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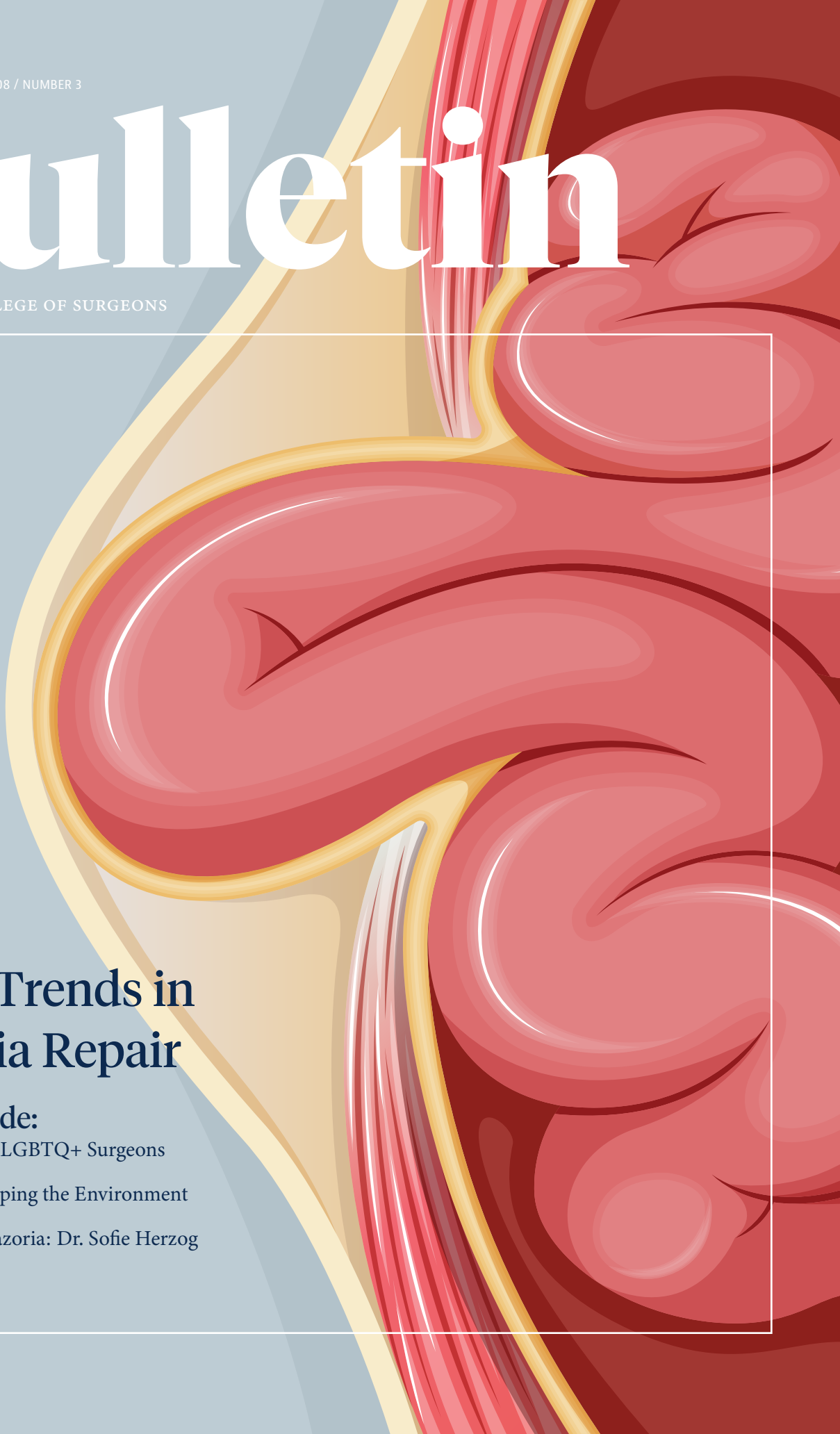
Bulletin

AMERICAN COLLEGE OF SURGEONS



New Trends in Hernia Repair

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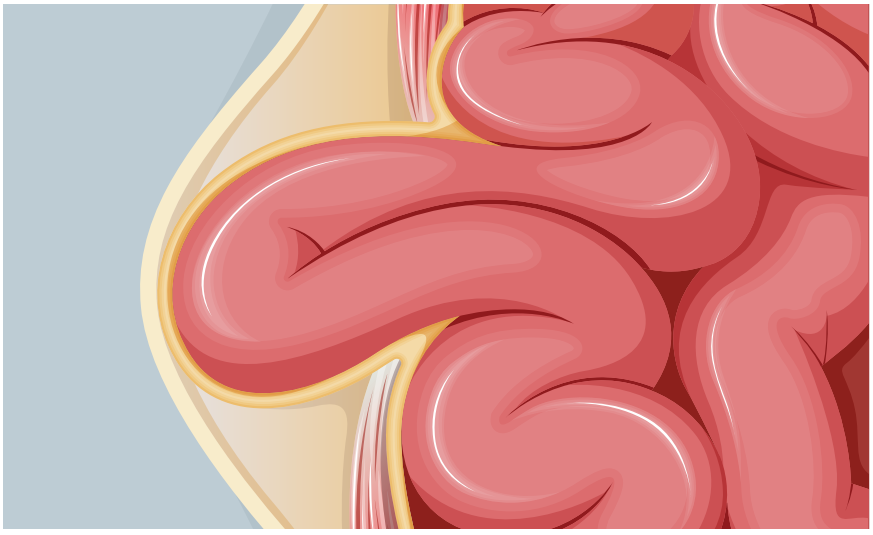

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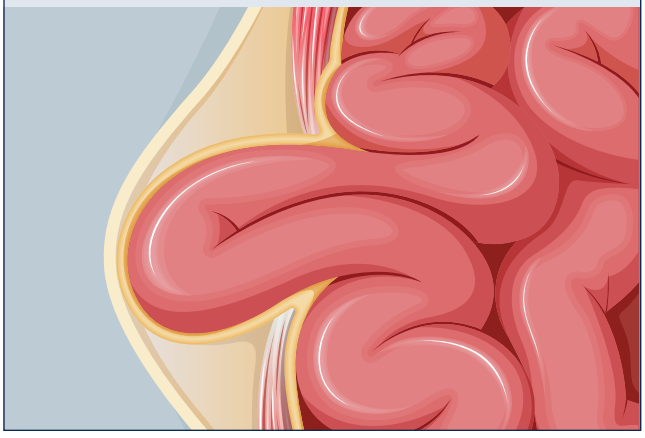

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Bringing Our Quality Programs to Every Community

Patricia L. Turner, MD, MBA, FACS

PROVIDING HIGH-QUALITY CARE is at the heart of everything we do as surgeons, and it has been the cornerstone of the American College of Surgeons since our founding in 1913. Today, it's more important than ever that we accelerate conversations about surgical quality as we emerge from the pandemic and confront the strains it has put on our healthcare system, superimposed on existing burdens placed on us as physicians.

Some hospitals are encountering challenging financial conditions, and with such difficulties, some look for ways to save money by eliminating programs. It is precisely at times like these that we must be vocal advocates for our colleagues and for surgical quality. Our patients need us, our fellow surgeons need us, and our hospitals need our guidance. ACS quality programs demonstrably lead to better care and better outcomes.

We are embarking on a multiyear, national campaign to promote the important role our surgical quality programs can play in improving patient outcomes while enhancing hospital efficiencies. Through our Power of Quality campaign, which we unveiled at Clinical Congress last October, we endeavor to bring our quality programs to every community and every hospital in America.

In the coming months and years, the ACS will highlight our quality programs and will work with participating hospitals to showcase how they can be used to deliver the best possible care—even in these turbulent times. By demonstrating success and providing metrics, we are confident that more and more communities will want our programs in their local hospital systems.

A Role for Every Surgeon

Surgeons play a key role in championing our programs and promoting quality. Yours is often the most effective voice your hospital leaders can hear to make the case for quality. Our experiences, along with the evidence of our programs' impact, make a compelling argument for hospital leaders. Our ACS program leaders can assist you by providing the materials and information you need for these important conversations. Our staff can also highlight those hospitals that recognize the difference our programs make every day to bolster your positions.

Evidenced-based Improvement

We all know that data are the keys to effective quality improvement efforts—relevant clinical data, not administrative or claims-based data that are too often being used today as a basis for decisions. The data hospitals can access through our National

Surgical Quality Improvement Program (NSQIP®) databases remain superior and are foundational to strong quality improvement efforts. A seminal study from 2012, published in *Annals of Surgery,* reviewed nearly 118,000 patient records from 200 hospitals to assess the difference between NSQIP data and claims data to capture surgical complications. The study demonstrated poor to moderate agreement in coding between NSQIP and Medicare claims data for 10 postoperative complications. The variability that results from using claims data to make clinical decisions is deeply problematic. We must be mindful of the standards set for the data we use and ask the right questions to inform our clinical decision-making.

Historically, the ACS quality programs continue to make a profound difference in treatment paradigms. In a 2006 *New England Journal of Medicine* article, fatality rates after treatment were lower in trauma centers versus non-trauma centers. In manuscripts on metabolic and bariatric surgery, several studies have demonstrated that ACS-verified centers have fewer complications, lower mortality, and lower costs than those not verified by the ACS. Additionally, it is well documented in the literature that breast cancer patients who receive treatment in centers accredited by our National Accreditation Program for Breast Centers have demonstrably better outcomes.

From Pediatrics to Geriatrics

The ACS has 18 quality programs that help hospitals achieve better results and improve the efficient delivery of surgical care. I am confident that patient care will improve if we can have our quality programs adopted by more institutions. In addition to condition-specific programs, we also have developed population-based programs like our Children's Surgery Verification (CSV) Program and our Geriatric Surgery Verification (GSV) Program. The CSV Program provides the nation's first and only multispecialty standards for children's surgical care. We've verified more than 50 programs and have more than 160 participating in our children's NSQIP database.

On the other end of the spectrum, our GSV Program caters to the unique care needs of surgical patients who are 75 years old and above. This program has enormous implications for hospitals across the country as the proportion of geriatric patients in our population continues to grow. Consider the example of Unity Hospital, a member of Rochester Regional Health in upstate New York. Matthew Schiralli, MD, FACS, medical director of the geriatric surgery program for the system, let us know that his institutions have seen a 20% decrease in elderly patients' death and serious morbidity and a marked reduction in extended stays due to postoperative delirium.

In addition, he reported that the ACS's quality programs have helped them prioritize what works to improve patient outcomes, reduce unnecessary hospital stays, and save money.

Paying for Quality

As part of the Power of Quality campaign, a significant goal is to raise awareness of our quality programs among stakeholders who are in the position to incentivize paying for quality, such as the Centers for Medicare & Medicaid Services (CMS) and other payers and employers. For example, we have been pleased with CMS's recognition of our GSV Program as a way to promote age-friendly care in the Medicare population.

As part of a preliminary rulemaking process, we proposed the Geriatric Hospital Measure for use in CMS's Hospital Inpatient Quality Reporting Program. In collaboration with the Institute for Healthcare Improvement and the American College of Emergency Physicians, we developed a new type of measure—a "programmatic measure"—based on the GSV. The measure considers the full spectrum of care needed for older adults to assure Medicare that we know how to address frailty and ensure that patients and caregivers know where to get comprehensive care that reflects the unique needs of the elderly.

The multistakeholder committees that reviewed this measure provided preliminary support, and the ACS staff will continue to work with CMS and other stakeholders toward its inclusion in the Medicare Hospital Inpatient proposed rule.

The Power of Quality campaign is integral to the priorities of the American College of Surgeons. I am committed to providing an opportunity for every member and every hospital to engage more meaningfully with our quality improvement efforts.

Together, we will improve patient outcomes, enhance efficiencies, reduce complications, and have a meaningful impact on our healthcare system for all patients.

New Approaches, Trends Are Emerging in Hernia Repair

Jim McCartney

"The ability for a surgeon to watch different techniques, identify one that is superior, and have that training available 24 hours a day around the world has changed hernia repair for the better."

—Dr. Scott Coates

HERNIA REPAIR SURGERY has evolved significantly in recent years, especially as the public is becoming more aware of mesh-related complications associated with surgery. This has prompted a focus on finding new ways to improve patient outcomes and quality of life.

An estimated 611,000 ventral and 1 million inguinal hernia repairs are performed each year in the US, according to Healthcare Cost and Utilization Project data and the US Food and Drug Administration[1]; globally, these surgeries are estimated to top 20 million a year, making hernia repair one of the most commonly performed general surgery procedures in the world.[2]

Among the trends in hernia repair surgery are increased use of robotics, nonpermanent mesh, and shared video learning. In addition, machine learning applications are in development, including one that helps surgeons better assess the hernia patient's risk for complications. A movement is also underway to expand hernia care using a more holistic approach that encompasses abdominal core health.

Increased Use of Robotics

Robotic surgery, which has been around for more than 2 decades, is quickly gaining popularity for use in hernia repair surgery. Innovations in this technology have led to three-dimensional (3D) imaging of the inside of the abdomen and enabled surgeons to perform surgery through small incisions rather than the large incisions associated with traditional open surgery, resulting in less tissue damage, reduced pain, and faster postoperative recovery for patients.

"Robotic surgery is gaining widespread use for hernia repair," said Scott D. Coates, MD, FACS, a general surgeon at Labette Health in Parsons, KS, whose own use of robotic surgery has greatly increased during the last 7 years. "Trainees have that platform as their go-to technology to repair

Mesh has "transformed the durability of what we do as hernia surgeons into something that has been much more predictable, reliable, and has a well-defined benefit."

—Dr. Benjamin Poulose

both simple and complex hernias. Although many still use the laparoscope, use of robotic surgery is expanding rapidly."

Some surgeons are calling the minimally invasive technology transformational. "The robotic approach allows us to perform more complex and difficult surgery than we could sometimes do with the laparoscope," said Benjamin K. Poulose, MD, MPH, FACS, a general surgeon in the Division of General and Gastrointestinal Surgery at The Ohio State University Wexner Medical Center in Columbus.

Increased use of robotic surgery also will lead to a wealth of robust data collected through the robotics platforms, he said. This includes technical information captured during the performance of the procedures. Researchers are exploring innovative ways to analyze the rich dataset, he said.

"Combining that with visual analytics techniques, especially with minimally invasive surgery, could be a powerful way to analyze surgeries in general," Dr. Poulose said.

Robotic surgery has been associated with higher costs, so some researchers have cautioned their colleagues to track its comparative effectiveness and not allow their enthusiasm for this new technology to outpace the need for it.[3]

Tackling the Problems of Mesh

Using mesh to repair hernias has been one of the biggest success stories in biomedical engineering during the last 50 to 60 years, according to Dr. Poulose. Mesh has "transformed the durability of what we do as hernia surgeons into something that has been much more predictable, reliable, and has a well-defined benefit," he said.

But using mesh to repair hernias is not the permanent solution that it was intended to be. Mesh occasionally can get infected, and hernias can recur even if permanent mesh is used. In addition, mesh-related complications are increasing in frequency as more patients live longer. Mesh also can grow into the small intestine, colon, or bladder, Dr. Poulose explained.

"Although these complications occur at a low rate, if you have one, it is obviously a big deal to you as a patient," Dr. Poulose said. "Our job is to figure out how meshes interact with a patient's tissue in the long term to minimize these really impactful complications."

Just as permanent mesh was once seen as a durable solution, it also was once thought that more mesh overlap is better than less. Recent research, however, does not necessarily support this assertion. The more overlap, the more likely there is to be postoperative pain for the patient, according to a study recently published in the *Journal of the American College of Surgeons* (*JACS*).[4]

Although not a perfect solution, an approach to mitigating problems associated with permanent mesh is the increased use of nonpermanent meshes such as bioresorbable mesh and absorbable mesh. Implantation of these meshes causes inflammation that strengthens the body's native tissue and builds scar tissue to reinforce the repair.

Dr. Poulose described bioresorbable mesh as one of the emerging success stories in tissue engineering, with a similar recurrence rate to permanent meshes.[4] Some types of absorbable mesh, however, have been shown to have a higher rate of recurrence in contaminated fields than permanent mesh[5]; this

Overleaf:
Dr. Scott Coates says robotic surgery is gaining widespread use for hernia repair.

Right:
Surgical mesh, designed to support damaged tissue around a hernia while it heals, is not the permanent solution that it was intended to be.

is one reason why Dr. Coates said he has not been using it as much as in the recent past.

Another approach to the mesh problem is extraperitoneal repair, often used in ventral hernia repair surgery, in which the mesh is placed outside the abdominal cavity. This method can avoid some of the issues associated with the mesh being place inside the cavity.

Finally, "no mesh" repairs are becoming more popular, especially when it comes to inguinal hernia or umbilical hernia surgery. Some repairs—such as with the Shouldice technique—can be done successfully without mesh. Even when no-mesh repair presents a higher chance of recurrence, many patients are willing to make the tradeoff, Dr. Poulose said.

Machine Learning and Its Applications

To help his patients understand the risks of hernia repair surgery, Dr. Coates uses the ACS National Surgical Quality Improvement Program® (NSQIP®) Surgical Risk Calculator. Although that calculator has been effective in providing patient-specific risk information to guide surgical decision-making, he said advances in machine learning, a branch of artificial intelligence, will help create a tool that could much more quickly identify potential risks or even potentially unnecessary procedures.

There are limitations when it comes to how data are analyzed to assess patient risks using traditional epidemiologic techniques, especially in fields like abdominal core health, Dr. Poulose explained. Evidence is emerging that machine learning has the potential to overcome these limitations and help screen and diagnose patients, predict outcomes, and make decisions.

"One of the advantages of machine learning is you're able to take massive amounts of data and identify patterns that we can then use to help make individualized clinical recommendations," Dr. Poulose said.

For example, a recent *JACS* study examined how machine learning algorithms used readily available preoperative clinical data to accurately predict complications of abdominal wall reconstruction, offering a new way to provide a data-driven, patient-specific risk assessment for patients before they undergo the procedure.[6] One of the challenges is convincing surgeons that this is a legitimate way to analyze data, he said.

Dr. Coates said he foresees other applications of machine learning, such as using it to anticipate how a person's muscle tone will age or in conjunction with 3D printing to create mesh that precisely fits the patient. He also predicted that someday artificial intelligence will be combined with surgical robots to perform autonomous suturing.

Shared Video Learning Technology

Another trend in hernia repair is the increased use of video learning to teach surgical techniques. Hernia repair training videos are offered through social media, collaborative groups, and the ACS and other professional organizations.

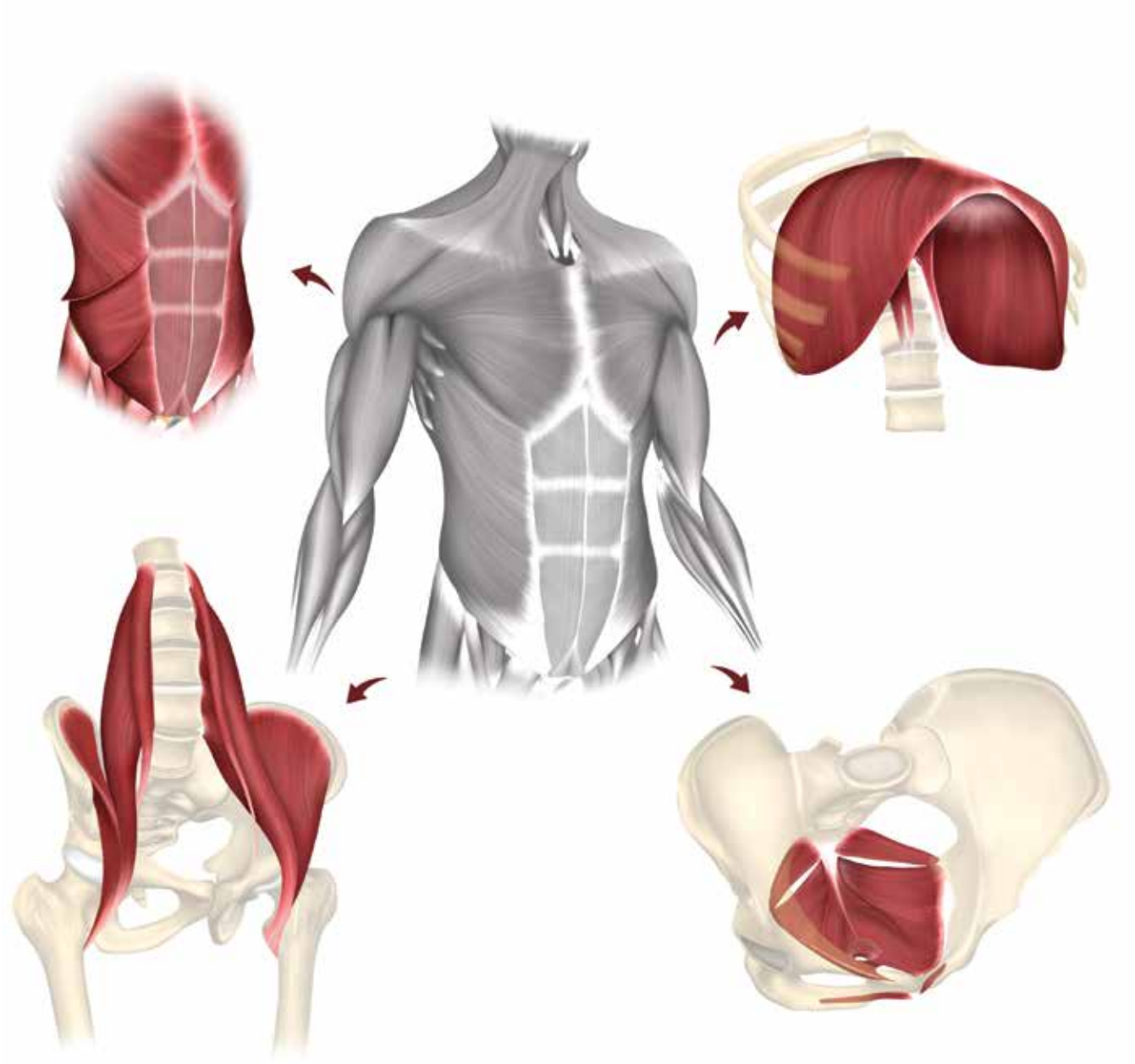
"The ability for a surgeon to watch different techniques, identify one that is superior, and have that training available 24 hours a day around the world has changed hernia repair for the better," Dr. Coates said. "Before, you had to go to a conference or another hospital to learn new techniques."

Some researchers urge caution due to the wide range in quality of available training videos, and suggest using a peer-review process to evaluate the options.

Improving Hernia Surgery Guidelines

As hernia repair surgery advances, guidelines for the various options in surgical repair also need to be updated. However, a persistent challenge to hernia repair guideline development has been the fact that there are so many effective ways to fix hernias, Dr. Poulose said. This has led to a wide variety of training and experience among hernia repair surgeons, which in turn made it difficult and controversial to establish guidelines. As a result, existing guidelines often come with weak recommendations, although a few have been upgraded to strong in recent years.[7]

Gathering a high volume of high-quality data over time, including those collected from robotic surgery,



may help lead to stronger guidelines. "Instead of recommending one specific operation, at some point, we may be able to recommend a couple of different approaches or a couple types of mesh that can help patients in certain circumstances," he explained.

Taking a Holistic Approach to Hernia Care

Hernias have come to be seen as a chronic problem to be addressed over time.

"We used to think that all hernia repairs are pretty durable, and the hernia won't come back," Dr. Poulose said. "What we now know is that hernias, especially ventral hernia, can end up as a chronic problem for many patients, with the hernia coming back over time. When this happens, you will need an array of therapies, both surgical and nonsurgical, to keep a patient's quality of life where it needs to be."

There is a movement to broaden the field to encompass the health of the abdominal core. The American Hernia Society partnered with the Abdominal Core Health Quality Collaborative (ACHQC), formerly known as the Americas Hernia Society Quality Collaborative, to advocate for a field known as abdominal core health.[8] This new field focuses first on maximizing the core muscle

"We realized that we needed to think beyond fixing holes, and instead, ask if fixing that hole can improve other areas of core musculature."

—Dr. Benjamin Poulose

strength of patients when they are healthy, through exercise, nutrition, and physical therapy.

The Wexner Medical Center in Columbus, OH, is home to the world's first Center for Abdominal Core Health, bringing together a multidisciplinary team of experts to help patients improve their core strength and treat problems using this holistic approach.

When problems arise like hernias, diastasis of the abdominal wall, and growths and tumors of the core, the Center convenes a multidisciplinary team to develop a personalized treatment plan for each patient.

"Our surgical specialties have evolved into fairly narrow practices, especially in academic centers," Dr. Poulose said.

The components of the abdominal core musculature are all related, he explained. The anterior abdominal wall and flanks work together as a functional unit with the pelvic floor, diaphragm, and lower back. Problems with one component can affect the others. Evidence is building to show that fixing one part of the abdominal core (such as a ventral hernia) can positively impact the other parts.

"Our physical therapy colleagues understand this concept well. We can learn a lot from how they approach patients," Dr. Poulose said. "We realized that we needed to think beyond fixing holes, and instead, ask if fixing that hole can improve other areas of core musculature."

This new approach already has spawned promising research. One study shows that stabilizing the anterior abdominal wall may alleviate lower back pain, Dr. Poulose said. Another looks at how stabilizing a woman's weak abdominal wall due to multiple pregnancies could positively impact pelvic floor function.[9] Yet another shows how stabilizing the abdominal wall and fixing a hernia can improve lung function.[10]

"Any effort like this where we're looking to make a monumental change in how an entire field is viewed and views itself is going to take some time," Dr. Poulose said. "But I think our next generation of surgeons gets this idea far more than people like me who've been in practice for a while."

Jim McCartney *is a freelance writer.*

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Opposite:
The components of the abdominal core musculature include the diaphragm superiorly, pelvic floor inferiorly, and abdominal wall and flanks anterolaterally. The lower back also is important for core stability and function. (©2023 Abdominal Core Health Quality Collaborative. All rights reserved. Used with ACHQC's permission)

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The Doctor Is Out

Supporting **Inclusion** for **LGBTQ+ Surgeons**

Tony Peregrin

"**You come out as an LGBTQ+ individual virtually every day**—it's not like it happens once in a lifetime and you're done," said **Harveshp D. Mogal, MD, MS, FACS,** associate professor of surgery and section chief of complex abdominal oncology at the University of Washington (UW) Medical Center in Seattle.

DR. MOGAL (HE/HIM) IS A MEMBER OF THE ASSOCIATION OF OUT SURGEONS AND ALLIES (AOSA), a relatively new organization comprising LGBTQ+ surgeons and allies from all surgical specialties.[1]

"For example, when you join a committee or you transition into a leadership position, you still face a lot of unknowns in terms of how people are going to respond to you as an out surgeon," he added. "My hope is that with more of us joining organizations like AOSA, we will learn to normalize this process, and that eventually, being LGBTQ+ will just be part of the fabric of surgery rather than something that we have to struggle against because it's not as accepted as it should be."

The idea to form a group of LGBTQ+ surgeons and allies emerged on MedTwitter toward the end of 2018. AOSA—which had its inaugural founders' meeting at Clinical Congress 2019 in San Francisco, CA—is committed to creating "a space for LGBTQ+ surgeons and trainees that promotes a dignified and successful surgical career without stigma, judgment, or discrimination," according to the group's mission statement. "We aim to achieve this through a combination of outreach, education, mentorship, and professional development."[1,2]

"If you're not out, you constantly have to make sure not to make a comment about your personal life, about your partner, and so on. And **that's a lot of emotional energy when you're trying to focus on operating."**

—Dr. Nicole Goulet

AOSA held its first business meeting at Clinical Congress 2022 in San Diego, CA, during which members elected individuals to fill officer and chair positions within the organization.

"The decision to go into surgery when you identify as queer is a big one," said Nicole Goulet, MD, FACS, (she/her), president of AOSA and director of the surgical intensive care unit at New York University Langone Hospital in Brooklyn. "While it's getting better, there are still comments that are made by surgeons in the operating room that include derogatory terminology about being gay, and if you're a surgeon who is not out, you think 'Geez, I certainly need to make sure I hide this.'"

An article, written by members of the Resident and Associate Society of the ACS and published in the January 2021 issue of the *ACS Bulletin*, noted that "…it is unsurprising that LGBTQ+ surgery residents fear disclosure and instead pretend to be heterosexual to avoid potential problems. This approach not only is unhealthy, but also decreases the opportunity for those surgeons with ingenuous views to have meaningful interactions with LGBTQ+ people, which could help challenge biases."[3]

Dr. Goulet cited data from two recent studies that provide additional context to the experiences of some LGBTQ+ surgical trainees.

A 2014 survey of 388 general surgery residents found that for those who identified as LGBTQ+, 57% reported actively concealing their sexual orientation from fellow residents owing to fear of rejection, and 52% from surgical attending physicians owing to fear of poor evaluations.[4,5] Among the surgical residents who experienced homophobic remarks, none reported the incident to leadership due to fear of reprisal among other reasons, according to Dr. Goulet.

A larger study published in 2019 surveyed 6,562 general surgery residents and found that for those who identified as LGBTQ+, 46.8% reported sexual harassment, 58.9% discrimination, and 75.2% bullying.[4,6] The study authors noted that while LGBTQ+ respondents were just as likely to be satisfied with their decision to become a surgeon, they were twice as likely to consider leaving their program and/or had suicidal thoughts in the past year.

"We'd all like to say that you can leave your personal life at home, but that's just not the case,"

AOSA board members and founding members attended the first AOSA annual business meeting this year.

said Dr. Goulet. "In surgery, we spend so much time together in residency, and then as colleagues in the operating room—and if you're not out, you constantly have to make sure not to make a comment about your personal life, about your partner, and so on. And that's a lot of emotional energy when you're trying to focus on operating."

"We are kind of exhausted being the outsiders or the 'others' within the group, where we are kind of expected to bring our full professional identity to work, but keep our personal identity completely divested from it," added Dr. Mogal. "That being said, I think, in general, people in the workforce today are more open about expressing their full identity without fear of retribution or discrimination. But particularly in surgery, that change has come very slowly. And arguably, it still isn't fully there, which is why we have organizations like the AOSA."

In order to propel this positive change even further, it is important to examine LGBTQ+ equity through an intersectional lens, which considers the racial and ethnic backgrounds, differing abilities, and other variables and identities that comprise the LGBTQ+ community.[7]

Advancing intersectional equity starts by recognizing that certain individuals face overlapping forms of discrimination, such as an openly gay surgeon who also identifies as Black or has a disability. In order to support meaningful inclusivity for all LGBTQ+ surgeons and other healthcare providers, it is essential to cultivate an intersectional approach to policy development, recruitment, and training that takes into consideration the complex challenges of all marginalized individuals.

Primary Aims of the AOSA

The AOSA, which currently has 200 members, has four main objectives:

- Reduce explicit and implicit bias
- Enhance systemic support
- Foster mentorship
- Support leadership opportunities and promotion

"In the short term, we want to grow our membership and raise awareness and visibility about who we are," explained Dr. Goulet. "And secondarily, a key component of our short-term goal is to provide advice, guidance, and education to other surgical organizations and societies."

Access the multimedia extras at *facs.org/bulletin*

Table 1. LGBTQ+ Inclusive Language in the Workplace

Instead of this	Say this
Guys/Gentlemen, Gals/Ladies	**Team, Colleagues, Faculty Members**
He, Him, His, She, Her, Hers	**Default to "They" or Avoid Pronouns Unless They Specify One**
Biological Man/Woman	**Cisgender Man/Woman**
Lifestyle or Preference	**Orientation or Identity**
Wife, Husband, Boyfriend, Girlfriend	**Partner, Spouse**
Maternity/Paternity Leave	**Parental Leave**

One example of educational outreach that could immediately enhance the narrative around LGBTQ+ individuals in the healthcare setting: The use of correct terminology, including pronouns.

In general, asking others their pronouns and names is a good place to start, according to Drs. Goulet and Mogal. It is recommended that surgeons and other healthcare providers avoid assuming individuals are cisgender and heterosexual and find teachable moments to advise colleagues in using appropriate and inclusive language if such a situation occurs[8] (see Table 1, this page).

"Asking what people's pronouns are, or introducing yourself with that information, helps to normalize this process," said Dr. Goulet. "As we start building that culture of having this be the norm, it creates an open conversation for everyone you work with and for our patients as well. Patients are going to hear these conversations and will, hopefully, be more likely to share things with you as their provider that they wouldn't have shared otherwise."

As for AOSA's long-term goals, developing a robust mentorship network is a benefit that will continue to evolve as membership numbers tick upward.

"Our members are really looking for a mentor they can reach out to if they are having trouble with their program or if they have questions about how to apply for a job if they are out," Dr. Goulet said. "We have a lot of people in the AOSA who are very comfortable with where they're at with being out, and they can provide advice to help others along their surgical career path."

AOSA
Association of Out Surgeons & Allies

Supporting LGBTQ+ Trainees

It is important to "create safe and welcoming environments for our trainees so that they can not only survive the rigors of training, but have the same opportunities to thrive as their gender-conforming and heterosexual counterparts," noted Dr. Mogal during a recent webinar.[8]

Dr. Mogal outlined four levels where LGBTQ+ individuals and allies can actively promote diversity in the surgical workforce (see Table 2, page 21).[8]

- **Individual:** Participate as an affirming and active bystander, which could include normalizing personal life discussions at work, correcting false assumptions or stereotypes, apologizing and promising to do better, when necessary

- **Departmental:** Engage in proactive and intentional recruitment, support targeted mentorship and sponsorship opportunities, and include LGBTQ+ individuals within the formal settings of committees and councils

- **Institutional:** Develop inclusive categories on admissions forms and surveys and be mindful of including the different types of gender identities that people identify with; expand benefits to spouses and same-sex domestic partners, support zero tolerance for bullying and harassment, along with a confidential reporting process

- **National:** Standardize LGBTQ+ curriculum within medical and surgical training, develop statements from leadership validating the experiences of LGBTQ+ individuals, and promote collaboration between national surgical organizations and groups like the AOSA

Dr. Mogal emphasized the need for increased visibility and allyship at all levels, particularly regarding the toll of the minority tax, which occurs when recruiting, mentoring, and educating others is disproportionately assigned to underrepresented minorities, due to the assumption that these individuals are uniquely qualified to fulfill these roles.[9]

"The burden of mentoring junior faculty, residents, or trainees tends to fall on those who identify similarly," said Dr. Mogal. "It is meaningful for LGBTQ+ trainees to be mentored by LGBTQ+ faculty because it's important to see yourself mirrored in someone who is successful and continuing to succeed. But it's equally important that those residents have a diverse perspective in terms of non-LGBTQ+ faculty because their academic interests may not necessarily align with somebody who's LGBTQ+."

Dr. Mogal said it was just as imperative that other leaders mentor these individuals.

"It is **meaningful for LGBTQ+ trainees** to be mentored by LGBTQ+ faculty because it's important to **see yourself mirrored in someone who is successful and continuing to succeed**."

—Dr. Harveshp Mogal

"It's very easy to delegate diversity issues to the underrepresented," said Douglas E. Wood, MD, FACS, FRCSEd, an ACS Regent and the Henry N. Harkins Professor and chair of the Department of Surgery at UW. "While these individuals have a lived experience and content expertise, it is an added burden, a minority tax, to expect them to exclusively lead change. I think surgeons, like myself, have a responsibility to own the inclusiveness, and to actually lead it with guidance from our LGBTQ+ colleagues and friends, who can help us get it right."

The Role of the Straight Ally

Straight, cisgender faculty members can provide support for LGBTQ+ individuals by first acknowledging that this disparity exists and then by playing an active role in developing safe spaces for residents and trainees.

"My privilege has given me the opportunity to be a department chair and it has given me the privilege of being a Regent," Dr. Wood said. "These are positions of influence where I can actually do something. That's why it should fall on me to lean in and be involved. And that is why I am a proud individual and institutional member of the AOSA."

Dr. Goulet estimates that about 10% of AOSA membership is composed of individuals who do not identify as LGBTQ+ based on information gleaned from the organization's membership application. She said the overall reaction to the AOSA and its mission has been "surprisingly positive."

"A lot of other surgical organizations and people outside of our group have been really supportive because they realize that our mission is important."

Dr. Goulet has some simple, but powerful advice for all surgeon allies to help foster an inclusive environment: if you make a mistake, own it, apologize, and learn from the experience.

"Earlier in my career, I went for a job interview after fellowship and one of the older male surgeons who was interviewing me failed to look at my CV carefully and didn't see all the LGBTQ+ stuff on there," said Dr. Goulet. "He asked all the illegal questions you're not supposed to ask during an interview, questions about kids and a husband. At that point in my career, I had already decided that I was going to be myself in these interviews, so I corrected him, he got flustered, and he wasn't sure what to say."

Her advice in these situations is to simply say "I'm so sorry" to change the cadence of the conversation,

"**They change me**. They help this cisgender, straight man to have **a better sense of empathy**, and they **help minimize the stigma** that we might have for the patients who we care for."

—Dr. Douglas Wood

Table 2. Four Levels of Support for LGBTQ+ Individuals in the Surgical Workforce

National	Standardize LGBTQ+ curriculum within medical and surgical training
Institutional	Establish inclusive categories on admissions forms and surveys; expand benefits to spouses and same-sex domestic partners
Departmental	Support intentional recruitment and retention efforts, encourage targeted mentorship
Individual	Participate as an active bystander and correct false assumptions and stereotypes

and to think carefully before getting into a similar position. "I always say nobody's perfect. We're all learning and sometimes we misspeak," said Dr. Goulet.

"Surgery has been a very macho, very hetero and homophobic specialty," said Dr. Wood. "I have heard so many casual dialogues that have been disrespectful to LGBTQ+ individuals of all types, whether it's a trans person in the emergency room or a gay man who is undergoing a surgical procedure."

According to Dr. Wood, one of the most impactful ways to influence the culture in surgery is to be more actively inclusive of LGBTQ+ surgeons.

"They change me. They help this cisgender, straight man to have a better sense of empathy, and they help minimize the stigma that we might have for the patients who we care for," he said. "Organizations like the ASOA are shining a bright light on the issues experienced by many LGBTQ+ surgeons, and they are intentional in their efforts to make our residency programs and healthcare systems more welcoming and inclusive."

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Surgeons Can Drive Quality—and Help the Environment

Matthew Fox, MSHC

Dr. Gwyneth Sullivan (right) and surgical research fellow Andrew Hu, MBChB, examine refuse during a postsurgery OR waste audit at Ann & Robert H. Lurie Children's Hospital.

FOR MANY HEALTHCARE PROFESSIONALS, the last several years have led to a diminished separation between patient care and public life, as well as between medical specialties.

From the COVID-19 pandemic's quarantines, dangers of overloaded health systems, and personal health risks to public revelations regarding health and social discrimination, it has become even more clear that environment plays a significant role in determining an individual's health; these environmental factors include the planet's changing climate.

Climate change, caused in large part by human carbon-producing activities, has been identified as a major driver in human health,[1] with the US healthcare system releasing more than 8% of the nation's carbon.[2]

As an energy- and resource-intensive field, surgery plays an outsized role in these emissions, and surgeons are beginning to take action and address the unintended environmental impact of their practice.

A recent scoping review in the *Journal of the American College of Surgeons (JACS)*[3] provided a look at studies that have examined the environmental sustainability interventions that hospitals around the US have implemented to reduce their carbon footprint. In this article, study authors and experts on the intersection of healthcare and climate change discuss how to move forward in creating a more sustainable health system.

Impetus for Action

The inspiration for the *JACS* review started with lead author Gwyneth A. Sullivan, MD, MS, a research fellow at the Northwestern Quality Improvement, Research & Education in Surgery Center at the Northwestern University Feinberg School of Medicine in Chicago, IL, and coauthors considering efforts they could make at their institutions to reduce costs and environmental impact of the operating room (OR).

"When I started looking into the literature, I realized there was a gap in identifying studies that meet both of those purposes," Dr. Sullivan said.

And there was no denying that performing surgery leaves a visible aftermath.

"I think every surgeon can attest to the fact that, at the end of a case, there's a tremendous pile of garbage that is generated from what we've done in the OR," said Mehul V. Raval, MD, MS, FACS, a pediatric surgeon at Ann & Robert H. Lurie Children's Hospital of Chicago, professor of surgery and pediatrics at Northwestern, and senior author of the *JACS* review. "Coming to the forefront was this idea that hospitals and health systems in general are huge waste producers in the modernized world, and when

you really look at it, ORs disproportionately create a large amount of that waste."

As such, one of the requirements for the selected studies in the review was that they needed to identify and attempt to address both cost and environmental impact.

In addition, there was a third pillar of interest that ultimately did not make it into the scoping review, but remains a critical part of the "triple bottom line"—a sustainability framework that is increasingly used in the healthcare, business, and other sectors.

"The other aspect that we considered was the potential social impact," Dr. Sullivan said.

The social aspect of the triple bottom-line approach to operating a healthcare facility, for instance, refers to stakeholders affected by the facilities' decisions—the patients and communities in which they live.[4] They are a critical part of this triad, even if the impact of a hospital's environmental sustainability is not simple to measure.

"Once that connection between healthcare's carbon footprint and the climate is made, it's very difficult to move away from it because of all the climate events that are happening on a regular basis around the world," said Husein Moloo, MD, FACS, a colorectal surgeon, associate professor of surgery, and director of planetary health for the Faculty of Medicine at the University of Ottawa in Ontario, Canada.

"If you care about social justice, climate change affects racialized communities more, and it affects those communities that are socioeconomically depressed. That's just within North America—but it's also seen when you expand that notion around the world, where lower- and middle-income countries are disproportionately affected," Dr. Moloo continued.

Downstream Effects and Advocating for Action

The growing corpus of scientific literature suggests that healthcare institutions are taking action to address sustainability and that these actions can have a positive impact on cost and the carbon footprint.

However, these are still the early days of connecting climate action to a hospital's value proposition, and there may be hesitance to get involved as a team, department, or hospital.

Surgeons often work in constrained environments with an institutional aversion to making significant capital investments in sustainability, Dr. Raval explained. But the hope is that studies like the recent scoping review in *JACS* will allow surgeons to have necessary conversations in a more meaningful way with leadership and be able to support the statement that not all interventions require large financial commitments.

Part of the solution comes in realizing that some of the infrastructure for sustainability is already in place due to the nature of surgical quality improvement (QI). "What we need to do is be more thoughtful about using the resources we're already expending funds on and the downstream effects of our choices," Dr. Raval said.

Being thoughtful about resource use and downstream effects, in the case of environmental impact, can be achieved by reframing the work already being done on QI projects.

For example, the efficacy of the ACS National Surgical Quality Improvement Program® (NSQIP®)—a bedrock of the College's suite of Quality Programs—is based on identifying and addressing patient risk of complications or morbidity through 30-day patient outcomes.[5]

Part of the solution comes in realizing that some of the infrastructure for sustainability is already in place due to the nature of surgical QI.

NSQIP-participating hospitals gather, review, and use data to create QI initiatives that keep surgical patients healthier and reduce or eliminate additional episodes of care. In each of these prevented episodes of care—in each test avoided, in each recovery room where lights are kept off, in each operation averted—thousands of dollars are saved and many resources and carbon-producing activities unused.

Awareness of this effect can help drive understanding that improving patient outcomes also can heal the climate downstream.

"We're not forgetting about surgical site infection (SSI) and readmission and all these things that are really important, but surgical quality programs and improving the environment can really align and move together," Dr. Moloo said. "When you decrease SSI, that's decreasing your carbon footprint, as well. So, let's encourage a reframing of the way we look at problems, which I think enables people to think more creatively around the actions they take each day."

The Power of Refusing

Addressing climate change or environmental sustainability on a political or societal level demands pointed action, such as legislation to improve public transit infrastructure, reducing personal automobile use, or demanding that private corporations lower their emissions. But there is a surprising benefit when a healthcare institution proactively shapes its carbon footprint by refusing to act—that is, deciding not to use certain products with significant environmental impact or using viable alternatives.

The *JACS* scoping review examined the five "Rs" of sustainability—refuse, reduce, reuse, repurpose, and recycle—and found a plurality of the initiatives

There is a surprising benefit when a healthcare institution proactively shapes its carbon footprint by refusing to act—that is, deciding not to use certain products with significant environmental impact or using viable alternatives.

included in the study fell into the refuse category, which Dr. Sullivan said was not a surprise. (See Figure 1, page 28, for a breakdown of the initiatives and their categories. Note that no "repurpose" initiatives were found in the study.)

"Many of the interventions in the refuse category are things like operating room (OR) tray reformulation or reducing the number of supplies used in surgical packs, which are things that a team of people who are invested in seeing a change happen can critically evaluate and then find ways to improve upon," Dr. Sullivan said.

The small successes are easier to achieve; for example, smarter, more "lean" surgical packs can help pave the way for conversations about larger-scale initiatives that will require more capital investment.

At the University of Ottawa, Dr. Moloo noted that the hospital currently is focused on using reusable gowns for medical staff, instead of disposable gowns, which data have suggested creates significant cost savings and less waste.[6]

"We've got our whole perioperative group behind it in terms of nursing, anesthesia, surgery, and administration, and we're going to be moving from disposable isolation gowns as well as disposable gowns in the OR to reusable," Dr. Moloo said, adding that moving away from paper faxing, changing anesthesia agents to less greenhouse gas emitting agents, and small-scale changes like getting patients to bring their own reusable bags for personal effects also are making an impact.

Interventions that start at an individual level have the potential to grow into hospital and health system-wide actions that have a significant effect on a large scale, especially once leadership is ready to invest.

Handwashing before an operation is one such example, Dr. Raval suggests. If surgeons committed to using a waterless scrub before operating instead of relying on a constantly running sink, how many gallons of water and associated energy and costs could be saved?

"It's actually a tremendous number of gallons of water saved each day for an individual surgeon," Dr. Raval said. Over the course of a week, month, year, this type of decision, made within the scope of a surgical department, is profound. Further, this type of behavioral change or choice is well within a surgeon's purview.

Ultimately, the goal is for a surgeon to start taking environmental action where they can and to see what ends up being possible in their context.

"What we're asking is for people to be thoughtful about things that they can do day in and day out, things that they have control over, and then work with their leadership, their institutions, and other interested parties to tackle some of those other bigger projects over time," Dr. Raval said.

Green Champions and the Team Effort

A cornerstone of effective surgical QI is the surgeon champion, an individual who oversees the development, implementation, and maintenance of an intervention or program to help ensure its success.

In much the same way—and sometimes embodied in the same individual—green champions can help lead the way to a more sustainable OR.

"As someone who does a lot of work in patient safety quality improvement, I have found that surgical QI and environmental efforts actually fit hand in hand," Dr. Raval said. "Many of the principles that we apply to continuous quality

Opposite, top: Pediatric surgery supply packs from an initial waste audit contain extra packaging and cardboard that could be reduced.

Bottom: Disposal of typical waste products from surgery and acquiring replacement supplies contribute to an OR's significant carbon footprint.

Figure 1. Quality Improvement Initiatives Grouped within the Rs of Sustainability

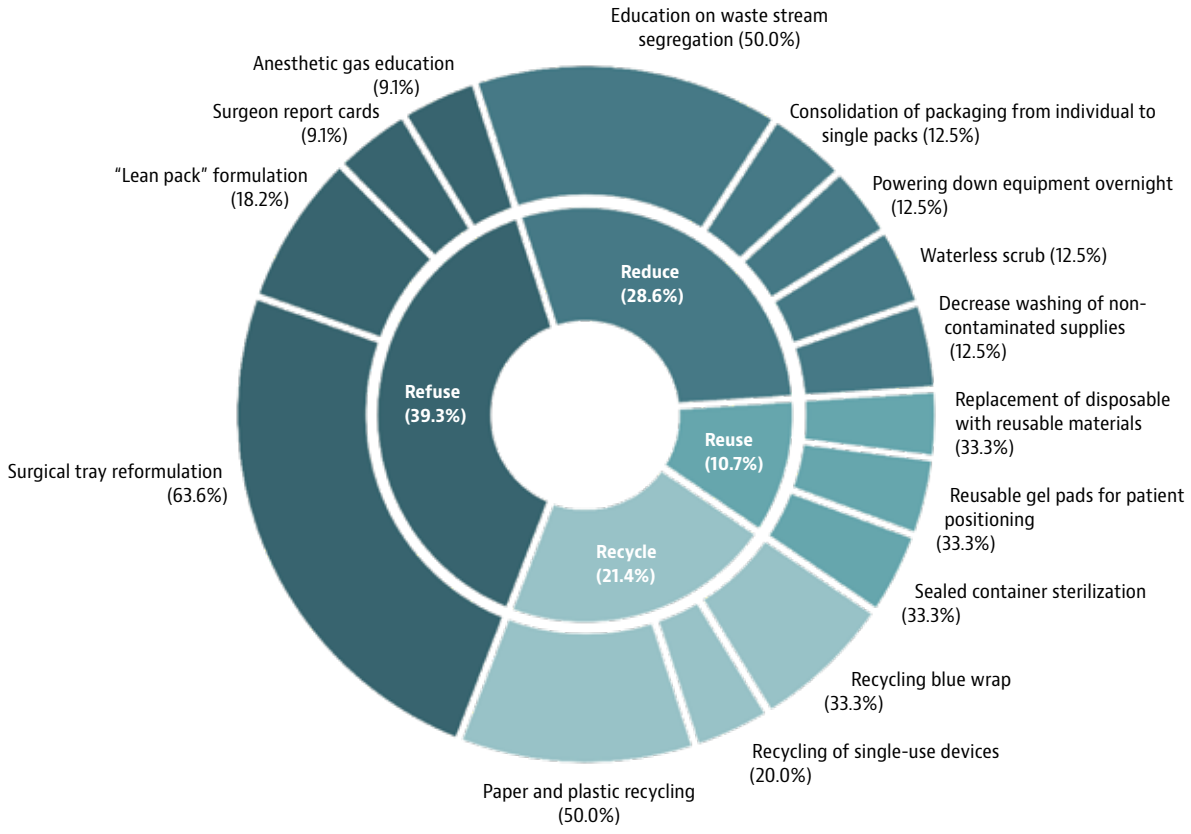

Figure adapted from: Quality improvement initiatives are grouped within the 5 Rs of sustainability. *J Am Coll Surg.* 2023;236:411–423.

improvement can be applied to many processes, including those that make our institution more environmentally sustainable."

Equally important to a green champion in environmental sustainability initiatives is a team. As with other surgical QI, it takes buy-in and commitment from nurses, technicians, and administration, as well as dedicated sustainability staff to achieve the desired outcomes.

"While the role of a surgeon champion can't be understated in sustainability efforts, it certainly can't be an effort in isolation," Dr. Sullivan said. "The people who I've seen be instrumental in moving some of these initiatives forward are often sustainability managers. They're the ones who really know the current landscape and know who to speak to about these efforts."

Not to be forgotten in these projects is the input of environmental services and waste management staff. These team members know better than any hospital staff the logistical realities of addressing disposal efforts.

"We've had conversations with their teams and we've engaged them early on, which is important to make sure that you're not trying to influence something where they don't have the capacity, staff, or infrastructure to really make those differences," Dr. Sullivan said.

Maybe the most important role of a surgeon champion in environmental sustainability, Dr. Moloo suggests, is to engage staff and start necessary conversations within teams and healthcare institutions.

"Being able to have those conversations about the intersections of carbon footprint and the extent of that carbon footprint with healthcare professionals and surgeons is a big deal," Dr. Moloo said. "Once you start having those conversations and have surgeon champions involved, it helps to start driving that change from within teams."

Patients, Populations, and People at the Forefront

Though a reduction in costs and environmental impact currently lead the way in incentivizing climate action for physicians and hospitals, as the *JACS* scoping review suggests, these two pillars ultimately exist to support the third in the triple bottom line—people and communities. Healthcare can no longer ignore the deleterious health impact

Maybe the most important role of a surgeon champion in environmental sustainability, Dr. Moloo suggests, is to engage staff and start necessary conversations within teams and healthcare institutions.

that their outsized carbon footprint may be having on the patients they are meant to heal.

A hospital and healthcare system infrastructure facilities are part of the community, and part of their responsibility is to improve the community's overall health and well-being, according to Dr. Sullivan.

"A big part of that is being better environmental stewards. The health implications of climate change and global warming are astronomical, and I think part of that ties into a lot of initiatives that we're seeing at the hospital level to integrate into other actions aimed at improving the well-being of local communities," she said.

The power of surgeons' voices and their actions extends beyond themselves, their teams, or even their hospitals. Healthcare workers are among the most trusted professionals in the US, and because health now represents 20% of the US gross domestic product, "We're a major player in any social or environmental policy going forward," Dr. Raval said.

However, there are perceived constraints within healthcare, and especially within surgery, that might seem to make the sector less affected by the growing demands of broader society to decarbonize or at least reduce its carbon footprint.

The existing policies and bureaucracies that exist within healthcare systems, such as safe disposal of hazardous materials, proper sterilization of equipment, or meeting patient treatment expectations, can make it challenging to apply into the setting of a hospital some of the social desire to be more environmentally friendly.

"Sometimes, the rules of engagement that we would expect for people to be environmentally friendly somehow don't permeate into hospitals and healthcare systems," Dr. Raval said. "But as we are being safe and responsible with our approach, we can do a lot of the things that I think society would want us to do within healthcare."

Note

See the related Viewpoint article on page 42.

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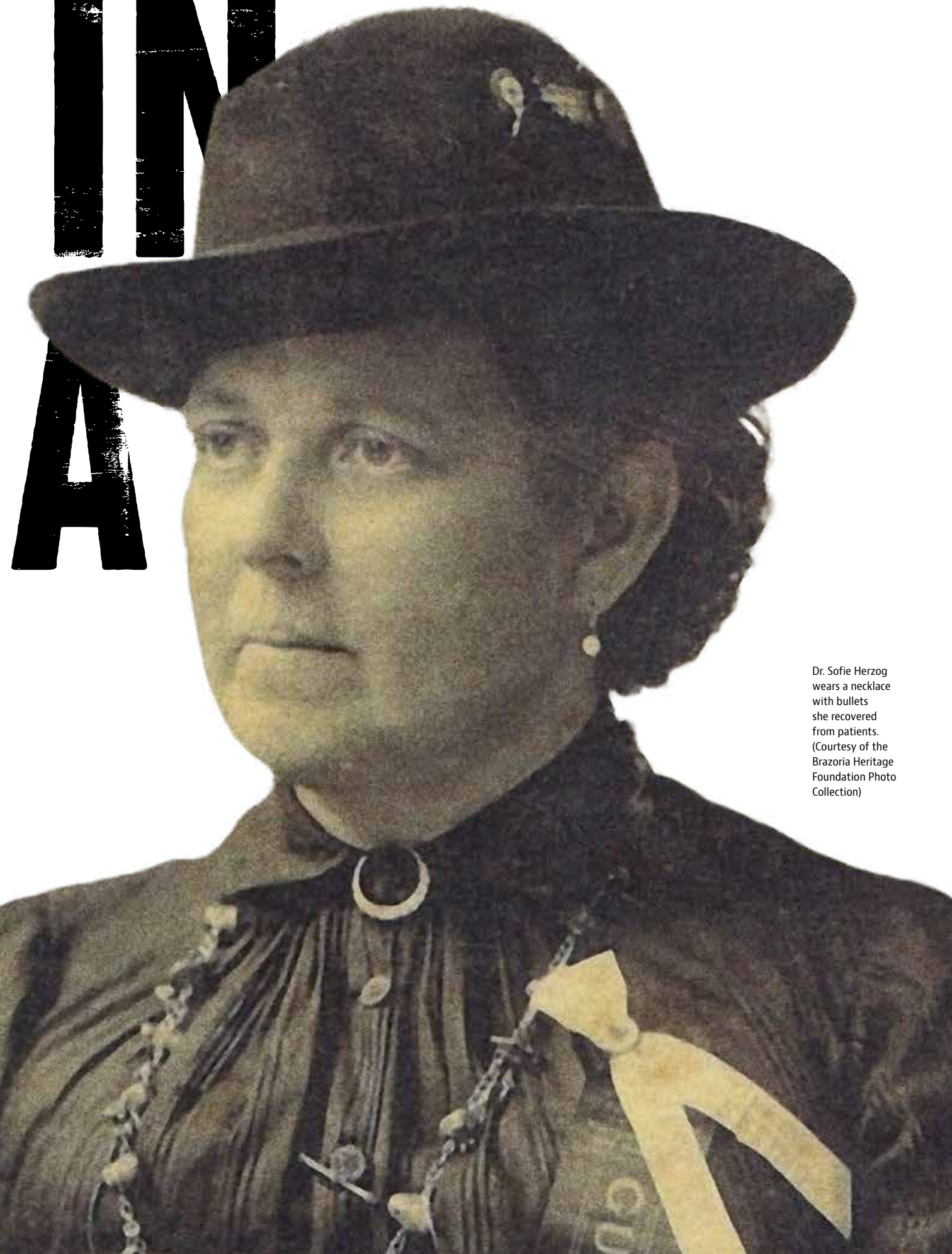
BRAZEN BRAZORI

Dr. Sofie Herzog Was First Woman Surgeon in Texas

Sadhana Anantha
Carlos T. Huerta, MD
Steve S. Courel
Eduardo A. Perez, MD, FACS

EDITOR'S NOTE: *This article is based on the first-place winning entry in the 2022 History of Surgery Poster Competition, which occurred in conjunction with Clinical Congress. An article featuring the second-place entry will appear in the April issue of the* Bulletin.

IN A



Dr. Sofie Herzog wears a necklace with bullets she recovered from patients. (Courtesy of the Brazoria Heritage Foundation Photo Collection)

IN A LONG-FORGOTTEN CHAPTER of trauma surgery history in America lies the daunting field of railway surgery. Railway surgeons were some of the first physicians to practice new ideas, form specialized societies, and revolutionize medical transport of critically ill patients. Early railway surgeons learned their trade in the field outside the confines of a hospital where they may have previously functioned as general practitioners.

Among these railway physicians was one of the first female surgeons in America—Sofie Herzog, MD.

In 1907, Dr. Herzog—an Austrian immigrant who was a leader, mother, maverick, and, above all, devoted surgeon—became the first female railway chief surgeon of the St. Louis, Brownsville & Mexico Railway in Texas. She served in a time marked by gruesome injuries resulting from war or railroad accidents. Dr. Herzog won over the hearts of the townspeople in Brazoria, TX, where she practiced until her death.

Known to this day for her remarkable success with bullet removal techniques, Dr. Herzog was mentioned at conferences across the country, where she was acknowledged as a professional woman in a man's world. But more than all that, she was beyond her time.

Her wild eccentricities made her an outcast who was ready to challenge the norm, while her practice is a testament to the vigor that female physicians needed to gain the respect of their male colleagues, communities, and, most importantly, their patients.

Early Life and Career

Sofie Deligath was born in 1846 in Vienna, Austria, and was no stranger to the medical field. Her family included prominent and successful doctors and surgeons; among them was her father, who was an internationally known surgeon. At some point after having observed countless surgeons performing operations, she began to take her unofficial training seriously. Vienna was considered one of the best cities in the world for medical care, so young Sofie observed world-class care before her move to America.

At the age of 14, she married Austrian surgeon Moriz Herzog, MD, and, over the next several years, gave birth to 15 children, including three sets of twins; eight of their children died in infancy. The family emigrated to the US in 1878, and Dr. Moriz Herzog accepted a job at the US Naval Hospital in New York City.

Sofie had earned her midwifery certificate, and although women doctors were not unheard of, it still was incredibly difficult for a woman to complete her graduate education, let alone medical school. In fact, she was not satisfied with the level of education a woman could receive in America and returned to Vienna for training. She later was forced to attend medical school again in the US to earn a US-issued medical license.

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Dr. Sofie Builds A Church

EPISCOPAL CHURCH WAS DR. SOFIE'S GIFT
The Ornate, Briefly Used Courthouse Is Shown At Left

A newspaper article details how Dr. Herzog built the Brazoria Episcopal Church. (Courtesy of the Brazoria Heritage Foundation Photo Collection)

Following her husband's death and after practicing for 9 years in Hoboken, NJ, Dr. Herzog moved to Brazoria with her youngest child. At the time, Brazoria was known for its rustic charm and was not a place frequented by newcomers. Gunslingers were rowdy, making care for gunshot wounds a necessity.

The town did not have a physician at the time, and the residents were ecstatic when they heard a new doctor was moving to Brazoria. However, that enthusiasm was short-lived when it was discovered that the physician was a woman. In fact, residents of Brazoria initially were cold to Dr. Herzog.

Dr. Herzog, who was 49 years old when she began treating patients in the small town, was different than most women. With her curly hair cut short like a man and her split skirt custom-made by a tailor for mobility, Dr. Herzog was the talk of the town. She also had opted to live alone rather than with family—a fact that was not well received by other women.

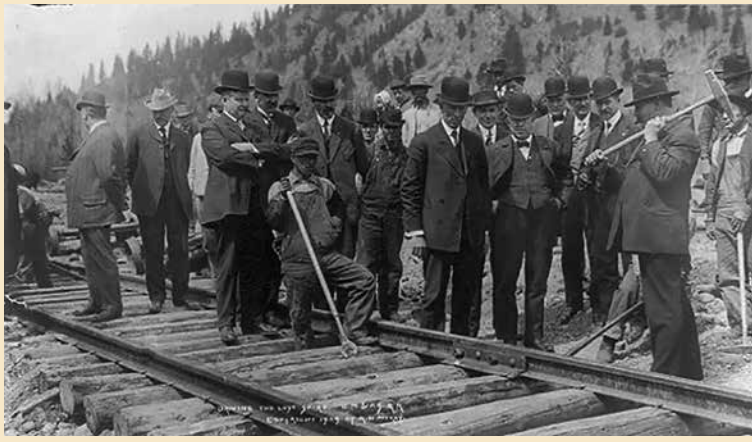
Added to this, Dr. Herzog's preferred mode of transport was riding astride rather than side-saddle on her horse, an act only men were seen to do. However, her fervor for building her practice was unparalleled, and she soon won over the residents and became known as "Dr. Sofie."

Dr. Herzog initially set up her practice in the house of her son-in-law Randolph Prell. This arrangement didn't work for too long. Prell walked in on Dr. Herzog treating a smallpox patient in the living room and demanded that she not accept such patients in the household. She decided parting was for the best and built her combined office and living quarters soon afterward.

It was in that space that Dr. Herzog started to maintain collections of tools, preserved medical paraphernalia, and random novelties. One of her most infamous collections included a shelf of jars containing stillborn fetuses preserved in alcohol. Dr. Herzog apparently kept them for scientific reasons, but one can imagine how these jars unnerved her in-house patients.

Another peculiar feature of her working quarters: reptile carcasses. Fueled by her curiosity, Dr. Herzog hired young men to capture snakes. After dissecting the reptiles to look at their anatomy, she used the carcasses to decorate her buggy and office. One of her most notable products of taxidermy was a 14-foot gator placed in the center of her office.

Along with her ability to keep the residents of Brazoria in a state of constant shock, Dr. Herzog also enjoyed engaging in everyday activities such as knitting and crocheting. In her spare moments between patients, she



"Driving the last spike. C.M. & P.S.R.R." (McKay, Rollin H., 1909). A railroad worker kneels on tracks surrounded by Roadmaster George Nick (holding spike hammer). (LC-USZ62-29461, Library of Congress Prints and Photographs Division, Washington, DC)

RAILWAY SURGERY

DURING THE LATE 1800s, railway surgery was thought of as a "de facto" specialty led by a cavalier group of physicians considered to be some of the earliest trauma surgeons.

The development of railroads in the mid-1800s spurred intercoastal migration to remote areas devoid of medical care within the US. More than 250,000 miles of unregulated tracks manned by thousands of industrial trains offered ample opportunities for traumatic injury among passengers and employees.

In 1888, railway accidents accounted for 5,282 fatalities and more than 25,000 injuries. By 1899, there was a 50% increase in deaths, with 7,123 fatalities and more than 40,000 injuries. To treat this type of trauma, a new breed of physicians interested in emergency surgery, limb salvage, and shock developed.

During the early days of railroad expansion, part-time private medical practitioners were commissioned along popular cross points. However, rapid growth into underdeveloped areas of the western country created a need to hire full-time surgeons.

Left:
This hospital car—from 1899—includes an operating room. (From *Railway Surgery: A Handbook on the Management of Injuries*)

Right:
Sofie Herzog sits in her office with a taxidermied 14-foot alligator behind her.

would make scarves, shawls, and hats for her grandchildren and the children of the town.

With her devotion to Brazoria and her patients, it was inevitable that the townspeople soon thought of her as one of their own.

In 1904, the construction of the St. Louis, Brownsville & Mexico Railway through Brazoria began. By this time, Dr. Herzog had earned the respect of the local officials and frequently was called upon to treat injured workers up and down the line.

When it came time to employ a surgeon for Brazoria and after multiple recommendations, local officials hired Dr. Herzog. This resulted in significant controversy since there had never been a female railroad surgeon.

The officials sent Dr. Herzog a telegram stating they would "understand" if she resigned, as the position was not suitable for a lady. Dr. Herzog swiftly dispatched a return telegram assuring them that she needed no special treatment because of her gender, and they were welcome to fire her if she did not perform her duties. She never gave them any cause to fire her, and she kept the position until she suffered a paralytic stroke a few months before her death.

Bullet Removal and Sterile Finger

Dr. Herzog's early cases were mostly births, emergencies, and illnesses among underprivileged members of the community. Many of the emergencies she treated were gunshot wounds, and Dr. Herzog's success in treating these injuries was extraordinary for the times.

In fact, she had been in Brazoria for less than 2 years when she was invited to address the South Texas Medical Society about her method of removing bullets. In that address, Dr. Herzog stated that she already had removed 15 bullets and two rounds of shots without losing a single patient. By 1897, Dr. Herzog was the first female member of the South Texas Medical Society, and she was the first woman elected vice-president of the organization in 1903.

It was most likely after a shooting accident in Hoboken involving her son that Dr. Herzog decided the traditional method of removing bullets (probing) often caused death. She found that using a sterile finger helped with controlling infection and positioning the patient so that gravity would "bring the bullet to her" also was beneficial.

In the case of abdominal wounds, Dr. Herzog reported that she would hang the patient a couple of inches above the bed. In every case, she reported that the bullet "came to her" within 24 hours and that every one of her first 17 patients was up and about by day 12, "ready to shoot or be shot at any time." Dr. Herzog's success with bullet removal was a source of pride, and she began using recovered bullets to create a necklace to fasten around her neck.

Bullet Necklace

Dr. Herzog was more than just a physician. She took an interest in making Brazoria a thriving community. She dabbled in real estate, buying and managing the Jefferson Hotel for many years while still treating patients. Dr. Herzog opened a large clinic near the railroad tracks next to her office, and she ran her own pharmacy.

Because she owned hundreds of books, Dr. Herzog also became the town's first librarian, lending out her personal collection to readers. She even built Brazoria's Episcopal church after a dispute with the local Catholic church over the terrible condition of the community's Catholic cemetery.

In 1913, Dr. Herzog, who was 67 years old, married Marion Huntington and moved to his

Dr. Sofie Herzog (Courtesy of the Texas State Library and Archives Commission)

plantation 7 miles outside Brazoria. At an age when many consider retiring, Dr. Herzog commuted to her patients every day, making house calls and distributing medications from her pharmacy.

She worked until a stroke caused her to be hospitalized—a few months before her death on July 21, 1925. She was 79 years old. Per her request, Dr. Herzog was buried with her bullet necklace—a reminder of both her surgical skills and charming quirks.

Dr. Herzog embodied the Hippocratic Oath with her commitment to equity in her medical practice. She would treat all patients, regardless of racial background, and would travel dirt roads to deliver babies along the Brazos River. Embracing aspects of her gender role but never letting them stop her, Dr. Herzog carved out a place in the hearts of Brazoria, where she is remembered as an icon to this day.

Acknowledgments

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Outreach Program Teaches Teens about Trauma, Injury Prevention

Paula Rasich

Left:
Philbert Y. Van, MD, FACS, from Oregon Health & Science University in Portland, prepares students from the Boone Academy of Health Science in Orlando, FL, for STOP THE BLEED® instruction.

Right:
Instructor André Jamison, who is a member of the Florida Teen Safe Driving Coalition and founder of DriveTrainer Academy, Inc., provided the driving simulators used for the EAST Community Outreach Program at Boone High School.

Trauma surgeons, nurses, advanced practice providers, physicians, and researchers from around the US traveled to William R. Boone High School in Orlando, FL—a magnet school that offers specialized courses for teens interested in healthcare careers—to take part in the annual Eastern Association for the Surgery of Trauma (EAST) Community Outreach Program held in conjunction with the EAST Annual Scientific Assembly.

Left:
Boone students learn STOP THE BLEED® techniques, including how to keep blood inside the "body" by using cloth to pack the wound in a severely injured person.

Right:
Hundreds of students at Boone High School participate in the EAST Community Outreach Program.

Left:
An EAST volunteer instructor teaches an overview of basic bleeding control and the importance of helping with life-threatening bleeding.

Right:
More than 40 EAST Community Outreach Program volunteers (not all pictured here) work with students each year, raising awareness about preventing injuries and saving lives.

MORE THAN 400 STUDENTS attended the daylong event in January, which was designed to educate high schoolers about trauma and injury prevention.

"When you are young, you think you are invincible," said Hee Soo Jung, MD, FACS, FCCM, a trauma surgeon and associate professor in the Department of Surgery at the University of Wisconsin-Madison.

"Rather than meeting people on the worst day of their lives, I'd prefer to meet them in this awesome setting where we connect, teach, and potentially prevent something tragic from happening. The students have so much energy and are excited to talk to us and learn about what we do."

The Centers for Disease Control and Prevention (CDC) reports that trauma is the leading cause of death for people between the ages of 1 and 44. Among children and adolescents aged 1–19, the leading causes of death are firearm-related injuries and motor vehicle crashes, according to the CDC.

"This is the population that we can make an impact on and where injury prevention is really key," said Linda Dultz, MD, MPH, FACS, co-coordinator of the EAST Program and a general surgeon who specializes in burn, trauma, acute, and critical care surgery at The University of Texas Southwestern Medical Center in Dallas. "So, if we can get to them early, engage and raise awareness, it's meaningful for all of us, because as trauma surgeons, we see these injuries every single day."

Since 2012, the EAST Community Outreach Program has educated several thousand high school students from different regions of the country about the dangers of distracted driving due to texting and alcohol use. The combination of lack of driving experience and risky decision-making is fatal for this population; with that in mind, the EAST distracted driving program was born.

When taking part in the interactive session, the students learn about risk factors—such as impaired driving, speeding, traveling with a passenger, and cell phone use—that most often contribute to motor vehicle fatalities. Simulated driving exercises give them the chance to get hands-on experience and see for themselves how quickly a distraction can turn deadly.

For much of the day at Boone High School, Dr. Jung, who is the immediate past-chair of EAST's Injury Control and Violence Prevention Committee, worked with students as young as 13 years old on navigating specific distracted driving scenarios, helping them learn how to drive safely. He is a father of two children, including a preteen, so the experience was particularly eye-opening for him.

A Collaborative Effort

EAST was established in 1986 with a mission to advance the care and rehabilitation of the injured patient. Expanding on that mission, in 2012, the association joined the EAST Annual Scientific Assembly to launch its Community Outreach Program, a collaborative effort featuring trauma professionals who mentor teenagers and teach them about the impact of trauma and crisis. The Society of Trauma Nurses also has supported this event since its inception.

"This started out as an idea—how can we as trauma surgeons reach out to the community and make an impact on the younger generation. Every year, the program has grown a little more as we continue to make connections in the community," Dr. Dultz said. "Today, we have a whole buffet of programs that high schools can choose from. They can pick and choose what parts of the curriculum they want to customize for their students."

At first, the annual event focused on distracted driving and bringing trauma survivors into high schools to tell their stories.

In 2017, when the ACS launched STOP THE BLEED® (STB), it was added to the lineup. An STB

course is provided during the outreach program, and students learn an overview of basic bleeding control and become empowered to make a life or death difference when a bleeding emergency happens.

Other programs covering topics such as trauma professional careers, interpersonal violence, substance abuse, burn safety, and firearm safety also were eventually developed and offered to the high schoolers. In addition, a Careers in Medicine panel was developed to give these teens the opportunity to learn about different career paths in healthcare associated with trauma.

"The best feedback we get is from the students who say they love connecting with the trauma surgeons and healthcare providers," Dr. Dultz said. "These students might not otherwise have connections to their hospital system or physicians or be familiar with the pathway to become a physician, so we share stories about what we do day in and day out, and we answer their questions about what it takes to become a trauma surgeon, nurse, or EMT."

Being Brave Saves Lives

The 2023 outreach event, themed Being Brave Saves Lives, was the first since 2020, when the COVID-19 pandemic forced the program to pause.

"At Boone, we worked with the local police officers, emergency medical services, and fire department personnel, and we partnered with Orlando Regional Medical Center, connecting with people who are thinking about injury prevention in new and innovative ways," Dr. Jung said.

The three-part program at Boone High School included trauma survivorship and STB, in addition to distracted driving.

The trauma survivorship program was newly revamped to focus on mental health issues related to being a trauma survivor, such as anxiety and post-traumatic stress disorder. The school specifically requested trauma survivorship because the years of isolation and uncertainty due to the pandemic has had lasting traumatic effects, causing some students to develop anxiety and depression.

The community has faced many challenges in recent years, and the session helped students understand the importance of taking care of their mental health and how to cope with crisis. By learning life-saving skills and about injury prevention, they can "be brave" and potentially save a life.

"What we are trying to convey is that the students have the power to make sure they are safe, that their friends are safe, and their family and loved ones are safe," Dr. Jung said.

Surviving Trauma

One of the defining moments of the day came when Crystal, a Florida resident, opened up about her experience of being in a car accident in 2009. She was on her way to school—at the time, she was studying to be an athletic trainer—when her car was struck by a drunk driver. Crystal described the debilitating accident and how it impacted her physically, mentally, and emotionally.

Over the ensuing years, she underwent multiple surgeries. Even though she survived the trauma, it was an uphill battle just to walk again. The accident took away her ability to play sports and fulfill her dream of becoming an athletic trainer.

Her story brought tears to the eyes of some students. Like so many, Crystal sought

Left:
Students practice on driving simulators and experience what it feels like to drive a car while receiving text messages.

Right:
EAST has partnered with the ThinkFirst National Injury Prevention Foundation for a trauma survivorship session in which students learn strategies for coping with trauma.

> "I'm really proud of the organization and its mission. We go to conferences to network and see the latest literature, but I think this program is a mission of service, which is why a lot of us became doctors in the first place."
>
> —Dr. Linda Dultz

Access the multimedia extras at *facs.org/bulletin*

professional help for her mental health issues and, today, she advocates for laws against distracted and drunk driving.

"We stay away from scared straight-type of programs. Those programs aren't necessarily effective. But we do think it's important for students to understand trauma-informed care, what patients go through every day, and how they are experiencing their trauma," Dr. Jung said. "It's one thing to talk about trauma and how it happens, but to have someone share their firsthand, lived experience and everything they have gone through to recover from that event is really important. I think her story resonated with the students."

Leaving a Lasting Impression

Reaching beyond high school students, Drs. Dultz and Jung are focused on opportunities that lie ahead.

For instance, they are considering new programs like fall prevention for the elderly and partnering with the American Red Cross to install carbon monoxide detectors in the homes of those in underserved communities.

In recent years, the Community Outreach Program participated in several large STB events for host communities and local organizations. In the future, Dr. Dultz said she has a goal of increasing education and awareness related to firearm safety.

"The more information we can provide around that topic, the more informed the public can be," she said.

Dr. Jung added, "We must think about new ways to make a long-lasting impact on our communities. One of the things I have focused on has been fostering connections. I hope that is our legacy."

Drs. Dultz and Jung said the potential to enhance the health and lives of the people within the community is motivating.

"I'm really proud of the organization and its mission. We go to conferences to network and see the latest literature, but I think this program is a mission of service, which is why a lot of us became doctors in the first place," Dr. Dultz said.

Dr. Jung agreed. "It's great to give back to the communities that we visit during our annual conferences," he said. "EAST has many facets, and one of those is connecting with like-minded people in the world of trauma surgery and teaching injury prevention." B

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ACS AMERICAN COLLEGE OF SURGEONS

Dr. Husein Moloo

Surgeons Have a Duty to Improve Planetary Health

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THE PROVISION OF HEALTHCARE SERVICES has traditionally been focused on optimizing patient outcomes and improving healthcare costs while streamlining care delivery. The impact of these well-intentioned practices, however, extends beyond the individual patient and practitioner and has implications for the population and planet.

In recent years, there has been a noticeable change in the climate, with worsening storms, droughts, wildfires, heat domes, derechos, and more. For many, it has created a sense that we urgently need a change from "business as usual." That sense of urgency was reflected in the most recent Intergovernmental Panel on Climate Change (IPCC) report, which sounded a "code red" for the planet.[1] Ongoing events around the world reaffirm this declaration with respect to climate change.

Climate change is a product of human activity, and we have become increasingly familiar with the concept of the carbon footprint—the total amount of greenhouse gases that are generated by the actions of an individual or group. If surgery and the industry of healthcare worldwide were considered a country, it would rank fifth in terms of the size of its carbon footprint. The US has the greatest emissions per capita with respect to the health sector.[2]

Within healthcare delivery, perioperative services have an outsized carbon footprint, from the production of disposable and single-use surgical devices, energy used for ventilation, and anesthetic gas use.[3-5]

Climate change is an existential risk, recognized by the World Health Organization

Within the perioperative space, there are a multitude of areas in which surgeons can engage.

as the number one health problem for humanity.[6] Healthcare practitioners, surgeons included, have a duty to do no harm and contribute to redefining the concept of healthcare with a planetary health focus.

Planetary Health Equates to Patient Health

Planetary health includes the recognition that:

- People for whom we care require clean air, water, soil, and food to be healthy
- Surgeons have a duty to future generations to provide them with a planet on which they can be healthy and thrive

The COVID-19 pandemic revealed the challenges associated with providing timely care within a system of strained resources. Taking ownership and learning about planetary health is crucial to ensuring that we continue to treat our patients in a sustainable manner for years to come.

Health effects from climate change and direct environmental toxicities, such as from waste, intersect with every organ system. This intersection is not surprising. The indigenous, or holistic, perspective reminds us that we are a part of nature and that, when we damage nature, we damage ourselves.

Climate change and its impact on the environment are having negative effects on cancer incidence, respiratory issues, patterns of infectious disease, and reproductive functions, to name a few. Importantly, climate change and environmental degradation are intertwined with myriad social issues.

One important area of impact is mental health. From a mental health perspective, one of the most common findings, present for more than 50% of American adults, is eco-anxiety.[7] Eco-anxiety results from the feelings created when people reflect on their changing environment. This rate is even higher in younger individuals.[7]

The effects of eco-anxiety can be mitigated by taking "eco-action." When we are aware of the climate crisis, the effect it has on health and the massive carbon footprint that healthcare imprints on our communities and planet, we also can understand that we have an incredible opportunity to play a mitigating role.

Surgeons Can Take Eco-Action

Within the perioperative space, there are a multitude of areas in which surgeons can engage.

Using a framework, such as the one proposed by MacNeill and colleagues, can be useful for creating an infrastructure upon which to build opportunities. This framework describes the following: Reducing demand, providing appropriate care, and working sustainably.[8]

Practically, what does that look like for a surgeon?

Consider colorectal cancer care as an example. Demand for surgery could be reduced by promoting screening, as a colonoscopy with polypectomy is much less carbon intensive compared to neoadjuvant chemoradiation followed by surgery and an inpatient stay.

Short- and long-term morbidities can be a sequela of treatment—all of which have a carbon footprint. Every action we take in healthcare has a carbon footprint and, generally, the more intense the treatment, the bigger the footprint.

Our activities as surgeons must reflect appropriate care. But where we have choices,

dilemmas, or uncertainty, decisions should incorporate the environmental context.

Consider the carbon footprint of diagnostic imaging ordered for cancer follow-up in terms of the footprint of driving an automobile—a commonly understood contributor to climate change.

A 2022 study found that one magnetic resonance imaging exam is equivalent to driving 145 km, one computed tomography exam to 76 km, and plain films to 6 km. We know that imaging is critical to our work as surgeons, but if it is performed at an inappropriate frequency, it can be wasteful.[9]

Or consider daily bloodwork on patients when it is not needed, which equates to 49 g–116 g of CO_2 per test.[10] With hundreds of millions of blood tests done annually, the cumulative effect is significant. By adhering to best practice guidelines, much improvement could be achieved without affecting daily workflow or patient outcomes and, perhaps, even improving those outcomes—consider it in the context of enhanced recovery after surgery pathways.

There are multiple opportunities to work sustainably in the perioperative and hospital environment. These tactics might include standardizing instrument trays, shifting away from single-use tools to reusables (such as gowns, drapes, trocars, and equipment), or reducing material waste.

One clear opportunity is to support our anesthesia colleagues in their efforts to abolish desflurane—an inhalational anesthetic gas with 2,500 times the global warming potential of CO_2.[11]

Another is to advocate for our facilities to perform energy audits, optimize energy efficiency and use patterns (especially for HVAC or laundry), reduce food waste, and publish carbon footprints.

In addition, we can ask our vendor partners to do the same audits or seek vendors who value sustainability. We need a shift in culture where environmental impact is regularly considered in healthcare decision-making at the individual and system levels.

Necessity of a Culture Shift

The examples in this article highlight that addressing the climate emergency requires a shift in culture. This shift begins with education—providing colleagues, mentors, and aspiring healthcare practitioners with the knowledge and skills to make planetary health a daily consideration in their practices.

One example of educating healthcare professionals could be incorporating sustainability considerations into existing quality improvement infrastructure. The UK has adopted a "triple bottom line" approach in quality improvement, which incorporates environmental impact and social accountability in addition to the traditional and important economic cost.[12] This approach has led to a multitude of initiatives that have decreased the environmental impact of activities.

Many green initiatives can decrease costs to health systems, positively affect the environment, and, perhaps most important to continuing the work of promoting sustainability, engage

As philosopher Marshall McLuhan stated, “On spaceship Earth, there are no passengers. We are all crew.”

healthcare professionals in something they find valuable and impactful.

At a time when there is distrust in many public figures, physicians should know that they remain a trusted voice.[13] The role of advocacy through the simple act of speaking about climate change and health, whether to family, peers, the public, patients, or policymakers, is a major contribution each of us can make. We owe it to our patients and the future of our planet to take advantage of this privileged position to make meaningful change.

The ACS Will Do Its Part

Our surgical societies, accreditation bodies, and journals need to become involved in the required transformational change. In the push to adapt our profession to the needs of the ailing Earth, leadership from surgeons within these organizations is needed.

The ACS is now in the process of developing a strategy on planetary health and will provide details in future communications.

As philosopher Marshall McLuhan stated, “There are no passengers on spaceship earth. We are all crew.”[14]

Surgeons are integral crew members. With an existential crisis facing our profession, the public, and the planet, it is past time to engage. B

Note

See the related article, “Surgeons Can Drive Quality—and Help the Environment,” on page 22.

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Mutational Profiling Using Circulating Tumor DNA Helps Guide Treatment Decisions for Patients with Colorectal Cancer

Timothy E. Newhook, MD
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Rebecca A. Snyder, MD, MPH, FACS

Mutational analyses, including tumor tissue somatic mutation or circulating tumor/cell-free DNA analyses, are increasingly used for prognostication and treatment selection for patients with colorectal cancer (CRC).

DETERMINATION OF KRAS, BRAF, AND MSI status is standard of care. Extended molecular profiling has proven advantageous for prognostication in patients with metastatic CRC, particularly patients with resectable CLM.

For example, mutations in KRAS, BRAF, TP53, SMAD4, and FBXW7 are associated with worse survival outcomes following hepatectomy for CLM.[1-5]

The pathway-centric risk score is valuable when making decisions with patients regarding hepatectomy for CLM, which takes multiple deleterious mutations into account and stratifies patients into three prognostic groups.[6] However, more dynamic and precise biomarkers are urgently needed to guide treatment for all stages of CRC.

Circulating tumor DNA (ctDNA) has rapidly emerged as a promising dynamic biomarker to aid with clinical decision-making for CRC. Detection of ctDNA following completion of intended treatment, termed minimal residual disease (MRD), is associated with an extremely high risk for disease recurrence.[7] Currently, vague clinical and pathologic factors guide many treatment decisions for CRC. However, would a seismic shift in treatment patterns occur if we could detect occult disease hiding in the shadows?

Localized Colorectal Cancer

Two recent studies have supported use of ctDNA for guiding adjuvant chemotherapy treatment (ACT) decisions after resection of stages II and III—DYNAMIC and GALAXY in CIRCULATE-Japan.

Glossary of Terms

CRC: Colorectal cancer

KRAS: Kirsten rat sarcoma

BRAF: B-Raf proto-oncogene serine/threonine kinase

MSI: Microsatellite instability

CLM: Colorectal liver metastases

TP53: Tumor protein p53

SMAD4: Suppressor of Mothers against Decapentaplegic family member 4

FBXW7: F-Box and WD Repeat Domain Containing 7

ctDNA: Circulating tumor DNA

MRD: Minimal residual disease

ACT: Adjuvant chemotherapy treatment

DYNAMIC: Circulating Tumor DNA Analysis Informing Adjuvant Chemotherapy in Stage II Colon Cancer

GALAXY: General Anesthesia versus Local Anesthesia in StereotaXY

CIRCULATE-Japan: Colon Adjuvant Chemotherapy Based on Evaluation of Residual Disease in Japan

RFS: Recurrence-free survival

COBRA: Circulating Tumor DNA as a Predictive Biomarker in Adjuvant Chemotherapy in Patients with Stage IIA Colon Cancer

VEGA and ALTAIR: Subtrials of GALAXY-Japan

RAS: Rat Sarcoma Viral Oncogene Homolog

Circulating tumor DNA has rapidly emerged as a promising dynamic biomarker to aid with clinical decision-making for CRC. Detection of ctDNA following completion of intended treatment, termed minimal residual disease, is associated with an extremely high risk for disease recurrence.

In DYNAMIC, Tie and colleagues randomized patients to standard (ACT for high-risk features) or ctDNA-guided management (ACT if ctDNA detected postoperatively).[8] Recurrence-free survival (RFS) at 2 years was equivalent (93.5% and 92.4%, respectively), while ACT use was nearly halved (15% versus 28%), indicating ctDNA evaluation may reduce unnecessary chemotherapy.

A research group from Japan initiated a new type of adaptive platform trials to evaluate the clinical benefits of ctDNA analysis and refine precision adjuvant therapy for resectable colorectal cancer. CIRCULATE-Japan comprises three clinical trials, including the GALAXY study. This trial reported an observational cohort of stage I–III colon cancer patients stratified by postoperative ctDNA status at 4 and 12 weeks.[9] Six-month disease-free survival was 98%–100% in patients with no detectable ctDNA at either timepoint (n = 618) or converted to negative with ACT (n = 58) but was only 45% if ctDNA was detectable at both timepoints (n = 78) and 59% if ctDNA became positive 12 weeks postoperatively (n = 32). In addition, ctDNA clearance was higher in patients who received ACT (84% versus 34%).

Four ongoing randomized trials are investigating ACT based on postoperative ctDNA. In the Phase II/III Study of COBRA trial, low-risk stage II patients are randomized to observation versus ctDNA-guided ACT.[10]

In the CIRCULATE-US trial, high-risk stage II and all stage III patients are randomized to standard-of-care ACT versus observation if they are ctDNA-negative or standard-of-care ACT versus addition of irinotecan if they are ctDNA-positive.[11]

The VEGA and ALTAIR trials in Japan are randomized observation versus oxaliplatin-based ACT if patients are ctDNA-negative or observation versus trifluridine/tipiracil for patients who are ctDNA-positive but imaging-negative after standard-of-care ACT.[12] Together, these trials will provide detailed insight into incorporating ctDNA in clinical decision-making after surgery, thus minimizing side effects from chemotherapy while maximizing cancer-free survival.

Resectable Colorectal Liver Metastases

Like MRD for patients with localized CRC, ctDNA detection following curative-intent hepatectomy for CLM is associated with oncologic outcomes. In a study of 48 patients undergoing curative-intent hepatectomy with paired pre- and postoperative ctDNA analyses, 38% of patients were ctDNA-positive postoperatively, and these patients had an RFS of only 7.5 months compared to 33 months for those who were ctDNA-negative.[13]

Subsequently, a tumor comutation in RAS+TP53 was associated with ctDNA detection within 180 days of curative-intent hepatectomy, highlighting patients at high risk for MRD.[14] Moreover, serial sampling of ctDNA postoperatively may refine prognostication.[15]

Patients without detectable ctDNA after curative-intent hepatectomy for CLM are at much lower risk for at least early recurrence, however, these patients do recur. Reinert and colleagues reported a 56% recurrence rate for patients ctDNA-negative postoperatively across their study and, interestingly, usually in the lungs. Lung recurrences were more than 15 times more likely in patients who were ctDNA-negative postoperatively.[16] This has significant implications for surveillance following hepatectomy for CLM.

Ongoing clinical trials evaluate the impact of ctDNA-guided treatment strategies for patients with CLM with the objective of better identifying patients who may benefit from chemotherapy, as well as those who may not.

For example, the REACT-CLM trial (NCT05062317) includes patients who undergo curative-intent hepatectomy for CLM after at least four cycles of preoperative chemotherapy. Patients undergo ctDNA analysis for MRD 2–6 weeks postoperatively and, if positive, continue intensive chemotherapy. However, those without MRD de-escalate postoperative chemotherapy or enter surveillance at the discretion of their care team.

With a primary endpoint of 12-month recurrence-free survival, the hypothesis is that those without detectable ctDNA can safely de-escalate postoperative chemotherapy, which has profound implications for quality of life and survivorship.

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Andean Adventure Brings Together the ACS and Latin American Surgeons

Peter J. Kernahan, MD, PHD, FACS

FRANKLIN H. MARTIN, MD, FACS, A MAN OF RESTLESS ENERGY, was an inveterate traveler both for the ACS and personal pleasure. In 1920, alongside William J. Mayo, MD, FACS, and their wives, Isabelle Hollister Martin and Hattie Damon Mayo, Dr. Martin made the first of three trips to establish closer relations between the College and Latin American surgeons.[1,2]

Together, the group would cross the Andes between Chile and Argentina on the Transandine Railway on the most spectacular and dramatic part of their tour of Peru, Chile, Argentina, and Uruguay.

The journey began in Valparaiso with a mainline train to Los Andes (2,720 feet) in the foothills of the Andes. After a layover in Los Andes, the "cheerful if a sleepy group" boarded the three-coach, narrow-gauge Andean train in high anticipation of a 14-hour journey across the Cordillera to its eastern terminus at Mendoza (2,376 feet).[3]

Built between 1887 and 1910, the line was one of the great railway projects of the time, covering 154 miles with more than 80 bridges and tunnels.[4] Contemplating the route, Dr. Martin observed that "one has great difficulty in deciding whether to admire more the work of nature or the work of man."[3]

From Los Andes, the train wound steadily upward to the 2-mile-long Uspallata tunnel (10,471 feet) that spanned the border between Chile and Argentina before descending toward Mendoza.

The altitude took its toll when during the lunch stop at Puente del Inca, Argentina (9,000 feet), Drs. Martin and Mayo became "well winded" while walking from the train to the hotel, something their wives prudently avoided by taking the waiting jitney.[3]

A welcoming crowd broke into cheers on hearing that the famous Dr. Mayo was in the party.[5] After an excellent meal, the journey resumed, and the travelers marveled—in Isabelle Martin's words—

"as hour after hour the most majestic, multicolored mountains crept by us."[3]

Despite the awe-inspiring scenery, the route was not without hazard. Three days earlier, a landslide had swept away a bridge, small hotel, and several unlucky travelers.[5] Consequently, the party made a moonlit trek along a temporary trestle once the locomotive had gingerly pushed the empty carriages across. Looking down a short while later, Dr. Martin saw the roof of an upended coach from an earlier disaster that drowned 11 passengers.

Reaching Mendoza unscathed at midnight, the weary but exultant travelers boarded a mainline sleeper and made the 20-hour journey to Buenos Aires across plains that reminded Dr. Martin of North Dakota and Manitoba.

Once they reached their destination, they were met by a delegation of Argentinian surgeons and brought in style to their hotel. After productive meetings in Argentina and Uruguay, the party returned to Chile by the same route.

Drs. Martin and Mayo were impressed by the surgery they had seen. The trip marked the start of an ambitious effort to link the North and South American surgical professions.[2] By 1928, 242 Latin American surgeons from 17 countries had become Fellows of the ACS.[1] B

Dr. Peter Kernahan *is a lecturer in the Program in the History of Medicine and an adjunct associate professor in the Department of Surgery at the University of Minnesota in Minneapolis.*

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The Transandine Railway operated from Mendoza in Argentina, across the Andes mountain range via the Uspallata Pass, to Santa Rosa de Los Andes in Chile. (Courtesy of the Archivo General de la Nación Argentina via Wikimedia Commons)

Opposite page:
Top: Dr. Franklin Martin
Bottom: Dr. William Mayo

Leadership & Advocacy Summit Promises to Inspire, Bring Fresh Focus

The ACS will host its annual Leadership & Advocacy Summit April 15–18 at the Grand Hyatt in Washington, DC. The Summit is a dual meeting offering comprehensive and specialized sessions on effective surgeon leadership, as well as interactive advocacy training with coordinated, in-person visits to Congressional offices.

Registration for the 2023 Summit is now open at *facs.org/summit.*

Leadership Summit April 15–16

The Leadership Summit will be a high-impact event with a programming lineup that includes compelling speakers offering real-world expertise and skill-building guidance. Attendees will have the opportunity to network with ACS leaders and engage with colleagues, while learning new and innovative ways to face challenges and enhance their leadership skills—in and out of the operating room.

Featured topics will include defining your personal mission statement, serving in a leadership role during challenging times, using strategies to get what you deserve, recognizing surgeon burnout and operationalizing solutions, and understanding effective performance-based teaching.

A special session—Negotiation Practice and Principles: Tips, Tactics, and Traps Seminar—will be held ahead of the Leadership Summit. This plenary session will provide an overview of advanced negotiation concepts, strategies, and tactics when dealing with organizations in the context of medical employment. The first part will explore recognizing negotiation styles, choosing an approach, making offers and counteroffers, creating and claiming value, narrowing options, breaking an impasse, and dealing with closure behaviors. The second part of the seminar will focus on specific value-creation methodologies, risk analysis, cognitive error, implications from neuroscience, and dealing with difficult conduct.

Preregistration for the special session is required, and capacity is limited.

The Leadership Summit—open to all US and international ACS members and nonmembers—begins Saturday evening, April 15, with a welcome reception, followed by a full day of programming on Sunday, April 16. A virtual option is available for this engaging and timely meeting.

Advocacy Summit April 16–18

The Advocacy Summit will connect attendees with policymakers and advocacy experts to discuss the latest developments in key healthcare policy and legislation, champion the critical interests of surgeons and patients, advocate for healthcare priorities and federal policies, explore ways to build relationships for long-term advocacy, and network with colleagues from across the country.

Attendees can expect in-depth advocacy training, including effective tips and tactics to help communicate policy priorities on Capitol Hill and at home. In 2023, several ACS-supported legislative priorities could be considered by Congress, and surgeon-advocates play a critical role in educating lawmakers about important healthcare issues and effecting positive change. Your participation at the Advocacy Summit is essential to the College's success.

Open only to ACS members in the US, the Advocacy Summit begins Sunday evening, April 16, with a welcome reception and keynote dinner, followed by a full day of panels, training, and programming on Monday, April 17; in-person meetings with members of Congress and congressional staff will be on Tuesday, April 18.

No virtual option is available for the Advocacy Summit.

More information is available at *facs.org/summit*. Share updates or follow the Summit on Twitter using #ACSLAS23.

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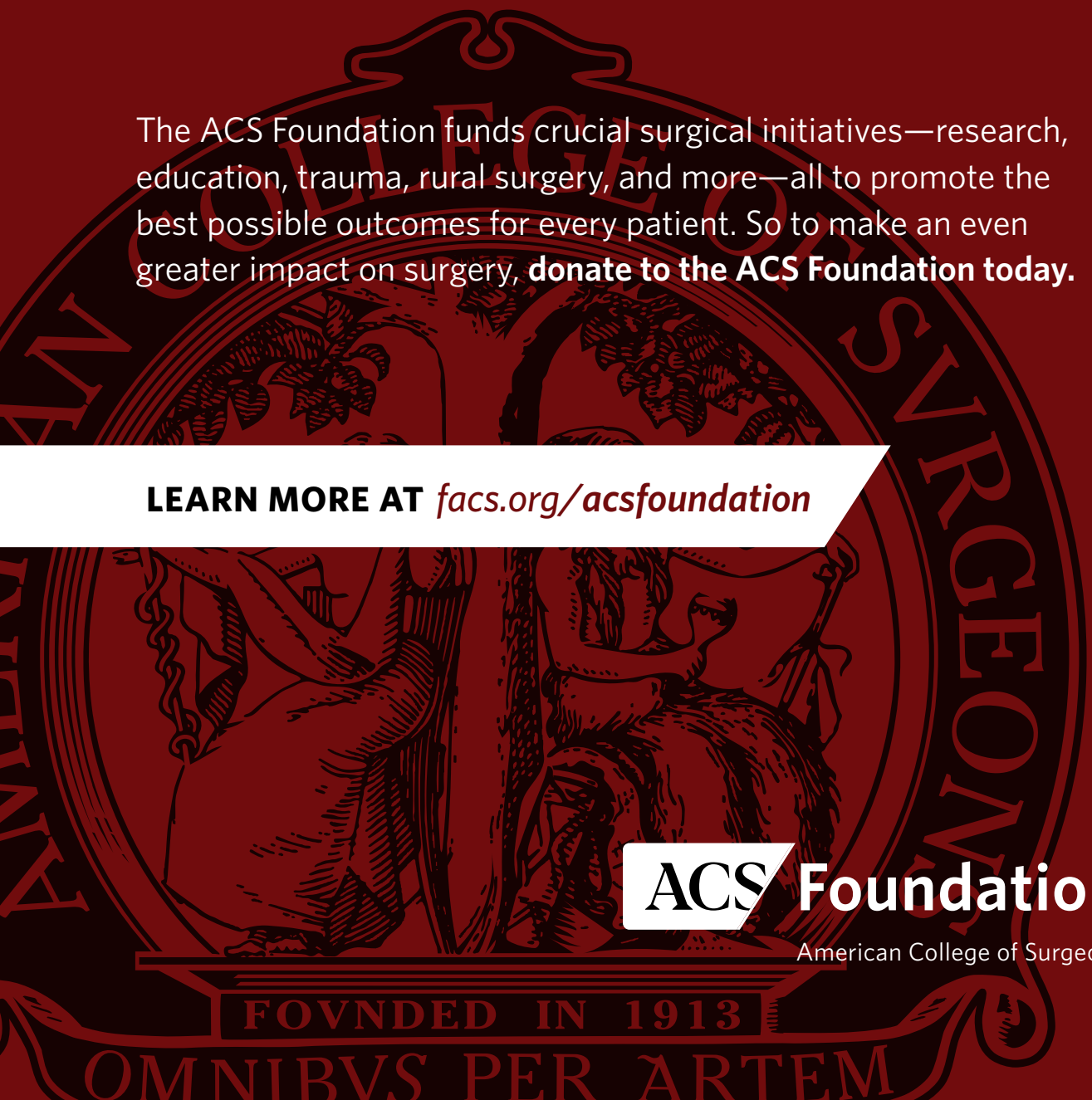

ACS Foundation

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ABS Changes CME Reporting Process

Submit Existing CME by April 3

THE AMERICAN BOARD OF SURGERY (ABS) recently made changes to its CME processes. These changes impact the way diplomates interact with the ABS, upload CME credits, and meet Certification requirements. Those who are not ABS diplomates are not affected.

The ability to directly transmit CME data from the ACS *My*CME portal to the ABS has been a longtime ACS membership benefit, and the ACS is committed to making compliance with the ABS's new rules as seamless as possible. For more details, read the agreement between the ABS and the Accreditation Council for Continuing Medical Education, which is responsible for these changes, at *absurgery.org/default.jsp?news_abscme0223*.

Many surgeons previously have used the easy, two-step process to upload CME credits from their ACS *My*CME profile to the ABS. That same process can be followed to remain in compliance.

What should you do?

1. Access your 13-digit Authorization Code by logging into the ABS website, opening the Ongoing Requirements on the right side of the webpage, and then the CME Repository link. If you are not able to access your 13-digit code, contact the ABS at *cc@absurgery.org*.

2. You must then log in to the ACS *My*CME portal, select the Send CME Data tab at the top, and send your data using the process with which you are familiar. (Step-by-step instructions are available at *facs.org/media/yvbpz3hd/how-to-send-cme-credit-from-acs-to-abs.pdf*.)

Once you do this, your CME credits will be securely transmitted from the ACS.

The ACS process has not changed, and *My*CME will continue to be available. There is urgency, however, because the ABS has announced that it is turning off the manual upload option for diplomates on July 1, 2023. Diplomates should make sure their credits are transmitted by completing the above process by April 3 to allow time for any issues that might arise to be addressed.

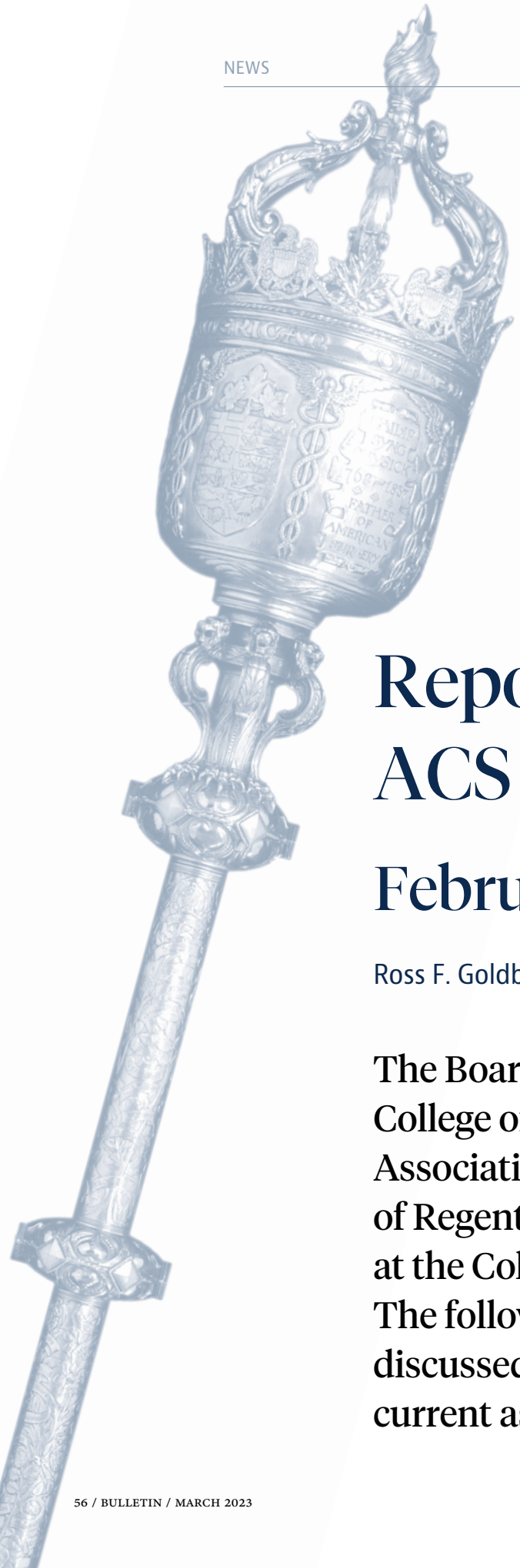
After April 3, the *My*CME portal will still be available to upload, track, and monitor CME credits. Users will be able to transmit their CME data. The process will be slightly different, but it will continue to be streamlined and initiated by the user through the *My*CME portal. B

Questions?

ACS *My*CME portal: Email MyCME@facs.org

New data transmission process via ACCME: Visit *absurgery.org/default.jsp?news_abscme0223*

ABS portal: Visit ABS CME Information at *absurgery.org/default.jsp?faq_cme*



Report on ACSPA/ ACS Activities

February 2023

Ross F. Goldberg, MD, FACS

The Board of Directors of the American College of Surgeons Professional Association (ACSPA) and the ACS Board of Regents (BoR) met February 3–4, 2023, at the College's office in Washington, DC. The following is a summary of key activities discussed. The information provided was current as of the date of the meeting.

ACSPA

The ACSPA, a 501(c)(6), allows for a broad range of activities and services that benefits surgeons and patients, including expanded legislative advocacy and political programming such as the ACSPA Political Action Committee (ACSPA-SurgeonsPAC).

During the 2022 election cycle (January 1, 2021–December 31, 2022), the ACSPA-SurgeonsPAC raised more than $667,800 from 948 ACS members and eligible contributors and disbursed nearly $573,000 to 117 candidates seeking federal offices, political campaigns, and other PACs. In addition, 95% of the individuals who the SurgeonsPAC supported were successful in winning election, including two new US Representatives: Yadira Caraveo, MD (D-CO) and Rich McCormick, MD (R-GA).

SurgeonsPAC continues to prioritize a balanced, nonpartisan disbursement strategy with support for Democrats and Republicans. Distribution of funds is focused on health professionals, key congressional leaders, and members who serve on important US House and Senate committees with jurisdiction over various healthcare policies and issues, including ACS-supported legislative priorities.

ACS

The BoR accepted resignations from four Fellows and changed the status from Active or Senior to Retired for 53 Fellows. The Regents also approved a revision to the 2014 Statement on Bicycle Safety and the Promotion of Bicycle Helmet Use.

Division of Education

The ACS Committee on Ethics, housed in the Division of Education, is planning several activities for Clinical Congress 2023:

- J. Conley Ethics and Philosophy Lecture
- "Ethics of Surgical Innovation" panel session
- Meet the Expert session "Ethics Consults: How Can They Help Me?"
- Town Hall session "The Surgeon and Industry: Identifying and Managing Conflicts of Commitment"

Division of Integrated Communications

A strategic analysis by the Division of Integrated Communications reviewed the Division's services, programs, and products, identified internal and external challenges, defined future vision, and established priorities for moving forward.

Reviewed topics included:

- Digital transformation/business intelligence
- Member marketing and communications
- External/influencer communications

Strategic goals included:

- Ensuring that the ACS is not only relevant, but essential to all surgeons
- Raising the ACS profile to positively influence healthcare policy decisions

Division of Research and Optimal Patient Care

The Division of Research and Optimal Patient Care (DROPC) encompasses the areas of Continuous Quality Improvement (CQI), including ACS research and the accreditation programs.

Cancer Programs

The overarching mission of the College's seven Cancer Programs is to improve the care of the patient with cancer. The Cancer Programs work together to achieve this mission by setting standards, monitoring compliance, accrediting sites, collecting and reporting on vital statistics, and using vital statistics to drive quality improvement, research, optimization of staging, operative standards, and best practices.

In 2022, the Cancer Programs met the following strategic goals:

- Established the first Cancer National Quality Improvement Collaborative (CaNQIC)
- Conducted Just Ask—a national QI project on smoking cessation—across 800 programs with more than 2,000 completed QI projects
- Published two reports on the first National QI Collaborative project—Return to Screening
- Developed two new national QI projects: Beyond Ask (smoking cessation) and Breaking Barriers (e.g., to cancer care) for implementation in 2023
- Developed a cancer curriculum and sessions for the 2022 Quality and Safety Conference to educate, train, and share QI best practices among cancer accreditation programs

- Incorporated National Cancer Database (NCDB) codes and American Joint Committee on Cancer TNM staging system into Cancer Surgery Standards Program synoptic operative reports
- Analyzed National Cancer Database statistics to report the national impact of COVID-19 on cancer diagnoses
- Created new National Accreditation Program for Breast Centers patient journey standards for accreditation (published in February 2023)
- Completed and distributed pediatric cancer standards

For 2023, Key Performance Indicators for the Cancer Programs include accrediting 2,200 programs, reporting on 1.5 million new cancer cases, and developing 6–10 new cancer staging and synoptic operative report protocols.

The Healthcare Coalition for Firearm Injury Prevention, a multidisciplinary coalition of professional medicine and public health organizations, currently is being established. The Coalition will focus on projects and initiatives to advance firearm-related injury prevention using a public health approach.

The MyATLS application redesign project is underway . The new design will have a content management system allowing for continuous updates of application material, along with an improved user interface and experience system. Gaming options also will be included to reinforce educational objectives.

The project framework is based on diversity, equity, and inclusion (DEI) principles and will provide for diversity in representation, equity in access, and inclusion in design, development,

For 2023, Key Performance Indicators for the Cancer Programs include accrediting 2,200 programs, reporting on 1.5 million new cancer cases, and developing 6–10 new cancer staging and synoptic operative report protocols.

Trauma Programs

The 2022 TQIP Annual Conference was held December 11–13 in Phoenix, AZ. The keynote speaker, Stephen W. Trzeciak, MD, MPH, an intensivist and clinical researcher at Cooper University Health Care Camden, NJ, and author of *Compassionomics,* discussed the importance of compassion in combatting burnout. The 2023 TQIP Annual Conference will be held December 1–3, in Louisville, KY.

The second Medical Summit on Firearm Injury Prevention was held September 10–11, 2022, at the ACS Chicago headquarters. A manuscript detailing the meeting's proceedings was submitted to the *Journal of the American College of Surgeons.*

and delivery. Content will be made available free of charge to low- and middle-income countries.

The STOP THE BLEED® (STB) program continues to focus on empowering, educating, and informing individuals in bleeding control techniques. The November 2022 comic book issue of *G.I. Joe: A Real American Hero* featured the STB program. A framed copy of the issue will be displayed at the ACS Chicago headquarters. The STB program will partner with Hasbro, the maker of *G.I. Joe: A Real American Hero,* on future efforts.

In conjunction with the Safe Chicago program, the STB program successfully placed 550 STOP THE BLEED® kits in more than 350 locations throughout the city. Following this successful implementation,

The MyATLS application redesign project is underway . The new design will have a content management system allowing for continuous updates of application material, along with an improved user interface and experience system.

other cities have inquired how to implement a similar safety program within their respective city/county.

ACS Safe Community Standards currently are being developed, and Milwaukee, WI, will serve as a pilot city to develop the necessary standards for the initiative. Discussions to implement similar programs are underway in Phoenix, AZ, and Seattle, WA.

The ACS and the STB program have supported the ongoing war in Ukraine by facilitating the ordering and shipping of bleeding control supplies via fundraising efforts or by vetting organizations with missions in that area. These combined efforts have provided more than $1.7 million in humanitarian orders, with 68,880 Combat Application Tourniquets delivered to Ukraine. More than $90,000 in donations were placed via *stopthebleed.org*.

Office of DEI

The Office of DEI continues to focus on achieving its primary goals and producing key deliverables using a four-part strategic framework: assess and organize; educate and align; evaluate and innovate; and convene and collaborate.

To further assess and organize the DEI work across the College, an ACS DEI Leadership Roundtable was created to bring together leaders to share their respective group's current and planned projects and identify potential gaps. Future meetings will focus on developing common metrics and data collection strategies to measure the reach and impact of ACS DEI initiatives.

The ACS DEI and Anti-Racism Resource and Implementation Toolkit is expected to have a beta launch in June 2023. In collaboration with the Board of Governors (BoG) Diversity Pillar and the ACS Division of Education, the CME-accredited Toolkit will feature a digital, interactive format that allows for ease of use, employs a case-based approach to deliver content that covers more than 40 topics in DEI and anti-racism, and integrates multiple learning modalities.

In partnership with DROPC, an ACS Equity Integration Strategy in Quality and Safety Initiative is underway . By codifying equity into quality and safety standards, the ACS will provide support for 15,000 institutions and programs participating in Quality Verification Programs and working toward improving environmental safety for their workforces. Initial steps for data acquisition are underway , and the launch of Phase 1 is slated for the spring 2023. B

Dr. Goldberg *is the specialty ambulatory medical director and division chief of general surgery at Valleywise Health in Phoenix, AZ, and an associate professor of surgery at Creighton University School of Medicine and the University of Arizona College of Medicine, both in Phoenix, AZ. He also is the Chair of the ACS BoG.*

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[2] Premium Credits are reviewed annually by the Trustees of the ACS Insurance Trust and are based on the insurance programs positive financial performance. A complete listing of base policy rates are available at acs-life.com or by calling 1-800-433-1672.

[3] Including coverage features, costs, eligibility, renewability, exclusions and limitations.

Members in the News

Regent Dr. Carol Brown Appointed to Prestigious US Cancer Panel


Dr. Carol Brown

Carol L. Brown, MD, FACS, FACOG, a renowned gynecologic oncologist, leader in health and cancer equity, and ACS Regent, has officially started her role on President Biden's Cancer Panel. This influential three-person panel monitors the activities of the National Cancer Program and reports directly to the President on barriers to progress in reducing the cancer burden in the US.

Dr. Brown is a professor of surgery at Weill Cornell Medical College in New York, NY. In addition, she is the senior vice-president and chief health equity officer, Nicholls-Biondi Chair for Health Equity, and vice-chair of health equity in the Department of Surgery at Memorial Sloan Kettering (MSK), also in New York City. Dr. Brown is a former member of Cancer Moonshot, which President Biden initiated in 2016 when he was Vice President.

Throughout her career, Dr. Brown has provided high-quality cancer care to women, addressed disparities in cancer care and outcomes, and advocated for improved public policy for gynecologic and other cancers. Her health equity roles at MSK allow Dr. Brown to address the social determinants of health that affect cancer health outcomes. She has been integral to managing the Cancer Health Equity research program, which allows underserved patients to participate in MSK clinical trials.

Dr. John Maa Serves on Tobacco Oversight Committee


Dr. John Maa

John Maa, MD, FACS, a general and trauma surgeon at MarinHealth Medical Center in Greenbrae, CA, has been reappointed to the California Department of Public Health Tobacco Education and Research Oversight Committee. Dr. Maa was first appointed to the committee in 2022. The committee is a legislatively mandated advisory committee charged with overseeing the use of California's Proposition 99 and Proposition 56 tobacco tax revenues for tobacco control and prevention education and tobacco-related research.

Dr. Maa formerly was chair of the University of California Office of the President Tobacco-Related Disease Research Program. Dr. Maa also is a Past-President of the ACS Northern California Chapter and a past member of the ACS Health Policy Advisory Council.

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

Drs. Callisia Clarke and Tom Varghese Named Presidents-Elect of Academic Surgery Organizations

Dr. Callisia Clarke

Dr. Thomas Varghese

Callisia N. Clarke, MD, MS, FACS, FSSO, and Thomas K. Varghese Jr., MD, MS, MBA, FACS, were named presidents-elect of the Association for Academic Surgery (AAS) and the Society of University Surgeons (SUS), respectively. Dr. Clark currently serves as the recorder for the AAS, and Dr. Varghese currently is chair of the SUS Committee on Justice, Equity, Diversity, and Inclusion. Their 1-year terms will begin in 2024.

Both organizations are dedicated to advancing excellence and leadership in academic surgery, with a focus on surgical research. The AAS promotes the development of young academic surgeons, while the SUS supports and advances leaders in academic surgery.

Dr. Clarke is an associate professor and surgical oncologist at the Froedtert Hospital Cancer Center, Medical College of Wisconsin in Milwaukee. At the ACS, she serves on the Committee to Advance Diversity, Inclusion, and Equity, as well as the Cancer Research Program Education Committee.

Dr. Varghese is the associate chief medical quality officer and chief value officer at the Huntsman Cancer Institute, chief of the Section of General Thoracic Surgery at the University of Utah, and professor in the Department of Surgery at the University of Utah School of Medicine, all in Salt Lake City. At the ACS, Dr. Varghese has been a Governor since 2018, where he has served on the Best Practices Workgroup, the Quality, Research and Optimal Patient Care Pillar, and on the Nominating Committee.

Timothy Donahue, MD, FACS, chief of the Division of Surgical Oncology and professor of surgery at the David Geffen School of Medicine at the University of California, Los Angeles, currently is SUS president. Fabian Johnston, MD, MHS, FACS, division chief of gastrointestinal oncology and associate professor of surgery at Johns Hopkins Medicine in Baltimore, MD, is the current AAS president. B

Apply or Nominate a Colleague for Academy of Master Surgeon Educators

APPLICATIONS and nominations now are being accepted for induction into the 2023 class of the ACS Academy of Master Surgeon Educators®. Induction into the Academy is open to master surgeon educators across the global community and the House of Surgery.

Selected through a rigorous peer-review process, the members of the Academy are actively engaged in defining megatrends in surgical education and training, steering advances in the field, fostering innovation and collaboration, supporting faculty development and recognition, and underscoring the critical importance of surgical education and training.

Since the Academy's launch in 2017, its members have hosted annual symposia that bring together Academy members to exchange best practices and discuss critical topics in surgical education, held more than 10 Grand Rounds webinars addressing a range of clinical and nonclinical topics, collaborated on and published significant works of scholarship during the COVID-19 pandemic to address changes in surgical training, hosted open-dialogue Fireside Chats with education experts, and more.

Applications for 2023 membership are due by **Friday, April 28**. Nominations are due by **Friday, April 14**.

Learn more at *facs.org/for-medical-professionals/education/programs/academy-of-master-surgeon-educators/becoming-a-member.* B

New Publication *for Current and Aspiring Leaders in Surgery*

With contributions from more than 80 current surgical leaders, the *Surgical Chairs Playbook* provides practical insights, real-world guidance, and innovative suggestions that will benefit current and aspiring leaders in academia and private practice.

Topics include:

- Managing priorities and resources in mission-focused organizations
- Growing leadership skills throughout your career
- Building productive interpersonal relationships
- Engaging with the business side of surgery

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Open to US/domestic ACS members only, the Advocacy Summit offers attendees the opportunity to develop their advocacy skills, learn more about ACS legislative and health policy priorities, and engage with members of Congress and their staffs.

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