—a distinction that means many of his mentees are not ACS Clinical Scholars.

Nonetheless, what Dr. Raval called the “spirit” of Clinical Scholars in Residence still pervades his work: “The mentorship aspect that I learned as a Clinical Scholar has spilled over. That’s the real-world impact that is most meaningful to me, which is that I have had the opportunity to mentor many scholars. It’s been rewarding and fulfilling and is definitely a big part of what I do day in and day out.”

In addition, Dr. Raval’s lab is affiliated with Northwestern Quality Improvement, Research & Education in Surgery, a larger quality improvement research program somewhat like SOQIC. His work during his time as a Clinical Scholar and at the Raval Research Lab also helped establish the ACS’s NSQIP-Pediatric, a child-specific version of NSQIP, which is in use in more than 150 hospitals.³

Meanwhile, in Boston, Massachusetts, alumnus Scholar Jason B. Liu, MD, MS, an endocrine surgeon and surgical oncologist at Brigham and Women’s Hospital, leads the Patient-Reported Outcomes, Value, and Experience (PROVE) Center, a research entity focused on patient-reported outcome measures. The PROVE Center is engaged with NSQIP on a research project focused on patient-reported outcomes data, and per Dr. Ko, Dr. Liu continues to work with Clinical Scholars in Residence directly as well.

Real-World Impact

While excellent, database citations, research skill-building, and research programs are not direct measures of impact on quality improvement and

surgical outcomes per se. Are the partnerships forged in the Clinical Scholars in Residence program yielding positive changes in the real world?

Dr. Ko said the program is well-positioned to do exactly that: “The platform of the College is significant. If we want to work with the government or the Centers for Medicare & Medicaid Services (CMS), we’re able to say, ‘We’re with the College of Surgeons.’ And we did work with CMS to evaluate its claims data versus registry data, and we did that with a Scholar. We also developed our quality verification and accreditation programs with our Scholars.”

Dr. Bilimoria said that strength has paid off. He cited a real-world example based on the work of another former Clinical Scholar, Ravi Rajaram, MD, MSc, FACS, who “wrote a series of articles examining how Medicare was not incentivizing the right things. They actually were penalizing high-performing hospitals, because the measures were faulty. So many groups, including CMS, made changes to their quality measurement programs based on those results—especially because Dr. Rajaram’s article ended up in *JAMA*.”⁴

For Dr. Mohanty, the work that he did in place of coauthoring papers with other Clinical Scholars remains a high point. “Folks have come up to me unprompted about the perioperative guidelines” that he helped create during his first 2 years as a Clinical Scholar, he said. “They are using them to develop protocols that are focused on older adults. A framework I’ve seen is a geriatric surgical center, and some doctors involved in perioperative care have approached me and said, ‘We really want to bring this here.’ So, I’ve seen that on-the-ground development.”

Social Impact

Another secret to the long-lasting collaborations between Clinical Scholars in Residence alumni are the enduring friendships many first developed at the ACS office. Collegial relationships aren't rare, but the alumni group is notable for the intensity of camaraderie between many of its members.

In sum, Dr. Ko's approach to selecting Clinical Scholars seems to have created an organizational culture that, in even greater volume than its other outputs, has produced abundant admiration among its associates. It is clear from current Scholar Xane Peters, MD, that the good feelings are still flowing, too: "It's really exciting to be surrounded by people who are passionate about the same things you are passionate about." See the output of Dr. Peters current work with the ACS on pages 8-15.

Future of Clinical Scholars in Residence

Whether or not all this achievement, enthusiasm, and ongoing productivity might translate into any one pair of Clinical Scholar alumni ending up as well-known and influential as famed behavioral economists Kahneman and Tversky is dubious. Quality improvement research rarely garners fame, of course, but more importantly, the Clinical Scholars program is a network of outstanding colleagues and friends, not just a single pair.

Nonetheless, program alumni may still view their time at the ACS as the genesis of their impact on the world, in the same way Tversky and Kahneman looked back fondly on their first days collaborating on their eventually famous work.^{5,6}

Of course, the influence of quality improvement work may pervade the healthcare milieu even without clear recognition. After all, this is often

how the influence of Kahneman and Tversky still functions. For instance, when Clinical Scholar alumni collaborate on getting health systems to improve the data fields in their electronic medical records, add chart reminders for busy clinicians, or recalibrate their quality-based incentive payments, consciously or not, they are using behavioral economics—the same work that Kahneman and Tversky once pecked out together on a single typewriter, in a room not unlike the one the Clinical Scholars in Residence themselves worked in, too.⁷ **B**

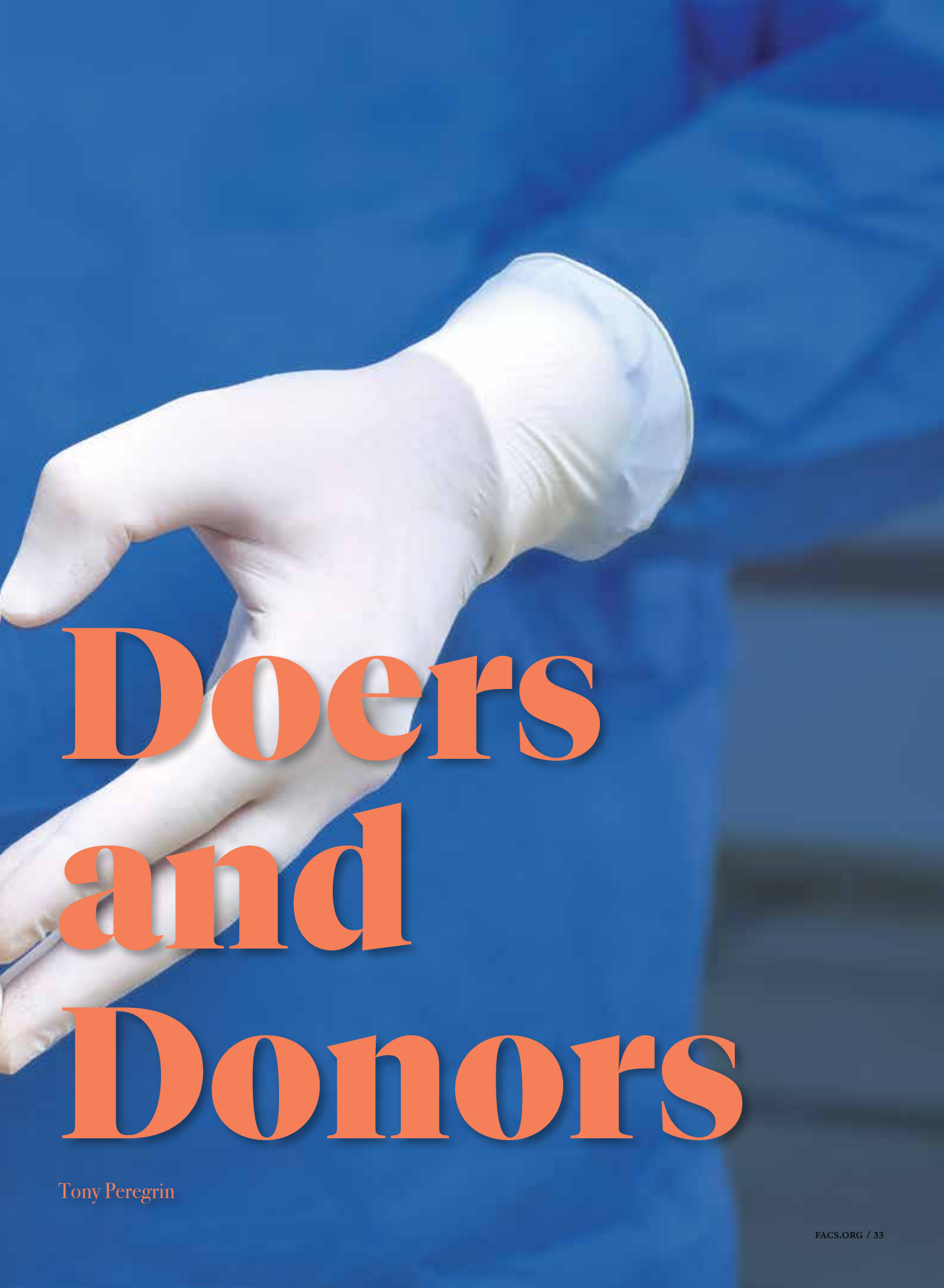
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A close-up photograph of a hand wearing a white latex glove, holding a small, light-colored object. The background is a solid, vibrant blue. The text is overlaid on the upper right portion of the image.

Distinguished Philanthropist Award Recipients Are



Doers and Donors

Tony Peregrin

The ACS Foundation has a singular mission—to raise money for surgical research, scholarships, fellowships, and philanthropic programs that, by extension, benefit surgical patients around the world.

SINCE 1989, the ACS Foundation has recognized individuals for their exemplary investment in the mission of the College with the Distinguished Philanthropist Award—the Foundation’s highest and most significant honor.

This year, two ACS Fellows will be presented with the Distinguished Philanthropist Award at Clinical Congress in Boston, Massachusetts: Retired Colonel Kirby Gross, MD, FACS, the 2023 recipient; and Kenneth W. Sharp, MD, FACS, the 2022 recipient. (Due to the COVID-19 pandemic, Dr. Sharp is being recognized at this year’s annual meeting).

“The Distinguished Philanthropist Award recipients serve as an inspiration for all donors and motivate others to support the Foundation,” said Beth White Carona, CFRE, Director of the ACS Foundation. “The recipients embody the true spirit of giving selflessly and impact the College in a meaningful and lasting way through their philanthropy.”

In the past 10 years,

Distinguished Philanthropist Award recipients—along with thousands of other philanthropic Fellows and friends of the College—have contributed more than \$23 million, supporting ACS initiatives, including scholarships and fellowships, awards promoting surgical and outcomes research, and lifelong learning.

The ACS Foundation Board of Directors identifies and selects nominees for the award. The nomination criteria are:

- A record of service to the College and the Foundation
- A leadership commitment to the practice of philanthropy
- A personal history of philanthropy to the College
- Service to the larger not-for-profit community

Both the 2022 and 2023 Distinguished Philanthropist Award recipients will be recognized at the Donor Recognition and Scholars and Travelers Luncheon on Monday, October 23, during Clinical Congress.

Dr. Sharp’s Passion for Giving Inspires Others

Dr. Sharp is currently the Regental Liaison to the ACS Foundation Board after having served for 9 years on the Foundation Board as a Director. Working closely with Foundation leadership, Dr. Sharp has enhanced visibility of the Chapter Programs Fund and has assisted several ACS chapters to start their own fund, including his home chapter in Tennessee.

“Quite frankly, I feel good when I give,” admitted Dr. Sharp, when asked what inspires him to be a long-time supporter of the ACS Foundation. “The ACS has given me an extraordinary amount of support in my career. So much of the satisfaction I’ve had in dealing with organized medicine and surgery has centered on the efforts of the College to represent me on Capitol Hill, teach me new skills, and help me learn how to teach my students and residents. And, it has helped me improve the care of surgical patients.”

A highly respected surgical educator and mentor, Dr. Sharp



Dr. Kenneth Sharp



Colonel Kirby Gross

is a professor of surgery and vice-chair of the Department of Surgery at Vanderbilt University Medical Center in Nashville, Tennessee.

Since becoming an ACS Fellow in 1987, Dr. Sharp has served in various leadership roles for the College. He has been a Regent since 2018, participating in the regental Bylaws, Anti-Racism, and Member Services Liaison Committees. He previously was a Governor (2000–2006), and currently serves on the Clinical Congress Program Committee. At the local level, Dr. Sharp is a Past-President for the ACS Tennessee Chapter.

Earlier this year, Dr. Sharp was named president of the Southern Surgical Association (SSA), an organization that is noted for its wide dissemination of innovative research. Each spring, articles

developed by the SSA are featured in a special issue of the *Journal of the American College of Surgeons*.

Beyond his extensive leadership roles, Dr. Sharp also is known for his ability to inspire surgical peers to support the ACS Foundation. He often represents the ACS Foundation at regional surgical meetings, such as the ACS Leadership & Advocacy Summit.

In fact, Dr. Sharp's talent for motivating others to engage with the ACS Foundation is one of the reasons he was selected as the 2022 Distinguished Philanthropist.

"I've given a good amount of money, but I am by no means a huge donor," said Dr. Sharp. "I received this Distinguished Philanthropist Award because I have given a respectable amount of money, but I've also stimulated a lot more donations from others."

Heeding the Call of Duty and Philanthropy

For more than 25 years, Colonel Gross has been a consistent and generous donor to the ACS Foundation, an endeavor partially inspired by the other Distinguished Philanthropist Awardee honored at this year's Clinical Congress—Dr. Sharp.

"Kirby was one of my trainees 20 years ago at Vanderbilt University Medical Center," recalled Dr. Sharp. "I did very little hands-on training with him, but I was one of the professors there, and he knew who I was. What is particularly interesting is that probably 10 years or so ago, after he finished his training, Kirby came back to Vanderbilt to visit, and he had a cup of coffee with me. We talked about the ACS Foundation. I remember him saying that the College had

been a really important part of his career—so he started giving, and I will tell you, he gave generously.”

Colonel Gross is the first active-duty member of the military to serve on the ACS Foundation Board, which he said gave him the opportunity to encourage fellow military colleagues to acknowledge the value of the College.

“It is an honor for me to be recognized in the same year as Dr. Ken Sharp, who was one of my mentors and is now a colleague,” said Colonel Gross. “It has been particularly interesting to learn how he views the importance of his relationship with the College; I’ve learned much from him.”

Colonel Gross answered the call

to serve in the US Army at the age of 48, when he was inspired to leave a successful general surgery practice after the 9/11 attacks to care for members of the US Armed Forces.

More than 20 years later, Colonel Gross remained on active duty, deploying 10 times with special forces and conventional units in the Afghanistan and Iraq wars—making him one of the most deployed military surgeons in US history before he retired earlier this year.

“Keep in mind that I might be changing roles, but I’m not changing my mission,” said Colonel Gross, an attending surgeon and educator with the Army Military-Civilian Trauma Team Training Program at

Cooper University Health Care in Camden, New Jersey. This program provides opportunities for US Army medical providers to work in trauma centers with more emergency care patients than are typically seen in Army hospitals, allowing military medical professionals to maintain their skills in support of military medical readiness.

Colonel Gross is a strong supporter of the Military Health System Strategic Partnership ACS, which is partially funded by the ACS Foundation. This program is a collaboration between the ACS and the Department of Defense Military Health System and uses battlefield experiences to provide better care for soldiers and civilians.





Dr. Julie Freischlag

A Fellow since 1989, Colonel Gross has been a dedicated member of the Excelsior Surgical Society (ESS), which became a formal society within the ACS in 2014, serving as its treasurer and in other leadership roles. And, while his term ended as a member of the Foundation Board after serving for 6 years, Colonel Gross will continue to help the ACS Foundation secure funding for the ESS in retirement.

There are a few perks for retired military leaders—chief among them for Colonel Gross is the freedom to engage in advocacy work on behalf of military surgeons and their patients.

“One of the interesting things as a uniformed service member—we are limited in terms of the advocacy we can conduct, which certainly makes sense, but now that I’m no longer in uniform, I’ll

have a chance to more vigorously advocate for the Excelsior Surgical Society,” he said.

Dr. Freischlag’s Investment in the Future

Distinguished Philanthropists Awardees, such as Dr. Sharp and Colonel Gross, demonstrate a notable level of engagement with the ACS Foundation, but supporting the College comes in many forms that often highlight a donor’s personal values and areas of interest.

“My husband and I decided to give a large gift to the Foundation because the American College of Surgeons has made my career,” said Julie A. Freischlag, MD, FACS, ACS Past-President (2021–2022), and an esteemed vascular surgeon. “I wouldn’t be where I am today if I didn’t get the support from the College, and from all the surgeons I’ve met, especially women surgeons back when I started to train. And after we made our gift, it made us feel so great that it hopefully can help someone else have a wonderful career, because they were a member of the American College of Surgeons.”

Dr. Freischlag selected the ACS Foundation’s Greatest Needs Fund as the recipient of her gift.

“With a contribution to the Greatest Needs Fund, you give the College the ability to direct the funds where they can have the most impact and support a diverse and wide range of projects,” explained Carona. “In line with the College’s commitment to education, \$200,000 of the amount raised through the Greatest Needs Fund is allocated to scholarships on an annual basis.”

A Fellow of the College since 1991, Dr. Freischlag is chief executive officer of Atrium Health Wake Forest Baptist in Winston-Salem, North Carolina, chief academic officer and executive vice-president of Advocate Health, executive vice-president for health affairs at Wake Forest University, and dean of Wake Forest School of Medicine.

To learn more about the ACS Foundation, its programs, and how to contribute, visit facs.org/acsfoundation. You also can visit Foundation staff during Clinical Congress 2023 at their booth near registration at the Boston Convention & Exposition Center. **B**

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 Access video content at facs.org/bulletin



Dr. Sharmila Dissanaiké

In-Person Meetings Still Matter

Sharmila Dissanaiké, MD, FACS

FIRST, A DISCLAIMER: the author of this viewpoint article is a member of the ACS Program Committee and, as such, has a highly favorable bias toward participation in surgical meetings.

Be that as it may, it is worth highlighting a few reasons why surgeons may benefit from participating in what could be considered an archaic tradition—to gather in person each year in a different city to share knowledge and ideas with colleagues.

The first Clinical Congress took place in 1910 under the auspices of ACS Founder Franklin H. Martin, MD, FACS, with 1,300 attendees. Since then, this annual event has been one of the largest gatherings of surgeons in the world, bringing together an increasingly diverse range of surgeons from all specialties.

For many decades, attending an annual meeting of their surgical society of choice was the only way for practicing surgeons to meet

the continuing medical education (CME) requirements necessary to maintain their licenses to practice. As such, attendance at these meetings was a foregone conclusion, and the assembly with the highest number of CME credits available would more or less be guaranteed a strong attendance rate.

Since the early 2000s, as Millennials and Gen Z fill the ranks of practicing surgeons, the question to consider is whether



in-person meeting attendance can remain relevant to a generation raised on digital media. With a plethora of free information readily available online, much of it accredited for CME, is there a reason to take time away from a busy practice to attend a meeting?

If there were no other purpose for a meeting other than passive absorption of information, my answer to this question would be “no.” There are plenty of expeditious ways to obtain factual data on the latest advances in surgery—much of it from reputable sources just a few clicks away.

The reason to attend a surgical meeting is for everything that exists around the periphery of the panels of experts imparting

didactic information. It is the discussion from the floor, the provocative questions, the personal anecdote that stirs something deeper within us, much more than a mountain of data ever could.

It is the chance to interact with the speakers after their talk and make a connection that can lead to a conversation, a research collaboration, or simply—and perhaps best of all—a friendship.

It is finding like-minds (and, perhaps, even more importantly, not-alike minds!) among others in the audience, and strengthening these connections at social events. In a world that is increasingly siloed across geographic, subspecialty, and political divides, it is imperative

we have the opportunity to meet each other across these artificial boundaries.

For private practice and academic surgeons, rural and urban, US and international, to gather in a shared space and learn about the challenges the others are facing, benefits us all, as does realizing where we are alike and where we are different in order to move our profession forward and improve patient care.

It is the networking events at in-person meetings such as Clinical Congress, which will be held in Boston, Massachusetts, this year, that allow academic surgeons to introduce their trainees to colleagues who might offer them a job, and for private practice surgeons to recruit new partners

Finally, and perhaps most importantly, it is the opportunity to be reminded that we are not alone. As surgeons, we historically have been “Captain of the Ship.”



to their practice. It is the chance to interact with others by serving on a committee, and creating something that benefits our profession, and our patients.

Finally, and perhaps most importantly, it is the opportunity to be reminded that we are not alone. As surgeons, we historically have been “Captain of the Ship.”

Despite the intentional effort to shift this mentality into the modern model of interprofessional teamwork, this approach continues to dominate

the operating room. We are expected to be excellent team players and share authority, while also holding ultimate responsibility, and thus liability, for patient outcomes.

Throw in the additional challenges faced by surgeons of minority and marginalized backgrounds of various types, and this becomes a daily exercise in walking a tightrope. While all these goals are well-intentioned, it can place surgeons in a position that is

confusing, difficult—and lonely.

It is not surprising that reports of second victim syndrome, burnout, attrition from clinical practice, and early retirement are on the rise. Learning to be a surgeon is hard; holding the responsibility for another’s life placed in our hands as an attending surgeon is harder. Doing this all day, day after day, while faced with myriad regulatory, administrative, and financial obstacles can feel like constantly swimming upstream. Very few individuals can fully understand the exhaustion that results from these challenges, and none as much as other surgeons.

During the COVID-19 pandemic, in-person meetings were temporarily placed on hold and converted to online virtual events throughout the medical world. While many tried to remain engaged in this new format, and the didactic content remained excellent, it was quickly evident that a virtual conference was not an equivalent experience to in-person meetings.

The activities of daily life at work or home would take precedence over sitting in an office with the door closed to watch educational sessions on a computer after we had already spent the entire day staring at



ourselves on screen through innumerable videoconferences. “Zoom fatigue” and the lack of protected time to attend a conference without other distractions served to discourage participation for most of us.

Vivek Murthy, MD, US Surgeon General, recently raised the alarm on the epidemic of loneliness and social isolation in America. Massive advances in technology, and the resulting shift in social interactions from in person to online and automation (e.g., self-checkout and online shopping versus your local corner store) have resulted in the most isolated society in human history.

Humans are social animals, and there is overwhelming evidence of severe adverse consequences to our health and well-being with every step we take away from in-person interaction and connection with others.

Surgical meetings provide the best opportunity there is to interact with others facing the same challenges that we do. We build a network of colleagues whom we can call on for help with professional and personal challenges and crises.

We interact both in the educational sessions and in animated conversations in the hallway outside. We discuss

topics of interest with experts in the field to whom we may not otherwise have easy access.

We cut loose at the designated social events, and perhaps even strike up a conversation with a random colleague while in line for dinner, with whom we otherwise would never have connected.

For me personally, the connections I’ve made with other chairs, surgeons within and outside my own specialty, retired surgeons now pursuing other adventures, and trainees in the surgical community at Clinical Congress have resulted in a more diverse perspective on our profession—past, present, and future.

Over the years, several of these acquaintances have become a strong cohort of friends whom I can call on anytime for help, advice, a confidential sounding board, or occasionally just to vent, since we all have those days. Having this network outside of my own immediate circle in the workplace is perhaps my

best reason to attend Clinical Congress and other surgical meetings. The fact that there is excellent educational content to anchor it all is simply a bonus. **B**

Disclaimer

The thoughts and opinions expressed in this viewpoint article are solely those of Dr. Dissanaik and do not necessarily reflect those of the ACS.

Dr. Sharmila Dissanaik is a burn, trauma, and acute care surgeon, and the Peter C. Canizaro Chair of Surgery at Texas Tech University Health Sciences Center in Lubbock. She serves as an ACS Governor representing North Texas and a member of the ACS Committee on Trauma, Ethics Committee, Program Committee, and Advisory Council for Rural Surgery.

NAPRC Stays the Course in Quest to Improve Rectal Cancer Care

Steven D. Wexner, MD, FACS

APPROACHING ITS 10TH ANNIVERSARY, the National Accreditation Program for Rectal Cancer (NAPRC) is updating its strategic approach and expanding on verification and quality improvement initiatives that have been its hallmark for the past decade.

Discussion about NAPRC formation began in 2011, and in August of that year, an inaugural meeting of stakeholders was held.

This interdisciplinary group featured acclaimed experts representing the ACS Commission on Cancer (CoC), College of American Pathologists (CAP), American College of Radiology (ACR), American Society of Colon and Rectal Surgeons (ASCRS), Society of American Gastrointestinal and Endoscopic Surgeons (SAGES), Society for Surgery of the Alimentary Tract (SSAT), and the Society of Surgical Oncology (SSO).

Over the next 3 years, the case was built through lectures and studies in the peer-reviewed literature that a national accreditation program for rectal cancer was necessary. Data, primarily from the National Cancer Database (NCDB), confirmed the wide disparity in rectal cancer care in the US.^{1,2}

Moreover, it was clear that the outcomes of rectal cancer surgery in the US, confirmed by rates of permanent colostomy creation, circumferential resection margin positivity, and local recurrence, were far below levels achieved in European countries.

The common denominator among the countries that outperformed the US in rectal cancer care was the presence of an interdisciplinary care model, particularly in high-volume centers. Patient outcomes data in Scandinavia, the United Kingdom, and elsewhere in Europe showed that adopting a team approach and, in many cases, centralizing services helped improve care while increasing patient volume.

After 3 years of data collection and dissemination, a formal request was made in May 2014, during a presentation to the CoC Accreditation Committee, which then unanimously recommended creation of the NAPRC. Following ACS Executive Committee approval, the ACS Board of Regents unanimously approved funding for the program in June 2014.

The governance structure of the NAPRC includes Executive, Standards, Accreditation, and Education Committees. Each committee includes one

In the short time since the program's inception, numerous changes have occurred in the evaluation and management of rectal cancer.

representative from the constituent organizations—ACR, ASCRS, CAP, SAGES, SSAT, and SSO—as well as four ACS Fellows and requested representation from the ACS Resident and Associate Society and Young Fellows Association.

Stakeholders spent the first 3 years after the NAPRC was formed developing a set of rectal cancer care standards. The standards were used to beta test six sites varying in location and practice type. Ultimately, the accreditation process for the NAPRC began in March 2018. Between 2018 and 2022, 77 programs were accredited.


In 2022, the first reaccreditation visits began, and in April of this year, a strategic retreat was held to begin updating the standards and to introduce standards on two new topics: local excision and wait and watch. Other standards such as postoperative adjuvant chemotherapy were retired due to changes in practice.

In the short time since the program's inception, numerous changes have occurred in the evaluation and management of rectal cancer. For example, rectal ultrasound has been replaced by thin-slice rectal cancer protocol MRI; synoptic reports are widely accepted and, in fact, are required by the CoC; and adjuvant chemotherapy, which was initially replaced by neoadjuvant chemotherapy, now has been supplanted by total neoadjuvant therapy.

In addition, the “wait and watch” approach has morphed from a practice that occasionally was used to an approach that now is embedded into the standard of care for rectal cancer surgery. Immunotherapy will undoubtedly accelerate in its indications and acceptance, and innovations in rectal cancer care mean the NAPRC standards will continue to be fluid to accommodate continued advances in the field.

The next phase of NAPRC growth will be to confirm its value-base proposition of improving rectal cancer outcomes for patients throughout the US. At least nine studies have been published so far validating its value.³⁻⁵

In addition, NCDB data will be used to focus on additional variables that could demonstrate the value of accreditation. Such variables might include rates of permanent stoma creation, anastomotic leak, and local recurrence, as well as patient-reported outcomes. Different types of accreditation models also will be explored.

Updates about the NAPRC will be included in ACS communications such as *Cancer News*, the *ACS Brief*, and the *Bulletin*. Learn more about NAPRC accreditation at facs.org/naprc. 

Dr. Steven Wexner is the director of the *Ellen Leifer Shulman and Steven Shulman Digestive Disease Center and chair of the Department of Colorectal Surgery at Cleveland Clinic Florida*. For the ACS, he is *Chair of the CoC NAPRC*.

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Stolen Heart: DeBakey-Cooley Controversy Beats On

Craig A. Miller, MD, FACS

On the evening of Friday, April 4, 1969, television news programs across the US led with the most electrifying story of the day: Doctors in Houston, Texas, had performed the world's first implantation of a total artificial heart in a human recipient.



DRAMATIC ANNOUNCEMENTS REGARDING advances in cardiovascular surgery from the Texas Medical Center were nothing new. Headlines were made when the first left ventricular assist device was implanted there in 1966 by Michael E. DeBakey, MD, FACS, and when the first heart transplant in the US was performed by his colleague and rival, Denton A. Cooley, MD, FACS, in 1968. This case, however, was different.

The recipient of the new mechanical heart was Haskell Karp, a printing estimator from Skokie, Illinois, who suffered from profound congestive heart failure after four myocardial infarctions. Dr. Cooley recommended a heart transplant for Karp, who had been languishing at St. Luke's Episcopal Hospital in Houston, but finding a donor was challenging, and results for this procedure, at the time, had disappointing clinical outcomes.

Dr. Cooley discussed with Karp the option of ventriculoplasty, with the backup of a "new kind of pump" in case that operation was not successful.

The new pump resided in Dr. DeBakey's research lab within the Baylor College of Medicine

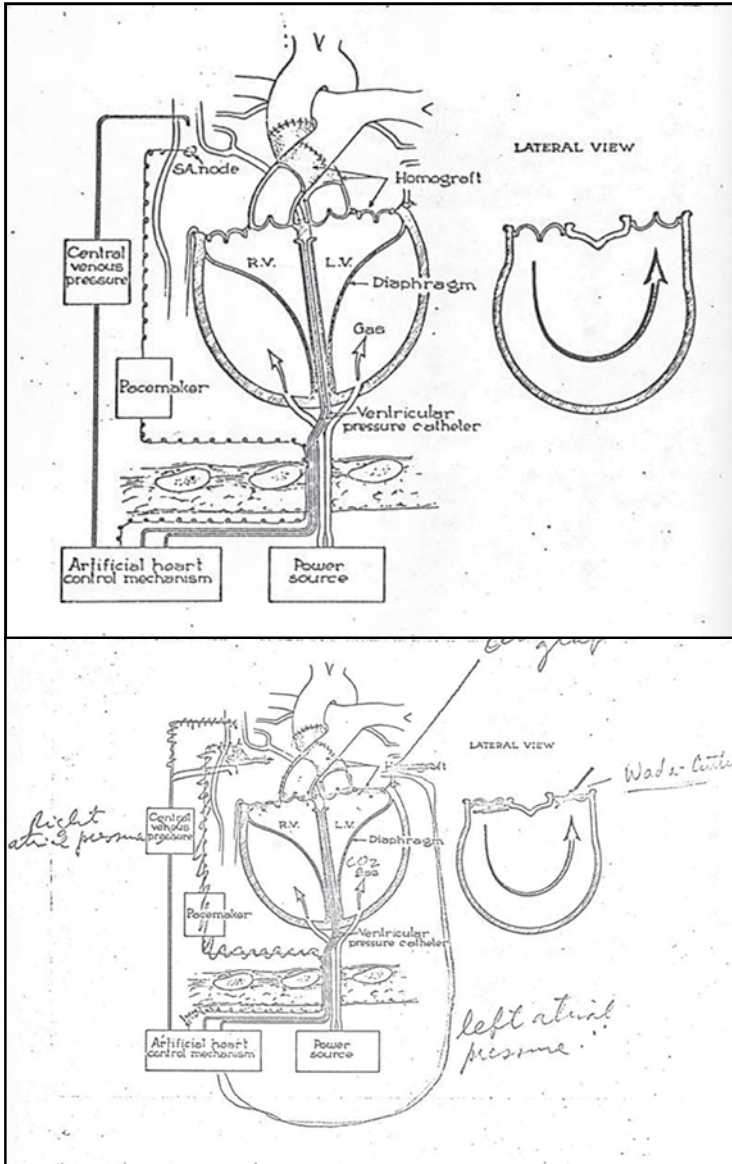
Department of Surgery. After the great success of the left ventricular device in 1966, hopes had been high that construction of a dual chamber device would be the next quick step to a total mechanical heart—the solution to the problem of scarce donors.

Funded by a National Heart Institute (NHI) grant, Dr. DeBakey's lab team had made considerable technical progress in developing the device, but by late 1968, success—as measured by survival in animal experiments—had not been achieved. It was at this point that Dr. Cooley approached one of the research residents involved, Argentinian surgeon Domingo Liotta, MD.

Dr. Cooley convinced Dr. Liotta, who expressed frustration at the deliberate pace of work involved in developing the dual pump, to join forces in a surreptitious attempt for rapid advancement with human implantation. Over the next few months, more animal experiments were performed using valves provided by Dr. Cooley.

Although the animals all still died shortly after implantation, incremental improvements in physiological responses seemed to be present.

Dr. Denton Cooley and Domingo Liotta examine patient Haskell Karp after the artificial heart operation. The large control unit was placed next to Karp. (Credit: National Library of Medicine)



At the same time, and with the medical photography team on hand, Dr. Cooley attempted ventriculoplasty on Karp but could not wean him from cardiopulmonary bypass. To the astonishment of onlookers, Dr. Cooley removed Karp's heart and replaced it with the Baylor pump. Because of the large size of the control apparatus, Karp remained in the operating room rather than being transported to the intensive care unit (see image on page 45). Karp briefly awoke and was extubated before being placed again on the ventilator.

Alerted about a groundbreaking event, reporters were on hand for an impromptu news conference when Drs. Cooley and Liotta, along with other members of the operating team, announced what had transpired.

When informed about the events back home, an aghast Dr. DeBakey told NHI officials he had no knowledge of Dr. Cooley working in this research area and that Dr. Liotta was on his own lab staff, funded by the NHI.

Over the next hours, Karp's condition deteriorated, with evidence of the organ dysfunction that had plagued the animal experiments. On Saturday, April 5, Dr. Cooley and a tearful Mrs. Karp went on national television to plead for an organ donor as it became obvious that the artificial heart would not be able to sustain Karp's life much longer.

A donor heart was found in Massachusetts and flown to Houston for cardiac transplantation the following day; however, Karp died on April 8 of *Pseudomonas pneumonia* complicated by multisystem organ failure.

By then, Dr. DeBakey, who also was president of the Baylor College of Medicine, had returned to the Texas Medical Center, and an investigation was initiated. Dr. Cooley insisted that the Karp heart was an independent design from Dr. DeBakey's work but other testimony refuted this; Dr. Liotta's drawing of the Karp device was nearly identical to a sketch of the pump from Dr. DeBakey's lab (see image on this page).

A 1968 sketch of the Baylor artificial heart design (top) looks similar to Dr. Domingo Liotta's drawing of the heart implanted in Haskell Karp. (Credit: National Library of Medicine)

At this point, Dr. Cooley began to search for a possible human recipient. Karp appeared to be a suitable candidate.

Dr. Liotta quickly constructed three new pumps and, on the night of April 3, took them from Dr. DeBakey's lab. Dr. Cooley had already recruited a technician to build duplicates of the Baylor pump control and power mechanisms; these also were delivered to Dr. Cooley's office at St. Luke's that night.

On April 4, Dr. DeBakey left Houston to attend a meeting with NHI officials in Washington, DC, to discuss progress on the artificial heart.

Nearly 40 years passed without contact between Drs. DeBakey and Cooley, two giants of cardiovascular surgery separated by only a few hundred yards on the Texas Medical Center campus but also by an impenetrable wall of betrayal and deceit.

When the comprehensive and confidential report was completed, the conclusion was that Drs. Cooley and Liotta had inappropriately taken the artificial heart from Dr. DeBakey's lab and implanted it in Karp without consent of the university's Protection of Human Subjects in Research Committee and contrary to the stipulations of the NHI grant.

Dr. Liotta's employment was terminated and, a short time afterward, he left the US. Dr. Cooley resigned from Baylor after refusing to sign an agreement stipulating that permission must be received by the university ethics board prior to performing experimentation on humans. He was the only faculty or staff member out of more than 1,300 who did not sign the agreement.

Dr. Cooley was censured by the Harris County Medical Society and the ACS for his role in the artificial heart case but went on to great success as surgeon-in-chief of The Texas Heart Institute.

Nearly 40 years passed without contact between Drs. DeBakey and Cooley, two giants of cardiovascular surgery separated by only a few hundred yards on the Texas Medical Center campus but also by an impenetrable wall of betrayal and deceit.

In 2007, shortly after Dr. DeBakey received the Presidential Medal of Freedom at age 99, former residents of the two legends arranged a meeting and rapprochement, and any lingering ill will was—at least superficially—put to rest.

The pump now resides in the Smithsonian National Museum of American History, floating in a formalin-filled Lucite box. Its official designation is the "Liotta-Cooley Artificial Heart," a name that is, fittingly, both accurate and entirely wrong. **B**

Dr. Craig A. Miller is a board-certified vascular surgeon in Columbus, OH. He is a Scholar-in-Residence at the Medical Heritage Center of The Ohio State University College of Medicine, and the Michael E. DeBakey Fellow in the History of Medicine at the National Library of Medicine. Dr. Miller also is the author of *The Making of a Surgeon in the 21st Century*, *The Big Z: The Life of Robert M. Zollinger, MD*, and *A Time for All Things: The Life of Michael E. DeBakey*, and he is a member of the *ACS History and Archives Committee*.

Bibliography

Miller CA. *A Time for All Things: The Life of Michael E. DeBakey*. New York, Oxford University Press, 2019:444-488.



Pediatric Surgeons Meet with White House Advisors on Fetal and Maternal Health

Meeting attendees, from left: Dr. Tom Tracy, Dr. Francois Luks, Katie Keith, Lina Volin, Dr. Henri Ford, Dr. Holly Hendricks, and Dr. Yinka Olotuye. Not pictured: Drs. Patrick Bailey and Tippi McKenzie.

IN THE WAKE of the US Supreme Court's *Dobbs v. Jackson Women's Health Organization* decision ("Dobbs") in 2022, health professionals have been discussing how subsequent legislation from various states affects medical decision-making and treatment for fetal and maternal health.

To inform policymakers of the implications of current and proposed law, in August

pediatric surgeons and fetal specialists representing the ACS and the American Pediatric Surgical Association (APSA) met with two White House health policy advisors to discuss how the *Dobbs* decision is affecting the safety and autonomy of mothers.

The meeting came out of conversations at the APSA meeting in May about the impact of *Dobbs* on pediatric surgeons who specialize in

fetal intervention. Prior to that meeting, White House representatives expressed an interest in talking with surgeons to become educated on the state of the art in fetal interventions.

ACS President-Elect Henri R. Ford, MD, MHA, FACS, Patrick V. Bailey, MD, MLS, JD, FACS, ACS Medical Director of Advocacy, and other pediatric surgeons participated in a meeting on August 8, with Katie Keith, Senior Advisor,

and Lina Volin, Chief of Staff and Advisor to the White House Gender Policy Council.

The group communicated how restrictive laws regarding reproductive health affect pregnant women and their fetuses. They noted:

- Dobbs creates ambiguity. Fetal surgery is associated with a risk of fetal demise and pregnancy loss, which might be interpreted as termination. As such, physicians may be discouraged from intervening when indicated for fear of causing pregnancy loss and suffering legal consequences; or, conversely, may overuse medical intervention based on the principle that “everything must be done” to save the fetus.
- Multiple gestations may lead to complex decisions. Fetal intervention may be withheld if only one twin appears sick for fear of harming the other, even if intervention would benefit both; conversely, fetal

intervention on a sick twin may be seen as “doing everything possible” but pose a risk to the unaffected twin.

- Unclear interpretation of a law meant to preserve fetal life at all costs may introduce misinformation and hamper medical progress. Fear of prosecution may interfere with a physician’s ability to offer evidence-based medical information and may discourage innovation, hampering current and future forms of fetal intervention.


Those in attendance engaged in a robust conversation and were able to provide background on both the impact Dobbs has had on their practices and the uncertainty Dobbs has created when providing prenatal counseling.

It is anticipated that further input will be sought after Keith and Volin determine how these important considerations fit into their broader policy agenda.

In addition to Drs. Ford

and Bailey, pediatric surgeon attendees included:

- Holly L. Hedrick, MD, FACS, Louise Schnauffer Endowed Chair in Pediatric Surgery at Children’s Hospital of Philadelphia, PA
- Francois I. Luks, MD, PhD, FACS, Murray Beardsley Professor of Pediatric Surgery at the Alpert Medical School of Brown University in Providence, RI
- Oluyinka O. Olutoye, MD, PhD, FACS, Thomas Boles Jr. Chair of Pediatric Surgery at The Ohio State University in Columbus
- Thomas F. Tracy Jr., MD, MBA, FACS, APSA executive director and president-elect

Tippi Mackenzie, MD, FACS, John G. Bowes Distinguished Professor in Stem Cell and Tissue Biology and professor of surgery at the University of California, San Francisco, also participated in the discussions the group undertook prior to the meeting. 

Annual Business Meeting of Members

ALL MEMBERS are welcomed and encouraged to attend the Annual Business Meeting of Members of the ACS on Wednesday, October 25, 2023, at 4:15 pm in Room 104ABC of the Boston Convention and Exhibition Center. This session is in accordance with Article I, Section 6, of the *Bylaws*.

During the meeting, the ACS Officers and Governors will be elected, and reports from officials will be presented. There will also

be items of general interest to the Members that will be included on the agenda. Members are respectfully urged to attend.

Sherry M. Wren, MD, FACS
Secretary
American College of Surgeons
September 1, 2023

Learn more about registering for Clinical Congress and attending the Annual Business Meeting of Members at facs.org/clincon2023.

Trauma Summit to Advance Equity Research Convenes in Chicago

MORE THAN 50 trauma surgeons, nurses, program managers, researchers, and survivors convened at ACS headquarters in Chicago this summer to take stock of existing disparities in injury care and research and consider innovative solutions to address them. The Summit on the Advancement of Focused Equity Research (SAFER) in Trauma

was developed by the Coalition for National Trauma Research's (CNTR) Equity, Diversity, and Inclusion Committee, chaired by Vanessa Ho, MD, FACS, from Case Western Reserve University in Cleveland, Ohio.

Presentations—including keynote addresses from Cherisse Berry, MD, FACS, from New York University in New York City, and

Zara Cooper, MD, FACS, from Harvard University and Brigham and Women's Hospital in Boston, Massachusetts—provided historical context, demonstrated systemic issues, and level-set the conversation before launching into innovations that could be harnessed to advance equity.

Dr. Cooper argued that trauma surgeons are in the ideal



position to affect the intransigent presence of disparity in care.

“If not us, who? If not now, when?” she asked. “We can do this!”

Other highlights included LJ Punch, MD, FACS, who shared how he built the Bullet Related Injury Clinic in St. Louis, Missouri, specifically to increase community involvement, impact, trust, and communication flow; Joseph V. Sakran, MD, MPH, FACS, who focused on the political determinants of health and the cost of inequities in care to society; and Rachael A. Callcut, MD, MSPH, FACS, who provided a primer on artificial intelligence and how it might be harnessed to address bias.

Trauma survivor and patient advocate Andrew Oberle shared his story—from a gruesome chimpanzee attack in South Africa, to recovery

challenges, living with disability, and advocating for other trauma victims.

Four early career investigators—Tandis Soltani, MD, Sydney Timmer-Murillo, PhD, Anamaria J. Robles, MD, and Kate M. Stadel, MD, MPH—received travel fellowships and are leading the development of manuscripts that describe innovative approaches to reducing disparities in the realms of large database research, community-engaged research, clinical trials, and implementation science.

Overall, the conference was action-oriented and promised to drive additional inquiry. In addition to conference articles, a SAFER-Trauma webpage is being built on the CNTR website at nattrauma.org, which will house presentations and recordings from the conference, as well as provide a forum

for ongoing collaboration.

SAFER-Trauma was funded in part by a grant from the Agency for Healthcare Research and Quality. In addition to ACS support, the American Association for the Surgery of Trauma, Eastern Association for the Surgery of Trauma, and American Trauma Society provided financial support.

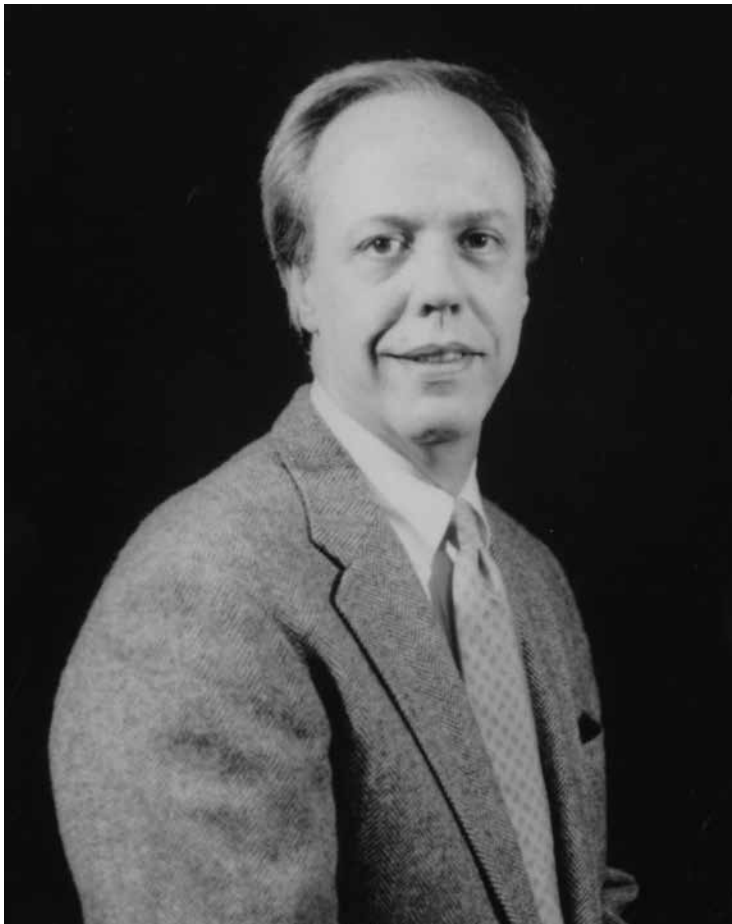
The ACS Committee on Trauma (COT) is a member organization of CNTR, which earlier this year released research regarding the development of a National Trauma Research Action Plan.* **B**

*American College of Surgeons. “Trauma Group Publishes Action Plan, Makes Data Available for Secondary Analyses.” *ACS Brief*. Accessed August 20, 2023. <https://rb.gy/bzq0u>.



More than 50 attendees participated in the SAFER-Trauma event, including ACS trauma leaders Jeffrey D. Kerby, MD, PhD, FACS, COT Chair (front row, far left) and Eileen M. Bulger, MD, FACS, Medical Director of ACS Trauma Programs (front row, second from left).

Dr. John Ochsner Gage, ACS Past-Secretary and DSA Recipient



JOHN OCHSNER GAGE, MD, FACS, a general and vascular surgeon and longtime leader in the ACS, passed away August 7, at the age of 81.

Born in 1941, Dr. Gage pursued his passion for medicine and attended Tulane University Medical School in New Orleans, Louisiana. As a resident at Charity Hospital through Louisiana State University, Dr. Gage specialized in both general and vascular surgery, eventually serving as a physician in the US Navy and spending time aboard the USS *Kitty Hawk* before starting a career in private practice.

Working for more than 30 years at West Florida Hospital in Pensacola (now HCA Florida West Hospital), Dr. Gage was an active member in several professional medical associations, including the ACS. Dr. Gage became an ACS Fellow in 1980, going on to serve as President of the Florida Chapter (1986–1988), Governor (1988–1994), Chair of the Board of Governors Committee on Socioeconomic Issues (1990–1994), and Chair of the ACS General Surgery Coding and Reimbursement Committee (2001–2004).



Regarded as a talented surgeon, Dr. Gage was known by his colleagues for his roles as leader, teacher, mentor, and innovator who worked to not only save the lives in front of him but also to improve the practice of medicine.

His service to the ACS culminated as Secretary of the College, a position he held from 2001 to 2006.

In addition to his other accolades, Dr. Gage received the ACS Distinguished Service Award (DSA) in 1995 for his exceptional and continuous service as an ACS Fellow, as well as a career distinguished by devotion to patient care and the principles and ideals that guide all surgeons in their professional practice.

Outside of the ACS, Dr. Gage was a founding member of the American Medical Association Physician Relative Value Update Committee and a member of the Southern Surgical Association.

Regarded as a talented surgeon, Dr. Gage was known by his colleagues for his roles as leader, teacher, mentor, and innovator who worked to not only save the lives in front of him but also to improve the practice of medicine. His dedication to the advancement of medicine led him to be invited to teach at Florida State University College of Medicine in Tallahassee. His patients have described Dr. Gage as relatable, trustworthy, dedicated, and kind.

Dr. Gage is survived by his wife, Melodie Sillings Gage, and two sons, Julian and Trevor. **B**

As ACS Secretary, Dr. Gage carried the Great Mace at the Clinical Congress Convocation.

Member News

Gray Is President of UT Medical Center



Dr. Keith Gray

Keith D. Gray, MD, MBA, FACS, a surgical oncologist, has started a new role as president of the University of Tennessee Medical Center (UTMC) in Knoxville.

He also will assume the position of UTMC chief executive officer starting April 1, 2024.

Dr. Gray previously served in various roles at UTMC, including executive vice-president and chief medical officer, chief of the Division of Surgical Oncology, chief-of-staff, and medical director for various service lines. Additionally, he co-founded the Physician Leadership Academy. For the ACS, he was a member of the Health Policy Advisory Council.

Mak Directs Pediatric General Surgery



Dr. Grace Mak

Grace Z. Mak, MD, FACS, is now chief of pediatric general surgery and surgeon-in-chief of Comer Children's Hospital in Chicago, Illinois. She also is professor of surgery and associate professor of pediatrics in the Department of Surgery at The University of Chicago.

A nationally recognized leader and pediatric surgeon, Dr. Mak has served in leadership roles in the Department of Surgery and at Comer, including program director of the pediatric surgery fellowship, medical director of the Comer operating rooms, and the inaugural vice chair of surgeon life and professional development.

Freischlag Will Lead AAMC Board of Directors



Dr. Julie Freischlag

Julie A. Freischlag, MD, FACS, has been named chair-elect of the Association of American Medical Colleges (AAMC) Board of Directors. She will become chair of the AAMC and serve a 1-year term starting November 1, 2024.

Dr. Freischlag, a vascular surgeon, is the chief academic officer and executive vice-president of Advocate Health, chief executive officer of Atrium Health Wake Forest Baptist in Winston-Salem, North Carolina, and executive vice-president for health affairs at Wake Forest University. She has held many leadership roles in the ACS, including Past-President, Past-Chair of the Board of Regents, Past-Secretary of the Board of Governors, and has served on several committees and workgroups.

Nguyen Is Moving to Baptist Health Miami



Dr. Tom Nguyen

Tom C. Nguyen, MD, FACS, a cardiothoracic surgeon, will take over this fall as chief medical executive and Barry T. Katzen Endowed Chair of Baptist Health Miami Cardiac & Vascular Institute in Florida.

Dr. Nguyen currently serves as the Charles Schwab Distinguished Professor of Surgery, co-director of the Heart and Vascular Center, and professor and chief of the Division of Adult Cardiothoracic Surgery at the University of California, San Francisco. He is highly regarded for his expertise in performing minimally invasive, high-risk heart operations and for his research on transcatheter aortic and mitral valve replacements.



Have you or an ACS member you know achieved a notable career highlight recently? If so, send potential contributions to Jennifer Bagley, MA, *Bulletin* Editor-in-Chief, at jbagley@facs.org. Submissions will be printed based on content type and available space.

Tsai Will Head Surgical Oncology at The Ohio State



Dr. Susan Tsai

Susan Tsai, MD, MHS, FACS, will join The Ohio State University in Columbus on November 1 as chief of the Division of Surgical Oncology at the Comprehensive Cancer Center—Arthur G. James Cancer Hospital and Richard J. Solove Research Institute.

Dr. Tsai currently is a professor in the Division of Surgical Oncology at the Medical College of Wisconsin in Milwaukee. There, she also serves as director of the LaBahn Pancreatic Cancer Program and leader of the Gastrointestinal Diseased Oriented Team. In addition, she is chief of hepatopancreaticobiliary surgery at the Clement J. Zablocki Veterans Administration Medical Center. Dr. Tsai has served as the president of the Society of Asian American Surgeons.

Gerber Is Surgery Chair in Cincinnati



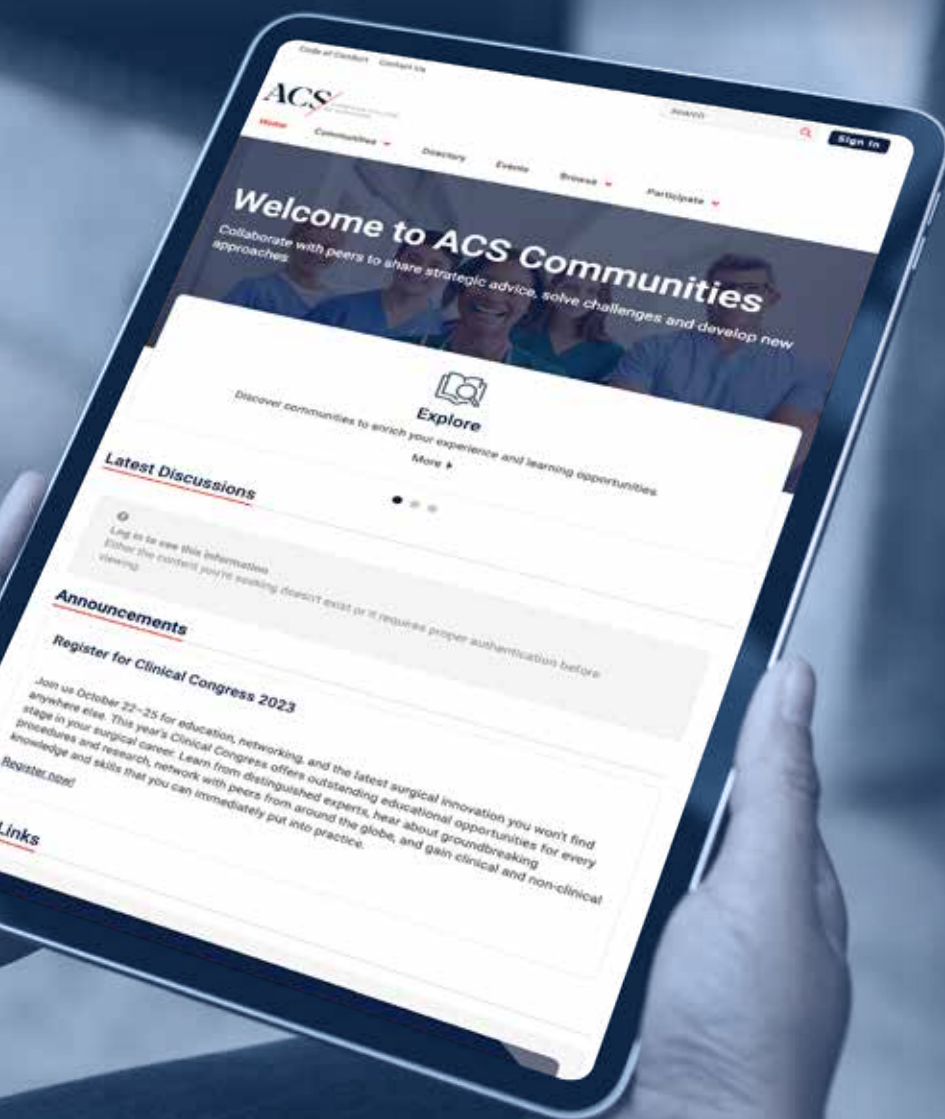
Dr. David Gerber

David A. Gerber, MD, FACS, a transplant surgeon-scientist, has been appointed chair of Ohio's University of Cincinnati College of Medicine Department of Surgery. In addition, he will serve as Christian R. Holmes Memorial Chair of Surgery.

Dr. Gerber previously was the George F. Sheldon Distinguished Professor with Tenure at the University of North Carolina at Chapel Hill School of Medicine, vice-chair of the Department of Surgery, and chief of the Division of Abdominal Transplantation, as well as held research-based roles. A retired colonel in the US Air Force Reserve Medical Corps, Dr. Gerber also was an adjunct professor at the Uniformed Services University of the Health Sciences in Bethesda, Maryland. **B**

Get the Most Out of Your Community

The ACS Communities is an online, members-only forum where you can connect, engage, and share information with colleagues around the world.



Specialty communities focus on issues related to clinical and direct patient care, while nonclinical communities—such as ACS Wellness and Advocacy—focus on those topics.

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