Achieving consensus on OR attire

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The American College of Surgeons (ACS) recently surveyed the membership to determine how surgeons are reacting to changes in the health care marketplace and whether they believe the College is being responsive to their changing needs. In this column, I provide an overview of our findings and describe what the ACS is doing to address the very real challenges facing surgeons, particularly those of you in private practice.

Survey findings
Of the 5,068 survey respondents, slightly more than half (53 percent) have shifted their mode of practice at some point in their career, and more than one-third of the respondents (36 percent) have moved from private practice to employment-based practice. Respondents indicated that their primary organizational/professional concern is improving patients’ clinical outcomes (67 percent), and private practice surgeons (that is, surgeons who own or are partners in a group practice or are solo practitioners) say that a major challenge is improving their practices’ business performance. Although surgeons face a host of operational issues, the most commonly expressed is insufficient reimbursement (61 percent), followed by clinical documentation requirements (52 percent). Private practice respondents also reported concerns about overhead expenses (68 percent) and denial of payment (62 percent).

With respect to satisfaction with the College, surgeons who are employed are more satisfied with the ACS than practice owners or partners (61 percent versus 47 percent). Surgeons in solo practice report the lowest satisfaction level (43 percent) and the highest dissatisfaction (28 percent). Despite somewhat soft levels of satisfaction with the College, most respondents (57 percent) feel the ACS is the one organization that is best positioned to represent their concerns.

Rest assured, the ACS is committed to helping all surgeons, regardless of their practice setting, to maintain their autonomy and to thrive in the modern-day practice environment.
Past-Executive Director of the ACS Thomas R. Russell, MD, FACS, identified the root cause of the problems that plague private practice surgeons in a 2003 *Archives of Surgery* article, noting that surgery has moved from a cottage industry of independent business owners to an industry that is dominated by large conglomerates.¹ Big business’s propensity to swallow up independent firms has affected other industries for more than a century. The federal government first recognized that it needed to turn the dial in favor of small, independent businesses and the spirit of entrepreneurship when it passed the Sherman Anti-Trust Act of 1890.² Subsequently, the Federal Trade Commission (FTC) in the 1920s developed rules that actively encouraged the government, trade associations, and labor unions to work together to manage the terms of market competition.

Early in his presidency, Franklin D. Roosevelt signed the National Industrial Recovery Act (NIRA), which encouraged organized private industry and labor to develop codes of fair competition on an industry-by-industry basis. In 1935, the U.S. Supreme Court declared the NIRA unconstitutional, but let stand an extensive body of free trade laws enacted at the state level. Roosevelt responded by turning up the dial in favor of small, independent businesses and the spirit of entrepreneurship when it passed the Sherman Anti-Trust Act of 1890.³ Subsequently, the Federal Trade Commission (FTC) in the 1920s developed rules that actively encouraged the government, trade associations, and labor unions to work together to manage the terms of market competition.

To more effectively negotiate with insurers, many hospital networks have merged and, in the process, pushed private practice physicians out of business because, unlike hospitals, physicians are unable to engage in collective bargaining. The FTC and the Department of Justice (DOJ) view collaborative negotiations between physicians as price-fixing and, therefore, illegal per se under the Sherman Act. Hence, private practice surgeons have found themselves in a “take it or leave it” position at the negotiating table.

The ACS DAHP is crafting model state legislation that would permit private practice surgeons to jointly negotiate with payors, increase physicians’ bargaining power, and allow collaboration-driven innovation. This mind-set resonated in other circles as well, which argued that certain professionals, including lawyers and physicians, were charging too much for their services and needed to be reined in.³ These forces combined to turn up the dial on the corporatization of health care and begot the mega-insurers and hospital networks that dominate the health care landscape today. In fact, by 2013, the four largest insurers in the U.S. controlled 76 percent of the insurance market.⁴ Payor consolidation has been greatest at the state and local level, and in some locations a single insurer controls more than 90 percent of the commercial health care market.⁵

To respond to these concerns, the ACS Division of Advocacy and Health Policy (DAHP), under the leadership of Patrick V. Bailey, MD, MLS, FACS, Medical Director, Advocacy, is crafting model state legislation that would permit private practice surgeons to jointly negotiate with payors, increase physicians’ bargaining power, and allow collaboration-driven innovation. This legislation would be introduced at the state level because, under the State Action Immunity Doctrine, established in the 1943 Supreme Court ruling on *Parker v. Brown*, anticompetitive action that is sanctioned and overseen by a state is immune from federal antitrust law.
The ACS model legislation has been carefully drafted to comply with the State Action Immunity Doctrine, but to pass joint contracting legislation, the College will need to identify state legislators who are willing to champion the bill. State chapters will likely need to work closely with the DAHP to hire lobbyists and political consultants to counter what we anticipate will be strong resistance from the insurance and hospital industries. In addition, the College anticipates that the FTC and DOJ will likely challenge the state laws in federal court.

This battle will be hard fought and will require the active involvement of all ACS members who are committed to improving the position of private practice in today’s concentrated health care marketplace. The ACS leadership will be calling upon each of you to assist in this effort to preserve your ability to remain competitive and provide quality care to your patients. Together, we can turn the dial in favor of private practice.

*REFERENCES*


If you have comments or suggestions about this or other issues, please send them to Dr. Hoyt at lookingforward@facs.org.
Proceedings and recommendations from the OR attire summit:
A collaborative model for guideline development

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The revised Guideline for Surgical Attire, published by the Association of periOperative Registered Nurses (AORN) in 2015, was the first to invoke operating room (OR) attire as a controllable contributing factor related to surgical site infections (SSIs).\(^1\) That guideline offered 47 recommendations, including one that called for complete coverage of the scalp, hair, and ears. At the time, these were the only recommendations on surgical attire to be issued by a national organization, and they were ultimately incorporated into the Agency for Healthcare Research and Quality’s (AHRQ) National Guideline Clearinghouse. Subsequently, national organizations, such as The Joint Commission and the Centers for Medicare & Medicaid Services, accepted these recommendations as standards for measuring patient safety in the OR.\(^2\) Enforcement of these guidelines was initially variable, but as hospitals began to receive citations for noncompliance, policies that conformed to the AORN recommendations were adopted. In numerous ORs across the country, the wearing of skullcaps, a long-held practice of the surgical profession,\(^3\) was banned, leading to a vigorous debate regarding the process for adopting a national patient safety policy.

In the U.K., a similar debate is brewing on arm coverage. In 2007, the National Health Service (NHS) launched the Bare Below the Elbows (BBE) policy, which requires short-sleeved attire and that no wrist-watches, jewelry, or neckties be worn during any clinical activity. The stated goal of the BBE policy was to reduce nosocomial infections through improved handwashing practices, but physician groups argued that the real goal was to eliminate the use of the white coat,\(^4\) thereby decreasing the stature of the physician.

The AORN recommendations for OR attire and the NHS BBE policy have both been challenged for lacking a sufficient evidence base and for intruding on personal liberty.\(^4,5\) In addition, attire-related regulations were found to unintentionally distract and reduce morale among surgeons, anesthesiologists, and nurses in the OR.\(^5\) Both guidelines were developed with little physician input, leading to the perception of external overregulation, a factor that has been found to be a major contributor to burnout and decreased professional satisfaction.\(^6,7\)

As the leading surgical organization in the U.S., the American College of Surgeons (ACS) published a Statement on Operating Room Attire, which outlines appropriate attire for surgeons based on professionalism, common sense, decorum, and the available evidence on this topic.\(^3\) The American Society of Anesthesiologists (ASA) also conducted a scientific review and published a statement on OR attire.\(^8\) In addition, the Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), and other health care entities published contemporary guidelines on validated strategies to reduce the incidence of SSI, which minimally addressed attire-related practices. No evidence-based guidelines or position papers on OR attire published before or after the release of AORN’s recommendations supported the hypothesis that attire regulations would reduce SSI.

The ACS convened a meeting concerning recommendations for OR attire in February 2018 at its headquarters in Chicago, IL, to support a collaborative discussion and review of the entire body of evidence.
pertaining to OR attire with the aim of promoting perioperative policies and procedures on surgical attire through a multidisciplinary approach representing surgery, anesthesiology, nursing, and infection prevention. The following organizations participated in the summit: the AORN, the ASA, the Association for Professionals in Infection Control and Epidemiology (APIC), the Council on Surgical and Perioperative Safety (CSPS), the Association for Surgical Technologists (AST), and The Joint Commission. This article outlines the process by which this group arrived at a consensus, reviews and scores the evidence base on OR attire, and provides a framework for future recommendations for OR attire guidelines. (For scoring details, see Table 1, “Categorization and appraisal of evidence related to OR attire,” in the online version of this article at bulletin.facs.org/?p=27846.)

The summit
Organizations participating in the summit were asked to appoint delegates and to submit a bibliography of relevant publications for discussion. The process for identifying these materials was left to the discretion of the individual societies and included works published in peer-reviewed and non-peer-reviewed scientific journals, as well as articles published by the lay media. All submitted articles were reviewed by summit attendees.

Each participant received full-text copies of each proposed article. These materials were grouped using a taxonomy that was developed to facilitate discussion and then subdivided into scientific and nonscientific sections. Some societies also provided summaries of their submissions to facilitate discussion at the in-person meeting in Chicago.

The first objective of the summit was to narrow the focus from the broad topic of OR attire to a primary area of concern. Summaries of each submitted article were discussed, and consensus regarding the interpretation of each study was reached. Articles pertaining to hospital attire laundering practices were deferred for discussion at a later date. All participants agreed upon several core concepts related to OR attire, including the need for guidelines developed in a collaborative manner, and key questions, such as particulars regarding beard coverage, were identified for further research.

The reviewed studies were scored by Dr. Moalem, a coauthor of this article, using the principles published by AHRQ. Each group of studies was scored on limitations, directness, consistency, and precision. Groups of studies that contained relevant, valid data were summarized and tabulated for the purposes of scoring the evidence. Only scientific studies, guideline documents on SSI prevention, AORN publications on OR attire, and studies that were foundational to the AORN’s recommendations are included in this article.

In total, 110 articles were submitted by three organizations for consideration (ACS: 44; ASA: 56; AORN: 10), of which 30 were duplicates. A total of 21 articles were published before 1990, and therefore, not collectively reviewed unless an article was considered to be a landmark study or was referenced or used as a basis for a subsequent recommendation. In addition, AST provided its Guidelines for Best Practices for Laundering Scrub Attire along with supporting literature. The College has previously published a summary of the summit participants’ findings. The group unanimously agreed that the primary task of the initial meeting was to determine the effectiveness of OR hats, including the extent of hair coverage, in preventing SSI. Other aspects of OR attire guidelines were determined to be secondary considerations and were left for subsequent consideration.

The articles were subdivided into seven categories, including outcome studies (further subclassified by focus on hats/attire regulations, beards, and BBE policies), studies on porosity or effectiveness of hats, review articles, guideline statements, opinion papers, studies suggesting OR staff as a potential source of contamination, and AORN publications. Brief summaries of the most relevant scientific literature reviewed by summit participants follow.

The AORN recommendations for OR attire and the NHS BBE policy have both been challenged for lacking a sufficient evidence base and for intruding on personal liberty.
Partial in response to AORN’s recommendations, the ACS issued a Statement on Operating Room Attire, which was meant primarily to uphold a tradition of excellence, professionalism, trust, and respect between the surgeon and patient.

**Outcome studies**

Five outcome studies evaluated the relationship between SSI and hair and scalp coverage. One concluded that omission of hats in laminar air flow ORs increased air contamination rates three- to five-fold, but four more recent studies on the extent of hair coverage or the type of hat worn failed to show an association with SSI. Two of these studies used validated outcome databases to determine whether enforcement of AORN recommendations decreased SSI in a combined total of 21,000 operations. Neither study revealed a significant difference, and in both a slight increase in SSI was actually noted (0.77 percent versus 0.84 percent in clean cases and 0.73 percent versus 0.77 percent in clean and clean-contaminated cases combined). A survey-based study of high-volume hernia surgeons also did not reveal an association between hat choice and SSI. Finally, a study attempted to relate adherence to infection control practices and SSI but found no association.

Only two published studies evaluated the effect of facial hair on SSI. The first study used 30 subjects to demonstrate that unmasked, bearded men shed more bacteria than either clean-shaven men or women, and that wiggling the mask increased shedding in bearded men. A subsequent study concluded that unmasked bearded men shed similar amounts of bacteria to their shaved counterparts (9.5 versus 3.3 colony forming units [CFU], p = 0.1). The addition of a mask decreased shedding in both groups (1.6 versus 1.2 CFU). Both studies were limited by small sample sizes (10 in each group).

**Porosity studies**

A November 2017 scientific study systematically tested the permeability, particle transmission, and pore sizes of disposable bouffants, skullcaps (side and top parts), and cloth caps in a mock OR environment. The significant findings revealed that bouffants performed worse than disposable or cloth skullcaps in all parameters studied. Bouffants were demonstrated to have three times larger average and maximum pore sizes (89.4 and 251.8 µm) than cloth (26.1 and 89.5 µm) or the sides (31.3 and 119.8 µm) and crowns (36.2 and 110.0 µm) of disposable skullcaps. Accordingly, bouffants were found to allow for more particle-through transmission and were associated with greater bacterial shedding on settle plates (average 3 CFU versus 1 for skullcap or cloth hat). Home-laundered cloth skullcaps were associated with the least particle transmission, presumably because they have the smallest material pore size. A limitation of that study is that cloth bouffants were excluded from the comparison.

**Guideline documents**

Ten guideline statements on SSI prevention have been published by health care societies since 1999, when the CDC first issued guidelines for the prevention of SSI. The CDC recommended wearing face masks for the protection of the wearer, not the patient. Surgical caps also were recommended, although no comment was made regarding the type or extent of hair coverage. In 2017, the CDC updated its recommendations in the most comprehensive set of guidelines on SSI prevention published to date. In total, the CDC provided 42 statements, including 17 recommendations (8 Category 1A, 4 Category 1B, and 5 Category II), and 25 other comments on SSI prevention-related topics for which the agency could make no recommendation or considered unresolved. No mention was made of OR attire, masks, or head coverings in the CDC update. In the online supplementary materials, the CDC noted that the recommendation for head coverings remained an accepted practice.

Another important publication on SSI prevention was the product of an extensive collaborative effort by five leading health care organizations in September 2014. Like the CDC’s document, none of the 25 recommendations in that document related to OR attire. Similarly, the WHO recommendations on SSI prevention make no reference to attire, scrubs, hats, or hair.
Three guideline statements from the U.K. also made no recommendations on surgical hats or masks, other than to recommend that masks should be worn for the protection of the wearer, although researchers noted that there is insignificant evidence to support the continued wearing of masks to prevent wound infection.24-26 One statement in particular, issued in a report by the Hospital Infection Society Working Party, goes on to state, “There is no need for non-scrubbed staff members of the operating team to wear disposable headgear; however, common sense dictates that hair should be kept clean and out of the way.”26

The AORN Guideline for Surgical Attire was first published in 1975 and has been revised 10 times.1 In 2015, the updated guideline included 47 specific recommendations concerning the material that should be used for scrubs, laundry and storage practices, locker room facilities, and proper wear of attire—the first time that OR attire was implicated as a cause of SSI. Recommendation 3A, “clean surgical head cover or hood that confines all hair and completely covers the ears, scalp skin, sideburns, and nape of the neck should be worn,” has been quite controversial. Other recommendations, such as “when in the restricted areas, all non-scrubbed personnel should completely cover their arms with a long-sleeved scrub top or jacket” directly contradict the BBE recommendations in the U.K. Summit participants reviewed the studies referenced in these recommendations, judging them to be of insufficient quality or relevance to support the recommendations for full hair coverage.

Partially in response to AORN’s recommendations, the ACS issued a Statement on Operating Room Attire,3 as previously noted, which was meant primarily to uphold a tradition of excellence, professionalism, trust, and respect between the surgeon and patient. In addition, the ACS and the Surgical Infection Society published a joint statement in 2016 that provided a comprehensive overview of the scope of the problem of SSI, relevant definitions, and list of proven risk factors. Following a detailed review of the evidence, the authors concluded that although questions related to surgical hat type and material and extent of coverage of skin and hair were hotly debated, no data were available to inform conclusions.27

**Studies suggesting OR staff as a potential source of infection**

Five experimental studies demonstrated high bacterial carriage rates among OR personnel. In one study at a large university hospital, investigators tested 238 culture specimens from 135 personnel, most of whom claimed to change uniforms daily and rated their clothing hygiene as fair to excellent.28 Pathogenic bacteria, a quarter of which were antibiotic-resistant, were isolated from at least one site from 63 percent of the study participants. In another study, each physician served as his or her own control and showed that the level and type of bacterial contamination of OR clothes increased over the course of the day, but was similar both inside and outside the OR setting, suggesting little benefit of repeated changing of clothes.29 Two studies showed that changing into clean scrubs significantly reduced airborne bacterial levels.30,31 The latter study also showed that dispersal of methicillin-resistant staphylococcus epidermidis occurred in 25 percent of women and 43 percent of men.

A small experimental study conducted in the U.K. in 2004 looked at the source of bacterial shedding in laminar flow theaters and was the sole study AORN used to develop its recommendation to cover the ears with hats.32 A total of 20 OR team members had their foreheads, eyebrows, and ears swabbed for culture. The results section of this study comprises a single sentence: “There was a significantly greater number of colonies cultured from swabs taken from the ears (p = 0.047) compared with the other two facial areas studied.”32

Several case reports of outbreaks that were attributed to bacteria carried by hospital staff were reviewed by summit participants, including studies that covered an outbreak of mycobacterium jacuzzii infections
The summit participants emphasize the perspective that attire is the first and often most visible extension of professionalism and should therefore be defined and enforced locally.

REFERENCES


AORN publications

In addition to the AORN recommendations, eight other AORN publications were reviewed, four of which were continuing education activities on how to implement the attire recommendations. Three studies were literature reviews that summarized some of the studies referenced earlier in this article. One study, “Surgical Head Coverings: A Literature Review,” repeatedly stated that “there is no conclusive evidence that hair covering prevents SSI.” Nonetheless, the author suggested that head covering may provide the best possible protection for surgical patients.

A February 2017 editorial revealed AORN’s goal in publishing the guideline was to show that “AORN was at the forefront of evidence-based approaches to perioperative nursing care when we began rating the evidence that supports our guidelines in 2011. Since that time, 17 guidelines have been accepted into the AHRQ National Guideline Clearinghouse, and five more will be submitted in 2017.” The author further extolled AORN as “recognized throughout the health care community, nationally and

continued on next page
internationally, as representing the gold standard for perioperative care.\(^4\)

**Conclusion**

This article details the proceedings of a historic meeting between the ACS, ASA, AORN, APIC, AST, CSPS, and The Joint Commission. The ACS—dedicated to improving the care of the surgical patient and to safeguarding standards of care in an optimal and ethical practice environment—convened and organized the summit. The process was collaborative, respectful, and allowed for a multidisciplinary review of the available evidence on OR attire. Participants unanimously agreed that the summit was the optimal approach to developing guidelines that affect surgical patients, and the authors anticipate that future guidelines will continue to be developed collaboratively for the benefit of all patients and OR caregivers.

Following a careful review of the available literature, the summit participants found that the scientific evidence fails to demonstrate any association between the type of surgical hat or extent of ear and hair coverage and SSI rates. Furthermore, we concluded that one study showed the bouffant hat to be a significantly less effective barrier to the transmission of particles than either disposable or home-laundered cloth skullcaps, both of which have been banned at numerous institutions.

The summit participants emphasize the perspective that attire is the first and often most visible extension of professionalism and should therefore be defined and enforced locally. We recognize that standards for professional attire and behavior are influenced by geographic and socioeconomic factors, as well as patient acuity of illness and hospital culture. We therefore recommend that guidelines governing OR attire requirements be limited to those protocols that are sufficiently supported by evidence and can

**REFERENCES, CONTINUED**


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be implemented while preserving patient safety and clinician autonomy. We further recommend that outcomes, such as SSI, be carefully and continuously monitored and that attire be considered as one of numerous potential causes if discrepancies from historical or national standards are noted. ♦

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• CSPS: Roy Constantine and Joseph Charleman

• AORN: Lisa Spruce and Amber Wood

• APIC: Katrina Crist, Linda Greene, and Janet Haas

• ASA: Paul Pomerantz; Lois Connolly, MD; and Matthew Popovich

• The Joint Commission: David Baker, MD, and Ana Pujols McKee, MD

In addition, we would like to thank Donna Coulombe, ACS Executive Services, for coordinating the summit, providing reference materials, and supporting this project.

REFERENCES, CONTINUED

How do we define disruptive or impaired behavior? Inappropriate and disruptive behavior on the part of physicians and other hospital staff is more than a teamwork issue; these behaviors also present a serious threat to patient safety and quality of care. According to the American Medical Association (AMA), the relationship between patients and physicians is based on trust and should serve to promote patients’ well-being while respecting their dignity and rights. Disrespectful or derogatory language or conduct on the part of either physicians or patients can undermine trust and compromise the integrity of the patient-physician relationship. It can make members of targeted groups reluctant to seek care, and create an environment that strains relationships among patients, physicians, and the health care team.

Disruptive behavior by a physician, often called abusive behavior, generally refers to a style of interaction by physicians with others—including hospital personnel, patients, and family members—that interferes with patient care or adversely affects the health care team’s ability to work effectively. It encompasses behavior that adversely affects morale, focus and concentration, collaboration, and communication and information transfer—all of which can lead to substandard patient care.

As delineated by Ernest Amory Codman, MD, FACS, more than 100 years ago, physicians have a responsibility to monitor hospital activities for quality and safety concerns. This responsibility includes monitoring the medical staff and the actions of its members. When dealing with impaired behavior, physicians have defined
RESOURCES TO IDENTIFY AND MANAGE DISRUPTIVE BEHAVIOR

Federation of State Medical Boards:
- [www.fsmb.org/contact-a-state-medical-board/](http://www.fsmb.org/contact-a-state-medical-board/)

ACS wellness resources:
- [facs.org/member-services/surgeon-wellbeing/resources](http://facs.org/member-services/surgeon-wellbeing/resources)

AMA:
- Module on addressing disruptive physician behavior: [https://cme.ama-assn.org/Activity/5976608/Detail.aspx](https://cme.ama-assn.org/Activity/5976608/Detail.aspx)

Texas Medical Association:
- Ethics program on behavioral health issues, disruptive behavior, and professionalism: [https://texmed.inreachee.com/Details/Information/9a89b903-e296-4ff4-b0ad-c6a453de8eae](https://texmed.inreachee.com/Details/Information/9a89b903-e296-4ff4-b0ad-c6a453de8eae)

The Joint Commission:
- High Reliability Healthcare blog, “Revisiting disruptive and inappropriate behavior: Five years after standards introduced”: [www.jointcommission.org/jc_physician_blog/revisiting_disruptive_and_inappropriate_behavior/](http://www.jointcommission.org/jc_physician_blog/revisiting_disruptive_and_inappropriate_behavior/)

metrics to recognize this conduct. For example, does the physician test positive for certain substances? What is the physician’s blood alcohol level? Most states in the U.S. have programs in place to assist impaired physicians who are in need of treatment. These programs also provide guidelines for medical administrators on how to credential and monitor the impaired physician.

Evaluating, monitoring, and credentialing the disruptive physician can be a more complicated process. What is a disruptive physician? Most surgeons would agree that a physician who throws objects and uses physical force and/or abusive language should be labeled disruptive. Threatening violence or retribution or engaging in sexual harassment also is commonly viewed as disruptive behavior. In other scenarios, the appropriateness of using the disruptive label can be more difficult to determine. While some direction can be garnered through resources such as the AMA Code of Medical Ethics and the Ethics Panel at the World Medical Association, the parameters of what actions
constitute disruptive behavior should be decided locally by the organized medical staff. The medical staff should clearly define which actions are intolerable and how the disruptive physician will be held accountable. Accordingly, the physician should be afforded due process when any medical staff disciplinary action is taken. For example, in the weeks and months leading up to the start of a sport’s season, coaches, referees, and players receive instructions on how penalties will be called and managed. Physicians should be given similar consideration. Several resources are available to help clarify what constitutes disruptive behavior (see sidebar, page 22).

The 2018 ACS Board of Governors (B/G) Survey revealed that 7 percent of Governors have been labeled a disruptive physician, including 5 percent (2/41) of the International Governors, 6 percent (13/212) of the U.S. Governors, and 40 percent (4/10) of the Canadian Governors. Interestingly, when all the Governors were asked if they knew of a surgical colleague who...
had been labeled as disruptive, 83 percent answered affirmatively.

The survey also focused on to whom the disruptive surgeon posed a threat. The survey revealed that 46 percent of the time, the threat was to colleagues, 32 percent to patients and their families, and 35 percent to themselves (see Figure 1, page 22).

Governors were asked if they knew of a colleague who was inappropriately labeled disruptive; 41 percent answered affirmatively (see Figure 2, page 23).

Interestingly, only 52 percent of the hospitals/facilities where Governors practice defined disruptive behavior in their bylaws. However, 74 percent of the Governors said their practices either had policies and procedures or a program to address disruptive behavior (see Figure 3, page 23).

Governors also were asked whether they had encountered circumstances when the label of disruptive behavior had been used to curtail opposition to a policy or change; 49 percent did not believe it was applied in this manner.

Finally, 83 percent of the Governors agree that disruptive behavior is an important issue that the College should continue to address (see Figure 4, page 23).

The impaired physician
Physician impairment is a public health issue that affects not only physicians, but also their families, colleagues, and patients. In this context, the AMA defines impairment as a physical, mental, or substance-related disorder that interferes with a physician’s ability to
undertake professional activities competently and safely.

Almost all of the Governors (99 percent) said they had never been labeled impaired. However, 57 percent knew of a colleague who was impaired (see Figure 5, page 24).

Most of the Governors said they believe the impaired physicians pose the greatest threat to patients and families or to themselves (see Figure 6, page 24).

When a physician is found to be impaired, there are several different ways to address the situation, such as reporting the behavior to a supervisor, hospital, physician health program, and so on (see Figure 7, this page).

Many of the respondents (more than 42 percent) said that impaired colleagues were reluctant to seek help because it might negatively affect their privileges or referrals (see Figure 8, page 26).

Interestingly, only 62 percent of bylaws for the hospitals/facilities where Governors practice define the behaviors of an impaired physician. A definition was more prevalently found in the bylaws of U.S. and Canadian practices than international practices.

Notably, most (58 percent) of the Governors’ hospitals/facilities educate employees on the ethical obligation to report impaired colleagues. Overall, 85 percent of the respondents agreed that the impaired surgeon is an important issue that the ACS should continue to address (see Figure 9, page 27).

**Conclusion**

While less than 10 percent of ACS Governors report that they have been labeled disruptive, more than 80 percent know of a colleague who has borne that label. Because the definition of disruptive behavior is only codified in 52 percent of the bylaws of hospitals/facilities, it is important to ensure a definition is included in your institution’s bylaws, as well as the procedures to manage these behaviors, including ensuring due process for the physician. Fortunately, most of the Governors practice in institutions that have programs to address disruptive behavior.

More than half of the ACS Governors know of a colleague who has been labeled impaired. Unfortunately, many impaired physicians are reluctant to seek help. Being impaired poses a high threat to patients, families, and to the affected physician. Although 70 percent of North American-based and 56 percent of international hospitals/facilities have bylaws defining impairment, those institutions that do not should ensure that this language is defined in future revisions. Emphasis also should be given to the proper ways to report impaired behavior.

The impaired physician has medical condition(s) that should be addressed, regardless of whether they continue to operate. Surgeons have a responsibility to help their colleagues get treatment—for the good of the affected physician and for the safety of their respective patients. As surgeons, we are responsible for monitoring our colleagues who are affected by
FIGURE 8.
Are you aware of impaired colleagues who were reluctant to seek help because it might negatively affect privileges or referrals?

Note: Data may not add up to 100% because of rounding.

BIBLIOGRAPHY

The physician exhibiting disruptive behavior offers a bigger challenge. While many physicians labeled as disruptive have truly needed help, the survey also revealed that more than one-third of Governors were aware of physicians being labeled as disruptive when they disagreed with policies at a hospital or system and/or disagreed with proposed changes. For those wrongly accused, surgeons must ensure medical staff policies, procedures, and bylaws protect due process. For those surgeons who exhibit disruptive behavior, we as colleagues need to provide them with assistance and training to get the train back on the track. The best treatment for disruptive behavior is to prevent its development. Prevention can occur through a number of strategies, such as participation in an ongoing wellness program, improving surgeons’ emotional intelligence, intervention from a colleague, stress reduction activities, and so on. Establishing transparent rules for behavior, as well as the ramifications if the rules are breached, is a good start. These actions can help improve morale and stave off conflict resulting from disruptive behavior.

Documentation of events and interventions are an essential component of the resolution process. Clear communication also is critical in the prevention and management of disruptive behavior. As cases
are reported, investigated, and adjudicated, differences of opinion can be part of the problem, and many stem from miscommunication. With prevention in mind, surgeons should be taught effective listening skills and work to improve their emotional intelligence to avoid conflict and escalating confrontations. Surgeons are natural problem solvers; given the appropriate tools and resources, they can handily deal with this challenge to improve their working environments.

Dealing with physicians who are either impaired and/or disruptive can be more challenging but surmountable with time and effort. The issues of disruptive behavior and impairment are important topics that the ACS should continue to address by developing new resources and information to help surgeons recognize and respond to these behaviors and/or medical conditions in their colleagues.

FIGURE 9.
Level of importance for the College to continue to address the issue of impaired surgeons

BIBLIOGRAPHY, CONTINUED

John M. Howard:
A pioneer in vascular, trauma, and pancreatic surgery

by S. Amjad Hussain, MD, FACS, FRCSC;
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Jonathan H. Demeter, MD;
Joseph J. Sferra, MD, FACS;
and F. Charles Brunicardi, MD, FACS
John M. Howard, MD, FACS, is one of the leading figures in trauma, vascular, and pancreatic surgery. This article recounts his contributions to our profession during his service in the Korean War, his leadership of the National Research Council’s Committee on Emergency Medical Services, and his innovative approaches to surgery that he introduced as chair of the department of surgery, Medical College of Ohio, Toledo.

**Upbringing and education**

Dr. Howard was born August 24, 1919, on a cotton plantation in Prattville, AL, to a well-to-do family. His father, Fontaine Howard, was an educated man who owned and worked the plantation with his wife Mary and their four children, who were each tasked with tending to a patch of cotton after school. Dr. Howard often cited this experience, along with his Methodist upbringing, as instilling the work ethic that would continue throughout his life.

In 1947, Dr. Howard married Nina Abernathy, his high school sweetheart. After 53 years of marriage, Nina passed away in 2000, survived by their five children. (He married an old friend, Sara Sheppard Rice, two years later.) After graduation from medical school and completion of residency training in general surgery at the University of Pennsylvania, PA, in 1950, Dr. Howard joined the faculty of Baylor University, Dallas, TX.

**Korean War and vascular surgery**

The Korean War began June 25, 1950, when North Korea invaded South Korea. In December 1951, Dr. Howard, as part of the Berry Plan (also known as The Armed Forces Physicians’ Appointment Plan) served in Korea as a member of the United States Army Surgical Research Team.

**Editor’s note:** The American College of Surgeons (ACS) Surgical History Group (SHG) hosts an annual Poster Competition at the ACS Clinical Congress. The following article is based on the second-place winner of the SHG Poster Competition at Clinical Congress 2018 in Boston, MA. An article based on the third-place winning poster was published in the April issue of the *Bulletin*.

**HIGHLIGHTS**

- Describes the pioneering work of Dr. Howard in the areas of trauma, vascular, and pancreatic surgery for both civilian and military patients
- Outlines the work of the U.S. Army Surgical Research Team during the Korean War as led by Dr. Howard, which resulted in a significant decrease in amputations
- Summarizes his innovative contributions to pancreatic surgery, including his support of the Whipple procedure as a viable treatment for pancreatic cancer
Dr. Howard wanted to translate his progress in Korea into civilian health care in the U.S. Compared with his success in Korea, the treatment of trauma injuries in the U.S. was in its infancy.

and Residency Consideration Program), was assigned to the 46th Mobile Army Surgical Hospital (MASH) unit, and he was appointed to lead the U.S. Army’s Surgical Research Team. Captain Howard believed he was one of only two surgeons certified by the American Board of Surgery working in the Korean theater.

His primary responsibility was to improve the care of battlefield casualties. It was here that his journey as a scholar, surgeon, and a scientist truly began. His “lab,” as he described it, was indiscernible from the trauma unit. Under Dr. Howard’s supervision, casualties were first brought to battalion aid stations from the front lines, stabilized, then transported by ambulance to a MASH unit eight miles away.

Because of their limited personnel and resources, MASH units only dealt with the most urgent and emergent injuries. Under protocol at the time, vascular injuries to an extremity were suture ligated. In World War II, Michael E. DeBakey, MD, FACS, Dr. Howard’s mentor, found ligation of major vascular injuries had an amputation rate of 63 percent. Hemostat clamps crushed injured vessels, making them unsuitable for subsequent attempts at anastomosis. Seeing the alarming rate of amputation once more in Korea, Dr. Howard accepted the challenge of vascular repair and the prevention of major amputation.

The solution was found in the advances occurring in vascular techniques in the civilian domain. The following surgical milestones in particular ushered in a new era in cardiovascular surgery: operations on the great vessels of infants and children; ligation of a patent ductus arteriosus by Robert E. Gross, MD, FACS, in 1938; and subclavian-to-pulmonary anastomosis by Alfred Blalock, MD, FACS, surgical technician Vivien
Thomas, and pediatric cardiologist Helen Taussig, MD, in 1944.

Improvements in surgical devices also played a part in advancing vascular techniques. Noncrushing bulldog clamps lay in the field and got in the way of delicate surgery. Modified clamps—like the clamps used by Dr. Gross, where the serrations were smoothed and the handles were held closed with rubber bands—tended to slip with disastrous results. Pediatric surgeon Willis J. Potts, MD, FACS, in 1948, invented the noncrushing vascular clamp that had fine serrations to hold the vessel wall in place and jaws designed to close the lumen without excessive force. The instrument was long enough so that handles were outside the immediate operative field, some angled so that they lay flat while the jaws bent inward into the wound.

Dr. Howard saw the Potts clamp as a possible solution. In defiance of military dogma on the management of major vascular injury, Dr. Howard assigned Edward J. Jahnke, Jr., MD, FACS, a surgery resident at the time, to bring a supply of Potts clamps to Korea. Using the new instrument, the two began to repair major arterial injuries, saving the limbs of numerous soldiers. But two problems seemed insurmountable: a lack of clamps and too few surgeons in the Korean War theatre who were familiar with vascular repair.

Under patent, one supplier produced the Potts clamp, and the demand for the instrument was so high that it was back-ordered, and, according to the manufacturer, none were available for months. The U.S. Army, at Dr. Howard’s urging, wrote to the manufacturer and emphasized the urgent need of the clamps to support the war effort. The U.S. Army was unsuccessful in procuring the needed instruments. With soldiers continuing to suffer limb-threatening vascular injuries, Dr. Howard and his colleagues tried a bolder gambit. They sent a letter of their own that stated that because of the demands of war, the government would be obliged to break the patent and manufacture the clamps if the instrument maker did not supply them. It was a bluff worthy of Hawkeye Pierce and Trapper John McIntyre (characters from *M*A*S*H*, the American war comedy-drama television series that aired on CBS from 1972 to 1983)—but it worked. Within two weeks, six clamps (one for each MASH unit) were delivered to the MASH headquarters unit in South Korea.

The next step was training the other surgeons in South Korea. A call was sent out to each MASH unit for a pair of young surgeons to be sent to the 43rd Surgical Hospital, where Dr. Howard’s colleague, Carl Hughes, MD, was based. Drs. Howard and Hughes conducted a one-day training session on vascular repair, after which the surgeons returned to their stations. With training and the new clamps, the amputation rate fell to 7 percent according to Dr. Howard’s study, and, tongue in cheek, Dr. Howard called his session the first abbreviated but authentic vascular fellowship.

The initiatives developed by the Army Surgical Research Team reflect Dr. Howard’s ingenuity. Acute renal failure following extensive trauma carried a mortality rate of 90 to 95 percent, whereas soldiers with similar injuries uncomplicated by acute renal failure had less than a 10 percent mortality. Dr. Howard recognized that adequate treatment of acute renal failure could improve survival. At the time of the Korean War, ...
conflict, the U.S. had only two functioning dialysis machines in the region. Under Dr. Howard’s direction, physicians and technicians devised a machine of their own using sausage skins, electrolyte fluid, and a washing machine, similar to a device designed by dialysis pioneer Willem Kolff, MD, in WWII. Using 200 feet of cellophane membranes from sausages, intravenous tubing as cannulas, and appropriate electrolyte solutions, a dialysis center was established 75 miles from the front lines. Patients requiring dialysis were flown in by helicopter to the center. The result was a significant reduction in mortality from renal failure. Other projects pursued by the research team were resuscitation techniques, replenishment of fluid and electrolytes, the use of prompt surgical intervention, and procurement of plastic bags for storage of blood. On his return to the U.S., Dr. Howard wrote a four-volume book titled *Battle Casualties in Korea: Studies of the Surgical Research Team*, published in 1955. The work chronicled his observations and the research conducted by the Surgical Research Team.

**Trauma and emergency medicine**

After his service, Dr. Howard returned to Baylor University, where he worked with Dr. DeBakey for two years. He continued to work in surgical innovation and education with appointments as the chair of surgery at Emory University School of Medicine, Atlanta, GA; Hahnemann Medical College (now Drexel University College of Medicine), Philadelphia, PA; and, eventually, at the Medical College of Ohio (today the University of Toledo College of Medicine).

Dr. Howard wanted to translate his progress in Korea into civilian health care in the U.S. Compared with his success in Korea, the treatment of trauma injuries in the U.S. was in its infancy. For example, most ambulance services were owned by funeral homes. Hospital emergency rooms were staffed by health care professionals on a rotational basis. Emergency medicine and trauma training had yet to emerge as disciplines, and no formal training programs had been established for paramedics and first responders.

Dr. Howard prodded the National Research Council (NRC) to create a Committee on Emergency Medical Services (EMS), which he chaired from 1960 to 1973. In 1966, the committee published a white paper titled *Accidental Death and Disability: The Neglected Disease of Modern Society*, which chronicled the shortcomings of the approach to trauma in the U.S. The committee recommended sweeping changes, including standardized training for EMS personnel, medical requirements for ambulance design, and the need for a nationwide emergency medical communication system. He also founded the American Trauma Society (ATS) in 1968, serving as president for two years.

In 1973, Dr. Howard joined the faculty at the Medical College of Ohio, where he received a $2.5 million grant to test the EMS system he proposed at the NRC. Previous attempts to create nationwide emergency medical communication systems had failed because of sporadic interest. Under his supervision, an EMS system was developed in 15 counties, which would serve as the model for the national system in place today.
Pancreatic surgery
In addition to his contributions to vascular and trauma surgery, Dr. Howard was known for his expertise in pancreatic surgery, earning him the informal moniker “The Pancreas Man.” His dedication to the diseases of the pancreas led to advances in the surgical treatment of pancreatitis and pancreatic cancer. At the time, pancreaticoduodenectomy, also known as the Whipple procedure, was considered the only curative operation for pancreatic cancer. With a mortality rate of 25 percent, many members of the surgical community considered the procedure prohibitively dangerous. George Crile, Jr., MD, FACS, of the Cleveland Clinic, OH, called for a moratorium on the operation.

Dr. Howard disagreed. Based on his own experience, he was convinced that the mortality rate could be lowered with good surgical technique, intraoperative support, and attentive postoperative care. In 1968, Dr. Howard published “Forty-one consecutive Whipple resections without an operative mortality” in the *Annals of Surgery* to prove it could be a therapeutic option with an acceptable risk to the patient. He was recognized and honored around the world. The Royal College of Surgeons of Edinburgh and the College of Surgeons of Brazil awarded him honorary fellowships. He received awards of distinction from the NRC, ATS, and the Japan Surgical Society. In 2001, the Medical College of Ohio conferred Dr. Howard with the honorary degree (Honoris Causa) in medical sciences and 10 years later established an endowed professorship in pancreatic diseases in his name. Perhaps his proudest accomplishment, however, was receiving the presidential Legion of Merit from President Dwight D. Eisenhower in 1953 for meritorious conduct in the performance of outstanding service.

Conclusion
Dr. Howard contributed to significant advancements in the field of vascular and trauma surgery. He implemented new techniques and medical treatment both during his service in the Korean War and subsequent return to the U.S. As an innovator in pancreatic surgery, he demonstrated that the Whipple procedure was a viable treatment for pancreatic cancer.

Dr. Howard celebrated his 90th birthday surrounded by family, colleagues, and friends in celebration. In his brief remarks, he said the day was one of the happiest in his life, then whimsically invited the guests to return in 10 years to help him celebrate his 100th. In March 2011, Dr. Howard died after a brief illness at the age of 91. Those close to the innovative surgeon say he was a modest man: affable, courteous, and unflappable, who found opportunities to provide care when confronted with adversity.

Scholarly contributions and awards
Dr. Howard authored 400 scientific papers, wrote 31 book chapters, and was the author or co-author of 12 books. His last major contribution was a two-volume definitive biography of Allen O. Whipple, MD, that was published in 2004 when Dr. Howard was 85 years old.
Dr. Howard’s traits are ones all surgeons should strive to possess and demonstrate.

Authors’ note
Dr. Howard was a personal friend of the senior author, Dr. Hussain, for more than 30 years. Though much of the information described in this article is accessible in the literature, some anecdotes are the result of personal conversations Dr. Hussain had with Dr. Howard and his family. His contributions to vascular surgery, trauma, EMS, and pancreatic surgery are outstanding legacies that deserve the surgical community’s wide appreciation. To those who knew him, Dr. Howard was an exceptional man outside of the surgical suite, with rare qualities of persistence amid seemingly insurmountable difficulties, patience over anger, and confidence matched by performance. He left a rich gift of service to humanity. The culture Dr. Howard fostered for surgical innovation and training continues at the University of Toledo and in the department of surgery that he led.

REFERENCES
The 2019 state legislative sessions are in full swing, with dozens of new health care-related bills introduced every day. Bills addressing trauma funding, injury prevention, out-of-network billing, physician Maintenance of Certification (MOC), and scope of practice have begun to make their way through state capitols across the country. In response, the American College of Surgeons (ACS) State Affairs staff has sent Action Alerts to nearly 2,900 Fellows, tracked more than 1,200 bills that would affect surgical care, and participated in eight chapter lobby day events. In spite of this early progress, the sessions are far from over, which means that State Affairs staff will continue to advocate on behalf of surgeons and patients, while working to stay on top of surgery-specific legislation in all 50 states.

**Trauma**

**Bleeding control kits**
The ACS has championed the Stop the Bleed® program—a nationwide campaign that empowers ordinary citizens to save lives in the event of a traumatic bleeding injury—since its inception in 2012. Similar to cardiopulmonary resuscitation training, Stop the Bleed allows citizens to act quickly in the event of a medical emergency by teaching bystanders how to most effectively control severe bleeding until first responders arrive.

Over the course of the past several years, hundreds of thousands of Americans have been trained in bleeding control techniques, and Stop the Bleed has achieved national recognition. Building on this success, many states have introduced legislation that would mandate the installation of bleeding control kits in public schools and government buildings. By training students, teachers, and public servants to stop severe bleeding and by ensuring that tourniquets, gauze, and other medical supplies are readily available, legislators aim to improve survival rates in schools and communities across the U.S.

One state taking affirmative steps to ensure the well-being of its students is Indiana. On January 3, state Rep. Randy Frye (R) introduced H.B. 1063, which requires the installation of bleeding control kits in all Indiana public schools by 2020. The bill was cosponsored by state Rep. Bradford Barret, MD, FACS (R), an active member of the ACS Indiana Chapter. Dr. Barret, working with the chapter and other stakeholders, succeeded in getting H.B. 1063 introduced and unanimously passed in the House 99–0 and in the Senate 48–0. Much of the bill’s success was attributable to the fact that private stakeholders have provided most of the funding for the kits. And, because Indiana taxpayers will bear no
direct cost, H.B. 1063 has engendered broad bipartisan support.

At least six other states have introduced bills mandating the installation of bleeding control kits in schools or other public places—California, Massachusetts, Missouri, New York, Tennessee, and Texas—while the Louisiana Chapter is working to identify a sponsor for a bill when the legislature convened in April. Tennessee Chapter President George Maish, MD, FACS, and Cathy Wilson, RN, MSN, ACNP-BC, Vanderbilt University Medical Center, Nashville, testified at hearings of the House K–12 Subcommittee and Senate Education Committee on March 6 in support of H.B. 215 and S.B. 259 to require the installation of bleeding control kits in schools and Stop the Bleed training for school personnel. An amended version of S.B. 259, which makes the purchase of bleeding control kits optional but training mandatory, passed out of committee and at press time was awaiting further action in the Senate. The House Education Committee agreed to incorporate the amendment to S.B. 259 into the language of H.B. 215. That bill was heard in the House Education Committee on March 20, with testimony from Timothy Nunez, MD, FACS, and Christopher Brown, CCP, representing the Tennessee Chapter. Both bills continue to move through the legislative process with session adjournment scheduled for May 8.

Although members on both sides of the aisle tend to support these bills, several state legislatures have failed to enact similar legislation requiring bleeding control kits in schools or public places. Passage of similar bills in 2018 was unsuccessful. Georgia and North Carolina secured funding to purchase kits for schools through the budget process, but other state legislatures have failed to enact legislation largely because of the financial commitment necessary to purchase kits.

Arkansas has taken a novel approach to the challenge of securing funding for kits with the introduction of H.B. 1014. Instead of requiring that kits be installed in public schools, H.B. 1014 requires that every student complete a bleeding control course to graduate from high school. So far, the legislation has been well received and if passed could set the stage for a follow-up bill next year, which would appropriate money for bleeding control kits in Arkansas schools.

**Trauma funding**

Three bills were introduced in 2019 in Texas with the intent to eliminate the Texas Driver Responsibility Program, which generates an estimated $71 million in funding for the state trauma system. Two of the bills, S.B. 191 and S.B. 87, would replace the lost revenue with either an increase in registration fees or a temporary increase in traffic fines. The third bill, H.B. 550, would gradually phase out the program with no identified revenue replacement. In the later part of the session, another bill, H.B. 2048, was introduced to get rid of the program and implement an alternative revenue source, and this bill seemed to have some traction.

In Connecticut, Sen. Martin Looney (D) introduced a bill that would prohibit trauma centers from charging trauma activation fees. The Connecticut Chapter of the ACS opposed the legislation and provided testimony February 11 before the Joint Committee on Public Health. In addition, the chapter sent grassroots Action Alerts asking Connecticut Fellows to contact committee members to urge their opposition to the bill. Since then, the bill has remained in the committee but is still active. The Connecticut Chapter will continue to monitor the bill and take further action as necessary.

**Injury prevention**

In New Jersey, a six-bill package would establish a hospital-based violence intervention program. The legislation establishes programming for hospitals and trauma centers with sections that address funding, counseling, and Medicaid payments. The New Jersey Chapter is working with the sponsor to build

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support for the bill. Another hospital-based violence intervention program bill, A.B. 166, was introduced in California and would extend Medi-Cal benefits to beneficiaries who participate in hospital-based violence prevention programs.

In Connecticut and Nebraska, legislation has been introduced on the use of helmets while driving or riding on a motorcycle. The Connecticut Chapter presented testimony February 25 to the Joint Transportation Committee in support of H.B. 7140, which would require a person to wear a helmet while on a motorcycle. Meanwhile, the Nebraska Chapter opposes L.B. 378—legislation that would eliminate the requirement to wear a helmet while on a motorcycle. Proposed legislation in Massachusetts, Virginia, Washington, and West Virginia would weaken existing state law by exempting adults 21 years or older from the requirement to wear a helmet, whereas a bill in Iowa would create a universal helmet law for all motorcycle riders and passengers. Legislation in New York, A. 214 and S. 320, calls for the state Department of Transportation to study the efficacy of motorcycle helmets in preventing injury.

Cancer prevention
The ACS Commission on Cancer (CoC) and other stakeholder organizations continue to monitor and engage on cancer-related state legislation, such as expanding health insurance coverage for breast, cervical, colorectal, and prostate cancer; raising the age for tobacco purchase to 21 years old; and protecting minors from the harmful effects of tanning beds, as well as permitting student use of sunscreen products at school and school events.

Legislation to expand coverage for three-dimensional (3-D) breast tomosynthesis mammography has been introduced in Hawaii, Iowa, Massachusetts, Minnesota, and Oklahoma, and a bill introduced in New Hampshire would clarify the reimbursement rate for the screening. New Hampshire expanded coverage for 3-D mammography in 2018. The ACS sent letters of support for the bill in Hawaii, H.B. 481, and New Hampshire, S.B. 58. The Hawaii House Committee on Finance passed H.B. 481, and the New Hampshire State Senate passed S.B. 58.

In addition to 3-D mammography, other legislation has been introduced to improve access to cancer screenings, including breast cancer screening coverage and access legislation in Connecticut, Illinois, New York, Pennsylvania, Texas, and West Virginia. Legislation that New Mexico Gov. Lujan Grisham (D) signed into law February 4, H.B. 66, requires patients receiving a mammogram to be given written notification that dense breast tissue was detected during the screening. Similar bills are pending in Georgia, Illinois, and Oklahoma.

Screening bills for colorectal cancer have been introduced in Maine, Massachusetts, Mississippi, New York, and Rhode Island. In addition, a bill to provide lung cancer counseling and screening for MaineCare recipients was introduced in Maine, and a bill in Missouri would establish two pilot programs to provide screening and treatment services—one in St. Louis and one in Pemiscot, New Madrid, or Dunklin county.

Tobacco 21, the advocacy campaign to increase the minimum age to purchase tobacco products from 18 years old to age 21, continues to gain in popularity, with 17 states introducing legislation in 2019: Connecticut, Illinois, Indiana, Iowa, Maryland, Minnesota, Mississippi, New Hampshire, New Mexico, New York, Oklahoma, Tennessee, Texas, Vermont, Virginia, Washington, and West Virginia. Virginia Gov. Ralph Northam (D) signed H.B. 2748 into law February 21. Seven states, including California, Hawaii, Maine, Massachusetts, New Jersey, Oregon, and Virginia, restrict tobacco sales to 21-year-olds. The Washington State House of Representatives passed H.B. 1074 February 20, sending the bill to the Senate for consideration.
while House committees in Illinois and Minnesota and a Senate committee in New Hampshire advanced similar bills. A bill in Mississippi is the only one to fail as of press time.

Efforts to establish prohibitions on access to tanning beds for individuals younger than 18 years old are ongoing. Arizona, Indiana, Iowa, Maryland, Michigan, Missouri, Nebraska, and Montana introduced legislation on tanning bed restrictions. The bill in Arizona, S.B. 1119, failed to pass in the Senate Commerce Committee, and the Montana bill, S.B. 21, initially tabled in committee, was pulled directly onto the Senate floor and scheduled for a third reading and vote. The legislation in Nebraska, L.B. 140, was discussed at a committee hearing, but no action was taken. Two bills in Maryland were scheduled for committee hearings February 27–28.

The College and the CoC continue to participate in a coalition of health care organizations that support the enactment of laws that would allow students to possess and use sunscreen products on school grounds and at school-affiliated events. Legislation on this issue is pending in Arkansas, Maine, Massachusetts, Missouri, Rhode Island, New Jersey, and the District of Columbia.

MOC
Physician MOC refers to the process that surgical and medical specialty boards use to verify that the physicians whom they have certified continued lifelong learning, self-assessment, quality improvement, and adherence to professional standards of practice. The ACS maintains that board certification and continuous certification are necessary to affirm that surgeons have the educational background and competencies needed to provide quality care. This verification process is integral to ensuring that health care professionals have the rare privilege of self-regulation. At this time, legislation restricting the use of MOC has been introduced in Arkansas, Connecticut, Indiana, Massachusetts, New Jersey, North Dakota, Utah, and Virginia.

The Virginia Chapter of the ACS successfully opposed H.B. 167, which died in committee January 29. Bills in Arkansas, Massachusetts, and Rhode Island remain active but have not yet been scheduled for hearings or votes in committee. Bills in Indiana and North Dakota, on the other hand, have passed through the committee process and have been voted out of the first chamber.

In Indiana, the state chapter worked to oppose S.B. 203—legislation that would restrict the use of MOC for licensure, reimbursement, and hospital privileging. Don Selzer, MD, FACS—one of the Chapter’s two Ellenberger Award recipients for outstanding work in advocacy—testified on S.B. 203 January 24 before the Senate. In addition, the chapter sent Action Alerts to surgeons in the state, asking that they contact their elected officials to oppose the bill. Despite these efforts, the bill’s sponsor, Sen. Liz Brown (R), succeeded in moving the bill through the Senate and into the House. The Indiana Chapter will continue to communicate with elected officials in the state to educate them on MOC and urge them to oppose S.B. 203. Furthermore, ACS State Affairs staff will continue to monitor all active MOC bills and work with chapters as needed to oppose legislation that would weaken MOC.

State Chapter Lobby Days
The Chapter Lobby Day Grant Program began in 2010 as a way to encourage state chapters to get more involved in advocacy by providing surgeon advocates with the opportunity to engage with their elected officials face-to-face. Each year, participating chapters may apply for a grant of up to $5,000 or an enhanced grant of $15,000. Chapters are awarded only one grant per year and must match at least half of the funds provided by the College; for example, a
$5,000 grant recipient would be required to match $2,500 of its own funds.

This year, a record 27 states are participating in the Chapter Lobby Day Grant Program. Michigan received the College’s enhanced grant of $15,000 to help the chapter pursue comprehensive trauma funding legislation in the state. Michigan remains one of the few states in the U.S. without a comprehensive statewide trauma system.

To date, lobby days have occurred in Arizona, California, Connecticut, Florida, Georgia, Indiana, Kansas, Maine, Maryland, Nebraska, New York, Oregon, Tennessee, Texas, and Virginia. Chapters hosting lobby days later this year include Alabama, Arkansas, Illinois, Massachusetts, Michigan, Minnesota, Nevada, North Carolina, Ohio, Pennsylvania, Washington, and Wisconsin. Learn more about the ACS Chapter Lobby Day Grant Program at facs.org/advocacy/state/chapter-grant.

Other issues

Single payor

While the debate on Medicare for All is occurring at the federal level, states are moving forward with their own plans for expanding health insurance coverage for their residents, including proposals to create state-run health systems in Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, and Rhode Island. Other proposals seek to expand state Medicaid coverage to a larger pool of residents with higher incomes or with disabilities who traditionally would be ineligible. States where related bills are under consideration include Hawaii, Missouri, Montana, New Mexico, Tennessee, and Texas. Washington has a bill to create a workgroup to study the possibility of a publicly funded universal health care system.

New York’s proposal, A. 5248/S. 3577, would provide health care coverage for all New York residents, including all benefits covered by Medicaid, Medicare, Child Health Plus, and Affordable Care Act (ACA) mandates. Private health insurers would no longer provide coverage in the state. The plan would be paid for through increases in payroll and nonpayroll taxes, such as levies on investments. On February 28 the New York Chapter submitted a memorandum of opposition to A. 5248 to the Assembly Health Committee.

The bills are similar to the versions that the New York Assembly approved in 2018. The ACS New York and Brooklyn-Long Island Chapters and Manhattan Council advocated in 2018 that legislators oppose the previous version of the single-payor proposal, raising concerns about potential negative effects on patient care in New York. The New York Senate did not vote on the legislation in 2018, but the chamber was controlled by Republicans at that time. Republicans lost their majority in the November 2018 election, and in 2019, Democrats control the New York Assembly, Senate, and Governor’s office.

Scope-of-practice legislation

Optometrists again are pushing state legislation to expand their scope of practice to include surgical procedures, such as injections and laser surgery. Legislation has been introduced in Arkansas, Illinois, Iowa, Maryland, Minnesota, Nebraska, Texas, Vermont, and Wyoming. The College, in collaboration with other physician groups, sent a letter of opposition and initiated an Action Alert to members asking them to contact the Maryland Senate Energy, Health and Environmental Affairs Committee in an effort to defeat optometrist scope expansion S.B. 447. The ACS also intervened on other scope-of-practice issues, including submitting letters in opposition to a bill in Arkansas, S.B. 184, which would authorize the independent practice of certified registered nurse anesthetists, and offering support to the Indiana Chapter’s efforts to testify
in opposition to H.B. 1097 on independent practice of advanced practice nurse practitioners.

**Out-of-network/unanticipated billing**
For the last several years, public attention has turned to concerns about the practice of balance billing, where a patient receives an unanticipated medical bill following an insurer’s refusal to pay all or a portion of claim submitted by an out-of-network physician. This practice often occurs in the provision of emergency care, but more recent examples in the media have highlighted similar situations in the provision of nonemergency care, not only raising awareness in the state legislatures but also in Congress. To date, at least 23 states have considered legislation addressing unanticipated billing and network adequacy in some way, including Colorado, Connecticut, Georgia, Hawaii, Kentucky, Massachusetts, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, Washington, and West Virginia.

The problem of unanticipated out-of-network bills is complex and requires a balanced approach to resolve. Chapters and Fellows should collaborate with their colleagues in their states, including state medical societies and state specialty societies, to develop solutions that will work best for their state.

**Bariatric surgery coverage**
The Kansas and Connecticut Chapters are leading efforts to enact legislation to expand essential health care insurance benefits to include coverage for bariatric surgery. The Connecticut Chapter testified February 14 before the Joint Committee on Insurance and Real Estate in support of S.B. 317. The Kansas Chapter has held preliminary meetings with House Majority Leader Dan Hawkins (R) and Kansas Insurance Commissioner Vicki Schmidt to discuss the possibility of introducing a bill in the legislature or pursuing an alternative regulatory approach to expanding coverage.

**Get engaged**
Engagement of ACS Fellows is critical in ensuring that surgeons continue to be leaders in patient safety and health care quality. Fellows are encouraged to support ACS advocacy efforts by participating in state chapter meetings and lobby days, building relationships with elected officials (critical to effective grassroots advocacy), speaking about public policy issues with colleagues, responding to grassroots Action Alerts from the College, and attending the annual ACS Leadership & Advocacy Summit.

The ACS State Affairs team is always available to answer questions and provide background information regarding state issues and policy programs. Numerous state advocacy resources are available on the College’s website at facs.org/advocacy/state, and Fellows may contact us any time at state_affairs@facs.org or at 202-337-2701.
Editor’s note: The Bulletin is publishing the collected papers from the Metabolic Surgery Symposium, which took place in August 2017 at the American College of Surgeons (ACS) headquarters, Chicago, IL. This month’s articles focus on the role of the National Institutes of Health in the development of metabolic and bariatric surgery, and advocacy in action. Next month’s articles will focus on the ACS and metabolic surgery, and quality and safety programs in metabolic and bariatric surgery.
The role of the NIH in the development of metabolic and bariatric surgery

by Bruce M. Wolfe, MD, FACS; Elizaveta Walker, MPH; David Sarwer, PhD; Ninh T. Nguyen, MD, FACS; James Mitchell, MD; Robin Blackstone, MD, FACS; Lee M. Kaplan, MD, PhD, FACS; Henry Buchwald, MD, PhD, FACS; and Walter J. Pories, MD, FACS

From 1978 to 1991, the National Institutes of Health (NIH) hosted consensus conferences organized for the purpose of summarizing the state of knowledge in the field of metabolic and bariatric surgery (MBS) as determined by an evolving panel of experts who reviewed available published scientific literature and presentations. This article summarizes the three MBS consensus conferences and discusses the development of the 1998 NIH guideline that was the culmination of these conferences. The most recent product of these efforts, a guideline published by the American Heart Association (AHA), the American College of Cardiology (ACC), and The Obesity Society (TOS) in 2013, is also reviewed in this article. Previously, NIH scientists appointed panel members and oversaw the process in releasing guideline statements. However, during the most recent conference in 2013, the guideline process and efforts were transferred to the aforementioned organizations for release of the latest statement. This latter report indicates a departure of the NIH in the organization of MBS guideline statements.

This article also summarizes NIH-supported research and funding of clinical trials examining both medical and surgical weight-loss interventions, highlighting the Look AHEAD (Action for Health in Diabetes) research study and the Longitudinal Assessment of Bariatric Surgery (LABS) studies and their effect on this field. Finally, a
description of future research priorities for evaluating the state of the evidence and defining priorities for MBS research is offered.

The next frontier in MBS research will be providing research support to strengthen personalized care among populations with obesity and enhancing the capability to predict which patient populations may experience the greatest benefit from MBS as compared with nonsurgical interventions. Continued NIH support is vital to the ongoing development of safe and effective interventions that address obesity and its comorbidities.

NIH consensus conferences
Summary reports of the proceedings and recommendations of the expert panel were published as NIH consensus conference statements. This process played a major role in the early development of metabolic/bariatric abdominal surgical procedures as treatment for severe obesity and related metabolic diseases. The first conference devoted to this issue took place in 1978. The evidence base was a series of cases on the surgical treatment of obesity with intestinal (jejunoileal) bypass operations. The report noted the treatment was effective in reducing weight but had a number of undesirable complications.1

A second NIH Consensus Conference on MBS convened in 1985 and focused on the health implications of obesity. The third and most recent NIH Consensus Conference took place in 1991. A panel of experts reviewed published literature as well as oral presentations and responded to questions from the audience in order to construct a consensus statement.2 By the third conference, vertical banded gastroplasty and Roux-en-Y gastric bypass (RYGB) replaced jejunoileal bypass as the preferred surgical treatment. The panel made the following recommendations:2

- Patients seeking effective therapy for severe obesity for the first time should participate in a nonsurgical program, including a dietary regimen, appropriate exercise, and behavior modification. Transient success of very low-calorie diets, behavioral modification, and limited pharmacologic intervention was also noted.
- Restrictive or bypass procedures “could be considered for well-informed and motivated patients with acceptable operative risks.”
- Patients who were candidates for surgical procedures should undergo evaluation by a multidisciplinary team.
- The operation should be performed by an experienced surgeon in an appropriate clinical setting.
- Lifelong medical surveillance after surgical therapy “is a necessity.”
- Specific criteria for operative intervention were determined to be patients with body mass index (BMI) >40 kg/m² as well as patients with BMI 35–40 kg/m² who had high-risk comorbid conditions, such as cardiopulmonary disease, severe diabetes, and physical problems that interfered with their lifestyle (for example, employment, family functioning, ambulation).

The 1991 consensus conference and its subsequent statement were seminal events in the development and acceptance of bariatric surgery as an appropriate treatment for severe obesity and its related diseases. These basic criteria for selection of patients have persisted. Notably, the studies that led to these recommendations did not include the laparoscopic approach to the procedures, which is known to decrease the incidence of complications; the implementation of national accreditation; or results of high-level evidence describing the procedures’ effects on specific treatment groups. In 2013, the NIH formally retired the Consensus Development Program and concluded the organization of
The 1991 consensus conference and its subsequent statement were seminal events in the development and acceptance of bariatric surgery as an appropriate treatment for severe obesity and its related diseases. These basic criteria for selection of patients have persisted.

Consensus conferences of any type. As a result, the 1991 Conference Statement has not been updated by the NIH to include consideration of MBS in patients with less severe obesity (BMI 30–35 kg/m²) with associated comorbid conditions, particularly type 2 diabetes mellitus (T2DM).

NIH guidelines for the treatment of obesity

Although the NIH consensus conferences produced statements based on the recommendations of the expert panels, they were not official policy statements of the NIH; however, the consensus conference statements did lead to the development and publication of NIH guidelines, which are official NIH documents. In 1998, a panel of experts in obesity and health policy examined emerging criteria for construction of evidence-based guidelines. The panelists, none of them surgeons, recognized a preference for clinical evidence based on randomized control trials (RCTs).

One RCT comparing gastric bypass to nonoperative/medical controls was identified, and several other RCTs regarding specific aspects of conduct of the operations and perioperative care were identified. In addition, observational data were considered, including the Swedish Obese Subjects (SOS) study, a trial that consisted of observational data from surgical patients as well as matched patients treated with usual care.

The panel found no basis to alter the conclusions of the 1991 consensus panel and issued guidelines that mirrored recommendations from the 1991 consensus panel.

In 2007, the NIH appointed a new expert panel, including one surgeon, to update the 1998 guidelines. Criteria for selection of research papers to comprise the evidence base were refined to include the requirement of 80 percent retention. Because few evidence-based RCTs had been completed, reports from the SOS trial as well as the LABS study were included among the papers comprising the evidence base.

Following a prolonged, five-year process, the panel issued NIH’s Systematic Evidence Review from the Obesity Expert Panel, 2013 and referred the review and publication of any additional guidelines to the AHA, the ACC, and TOS. Hence, the NIH has no official medical or surgical position, consensus statement, or guideline regarding the treatment of obesity at present.

This guideline includes the strongest evidence-based recommendation of support for the surgical treatment of obesity among several guidelines in stating that physicians should “be proactive in identifying patients who would benefit” when “referring them to a surgeon.” Specifically, the 2013 AHA/ACC/TOS guideline states that patients with a BMI >40 kg/m² or BMI >35 kg/m² with an obesity-related comorbid condition who have failed behavioral and dietary modification with or without pharmacotherapy may be appropriate MBS candidates, and physicians should offer referral to an experienced bariatric surgeon for consultation and evaluation. In 2013, the evidence was judged to be insufficient to either endorse or discourage surgical intervention for patients with BMI <35 kg/m², because the evidence base at the time of the systematic literature review omitted the multiple RCTs that addressed metabolic/surgical intervention for patients with T2DM and BMI 30–35 kg/m². There has been no indication to date that the AHA, ACC, or TOS intend to update these guidelines.

NIH-supported research

The NIH conducts and supports investigators in the conduct of basic science, physiology, and treatment of obesity and related diseases. These investigations have made significant contributions to the health care professions’ understanding of obesity and the effects of treatment (see Table 1, page 45). Study of patients who underwent bariatric surgical procedures contributed to greater identification and understanding of the biology of obesity and its relation to gastrointestinal tract structure and function.
NIH clinical trials
The NIH has funded clinical trials of both medical and surgical weight-loss interventions for more than 50 years. A large number of these clinical trials have examined aspects of obesity and the response to interventions with a range of outcomes. Two examples of these trials are the Look AHEAD research study and the LABS consortium.

Look AHEAD
The Look AHEAD trial tested the hypothesis that intense lifestyle intervention (ILI) to accomplish weight loss among adults with obesity and T2DM, in comparison with usual care, would reduce all-cause mortality. A total of 5,145 patients were randomized at 16 clinical research sites to either the ILI or usual-care groups. The toolbox made available to investigators carrying out the ILI included dietary and physical activity instruction, decreased caloric intake, and weekly structured visits, among other interventions. Weight loss for the intervention group at one year was 8.5 percent total weight loss (TWL). A weight loss of 4.7 percent TWL persisted at the four- and eight-year intervals. Weight loss was highly variable, with 26.9 percent of patients achieving and maintaining a 10 percent weight loss over eight years. Definite and persistent improvement of markers or mediators of cardiovascular disease were demonstrated in addition to weight loss. However, observed mortality was similar between the two groups.

LABS
The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) established a multi-center research consortium known as LABS, which used an observational cohort design to address multiple clinical, epidemiological, and behavioral hypotheses. These studies comprise four trial groups: LABS-1, LABS-2, LABS-3, and Teen-LABS. LABS-1 focused on the evaluation of short-term safety of MBS and related issues, which was the first

TABLE 1.
NIH-FUNDED BASIC RESEARCH ON THE BIOLOGY OF OBESITY

Adipocyte biology
- Production of hormones, inflammatory mediators
- Modulation-mediated mechanisms of pathophysiology of obesity: leptin

Basic physiology
- Gut hormones
- Appetite, satiety
- Gastrointestinal (GI) motility
- Insulin/glucose metabolism
- Neural modulation of metabolism
- Receptor location and function
- Sensing mechanisms
- Nutrient physiology
- Digestion and absorption
- Modulation of metabolism by nutrients
- Microbiome

Clinical applications
- Inflammation
- Cardiovascular disease
- T2DM
- Cancer
priority of bariatric surgical clinical research. A total of 4,776 subjects were recruited with a 30-day retention rate of 100 percent. The all-cause 30-day mortality was 0.3 percent with a 4.1 percent major complication rate, 25 percent of which were laparoscopic adjustable gastric banding (LAGB). RYGB was performed in 71 percent of the subjects.18 Patient factors predictive of a serious complication were a history of deep vein thrombosis or pulmonary embolus, obstructive sleep apnea, or impaired functional status. Extreme BMI values also were associated with increased risk, though age, sex, race/ethnicity, and comorbid conditions were not. Reoperations were found to have similar perioperative mortality but with a fourfold increase in serious complications.19 Low-surgeon volume also was found to be an important predictor of adverse outcomes.20

LABS-2 comprised a portion of the cohort studied in LABS-1 (2,458 adults) and was a longer-term observational study designed to further examine the safety and efficacy of MBS. The following detailed information regarding multiple outcomes and domains was collected: weight loss and body composition, T2DM and insulin resistance, cardiovascular disease, pulmonary disease, renal disease, liver function, behavior/psychological factors, musculoskeletal and functional status, and gender and economic impact.11 Both validated instruments as well as instruments created by LABS were used for self-reported data collection (see Table 2, this page).

The use of self-reported weights within this clinical trial was validated.21,22 Variable data were available on 92 percent of study participants, including body weight in 83 percent. Multiple peer-reviewed publications have been developed reporting outcomes of many of the domains (61 as of press time) that the LABS consortium has studied. Some key findings to date are as follows:

- Postoperative weight loss is a key finding of any MBS clinical trial. LABS publications at both years three and seven showed that weight loss was highly variable despite standardized operative interventions.23,24 Seven years following RYGB, mean total weight loss was 28.4 percent (95 percent confidence interval:

<table>
<thead>
<tr>
<th>TABLE 2. LABS PATIENT-REPORTED OUTCOMES</th>
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<td><strong>VALIDATED INSTRUMENTS</strong></td>
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<td><strong>Domain</strong></td>
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<tr>
<td>Quality of life (QOL)</td>
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<tr>
<td>Alcohol</td>
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<td>GI symptoms</td>
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<td>Interpersonal support (IS)</td>
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The NIH/NIDDK has been a valuable partner in developing our understanding of obesity, related diseases, and treatment outcomes. Together with the clinical consensus and guidelines process, the NIH has played a crucial role in evaluating the evidence and in defining priorities for ongoing MBS research.

27.6–29.2) with the greatest seven-year weight loss (45 percent TWL) occurring in 13.3 percent of the RYGB cohort. Additionally, 15 percent of the LAGB cohort maintained weight loss exceeding 30 percent TWL, emphasizing the extreme degree of variability of response. Thus, postoperative weight loss is largely unpredictable using preoperative metrics.25

• Analysis of postoperative variables, including physical activity and behavioral variables, revealed that patients who adopted weekly self-weighing, discontinuing food consumption when feeling full, and not eating continuously during the day experienced 14 percent greater weight loss than those patients who were unable to make such changes.26

• Remission of T2DM following RYGB at years one, three, five, and seven was 71.2 percent, 69.4 percent, 64.6 percent, and 60.2 percent, respectively.27 The incidence of T2DM following RYGB was less than 1.5 percent.24 In addition, for each procedure at each time point, the probability of remission was directly correlated with weight loss.27

• For RYGB, remission of dyslipidemia and hypertension showed similar patterns of remission with minimal recurrence over time.24

• Multiple aspects of behavioral and psychological outcomes,26 as well as alcohol use, opioid dependence, and eating behaviors, have been described in previous Metabolic Surgery Symposium articles published in the Bulletin of the American College of Surgeons.

LABS-3 is a detailed study of a subset of the LABS-2 participants with or without T2DM who underwent frequent testing for intravenous glucose tolerance and meal-stimulated gut hormone response. At both six and 24 months following surgery, substantial improvement of the disposition index (DI) in both those participants with and without T2DM was demonstrated. Although the DI improved among the participants with T2DM, it remained in the fifth percentile of normal, providing an explanation for the recurrence of diabetes that has been reported by LABS and other investigators. LABS-3 is presently ongoing with eight–nine years of follow-up for all participants, and these long-term outcomes are under analysis.

Recruitment for Teen-LABS, a study of adolescents with obesity, was completed in 2007 and the trial is active with funding through 2021. The study design is a prospective observational cohort design with more than 200 participants. Preliminary publications have addressed perioperative outcomes, cardiovascular risk factors, quality of life, candidate characteristics, and safety, among others.28-32 Outcomes that are being reviewed involve psychosocial status and cognitive function, micronutrient deficiencies, and risk-taking behaviors, as well as continued data collection on pregnancies, additional abdominal procedures, and mortalities within the study population. The standardization of definitions, validated metrics, and shared data collection protocols have ensured the study team’s ability to produce reliable and accurate data for evidence-based recommendations.

LABS ancillary studies
The NIDDK funded several ancillary LABS studies, using the LABS database and bio-samples to explore additional domains. A subset of LABS participants underwent detailed studies of cognitive function both before surgery and at various time points, including two years following surgery. A modest but clinically important improvement in the impairment of cognition associated with severe obesity was demonstrated.13 Further analyses of the LABS outcomes are pending upon completion of the genomic and metabolomic analyses of LABS biospecimens. Other LABS ancillary studies include detailed assessment of physical activity/energy expenditure, an in-depth
REFERENCES


continued on next page
Other NIH-funded metabolic surgery trials
In 1975, the National Heart, Lung, and Blood Institute funded the first trial using metabolic surgery as the intervention modality. The Program on the Surgical Control of the Hyperlipidemias was not intended to focus on bariatric surgery. Nonetheless, it provided the first statistically significant determination that the marked cholesterol lowering achieved by the partial ileal bypass operation reduced the dual endpoint of recurrent myocardial infarction or atherosclerotic death, the incidence of peripheral vascular disease, and the need for coronary bypass or stenting, as well as increased life expectancy. The clinical findings were accompanied by serial arteriographic evidence of decreased atherosclerotic progression and actual plaque regression.39

Future research priorities
The NIH/NIDDK has been a valuable partner in developing our understanding of obesity, related diseases, and treatment outcomes. Together with the clinical consensus and guidelines process, the NIH has played a crucial role in evaluating the evidence and in defining priorities for ongoing MBS research. In the future, the NIH may provide research support in investigating and strengthening personalized care, as most MBS studies to date have focused on reporting large, homogeneous populations. The ability to predict more accurately which patients will achieve specific benefits from MBS would greatly focus these interventions. In addition, the capacity to predict which patients will benefit most from MBS relative to the flexible endoscopic and nonsurgical interventions in development will

REFERENCES, CONTINUED

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reduce risk and costs to patients. Continued NIH support into researching the etiology and mechanisms of obesity and diabetes is vital to ongoing development of safe and effective MBS, pharmacotherapy and lifestyle, and novel synergies of therapy. ♦

Acknowledgments
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REFERENCES, CONTINUED
HIGHLIGHTS

• Describes surgeons’ efforts to advocate for obesity’s recognition as a disease
• Highlights efforts to improve patient access to quality metabolic surgical care
• Outlines steps the ACS and ASMBS have taken to improve accreditation of metabolic and bariatric surgery centers
• Provides details about the efforts of the ObesityPAC, the Obesity Care Advocacy Network, and Obesity Summit

Advocacy in action:
Bariatric and metabolic surgery

by John M. Morton, MD, MPH, FACS; Bruce M. Wolfe, MD, FACS; Ninh T. Nguyen, MD, FACS; Stacy Brethauer, MD, FACS; Natan Zundel, MD, FACS; Bruce Schirmer, MD, FACS; and Kelvin Higa, MD, FACS, FASMBS

The leading public health concern for the industrialized world is obesity. It has been well demonstrated that obesity adversely affects all body organs, decreases the effectiveness of medical interventions, and raises the cost of medical care. In many ways, the first responders to this concern have been bariatric surgeons. Early in the approach to obesity as a disease, and similar to the experience in other fields of medicine, such as oncology or cardiology, surgery has been central in the treatment algorithm. Bariatric surgery, a subspecialty of metabolic surgery, has been a model of invention, assessment, and scientific advancement.

Obesity is only one expression of the metabolic syndrome, a body-wide defect of metabolism that also encompasses diabetes, dyslipidemias, hypertension, renal failure, blindness, amputations, and other diseases. The broader serious threat of these metabolic diseases should be the long-term focus of our advocacy in order to succeed in the adoption of metabolic surgery. The demonstrated safety and efficacy of bariatric and metabolic surgery has led to wider acceptance of surgery as a tool to combat obesity and metabolic diseases. These gains can be directly attributable to changes in procedure selection, fellowship training, minimally invasive operative approaches, and hospital and surgeon accreditation. Acceptance of bariatric and metabolic surgery over the past 20 years has been a model for how surgical care can impact public health.
metabolic surgery has been demonstrated in its recognition by the medical societies that contributed to the Diabetes Surgery Summit II guidelines and by the 37 percent growth in bariatric procedures between 2011 and 2016—an estimated total increase of 216,000 procedures annually. Nonetheless, bariatric and metabolic surgery is performed on only 1 percent of the affected population annually.

Public acceptance of surgical treatment of obesity has been shown to be low. A national survey demonstrated that although the public views obesity as a significant health concern equivalent to cancer, fully 89 percent of patients with a body mass index (BMI) >30 kg/m² did not consider themselves obese, and 40 percent had not sought further medical discussion of their weight. These views may be reflective of the lack of universal insurance coverage for bariatric surgery and a focus on less-invasive medical treatment and pharmaceuticals, which have been shown to be markedly less effective and durable than bariatric surgery. Finally, although faulty beliefs that bariatric surgery carries an excessive cost and high risk have been shown to be unfounded, these perceptions linger in the minds of the general public.

To meet the need and demand for treatment of obesity and its comorbidities, surgeons, physicians, allied health professionals, industry partners, and patients have sought to advocate for a patient’s right to access the wide range of medical and surgical treatments. Through these efforts, access to metabolic surgery has expanded, allowing many patients to increase their quality of life and longevity. Yet access to care remains a challenge for many patients in need. No universal insurance coverage is available for bariatric surgery. This situation is inconsistent with the documented improvements in medical costs for bariatric surgery and its very low risk. As detailed herein, persistent, vigilant, and evidence-based advocacy through this professional and patient alliance is required to meet our mutual goal of providing care to those patients affected by obesity.

**Advocacy principles**

Surgeons are natural advocates for their field. They possess a firsthand understanding of the consequences and treatment of disease, as well as evidence-based knowledge of the best practices for long-term patient care. Defining clear principles for treatment advocacy aids in meeting the needs of patients, advancing the medical field, and increasing treatment utilization. These are the five A’s of advocacy for metabolic bariatric surgery: Acceptance of disease, Assessment of intervention, Access to care, Accuracy of progress, and Advancing the cause.

**Acceptance of disease**

A great step forward in scientific acceptance of obesity as a disease was the resolution put forth in 2013 by the American Medical Association (AMA). Clinicians on the front lines of treating obesity have long recognized that obesity is a disease; however, the AMA’s affirmation of that perspective was a landmark event. Acceptance of obesity as a disease has increased as all medical disciplines have come to recognize obesity’s vast negative health impact. General surgeons know that obesity can lead to recurrence of hernias and gastrointestinal reflux disease following surgery; transplant surgeons can only place patients on the list for organ donations if they have a BMI <35 kg/m²; an orthopaedic surgeon may decide not to perform a total joint replacement on obese patients because they are at greater risk for surgical site infection, joint dislocation, and decreased implant longevity. Because obesity affects all medical disciplines, it is incumbent upon the entire house of medicine to be engaged in decreasing the burden of this disease.

Acceptance of obesity treatment is aided by “mainstreaming” bariatric surgery through surgeon organizing, both nationally and across disciplines. The American Society for Metabolic and Bariatric Surgery (ASMBS) has made a concerted effort over the last few years to become an institutional partner
of the National Quality Forum, AMA, Arnold P. Gold Foundation, Medical Group Management Association, and the Choosing Wisely Campaign.

Better understanding of the disease of obesity, particularly acceptance of the tenet that physiology is primary and psychology secondary in disease progression, has been paramount. The Biggest Loser study by Fothergill and colleagues demonstrated unequivocally that despite best efforts at dietary counseling and physical exertion, the 16 initial participants in the television competition all regained weight close to or greater than the amount they had lost. It is theorized that weight loss amplifies weight-mediated hormonal signaling, physiologically impelling the body to return to its original set point. Outcome observations following The Biggest Loser study showed that patients with clinical obesity need treatment that goes beyond motivation and inspiration.
Assessment of intervention
As W. Edwards Deming stated, “If you can’t measure it, you can’t manage it.” This approach holds true for the work of advocacy. Accurate assessment of national insurance coverage is critical to determine progress and focus resources in needed areas. Figures 1A-B, 2, and 3A-B, pages 53–55, demonstrate the gains made over the last decade. However, as the figures demonstrate, more needs to be done to achieve Medicaid coverage in Mississippi and Montana; state employee coverage in Idaho, Georgia, Louisiana, Montana, South Carolina, and Wisconsin; and to raise overall commercial coverage to 100 percent. Of note, insurance coverage decisions can change quickly, and in Georgia and Louisiana, state employees were covered on a pilot basis, which allowed some surgeons to perform a set number of cases for selected patients. Medicare has paid for Roux-en-Y gastric bypass (RYGB), gastric banding, and duodenal switch since 2006. The special circumstance of Medicare coverage for sleeve gastrectomy is discussed later in this article.

Access to care
Advocating for access to care requires coordination and expertise. ASMBS established several organizational efforts to address this need, recognizing that many coverage issues are local and require swift action. To accomplish these goals, the ASMBS formed an Access to Care Committee (ATCC), STAR program, and state chapters. The ATCC is a starting point for coordinated, strategic advocacy campaigns and maintains a network of state access-to-care advocates (STARS) who monitor threats to access within their geographic area and then develop advocacy action plans.

Through an ASMBS presidential initiative, the ASMBS chartered a nationwide network of state chapters, which resulted in all 50 states having a chapter by 2015 (see Figure 4, page 56). The state chapters have been encouraged to collaborate on educational, quality improvement, and access issues. For example, through the ASMBS Pennsylvania State Chapter, a coordinated effort by surgeon-advocates enabled a discussion about bariatric coverage for state employees with key members of the state government, resulting in benefit coverage. During monthly phone calls and annual state chapter meetings, advocacy strategy is reviewed and implemented. In addition, the ASMBS and American College of Surgeons (ACS) chapters have often co-located their offices to take advantage of natural synergies.

Accuracy of progress
As in all fields of surgery, safety and efficacy of intervention must be detailed to patient and payor alike to gain acceptance. The immense value of a clinical data registry is profound, allowing for accurate assessment...
of both safety and efficacy. Claims data, which Medicare uses, do not include clinically important variables such as BMI and are limited to a single payer. In 2006, the Centers for Medicare & Medicaid Services (CMS) required hospital accreditation and recognized its value through a data registry coupled with standards, resources, and site visits. In 2013, CMS acknowledged the tremendous improvement in quality demonstrated in bariatric surgery since 2006 by no longer requiring accreditation for Medicare patients. It should be noted that the following year, CMS recognized the ACS Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Data Registry as the only national Qualified Clinical Data Registry for the Physician Quality Reporting System in bariatric surgery.
Since 2002, mortality associated with bariatric surgery has declined at a rate that is unique to the field of surgery, from 1 percent to 0.1 percent. The value of accreditation has been demonstrated repeatedly to decrease costs and surgical complications. The benefits of bariatric surgery have been demonstrated through improvements in quality and quantity of life. Reporting of accurate outcomes has been instrumental in securing further acceptance of the safety and efficacy of bariatric surgery through partnership of the ASMBS and the ACS in establishing the MBSAQIP.

Advancing the cause
To meet the many challenges and remain an enduring effort, new avenues for advocacy must be explored, and bariatric surgeons must be seen as the stewards of care for patients with obesity. Bariatric surgeons
should be advocates for acceptance of obesity as a disease; leaders of the multidisciplinary bariatric team; providers of a continuum of care; architects of health policy; and investigators into the causes of obesity, its prevention, consequences, and treatment.

**Augmenting advocacy**

Specifically, the ASMBS has created three means of augmenting advocacy: the production of a video for the lay public; the formation of an ObesityPAC (political action committee); and the Obesity Care Advocacy Network and Obesity Summit for referral of healthcare professionals. Plans have been discussed to establish a foundation to advocate for obesity awareness, prevention, and treatment, which would draw on resources from all medical disciplines, industries, patients, and government.

**“It Starts Today” video**

A video detailing the stories of three patients provides a narrative for acceptance of bariatric surgery and can be used by anyone. “It Starts Today” explains the ways in which bariatric surgery improves the health and welfare of a nurse, a military veteran, and a former National Football League (NFL) player. The video shows that bariatric surgery works and that obesity is not due to lack of medical knowledge (as illustrated by the nurse), discipline (military veteran), or physical activity (NFL player). The video ends with a call to action to visit the ASMBS website to learn more and make use of bariatric surgery access resources.

**ObesityPAC**

The ObesityPAC was formed in 2015 as an ASMBS presidential initiative of the lead author of this article, John Morton, MD, FACS. The ObesityPAC represents the interests of bariatric and metabolic surgeons as the official political action committee of the ASMBS. The mission of ObesityPAC is to “preserve, protect, and defend the inalienable right of the patient with obesity to have safe, effective, equitable, and affordable access to care in all of the United States.” ObesityPAC has afforded local surgeons an opportunity to interact with politicians in their regions and districts, enabling direct one-on-one advocacy that would be difficult without monetary support. To both garner support and initiate dialogue, the ObesityPAC sponsors a donor event at each annual ObesityWeek, wherein a local elected official is given ObesityPAC support and speaks on issues related to obesity. For example, Sen. Bill Cassidy (R-LA) was invited to speak in New Orleans in 2016 at ObesityWeek. In the future, the ObesityPAC will work closely with other PACs, such the ACS Professional Association-Surgeons PAC, to maximize influence.

**Obesity Care Advocacy Network and Obesity Summit**

Partnering with other healthcare professional societies is an important component of our advocacy efforts. The Obesity Care Advocacy Network (OCAN) is composed of the patient advocacy organization (Obesity Action Coalition) and representatives of four major societies: ASMBS, The Obesity Society, Obesity Medical Association, and the Academy for Nutrition and Dietetics. The membership of these five organizations is approaching 200,000 members and represents the entire continuum of care for obesity. OCAN can use this vast membership to effect change on behalf of patients with obesity. Additional partners—including the ACS, Society of American Gastrointestinal and Endoscopic Surgeons, Society for Surgery of the Alimentary Tract, and the American Gastroenterology Association—have been recruited for assistance with other initiatives.

Finally, in 2014, Ninh T. Nguyen, MD, FACS (a coauthor of this article), and Dr. Morton led a large-scale effort to involve the entire house of medicine in addressing the obesity challenge. This effort, the Obesity Summit for the Provision of Care, has featured more than 35 different medical societies annually,
including the AMA, American Heart Association, and American Academy for Orthopaedic Surgery.\textsuperscript{18} The summit has resulted in six collaborative documents and inaugurated movements within the other societies to treat obesity.\textsuperscript{19-24}

Case studies in advocacy
Three examples of advocacy in action for bariatric surgery follow, including the 1991 National Institutes of Health (NIH) Consensus Conference, the Essential Health Benefit (EHB) Coverage in Colorado, and CMS coverage of sleeve gastrectomy.

1991 NIH Consensus Conference
Metabolic surgery pioneers, such as Henry Buchwald, MD, FACS, and Walter Pories, MD, FACS, realized the benefits of bariatric surgery extended beyond simple weight loss.\textsuperscript{25,26} As better understanding of obesity’s pathophysiology and its remission was gained, acceptance of metabolic bariatric surgery increased. However, use still lagged, partly because the health care professionals clung to the belief that obese patients should self-treat and not be offered treatment—that obese patients had caused their own health consequences. These beliefs run counter to scientific evidence and accepted principles of treatment for patients who also make unhealthy lifestyle choices, such as overuse of alcohol necessitating liver transplantation or tobacco use necessitating lung resection.

To further delineate indications, risks, and benefits of bariatric surgery, the NIH convened a consensus panel of experts in March 1991.\textsuperscript{27} Early practitioners of bariatric and metabolic surgery were panel participants, including Drs. Buchwald and Pories, who were joined by Robert Brolin, MD, FACS; John Halverson, MD, FACS; and Edward Mason, MD, FACS. This august panel created specific indications for bariatric procedures and set practice standards.
evolved the surgical specialty to move beyond weight loss to metabolic benefits and established clear indications and resources for bariatric surgery.

Essential health benefit coverage
The Affordable Care Act (ACA) of 2013 was the largest health care reform package since Medicare was created in 1965. The ACA had specific components that addressed obesity, including a requirement for restaurant chains to post calorie counts, coverage for weight-loss counseling, and a state-by-state EHB requirement. Determination of coverage for bariatric surgery within each state EHB was variable. Some states included a bariatric surgery benefit in their EHB, while others did not (see Figure 5, page 56). As a consequence, the U.S. now has a disparate patchwork of state treatment options, with 27 states offering bariatric surgery and 23 states excluding this option.

With Dr. Morton’s leadership, in 2013, the ASMBS created the No State Left Behind initiative to directly advocate with governors, state insurance commissioners, and state legislators for EHB coverage of bariatric surgery.28 No State Left Behind provided talking points, sample letters, state-specific obesity data, and summaries of information regarding safety and effectiveness. These efforts resulted in Colorado adding bariatric surgery to the state EHB. Disparities in coverage continue to exist despite evidence that adding the benefit has minimal impact on overall cost.29 Unfortunately, states without bariatric surgery coverage are those with the highest rates of obesity, a punishing deficit that falls disproportionately on the sufferers of the disease of obesity and perpetuates this health disparity.

CMS coverage of sleeve gastrectomy
Laparoscopic sleeve gastrectomy has become the most prevalently performed bariatric surgery.3 The explosive growth of the sleeve gastrectomy can be attributed in part to insurance coverage, as well as to patient and surgeon preference. As in many

REFERENCES, CONTINUED

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coverage decisions, CMS played a large role. Until 2012, CMS did not cover sleeve gastrectomy and, in 2014, all Medicare administrative contractors (MACs) covered sleeve gastrectomy. How did this happen?

Through a collaborative effort, data regarding the safety and efficacy of the sleeve gastrectomy were presented to CMS after the National Care Determination (NCD) was opened. In addition, all advocacy efforts included a team approach with bariatric surgeons, bariatric patients, specialty society partners, and industry. The NCD was opened to examine coverage of the sleeve gastrectomy, apparently at the behest of one Medicare patient who was awaiting renal transplantation and desired a sleeve gastrectomy. This scenario underscores the value and power of patient involvement. Surprisingly, initial review of the large evidence base for sleeve gastrectomy did not result immediately in coverage, as CMS declined to change the NCD, but instead allowed for MACs to make a Local Care Determination.

ASMBS, led by Robin Blackstone, MD, FACS, and Dr. Morton, petitioned each MAC individually and managed to secure coverage throughout the U.S. Initially, local barriers such as age restrictions remained, but to date, all restrictions have been removed. The narrative regarding achievement of coverage of the sleeve gastrectomy is reflective of best practices in advocacy, including data gathering, professional group collaboration, patient involvement, and persistence.

Conclusions

Although much progress has been made in coverage for bariatric surgery, challenges remain. All commercial, Medicaid, and state employee insurance policies should provide uniform bariatric surgery coverage. In addition, restrictive practices (such as high deductibles, special insurance riders for bariatric surgery, required timed preoperative weight loss) should be removed to provide benefits to all patients suffering
from obesity and its comorbidities. We must continue to demonstrate and advocate for acceptance of the safety and effectiveness of metabolic surgery, not only to insurance carriers, but to referring physicians, legislators, and patients themselves. Until the profession focuses on getting patients to demand this care, use of the powerful tool of metabolic surgery will remain sluggish.

The metabolic syndrome, a body-wide defect of metabolism, should be the longer-term focus of our advocacy to increase patient access to care and acceptance of metabolic surgery. To provide care to our patients in need, the metabolic bariatric surgery community needs to advocate consistently and vigilantly. In addition, metabolic surgeons must collaborate with all specialties that treat obesity to improve education, treatment, and advocacy. Challenges remain, but surpassing obstacles is what the daring do and what is required for all involved in the care of the patient with obesity.

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REFERENCES, CONTINUED
The American College of Surgeons (ACS) Committee on Ethics developed the following Guidelines for the Ethical Use of Social Media by Surgeons. The ACS Board of Regents approved the guidelines at its February 8–10 meeting in Chicago, IL.

Social media has become a ubiquitous part of modern life. As such, surgeons need to know how to use this platform successfully to interact with colleagues, patients, professional societies, and regulatory authorities in an ethical and professional manner, thus protecting the best interests of all parties including themselves. The following guidelines do not cover every possible interaction, but are intended to provide guidance as to how to have an online presence and adhere to the ACS Code of Professional Conduct.

**Surgeon-patient relationship**

It is important not to blur the boundaries between professional and personal relationships with patients, which may happen more easily online than in other interactions. Accepting “friend” requests on Facebook, for example, and other direct relationships on social media platforms used to share personal information (rather than websites explicitly intended for disseminating health care information) should be discouraged. One option is to maintain separate professional and personal profiles and accounts, and only use the professional account for interactions with existing or potential patients. Interactions on a professional account should follow the guidelines set forth in this statement.

Social media also affords the surgeon the ability to access information about a patient’s health care or other behavior (smoking or alcohol consumption, for example) that might affect treatment plans. This information theoretically might benefit the patient’s care, but there are drawbacks to using this information within the context of a surgeon-patient relationship. First, there is the need to reveal the source of the information in a sensitive manner, without destroying the trust of the surgeon-patient relationship. Second is the risk of tipping over into curiosity, voyeurism, and invasion of privacy, which can destroy the relationship with the patient and also reflect badly on the institution and even the entire profession. Therefore, “patient-targeted Googling,” as this practice is known, is strongly discouraged.

**Online communication with patients**

Privacy-protected professional/institutional accounts or web-based platforms should be used for purposes of e-mail and other online communication with patients. These accounts and platforms should only be used within the context of a preexisting surgeon-patient relationship and should augment, rather than substitute for, face-to-face communication. Documentation should be maintained as part of the official medical record, as it would be for any other medium.

Requests for surgical information online from a prospective patient should be treated with care; the limitations of online communication make it an inappropriate substitute for an initial face-to-face visit. An appropriate response to a request for surgical information through social media would be a recommendation to seek a referral from the patient’s primary care physician to a surgeon for a formal, in-person evaluation of a clinical concern. In some situations, where substantial geographic distance creates an impediment, an initial, face-to-face contact may be initiated via secured telemedicine communication tools.
Privacy concerns
Social media provide opportunities for sharing surgical information with colleagues and patients for educational purposes; examples include case scenarios, clinical photographs, or radiographic images. As with all other uses of clinical content or images, these materials should be shared only with informed consent (preferably in writing) from the patient or surrogate. All protected health information (PHI) and personal identifiers should be removed. Even with patient consent, images that allow identification of the patient, such as facial features and unique tattoos, should not be disseminated on social media.

Unlike in conventional media, images once shared online cannot be subsequently retracted or removed. Although the patient may have consented to use of these images at the time of interaction, there is the potential for the patient to subsequently regret this decision or for the images to be altered and used out of context by other persons. Minors whose parents have provided permission for use of their child’s image may subsequently choose not to have the image widely shared, especially as it may affect the child’s online presence years into the future.

Even images that omit identifying features may inadvertently allow a link to a specific patient. For example, a bloody trauma bay (even without a patient) after a major trauma incident or an unusual injury (samurai sword to the heart) in conjunction with the timing of the post will allow many people in that institution or community to accurately identify the patient or incident involved, as has happened in several well-publicized instances that have resulted in suspension or termination of the employee who posted the content. A waiting period of at least several weeks prior to posting and concealment of clinical details that are unusual or could be considered newsworthy will reduce the likelihood of patient identification and inadvertent breach of privacy laws.

Social media postings also should respect intellectual property and copyright laws, and surgeons should follow standard procedures for obtaining permission for reproduction of artwork, images, and so on, as with any other publication modality. This standard does not apply to reposting of content already within the public domain, such as news reports, blogs, or journal articles.

Social media postings that include images of individuals other than patients who interact with the surgeon in a professional context—colleagues, staff, residents, or medical students, for example—should be posted only with the consent of these individuals.

Patient education
Social media has emerged as a valuable tool for sharing information regarding health concerns among patients themselves (crowdsourcing or crowdhealth) as well as through established health care entities. Surgeons should be aware of, and recommend, reputable online peer-reviewed or quality-controlled sources for patient information in their areas of practice.

Surgeons may engage in discussions regarding health topics online through dedicated message boards, forums, or open social media; however, they should use caution and only submit general statements rather than specific recommendations that the reader could construe as health care advice. Blanket assertions on a social media profile (such as, “tweets do not constitute health care advice”), although widely used by health care professionals, provide neither legal nor ethical immunity if an interaction with a layperson evolves into what either party could consider to be a therapeutic relationship.

Surgeon education
Social media has emerged as a powerful tool for health care professionals to share information and obtain advice from colleagues regarding complex
Although engagement in these fora can be a powerful educational tool and benefit patient care, caution should still be exercised when sharing patient information because privacy is never absolute.

Clinical problems. Many closed groups, not accessible to the public, are hosted on larger social media platforms (such as Facebook, WhatsApp, ACS Communities) and allow surgeons around the world to exchange information and ideas. In these situations, a layer of privacy exists that allows freer exchange of clinical information and opinion than would be permissible in an open forum. Although engagement in these fora can be a powerful educational tool and benefit patient care, caution should still be exercised when sharing patient information because privacy is never absolute. It also is necessary to maintain usual professional standards of decorum and respect for the patient and to refrain from comments on a patient’s behavior, history, or characteristics that may be perceived as derogatory or disrespectful.

Surgeon’s online persona and professional representation

All content posted on social media, regardless of whether it originates from a surgeon’s professional or personal account, should be regarded as visible to the public, including patients, employers, professional societies, and state and federal regulatory authorities, such as licensing boards. As professionals, the public views our actions as representative of our profession—hence, the development and upholding of standards of professionalism by medical and surgical organizations. Online content also is subject to the same defamation laws governing libel and slander as other public discourse.

Content that may be considered appropriate in a closed, informal setting (such as a “roast” of a retiring surgeon, a parody item performed by medical students during a talent show) may be viewed very differently by the general public, creating a negative impression of the individual, his or her institution, and the entire profession. An image of a surgeon posing with a large amount of skin and tissue removed during an abdominoplasty operation, while not objectively wrong or containing patient identifiers, was pilloried on both social media and subsequently mainstream media as an inappropriate “surgical selfie” for its resemblance to trophy photography. While this perception was likely not the surgeon’s original intent, this example demonstrates how easily the boundaries of what is considered acceptable behavior by the public may be inadvertently crossed.

Unsavory postings may affect the surgeon’s ability to train residents, maintain employment, or practice in a community. Images of physicians intoxicated, using illicit drugs, or posing with weaponry or surgical specimens, for example, have resulted in formal censure by medical boards and employers. The same standards that would be expected in formal advertising or conduct at a professional society meeting apply to online content. Therefore, several physician organizations have recommended a “pause before posting” approach and that recommendation is strongly endorsed here.

Professional online profiles should be regularly updated and provide contact information, accurate representation of the surgeons’ credentials, and a description of services offered. Surgeon profiles are affected not only by their own postings, but also those of their patients, especially through online physician evaluation sites. These sites often appear high on the list of results when surgeons’ names are searched through Google or other search engines. Therefore, it is prudent for surgeons to play an active role in maintaining their own online presence by maintaining official professional profiles that appear first in a search. Regular “self-audits” to identify misleading or inaccurate information should be conducted; in some cases (although not all), an opportunity is provided to correct information or request a retraction.
It is prudent for surgeons to play an active role in maintaining their own online presence by maintaining official professional profiles that appear first in a search.

**Surgeon as employee**

Many institutions now have specific policies governing social media use by employees. These protocols may go above and beyond the guidelines in this statement and place additional restrictions on online activities in which employees, including surgeons, may engage. Surgeons should be familiar with and abide by these policies. Failure to do so has resulted in penalties, including dismissal. Screening online profiles is now a standard part of the interview process for new recruits, so the potential for future impact should also be considered. As the online presence of surgical societies and other organizations increases, participants should also be aware of additional policies by which they may be required to abide.

**BIBLIOGRAPHY**

Implementation of a pediatric trauma cervical spine clearance pathway

by Jennifer A. Cirino, MD; Natalie C. Luehmann, MD; Jacquelyn M. Pastewski, MD; Ameer Al-Hadidi, MD; Thomas W. Riggs, MD, PhD; Nathan M. Novotny, MD; and Begum Akay, MD

Pediatric cervical spine (c-spine) injuries are rare events, with an incidence of approximately 1 to 2 percent and potentially devastating consequences. Although the incidence, characteristics, and severity of c-spine injuries differ between adult and pediatric populations, pediatric patients are generally subjected to the same traumatic workup of their c-spine as adult trauma patients. Until recently, the c-spine workup at many institutions involved obtaining multiple c-spine films and often a complete c-spine computed tomography (CT) scan. Aggressive imaging in the pediatric patient population can be costly and may expose children to large amounts of radiation and, therefore, potential future malignancies. Injuries cannot be missed, but patients at low risk for injury should not be subject to unnecessary radiation exposure early in their lives. An established algorithm for c-spine evaluation can help balance these conflicting ideals in clinical decision making. Separate pathways for clearance of the pediatric c-spine have been found to be effective and reduce radiation exposure.

The problem
Beaumont Children’s Hospital/Beaumont Health, Royal Oak, MI, lacked any guidelines on c-spine clearance. As a result, patients experienced variations in care. The decision for imaging often depended on the practices of the physician(s) seeing the patient rather than predefined clinical criteria and risk stratification. Pediatric patients were generally evaluated with the same workup used in adult patients and, quite often, a CT scan was obtained. Beaumont Children’s is a Level 2 pediatric trauma center and is housed on the campus of Beaumont Hospital Royal Oak, a 1,100-bed tertiary care and Level 1 adult trauma center. Pediatric specialty services offered include pediatric surgery, pediatric emergency medicine, pediatric orthopaedic surgery, pediatric neurosurgery, and pediatric radiology, among others. Pediatric patients ages 12 and younger are managed by the pediatric surgery trauma team, and approximately 200 pediatric trauma admissions occur yearly.

The plan
A multidisciplinary group of pediatric trauma surgeons, emergency medicine physicians, orthopaedic spine surgeons, neurosurgeons, and radiologists developed the c-spine clearance pathway through discussion and a thorough review of the literature and other available guidelines. As a first step, we convened multidisciplinary journal clubs to review the characteristics of pediatric c-spine injuries, including mechanisms of injury, imaging findings, and types of injuries. These activities and reviews led the pediatric trauma surgeons to develop algorithms for low-risk patients and high-risk patients. These guidelines were then presented to the entire group for review and approval. Once all the specialty groups reached consensus, we presented the pathway to our hospital’s medical executive board for final approval (see Figures 1A and 1B, pages 67 and 68).

The four pediatric trauma surgeons educated the surgical and emergency medicine teams...
FIGURE 1A. PEDIATRIC TRAUMA C-SPINE CLEARANCE GUIDELINES

NOTE: Maintain immobilization by c-collar during radiologic studies until spine clearance is accomplished.

Does the patient meet low-risk criteria?
- Normal mental status and neurologic exam
- No midline tenderness on palpation
- No torticollis
- No predisposing condition (connective tissue disorder, etc.)
- Not a high-risk MVC (such as rollover, ejection, etc.)
- Not a diving injury

YES
Follow low-risk c-spine algorithm.
(Refer to attached low-risk algorithm.)

NO

Is there a neurological deficit, is the patient obtunded, or is it a clearly unreliable exam?

YES
Perform CT of C1-T1 and magnetic resonance imaging (MRI) when stable if expected to be obtunded >72 hours.
If CT and MRI are negative, remove collar.

NO
Perform c-spine cross table lateral with collar on.
Abnormal findings?

YES

≤8 years old.
Perform AP and lateral views of c-spine C1-T1 (no odontoid view).

>8 years old.
Perform AP, lateral, and odontoid views of c-spine C1-T1.

Abnormal findings?

YES
Perform CT of c-spine C1-T1.
Abnormal findings?

NO
Attempt to clear clinically, per low-risk c-spine protocol.

YES
Able to clear clinically?

NO
Consult ortho/spine or neurosurgery.
Keep collar on but change to Miami J.

NO
Able to clear clinically?

YES
Remove collar per low-risk protocol.

NO

groups—including 36 general surgery residents, eight pediatric emergency physicians, and six pediatric emergency medicine fellows—about the pathway before its implementation, because these specialists are present during the initial trauma evaluation. This training was provided during educational conferences, and digital copies of the pathway were widely distributed. It was also posted in the trauma bay for quick reference during trauma activations. Furthermore, the algorithm was strategically placed into our electronic health records by
inserting the guidelines into our history and physical templates. This process ensured that the evaluating trauma team’s use of the pathway was documented. The pathway was implemented in August 2016 with institutional review board approval, and we began collecting data in September 2016.

The results
To evaluate the efficacy of Beaumont Children’s c-spine clearance pathway (CSCP), we initially reviewed patient charts six months before and after implementation, and then again at 15 months before and after implementation. Statistical analysis was performed using \( \chi^2 \) test, Fischer’s exact test, and Mann-Whitney U test. A p-value less than 0.05 was considered statistically significant.

At six months, 53 patients were included in our preimplementation group and 30 patients in our postimplementation group. Patients treated using the CSCP received fewer c-spine radiographs (39.6 percent versus 6.7 percent, p <0.05) despite higher injury severity scores (ISS) (average ISS 4.0 versus 9.5, p <0.05). Additionally, in the CSCP group we saw a trend toward fewer CT scans, and more patients were cleared clinically (20.8 percent versus 53.5 percent, p <0.05). Overall, length of stay (LOS) also decreased (p <0.05). Although LOS changes may have been statistically significant, multiple factors may have been at work, so the changes in LOS are not clinically or cost significant. Neither group missed any injuries (see Figure 2, page 69).

We then looked at 15 months before and after pathway implementation. Our preimplementation (n = 119) and postimplementation (109) groups were similar in terms of age,
gender, mechanism of injury, and ISS. Patients treated using the CSCP received fewer plain c-spine radiographs (34 percent versus 16 percent, p <0.05). In the CSCP group, we noticed a trend toward fewer CT scans (28 percent versus 23 percent, p <0.05), more patients were cleared clinically (44 percent versus 62 percent, p <0.05), and fewer spine specialty consults were placed (28 percent versus 13 percent, p <0.05). No missed injuries were detected in either group (see Figure 3, this page).

Setbacks
One of the biggest challenges in this study was ensuring compliance with the CSCP. Several education sessions occurred with the surgical and emergency medicine residents and attending physicians, and the algorithm was widely distributed. However, initially, we had no accurate way to determine whether health care professionals were complying with the pathway. Documentation of the markers for low-risk criteria that led to being able to clear the patient’s c-spines clinically was lacking in the reviewed charts. Documentation of timing of clinical clearance also was lacking.

To address these barriers, we inserted the pathway into our trauma history and physical templates, which acted as documentation of c-spine evaluation and clearance. It also served as a reminder to use the clearance pathway, as specific questions required physician input to complete the documentation. We posted the pathway on the wall of our trauma bay as a reminder to physicians to use the pathway when evaluating patients.

Furthermore, some patients were transferred from outside hospitals that do not use or have access to our pathway. Many of these patients already came with imaging studies that may or may not have been performed had our pathway been used. Thus, patients who were transferred with cervical imaging already completed were excluded from our data analysis.

Cost savings
A decrease in the number of imaging studies performed on these patients led to a decrease in cost associated with evaluation of our patients at both intervals. Using cost data obtained from our imaging department, we were able to roughly calculate these cost savings. At six months, the number of c-spine X rays decreased from 30 to two, and the number of c-spine CT scans decreased from 24 to 13. Total costs for combined modalities dropped from $2,325 before pathway implementation to $865 after pathway implementation, which represents a 63 percent reduction in imaging cost.

At 15 months, 65 c-spine X rays and 33 c-spine
We recommend meetings of the various services involved in pediatric trauma care to review the existing literature and develop a pathway that works best for the institution.

CT scans were performed prior to implementation, and 28 c-spine X rays and 25 cervical CT scans after implementation. The total combined costs for X rays and CT scans was $3,853 before implementation and $2,332 after implementation, which represents an approximately 40 percent reduction in imaging cost.

Tips for others
Following are tips for dealing with pediatric c-spine injuries.

Getting started
Existing literature supports the use of pathways driven by clinical criteria when evaluating pediatric c-spines. Funding is not necessary, but multidisciplinary support is critical for the development of a usable and accepted pathway. We recommend meetings of the various services involved in pediatric trauma care to review the existing literature and develop a pathway that works best for the institution. No universally used and validated set of guidelines for c-spine evaluation exists for children; thus, a pathway like the one implemented at Beaumont Children’s can be developed, or modifications of adult NEXUS (National Emergency X-Radiography Utilization Study) criteria can be used. By including all groups in the development of the pathway, buy-in and adherence are more likely.

Sustaining the activity
Continued use of the activity is best achieved by making the pathway a consistent part of the initial trauma evaluation. By including it in our electronic medical record documentation, we were able to clearly document utilization for each patient. We also were able to document reasons for deviation from the pathway, such as transfers from other medical centers. Regular monitoring through institutional review board-approved reviews of charts and data collection also can show effectiveness and benefit, which should help maintain adherence and improvement moving forward. Finally, feedback during monthly trauma task force and quality improvement meetings can help address any concerns or issues with the pathway.

REFERENCES
Gastric cancer (GC) is a major cause of cancer-related morbidity and mortality worldwide. The relatively low incidence of GC in the U.S. and controversy surrounding the applicability of evidence from Asia to U.S. patients have confounded efforts to establish a consensus approach for locally advanced disease. For the last decade, alternative approaches, including adjuvant chemoradiotherapy and perioperative chemotherapy supported by level I evidence, have vied for primacy. Meanwhile, some centers have advocated for the use of neoadjuvant chemoradiotherapy and adjuvant chemotherapy without radiation in selected patient cohorts. Outcomes of a recent clinical trial, however, have compelled a reassessment of older trial data and provided momentum for a more uniform application of systemic therapy before surgery.

Trials of multimodality therapy

One of the first trials to affirm the advantage of multimodality therapy for resectable GC in the U.S. was the SWOG (formerly the Southwestern Oncology Group/Intergroup-0116 trial)—the results of which were published in 2001. This study randomized 556 patients with resected ≥T3 or node-positive adenocarcinoma of the stomach or gastroesophageal junction (GEJ) to observation versus adjuvant fluorouracil and leucovorin plus 4500cGy of radiation. Three-year survival rates were 50 percent in the adjuvant therapy group versus 41 percent in the surgery-only group. Despite criticisms regarding the extent and standardization of surgery in this trial, it provided an evidence base for adjuvant chemoradiotherapy and continues to influence practice.

In 2006, outcomes from the Medical Research Council Adjuvant Gastric Infusional Chemotherapy (MAGIC) trial supported an alternative approach of perioperative (both pre- and postoperative) chemotherapy. This study randomized 503 patients with clinical stage II adenocarcinoma of the stomach, GEJ or distal esophagus to perioperative ECF (epirubicin, cisplatin, and fluorouracil) chemotherapy, or surgery alone. Five-year survival rates were 36.3 percent in the perioperative chemotherapy group and 23 percent in the surgery group. Concerns regarding the tolerability of ECF and evidence suggesting similar efficacy of alternative regimens with reduced toxicity in the metastatic setting have led to the adoption of perioperative systemic therapy approaches with other drug combinations in clinical practice.

Despite largely philosophical arguments in favor of one approach over the other, the impression of equipoise and the absence of high-level comparative data have justified a range of strategies. Uncertainty regarding the role of radiotherapy in patients undergoing more extensive locoregional surgery (that is, D2 lymphadenectomy) has further obfuscated identification of a consensus approach. Nonetheless, data from national registries indicate increasing use of neoadjuvant therapy in practice, perhaps reflecting...
Emerging evidence suggests that molecularly defined subgroups of locally advanced GCs are less likely to respond to perioperative chemotherapy (or chemotherapy in general).

**REFERENCES**


dissemination of the results of the MAGIC trial and wider acceptance of neoadjuvant therapy approaches for high-risk malignancies in general.3 Recently, data from the docetaxel, oxaliplatin, and fluorouracil/leucovorin (FLOT) 4 study were reported and provide further support for the perioperative chemotherapy approach. This study compared the FLOT regimen with ECF/ECX (epirubicin, cisplatin, and fluorouracil or capecitabine) in patients with resectable gastric or GEJ adenocarcinoma.4 Compliance with the adjuvant component of therapy was better in the FLOT arm than in the ECF/ECX arm (50 percent versus 37 percent). With a median follow-up of 43 months, median overall survival in the FLOT group was 50 months versus 35 months with ECF/ECX. These early outcomes and the improved tolerability of the FLOT regimen are leading to a rapid shift in clinical practice.

**Unanswered questions**

Emerging evidence suggests that molecularly defined subgroups of locally advanced GCs are less likely to respond to perioperative chemotherapy (or chemotherapy in general). For example, perioperative ECF or adjuvant capecitabine/oxaliplatin appear to be less effective in patients with mismatch repair-deficient or MSI-high tumors.5,6 Exploratory subgroup analysis of the FLOT4 data suggests that GEJ tumors—disproportionately enriched for the chromosomal instability consensus molecular subtype—are most likely to respond to FLOT. These data compel consideration of tailored perioperative strategies (for example, immune checkpoint blockade, targeted therapies) for molecularly selected tumors. Additionally, the availability of more active and better-tolerated systemic regimens with higher response rates compels a reassessment of the role for radiotherapy in resected patients. Future trials may provide answers to these questions and further improve outcomes for patients with gastric cancer. ♦
At the February 6, 1915, meeting of the American College of Surgeons (ACS) Board of Regents, Franklin H. Martin, MD, FACS, recommended that John G. Bowman, PhD, serve as the first director of the College. Dr. Bowman, former president of the University of Iowa, Iowa City, and secretary of the Carnegie Foundation for the Advancement of Teaching, was an educator, not a surgeon. Before the meeting, many of the founders had met with Dr. Bowman regarding a possible affiliation with the College, and all felt their aim of ensuring the ACS was recognized by the public and could create and promote its own standards could better be accomplished by “a practical man, probably an educator, not necessarily a medical man.”1 The Regents approved Dr. Bowman’s appointment as Director of the ACS at that meeting, effective immediately.2

Dr. Bowman was born in Davenport, IA, in 1877, and had served as both chief administrator of the University of Iowa and the first alumnus to become its president. Serving as president from 1911 to 1914, he oversaw the formation of the University of Iowa’s Colleges of Education and Fine Arts and promoted the work of the extension division, created on the principle that the university should become a real, practical influence in the lives of the state’s inhabitants.3 At the University of Iowa, Dr. Bowman also dealt with medicine-related issues, most notably the issue of fee-splitting—which many of the university’s medical school professors had been accused of practicing. Dr. Bowman took on this ethical issue, leading to a struggle throughout his entire presidency and eventually culminating in his departure.4
Dr. Bowman strongly believed that education should take precedence over politics, and his commitment to that belief drew him to the College’s founders. After joining the ACS, Dr. Bowman brought his passion and commitment to informing and extending knowledge to a larger audience to launch the College into national prominence.

He dove into his new role with the aim of creating positive policy in the surgical profession that would ultimately improve access and elevate the standard of patient care. As Director, he was involved in most of the College’s efforts, but his biggest area of influence was the hospital standardization program. Dr. Bowman spent much of his time over the next several years traveling in the U.S. and Canada, meeting with Fellows and the local committees they had organized, visiting hospitals, and gathering information on best practices. He kept in frequent contact with Dr. Martin, then Secretary General of the College, and in January 1919 Dr. Bowman wrote an extensive article in the
Dr. Bowman was one of only two nonsurgeon Directors of the College; however, his experience in educational policy and commitment to the principle of sharing knowledge played an integral role in the early years of the ACS, and the overall success and longevity of the College’s hospital standardization program.

No group of men in the world, it seems to me, have in the last decade so clearly demonstrated their desires and capabilities to utilize their experience for the advancement of their work as have the Fellows of the College... For many years to come at least your task is to make the motives of surgery articulate, first, to the surgeons themselves, and, second, to the public. Headway in this aim will be abundantly reflected in scientific progress. For your clear insight and for your courage to proceed along such principles you have my highest admiration.

Dr. Bowman served as chancellor of the University of Pittsburgh from 1921 to 1945 and as its president from 1945 until his retirement in 1947. During his tenure, he led the controversial effort to build the Cathedral of Learning, then the tallest educational structure in the world, as a symbol of "some of the power that is in good teaching."

Dr. Bowman was one of only two nonsurgeon Directors of the College; however, his experience in educational policy and commitment to the principle of sharing knowledge played an integral role in the early years of the ACS, and the overall success and longevity of the College’s hospital standardization program.

Material related to Dr. Bowman, including correspondence with both Franklin H. Martin and his longtime Secretary Eleanor K. Grimm, can be found in the ACS Archives.

REFERENCES

Violence in the workplace continues to vex the health care industry, putting the safety of health care professionals at risk every day. Surgeons who attend to victims of violent trauma and share bad news with patients and families, and health care professionals who have to face individuals who are intoxicated or who have mental health disorders are well aware of this challenge.

Prevalent problem
The Centers for Disease Control and Prevention defines workplace violence as the act or threat of violence, ranging from verbal abuse to physical assaults directed toward people at work or on duty. Furthermore, the U.S. Department of Labor’s Occupational Safety and Health Administration (OSHA) reported that on average, from 2002 to 2013, incidents of workplace violence occurred in health care settings at a rate of more than four times that of private industry.

In 2016, the Bureau of Labor Statistics reported a total of 16,890 workers were victims of trauma from nonfatal workplace violence. Of those workers, 70 percent were employed in health care or social services. OSHA updated its “Guidelines for preventing workplace violence for healthcare and social service workers” in 2015. In the guide, the authors said, “Health care and social service workers face an increased risk of work-related assaults resulting primarily from violent behavior of their patients, clients, and/or residents.” The following organizational risk factors for workers were cited:

- Lack of facility policies and staff training that address the recognition and management of escalating hostile and assaultive behaviors from patients, clients, visitors, or staff
- Work that occurs when understaffed, especially during mealtimes and visiting hours
- High worker turnover
- Inadequate security and mental health personnel on site
- Long waits for patients or clients and overcrowded, uncomfortable waiting rooms

With increased attention to workplace violence—as well as ways to improve processes geared toward supporting and keeping care workers safe—a study published in the February 2019 issue of The Joint Commission Journal on Quality and Patient Safety describes how a large academic hospital designed and tested a huddle handoff communication tool to improve its process for addressing the risk of violent patient events.

New tool for successful huddles
In “Using a potentially aggressive/violent patient huddle to improve health care safety,” Larson and colleagues explain how a multidisciplinary quality improvement (QI) team developed a tool called the Potentially Aggressive/Violent Huddle Form, using two iterative Plan-Do-Study-Act (PDSA) cycles.

This QI effort came in response to two patient safety incidents during a two-year period in which a patient became violent at the time of admission to the medical unit from the emergency department. As part of the communication tool, an ED nurse initiated the huddle process by informing the admitting unit that a patient at risk for violence was being admitted. Then, the admitting care team called the team in the ED to ensure that both teams communicated and participated in the handoff...
In 2016, the Bureau of Labor Statistics reported a total of 16,890 workers were victims of trauma from nonfatal workplace violence.

together. The huddle process occurred for 21 transfers in the first PDSA cycle and for 18 transfers in the second.

The results were as follows:

• The ED nurses and care workers from the six medical units reported feeling safe during the transfer process 100 percent of the time during both cycles, compared with a baseline of 54.7 percent.

• From the first to the second cycle, satisfaction with the process in the ED improved to 75 percent from 53.3 percent.

These findings led the study’s authors to conclude that the huddle handoff communication tool and other methods to facilitate the transfer of potentially violent patients have the potential to decrease the number and severity of violent incidents in the workplace.5

The Joint Commission also maintains a web portal for Workplace Violence Prevention Resources for Health Care, including presentations, research and more, available at www.jointcommission.org/workplace_violence.aspx. Read more about the huddle handoff communication tool in the Journal at www.jointcommissionjournal.com/article/S1553-7250(18)30103-X/fulltext.

Acknowledgment
The thoughts and opinions expressed in this column are solely those of Dr. Pellegrini and do not necessarily reflect those of The Joint Commission or the American College of Surgeons.

REFERENCES
Although a substantial portion of renal injuries are the result of blunt force, penetrating trauma accounts for 29 percent of all kidney injuries, and stab wounds have been shown to comprise approximately 17 percent of all penetrating renal trauma injuries.

Between 3 to 5 percent of trauma victims present with renal injuries, making the kidney the most frequently injured genitourinary organ. Although a substantial portion of renal injuries are the result of blunt force, penetrating trauma accounts for 29 percent of all kidney injuries, and stab wounds have been shown to comprise approximately 17 percent of all penetrating renal trauma injuries. Despite its relative scarcity, understanding how to diagnose and treat this potentially deadly condition remains of utmost importance.

**Diagnosis and intervention**

The diagnosis of renal stab wounds should use a combination of clinical acumen and cross-sectional imaging. Guidelines suggest that intravenous contrast-enhanced computerized tomography should be used in stable patients who have signs of renal trauma or who the clinician suspects may have experienced renal trauma. It is important that imaging occurs in both immediate and delayed phases to adequately assess the blood supply and the collecting system. Hematuria and hemodynamic instability are insufficient markers of renal injuries, and clinicians should pursue more aggressive imaging if renal injury is suspected.

If a clinician diagnoses a renal stab wound in a stable patient, every effort should be made to manage it conservatively. Intervention is warranted in unstable patients or patients who do not respond appropriately to resuscitative efforts. Definitive intervention will vary by specific situation and grade of renal laceration, ranging from angioembolization to surgical repair. Regardless of the management strategy, it is imperative to first control the bleeding and then determine the best means of repairing the kidney and draining the perirenal space.

**Findings**

To examine the occurrence of patients with knife wounds to the kidneys in the National Trauma Data Bank® (NTDB®) research admission year 2017, medical records were searched using the International Classification of Diseases, 10th Revision Clinical Modification codes. Specifically searched were records that contained E code X99.1 (assault by knife) and a diagnosis code of S37.0 (injury of the kidney). A total of 237 records were
found, 216 of which contained a discharge status, including 197 patients discharged to home, seven to acute care/rehab, five to law enforcement, and one to skilled nursing facilities; six died (see Figure 1, this page). Of these patients, 84.8 percent were men, on average 33.7 years of age, had an average hospital length of stay of 6.6 days, an intensive care unit length of stay of 4.1 days, an average injury severity score of 15, and were on the ventilator for an average of four days. Of those patients tested for alcohol, 42 percent (71 out of 168) tested positive.

Renal injuries comprise a small percent of all traumatic injuries. Penetrating injuries to the kidneys account for an even smaller percentage of all renal injuries, and stab wounds are rarer than gunshot wounds. Therefore, one must be aware of back stabbers, as they may produce a renal injury.

Throughout the year, we highlight these data through brief reports that are published monthly in the Bulletin. The NTDB Annual Report can be found on the American College of Surgeons website as a PDF file at facs.org/ntdb. In addition, information is available on our website about how to obtain NTDB data for more detailed study. If you are interested in submitting your trauma center's data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.

Acknowledgment
Statistical support for this column was provided by Ryan Murphy, Data Analyst, NTDB.

REFERENCES

Health care professionals dedicated to raising the bar on the quality of surgical care and patient safety are invited to attend the American College of Surgeons (ACS) 2019 Quality and Safety Conference, July 19–22 at the Walter E. Washington Convention Center, Washington, DC.

“The ACS Quality and Safety Conference is likely the leading conference dedicated to surgical quality and safety,” said Clifford Y. Ko, MD, MS, MSHS, FACS, FASCRS, Director, ACS Division of Research and Optimal Patient Care. “It is designed for any and all who are working to achieve better care and outcomes for the surgical patient.”

Sessions at this year’s conference will include content from the many established ACS Quality Programs, including Cancer, the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP), the National Surgical Quality Improvement Program (ACS NSQIP®), and the Children’s Surgery Verification Program. Additional tracks and sessions will be offered for attendees interested in Quality Improvement (QI) Principles and Tools; the Geriatric Surgery Verification Program, which will be unveiled at the conference; and a list of important and emerging topics, including the following:

- Value improvement
- Bundled care
- Global health
- Change management
- Leadership principles
- Team dynamics
- Strong for Surgery
- Enhanced recovery
- Emergency general surgery
- Transplantation
- New ACS Quality Programs

The theme, Putting Our Patients First, will set the tone for the conference, as presenters and organizers strive to accomplish the following:

- Provide a professional forum to discuss and apply the most recent knowledge about quality and safety initiatives in the field of surgery
- Present methods used to analyze data from ACS Quality Programs and demonstrate practical ways to use the data for QI
- Assist hospitals and providers in managing, analyzing, and interpreting data
- Enhance the learning experience by offering breakout sessions that educate attendees on topic areas of their interest

Keynote speaker Rana L. Awdish, MD, is an intensive care physician at Henry Ford Hospital, Detroit, MI. Dr. Awdish will share her journey from near death to recovery, as well as the passion she has for improving the patient experience. Her story includes lessons learned from being both a physician and a patient and how her experience as a patient shaped her approach as a health care professional.

“The amount of expertise, experience, and education for, and by, all who attend is invaluable. On top of meaningful scheduled presentations, the conference offers several networking opportunities with attendees who are already successfully achieving improvement in their local practices,” Dr. Ko said. “The abilities to learn and share are key components to this conference.”

Visit the Quality & Safety Conference web page at facs.org/qualitysafetyconference for additional details and a link to register.

In addition, hotel accommodations can be secured online. For details on making reservations at the special conference rate that expires on June 17, visit the Hotel Accommodations web page found at facs.org/qualitysafetyconference.
Stop the Bleed featured in *The New Yorker*

The genesis and continual efforts of the Stop the Bleed® initiative were recently featured in an extensive article by Paige Williams that has been posted online at www.newyorker.com/magazine/2019/04/08/turning-bystanders-into-first-responders and was published in the April 8 print edition of *The New Yorker*. The article, which outlines the worsening severity of mass shootings in the U.S. and the need to train the public in bleeding control techniques, includes comments from Lenworth M. Jacobs, Jr., MD, MPH, FACS, Medical Director, American College of Surgeons (ACS) Stop the Bleed program, and a member of the ACS Board of Regents.

“Four months after Sandy Hook, Jacobs convened a small group of physicians, military leaders, and law-enforcement officials—including representatives of the F.B.I. and the Department of Defense—at Hartford Hospital [CT]. The group became known as the Hartford Consensus,” Ms. Williams reports. “Thirteen days after the Hartford Consensus first met, explosive devices filled with nails and ball bearings detonated near the crowded finish line of the Boston Marathon…. The marathon attack confirmed the Hartford Consensus’s view: people would instantly help one another during a crisis, even when the injuries were almost unbearable to see, much less to touch. The real first responders were bystanders.”

The article highlights the organic nature of the Stop the Bleed initiative, in which instructors can train people who, in turn, can become instructors themselves. Training sessions are being held in many different venues around the country, including schools, churches, and community centers.

*The New Yorker* article appears at an opportune time, published prior to the first National Stop the Bleed Month in May, and the second annual National Stop the Bleed Day, May 23. For more information, visit bleedingcontrol.org.

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**Coming next month in JACS and online now**

**Transferred emergency general surgery patients are at increased risk of death: A NSQIP propensity score-matched analysis**

Manuel Castillo-Angeles, MD, MPH; Tarsicio Uribe-Leitz, MD, MPH; Molly Jarman, PhD; and colleagues report in the June issue of the *Journal of the American College of Surgeons (JACS)* that after rigorous risk adjustment, interhospital transfer status has a small effect on mortality and morbidity in the emergency general surgery population. This could suggest that it is reasonable to transfer patients and that regionalization of care should be encouraged.

This article and all other JACS content is available at www.journalacs.org.
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The Board of Directors of the American College of Surgeons Professional Association (ACSPA) and the Board of Regents (B/R) of the American College of Surgeons (ACS) met February 8–9 at the College’s headquarters in Chicago, IL. Following is a summary of key activities discussed. The information provided was up-to-date at the time of the meeting.

**ACSPA**
From January 1, 2017, through December 31, 2018, the ACSPA and its political action committee, ACSPA-SurgeonsPAC, reported more than $1 million in receipts from more than 1,800 ACS members and staff. SurgeonsPAC disbursed $850,000 to more than 150 congressional candidates, leadership PACs, and political campaign committees. Commensurate with congressional party ratios, 55 percent of the amount went to Republicans and 45 percent to Democrats.

**ACS**
In addition to reviewing reports from the ACS division Directors, the Regents reviewed and approved the policy statement titled Guidelines for the Ethical Use of Social Media by Surgeons, which is published in this issue of the Bulletin, page 62.

The B/R also accepted resignations from 12 Fellows and changed the status from Active or Senior to Retired for 80 Fellows. The B/R approved the reinstatement of 146 Fellows.

**Division of Education**
The B/R approved the Division of Education’s proposal for the establishment of a new ACS Continuing Medical Education Credit System. The tiered approach supports the development and maintenance of expertise and mastery and promotes excellence in surgery through advanced education and training. It encourages surgeons to pursue these exemplary levels of achievement to improve patient care. The new system would recognize individuals who have demonstrated these high levels of achievement by issuing certification. The system will be based on new standards that would catalyze development of new and innovative education programs that use cutting-edge methods and state-of-the-art technology for teaching, learning, and assessment of cognitive, technical, and nontechnical skills.

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

**Quality and Safety Conference**
The 2019 ACS Quality and Safety Conference (QSC) will take place July 19–22 in Washington, DC, and will focus on putting the patient first. Sessions will highlight techniques to improve quality and safety, leadership, advocacy, and communication, with tracks devoted to important clinical topics, such as enhanced recovery, Strong for Surgery, emergency general surgery, transplant, geriatric, and trauma (see page 80 for details). The 2020 QSC is scheduled for July 24–27 in Minneapolis, MN.

**Red Book**
In 2017, the ACS published Optimal Resources for Surgical Quality.
and Safety (the Red Book). The development of adjunctive and integrated resources/standards based on this manual are near completion and ultimately will be used to launch a Surgical Quality Verification Program. The principal areas of focus for the standards are rooted in the foundational elements of the manual and include the domains and phases of surgical care, the surgical quality officer, program and committee infrastructure, peer and case review, disease-based management, and components of data capture and surveillance. Pilot visits began last year and will continue in 2019. The goal is to refine and revise the set of standards based on findings from the pilot phase. Since its release, nearly 10,000 manuals have been distributed.

ACS NSQIP
A total of 884 hospitals participate in the National Surgical Quality Improvement Program (ACS NSQIP®), with 716 participating in the adult option. The pediatric option represents 15 percent of overall participation, and another 19 hospitals are in various stages of the onboarding process. At present, 125 hospitals outside of the U.S. participate in ACS NSQIP—approximately 15 percent of all participating hospitals. Interest from international sites continues to build, particularly in Asia, Australia, Europe, and the Middle East.

MBSAQIP
A total of 907 facilities participate in the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP®), 810 of which are fully accredited. This year, MBSAQIP will launch a patient-reported outcomes (PROs) project at small group centers. National implementation is expected by July 2019. PROs will provide the first results from comparative effectiveness analyses of the three most common metabolic and bariatric procedures (gastric sleeve, gastric bypass, and gastric band) based on patient-centered, patient-reported, one-year outcomes from data collected nationally through MBSAQIP. The project will help provide patients and providers with up-to-date, robust metrics to further help inform patients regarding their surgical procedure options.

CSV
The Children’s Surgery Verification (CSV) Quality Improvement Program launched in 2017 with the goal of ensuring access to high-quality care for pediatric surgical patients. At present, the program has 129 active children’s surgery centers. Approximately 45 of these centers are in the various stages of verification, a 16 percent increase from 2018; 13 of the active sites are fully verified as Level I children’s surgery centers.

Plans are under way to create a CSV consultation program to allow centers to select their areas of focus based on their own assessment of their center against the CSV standards. As part of this program, sites will be able to select their areas of focus to provide more flexibility and customized guidance. The identified areas of focus include performance improvement and patient safety, data infrastructure, program support/staffing, non-pediatric providers, alternative pathways, anesthesia requirements, research requirements, and ambulatory centers. The process will be piloted at several sites before a public rollout later this year.

CQGS Project
The Coalition for Quality in Geriatric Surgery (CQGS) Project, funded by the John A. Hartford Foundation, aims to systematically improve surgical care for patients older than age 65 by establishing a verification program. Based on feedback from the CQGS beta pilot, the team is revising the standards and compliance measures and solidifying the verification process for final publication later this year. The beta pilot confirmed that the standards are meaningful and have a significant positive effect on care delivered to older adult patients. The CQGS Project will launch at the 2019 ACS Quality and Safety Conference.
**ISCR Program**

The Agency for Healthcare Research and Quality Improving Surgical Care and Recovery (ISCR) Program, a collaborative effort between the ACS and the Johns Hopkins Armstrong Institute for Patient Safety and Quality, Baltimore, MD, is under way. The program continues to attract hospitals throughout the nation that partner with the ISCR national program team to implement enhanced recovery practices. Participating hospitals receive a ready-to-use pathway and access to educational materials on how to implement the pathway and to experts in performance improvement to help troubleshoot implementation concerns. Participants also recently gained access to the ISCR Simuleader, an interactive tool that allows participants to learn implementation and change management practices that affect the success of the pathway.

**Strong for Surgery**

Strong for Surgery (S4S), a joint program between the ACS and the University of Washington, Seattle, identifies and evaluates evidence-based practices to optimize the health of patients before surgery. The program empowers hospitals and clinics to integrate checklists into the preoperative phase of clinical practice for elective operations. The S4S checklists are used to screen patients for potential risk factors that can lead to surgical complications and to provide appropriate interventions to ensure better surgical outcomes. As of January, the program grew from 178 sites to 413 sites after release of the tool kit.

**SSR**

The Surgeon Specific Registry (SSR) continues to evolve with more features as an online software application and database that allows surgeons to track their cases and outcomes from their computer or mobile device. Since its launch, more than 1.4 million cases have been entered into the SSR by a user base of 5,500 surgeons.

**Cancer Programs**

The Commission on Cancer (CoC) has accredited 1,483 individual and network programs, and 37 new cancer programs applied for accreditation in 2018. The CoC standards are undergoing a major revision focused on strengthening their overall impact on the delivery of quality cancer care. The revisions will eliminate redundancies; retire the commendation criteria and Outstanding Achievement Award; and, most importantly, introduce standards derived from *Operative Standards for Cancer Surgery (OSCS), Volume I*. The standard revisions will be ready for field testing and constituent feedback in 2019.

The National Accreditation Program for Breast Centers (NAPBC®) has accredited 669 centers and satellites and received 25 new applications in 2018. A comprehensive review and revision of the NAPBC standards will occur in 2019. The National Accreditation Program for Rectal Cancer (NAPRC) launched in 2017 and has five accredited centers. Participating NAPRC programs must first receive CoC accreditation.

Cancer Programs will participate in the 2019 ACS QSC with a half-day, preconference workshop on the National Cancer Database (NCDB) and four cancer tracks that include 13 individual sessions highlighting the American Joint Committee on Cancer (AJCC), Clinical Research Program, CoC, NAPBC, NAPRC, and NCDB. In addition, the annual meetings of the AJCC, CoC, and NAPBC will take place in conjunction with QSC to allow for greater participation.

The 2019 Cancer Cluster Program Workshops took place April 7–9 in Chicago. These workshops provided attendees with three consecutive days of programs to educate, engage, and enhance understanding of the NAPBC, CoC accreditation, and the NAPRC. These workshops are targeted at programs preparing for either accreditation or reaccreditation.
The NCDB—jointly sponsored by the College and the American Cancer Society—is a clinical oncology database sourced from hospital registry data that are collected in more than 1,500 CoC-accredited facilities. NCDB data are used to analyze and track patients with malignant neoplastic diseases, their treatments, and outcomes. Data represent more than 70 percent of newly diagnosed cancer cases nationwide and more than 39 million historical records. In 2019, the NCDB will launch a new data file uploader and submission reports and the Rapid Cancer Reporting System (RCRS). This new infrastructure will simplify data submission, decrease time between diagnosis and the NCDB's receipt of an initial record of disease, and integrate a quality improvement platform for CoC-accredited cancer programs to assess their performance with quality measures. Reporting capabilities also will be added for NAPBC- and NAPRC-accredited centers.

Trauma Programs
In 2018 the ACS Committee on Trauma (COT) Executive Committee initiated a strategic planning process to create a five-year plan to serve as a blueprint to guide the committee’s priorities and activities. Project management principles were used to define, accept, operationalize, implement, and evaluate each program element. This process has produced the following updated vision and mission statements:

• Vision statement: To eliminate preventable deaths and disabilities across the globe by preventing injury and improving the outcomes of trauma patients.

• Mission statement: To develop and implement programs that support injury prevention and ensure optimal patient outcomes across the continuum of care. These programs incorporate advocacy, education, trauma center and trauma system resources, best practice creation, outcome assessment, and continuous quality improvement.

As of January 8, 812 hospitals were participating in the ACS Trauma Quality Improvement Program (TQIP®), including 142 programs participating in Pediatric TQIP, with 14 percent of Adult TQIP programs also participating in Pediatric TQIP.

Stop the Bleed® training is being provided in more than 77 countries. As of December 31, 2018, bleedingcontrol.org had more than 35,000 registered classes, 39,000 instructors, and 547,000 individuals trained worldwide.

Data from the ACS Membership Survey on Firearm Injuries is being analyzed and will be used to drive ACS efforts to reduce firearm injury.

More than 11,000 ACS Fellows responded to the survey. The College also hosted a Medical Summit on Firearm Injury Prevention, February 10–11 in Chicago. The meeting, attended by representatives from more than 45 organizations, promoted further engagement in establishing a consensus-based, nonpartisan, public health approach to firearm injury.

In 2018, more than 40,000 students were trained in the following COT courses: Advanced Surgical Skills Exposure for Trauma, Advanced Trauma Life Support®, Advanced Trauma Operative Management, Disaster Management and Emergency Preparedness Course, Rural Trauma Team Development Course, and Basic Endovascular Skills for Trauma. ♦
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The American College of Surgeons (ACS) has awarded six Resident Research Scholarships for 2019–2021. The scholarships are offered to encourage residents to pursue careers in academic surgery and carry awards of $30,000 for each of two years, beginning July 1, 2019. These scholarships are supported by the Scholarship Endowment Fund of the College.

The recipients of these scholarships are as follows:


- **Omar J. Haque, MD**, Beth Israel Deaconess Medical School, Boston, MA. Projected specialty: Transplantation. Research project: Ex-vivo liver graft regeneration via normothermic machine perfusion in a two-thirds partial hepatectomy model.


- **Luis I. Ruffolo, MD**, University of Rochester Medical Center, NY. Projected specialty: Hepato-pancreatobiliary surgery. Research project: Reprogramming the tumor microenvironment in pancreatic adenocarcinoma.

An updated description and requirements for this program will be posted on the ACS website at facs.org/member-services/scholarships/resident/acsresident. The application deadline for the 2020 Resident Research Scholarships is **September 15, 2019**.

The Scholarship Endowment Fund was established to provide income to fund scholarships and fellowships awarded by the Board of Regents. Direct contributions to support the Scholarship Endowment Fund are welcome. Fellows wishing to make tax-deductible gifts to fund these vital programs are encouraged to contact the ACS Foundation at 312-202-5338.
The American College of Surgeons (ACS) has awarded four Faculty Research Fellowships for 2019–2021. The fellowships are offered to encourage young academic surgeon-scientists to establish their own laboratories and carry awards of $40,000 for each of two years, beginning July 1, 2019. These fellowships are supported by the ACS Scholarship Endowment Fund.

The recipients are as follows:

- **Franklin H. Martin, MD, FACS, Fellow:** Amar Nijagal, MD, University of California, San Francisco. Specialty: Pediatric surgery. Research project: The cooperative relationship between neutrophils and monocytes during neonatal liver inflammation: Insight into the pathogenesis of biliary atresia.

- **Christina L. Roland, MD, FACS, MD Anderson Cancer Center, Houston, TX. Specialty: Surgical oncology. Research project:** Exploring molecular and immune mechanisms of response and resistance to neoadjuvant checkpoint blockade in patients with surgically resectable soft tissue sarcoma.

- **Mustafa Raoof, MD, City of Hope, Duarte, CA. Specialty: Surgical oncology. Research project:** Pre-clinical studies of first-in-class therapy (AOH1996) targeting pancreatic cancer.

- **Stephanie Downs-Canner, MD, University of North Carolina, Chapel Hill. Specialty: Surgical oncology. Research project:** Inhibition of Th17 into Treg conversion as a novel component of immunotherapy in triple negative breast cancer.

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**Applying for and supporting fellowships**

An updated description and requirements for this program will be posted to the Scholarships webpage. The application deadline for the 2020 Faculty Research Fellowships is **November 15, 2019**.

The Scholarship Endowment Fund was established to provide income for scholarships and fellowships awarded by the ACS Board of Regents. Direct contributions to support the Scholarship Endowment Fund are welcome. Fellows who would like to make tax-deductible gifts to fund these vital programs are encouraged to contact the ACS Foundation at 312-202-5338.

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MAY 2019 BULLETIN American College of Surgeons
The Resident and Associate Society of the American College of Surgeons (RAS-ACS) earlier this year announced the recipients of the 2019 RAS-ACS Leadership Scholarship Awards. The winners were selected based on the following criteria: prior RAS-ACS involvement, potential for future leadership within the RAS-ACS, strength of the letter of support, and how well the essay supported the RAS-ACS vision.

Each scholarship covers course registration and travel expenses to and from various ACS meetings and courses. The winners are as follows:

**• Jeremy D. Kauffman, MD**, research fellow, division of pediatric surgery, Johns Hopkins All Children’s Hospital, St. Petersburg, FL, and general surgery resident, UPMC (University of Pittsburgh Medical Center) Pinnacle, Harrisburg, PA, who attended the Residents as Teachers and Leaders Course, March 29–31 in Chicago, IL.

**• Diane Haddad, MD**, general surgery resident, T32 research fellow, and master of public health candidate, Vanderbilt University Medical Center, Nashville, TN, who attended the ACS Leadership & Advocacy Summit, March 29–April 2 in Washington, DC.

**• Sharven Taghavi, MD, MPH, MS**, assistant professor of surgery, division of trauma and critical care, Tulane University School of Medicine, New Orleans, LA, who at press time was scheduled to attend the Surgeons as Leaders: From Operating Room to Boardroom Course, April 28–May 1 in Durham, NC.

**• Ravi Viradia, MD**, chief, general surgery residency, West Virginia University, Morgantown, who will be attending the ACS Quality and Safety Conference, July 19–22 in Washington, DC.
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- American Surgical Association
- American Association for the Surgery of Trauma
- Triological Society
- Southeastern/Southwestern Surgical Congress
- The Voice Foundation

[Website Link]
Calendar of events

*Dates and locations subject to change. For more information on College events, visit facs.org/events or facs.org/member-services/chapters/meetings.

MAY

Italy Chapter
May 4–5
Pisa, Italy
Contact: Dr. Giuseppe Nigri, giuseppe.nigri@uniroma1.it, facsitaly.org

Missouri Chapter
May 4–5
Lake Ozark, MO
Contact: Denise Boland, MissouriChapterACS@gmail.com, moacs.org

ANZ Chapter Meeting, RACS Congress
May 8
Bangkok, Thailand
Contact: Monique Whear, anz.acs@surgeons.org, asc.surgeons.org

Michigan Chapter
May 8–10
Grand Rapids, MI
Contact: Carrie Steffen, carrie@michiganacs.org, michiganacs.org

West Virginia Chapter
May 9–11
White Sulphur Springs, WV
Contact: Sharon W. Bartholomew, wvacs1@gmail.com

Ohio Chapter
May 10–11
Columbus, OH
Contact: Emily Maurer, emaurer@facs.org, ohiofacs.org

Metropolitan Washington, DC Chapter
May 11
Washington, DC
Contact: Ashley Porter, aporter@facs.org, dcfacs.org

Illinois Lobby Day
May 15
Springfield, IL
Contact: Nathalia Granger, ngranger@facs.org

China-Hong Kong Chapter, Chinese College of Surgeons (CCS) Meeting
May 16–18
Beijing, China
Contact: CCS2019 Secretariat, ccs_vip@163.com

Puerto Rico Chapter
May 16–18
San Juan and Carolina, PR
Contact: Aixa Velez-Silva, acspuertoricochapter@gmail.com, acspuertoricochapter.org

Maine Chapter
May 17–19
Bar Harbor, ME
Contact: Cathy Stratton, cstratton@mainemed.com, mainefacs.org

Virginia Chapter
May 17–18
Richmond, VA
Contact: Susan McConnell, smconnell@ramdocs.org, virginiaacs.org

Metropolitan Philadelphia Chapter
May 20
Philadelphia, PA
Contact: Lauren E. Newmaster, lnewmaster@pamedsoc.org, mp-acs.org

Louisiana Lobby Day
May 22
Baton Rouge, LA
Contact: Janna Pecquet, janna@laacs.org, laacs.org

Michigan Lobby Day
May 23
Lansing, MI
Contact: Carrie Steffen, carrie@steffenmanagement.com, michiganacs.org

Israeli Surgical Association Conference
May 29–31
Upper Galilee, Israel
Contact: Prof. Yoram Kluger, y_kluger@rambam.health.gov.il

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October 4–8
Chicago, IL

2021
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