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April 18–21, 2015

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The American College of Surgeons Division of Education welcomes submissions to the following programs to be considered for presentation at Clinical Congress 2015, October 4–8, in Chicago, IL.

Oral Presentations
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• SCIENTIFIC PAPERS*

Poster Presentations
• SCIENTIFIC POSTER PRESENTATIONS
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Submission Information
• Abstracts are to be submitted online only.
• Submission period begins after December 1, 2014.
• Deadline: 5:00 pm (CST), March 2, 2015.
• Late submissions are not permitted. There are no considerations made for “late-breaking abstracts.”
• Abstract specifications and requirements for each individual program will be posted on the ACS website at http://abstracts.facs.org/. Review the information carefully prior to submission.

*Accepted authors are encouraged to submit full manuscripts to JACS.
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For more than 100 years, membership in the American College of Surgeons (ACS) has signified a surgeon’s commitment to delivering the highest quality patient care, and every day the staff and leadership strive to ensure that each generation of surgeons can meet the evolving challenges that face the profession. These are the key messages that a new campaign—Realize the Potential of Your Profession—is trying to convey to young surgeons who are debating the value of becoming a Fellow and being actively involved in the ACS.

A core element of this campaign calls upon ACS Fellows to share the benefits of membership with nonmember colleagues and directly engage young surgeons through various communications channels. We plan to offer a series of networking events to drive awareness and interest in ACS membership. For example, we will pair a senior leader with a young surgeon to host an event for potential members in key markets.

The value of Fellowship
Talking points that we plan to include in these interactions include the following:

• ACS Fellows have been among the most eminent surgeons in the world. Early ACS Fellows, such as Ernest Amory Codman, MD, FACS; Franklin H. Martin, MD, FACS; William J. and Charles H. Mayo, MD, FACS; and Harvey Cushing, MD, FACS, helped to define quality surgical patient care and set the standards for surgical education and training. Alfred Blalock, MD, FACS; Robert M. Zollinger, MD, FACS; David C. Sabiston, Jr., MD, FACS; Joseph Murray, MD, FACS; C. Rollins Hanlon, MD, FACS; and their peers led the College through a period of unprecedented advances in surgical treatment. More contemporary figures have helped to guide the College through decades of Medicare payment changes and increasing public demands for value-based care.

• The ACS provides young surgeons with unparalleled access to opportunities for continuous professional development and exposure to clinical expertise, enabling them to be the best surgeons possible. The annual Clinical Congress of the ACS offers a range of hands-on and didactic courses, panel discussions, and social events where young surgeons can interact with leaders in the organization and the profession.

In addition, ACS publications, such as the Bulletin, the Journal of the American College of Surgeons, and various electronic newsletters, including ACS NewsScope and The ACS Advocate, ensure that members are informed about the issues that affect surgical practice, as well as advances in clinical care and scientific research. Furthermore, the Committee on Trauma (COT) and the Commission on Cancer (CoC) sponsor programs to help surgeons and other health care professionals provide optimal care to patients with some of the most acute surgical conditions.

• The ACS helps young surgeons to develop leadership skills and ascend in their career. Each year, the ACS presents the ACS Leadership & Advocacy Summit in Washington, DC, where young surgeons learn about the key characteristics of effective leaders, such as emotional intelligence, and put these skills to use to advocate on behalf of their patients. Furthermore, the ACS and several surgical specialty societies offer scholarships for surgeons to participate in the Heller Executive Leadership Program in Health Policy and Management at Brandeis University, Waltham, MA. The College also provides opportunities for young members to develop relationships with more established Fellows who can serve as professional mentors and coaches.

• The ACS has developed a reputation as a leader in quality improvement. Through the standard-setting and verification activities of the COT, the CoC, The Joint Commission (which evolved from the ACS Hospital Standards Program), the ACS National Surgical Quality Improvement Program, and so on, the College has become a trusted advisor to policymakers on quality issues. The College also is at the forefront of advising surgeons on public reporting and offers services, such as the Surgeon Specific Registry, to help surgeons meet Maintenance of Certification and other regulatory requirements.
The ACS has a legacy of excellence, and adding more young surgeons to our ranks and giving them access to a network of leaders and the array of resources for which the College is known will undoubtedly foster a future of excellence in surgical care.

• Fellows can connect with other surgeons and colleagues in ways that best suit their needs. The College’s robust membership of more than 80,000 allows surgeons of all specialties and practice models and locations to interact and to benefit from their shared knowledge and experience. Participation in the ACS provides opportunities to develop professional, collegial relationships with other surgeons who can be contacted for reliable advice, referrals, job leads, and so on.

• Surgeons can get involved in a way that is customized to their interests and goals. The College offers national and regional meetings on a range of issues. Surgeons also are encouraged to play an active role in ACS committees centered on their unique interests—from clinical research to health policy initiatives to education and training. And with increased teleconferencing capabilities, surgeons rarely need to travel to participate in committee meetings.

• The ACS provides surgeons with opportunities to influence health policy. The ACS is working with health policymakers to address the provision of care in mass-casualty events, Medicare payment reform, liability reform, regulations pertaining to the adoption and use of health information technology, state legislative advocacy, quality reporting, and so on. Two powerful advocacy tools available to Fellows include the ACS Professional Association political action committee (ACSPA-SurgeonsPAC) and SurgeonsVoice, a grassroots program.

Your involvement is imperative
As Patricia L. Turner, MD, FACS, Director, ACS Division of Members Services, has stated, “This initiative is designed to appeal to young surgeons in new and engaging ways.” To get the campaign started, this month we are rolling out a video, 100 Years, 100 Reasons to Join, which will be available via social media and on the ACS website, www.facs.org. ACS leaders will also share the video at speaking engagements.

Just as the Inspiring Quality initiative became a cornerstone of the ACS’ efforts to advance surgical quality throughout the country, we anticipate that this program will help young surgeons to realize the potential of their profession through engagement with the College. The ACS has a legacy of excellence, and adding more young surgeons to our ranks and giving them access to a network of leaders and the array of resources for which the College is known will undoubtedly foster a future of excellence in surgical care. We look forward to sharing news and updates on this important endeavor and ask that all Fellows help us advance the College’s message to potential new members. ☻
2015 Medicare fee schedule:
How the changes will affect surgical practice

by Neha Agrawal, MPH; Sana Gokak, MPH; Jill Sage, MPH; and Vinita Ollapally, JD
New payment policy and coding and reimbursement changes set forth in the calendar year (CY) 2015 Medicare physician fee schedule (MPFS) final rule took effect January 1, 2015. The MPFS, updated annually by the Centers for Medicare & Medicaid Services (CMS), lists payment rates for Medicare Part B services. On September 2, 2014, the American College of Surgeons (ACS) submitted comments related to the MPFS proposed rule. These comments provided feedback to CMS on a number of policies that ultimately were included in the final rule, which was released in November 2014. Although the MPFS final rule introduces important payment and policy changes that affect all physicians, this article focuses on updates that are particularly relevant to surgery and related specialties.

**CY 2015 conversion factor**
The MPFS final rule calls for reducing physician payments by 21.2 percent in CY 2015 due to use of the controversial sustainable growth rate (SGR) formula. The pay cut would take effect April 1, 2015, because the Protecting Access to Medicare Act of 2014, signed into law April 1, 2014, provides for a 0 percent change in MPFS payments for services furnished between January 1 and March 31, 2015. Without additional congressional action, the 21.2 percent SGR cut in physician payment will be applied to payment for Medicare physician services furnished on or after April 1, 2015.

**Practice expense RVUs**
The MPFS proposed rule solicited comments on possible uses of hospital outpatient department (HOPD) cost data as a means to ensure accuracy and maintain relativity in developing practice expense (PE) values and payments for services rendered in physician offices. The ACS weighed in on this issue, urging CMS not to use HOPD cost data to evaluate PE relative value units (RVUs). The ACS' comments to CMS noted that the American Medical Association (AMA) Relative Value Scale Update Committee (RUC) has a process for determining PE inputs that is comprehensive and data-driven, is produced by a team that has a history of expertise in this area, uses dedicated and extensive resources to improve the reliability of the PE methodology, and employs a bottom-up approach that involves a review of 100 percent of the PE inputs for all codes. The ACS' comments also cited differences in economies of scale, cost center structures, sites of service, maintenance of relativity, and the evaluation of direct and indirect costs, concluding that HOPD cost data and PE cost data are not comparable. CMS did not finalize any policies in the final rule, but indicated that the agency would continue to consider if and how HOPD cost data might be useful in addressing concerns regarding PE payments under the MPFS.

**POS Code 22**
To collect better data on off-campus versus on-campus provider-based HOPDs, the MPFS final rule states that CMS will remove Place of Service (POS) code 22, Outpatient Hospital: A portion of a hospital which provides diagnostic, therapeutic (both surgical and nonsurgical), and rehabilitation services to sick or injured persons who do not require hospitalization or institutionalization.* CMS will instead create two new POS codes—one to identify outpatient services furnished in on-campus,

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remote, or satellite locations of a hospital, and another
to identify outpatient services furnished in off-cam-
pus locations that are not remote or satellite locations
of a hospital or a hospital emergency department.
CMS states that it expects the two new POS codes to
be available after July 1, 2015, at which time physicians
will be required to record these POS codes, as appro-
priate, on their professional claim forms. There will
be no payment adjustments for services rendered in
the off-campus HOPD setting; this change is solely
for data collection purposes.
This change stems from CMS’ desire to better
understand the growing trend toward hospital acqui-
sitions of physician offices and the treatment of these
offices as off-campus, provider-based HOPDs from a
payment perspective. Currently, Medicare pays a sepa-
rate facility fee to account for a portion of PEs incurred
by the hospital, often resulting in inappropriate pay-
ments made to off-campus, provider-based HOPDs.

Valuing codes
Valuing new, revised, and potentially misvalued Cur-
rent Procedural Terminology (CPT) codes is a part of
maintaining the MPFS.† Under the current process,
CMS issues “interim final” values for most of these
codes in the MPFS final rule. These values are imple-
mented for the following year but are subject to public
feedback before being finalized at the end of the year.
The MPFS final rule revised this process, and going
forward values will be part of the MPFS proposed rule,
affording stakeholders an opportunity to provide feed-
back on proposed values in advance of implementa-
tion. Final values will be incorporated into the annual
MPFS final rule a few months later. The transition to
this revised process is set to begin in CY 2016, with full
implementation taking place in CY 2017.
CMS proposed modifying this process to support a
growing public demand for increased transparency
and time to prepare for payment changes. The ACS

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supported CMS’ proposal overall and specifically sup-
ported including values for new, revised, and poten-
tially misvalued CPT codes in the annual proposed
rule. CMS considered ACS’ comments and changed
its policies to follow this process, which eliminates the
need for most “interim final” values.

Global codes
One of the most significant changes in the MPFS final
rule calls for transitioning all 10- and 90-day global
codes to 0-day global codes. The transition for 10-day
global codes will begin in CY 2017, and the transition
for 90-day global codes will begin in CY 2018. CMS has
yet to develop a methodology for making this transi-
tion. CMS set forth a number of reasons as to why
the agency believes this transition is necessary, includ-
ing the following: to increase the accuracy of MPFS pay-
ment by basing payment rates more closely on the typi-
cal resources used, to avoid duplicative payments when
a patient receives postoperative care from a different
provider, and to facilitate the availability of more accu-
rate data for new payment models and quality research.
Prior to the release of the final rule, the ACS sub-
mited detailed comments to CMS stressing that the
agency should refrain from moving forward with this
proposal until a comprehensive analysis was conducted
to determine its effects on the provision of surgical care.
Because this wide-ranging proposal will affect more
than one-third of all CPT codes, the ACS asserted that
CMS should delay its implementation until stakehold-
ers have had sufficient time to understand the effects
and provide meaningful comments about this policy.
The ACS comment letter also offered recommen-
dations on a number of issues that CMS must resolve
before moving forward with the proposed policy. The
letter addressed CMS’ concern that the number and
level of postoperative services included in the value of
10- and 90-day global services fall short of accurately
reflecting the postoperative services that surgeons actu-
ally provide. The ACS questioned whether this policy
would result in patients not seeking follow-up care if
they had to make a co-payment for each follow-up visit
rather than one larger co-payment for the entire 10- or 90-day global service.

The ACS also raised implementation concerns with transitioning 10- and 90-day to 0-day global codes. For example, the ACS expressed concern about evaluation and management (E/M) services that are currently included in 10- and 90-day global codes, which are different from E/M services that are separately billable outside of the global period. If surgeons are expected to substitute separately billable E/M services, they will not receive reimbursement for all the services that were previously included in the 10- and 90-day global period.

Open Payments

The Physician Payments Sunshine Act, also known as Open Payments, requires applicable manufacturers (AMs) of drugs, medical devices, and biologicals to track payments and other transfers of value to physicians and teaching hospitals and then report these payments to CMS annually. Financial disclosures from the 2013 reporting year were made available to the public on September 30, 2014, and data for subsequent years will be available by June 30.

The MPFS final rule eliminates an exemption for reporting transfers of value made to physicians who speak at accredited continuing medical education (CME) program events. The ACS submitted comments to CMS firmly opposing the elimination of this “bright line” CME exemption, as it is definitive and feasible to implement. The ACS comments also discussed the unintended consequences of this proposal, such as physicians abstaining from presenting at CME events and thereby withholding their expertise on ways to improve the quality and cost of health care and increasing the administrative burden on physicians to track each transfer of value made to them at accredited CME events. Unfortunately, CMS has chosen to eliminate this exemption and will instead apply a separate exemption for physician speakers at accredited CME events when a transfer of value is made and the AM is unaware of the identity of the physician during that reporting year and for the first half of the following year.

PQRS

The Physician Quality Reporting System (PQRS) is a Medicare quality pay-for-reporting program, which began as a voluntary program that provided payment incentives to eligible professionals (EPs) who successfully report data on quality measures for covered services furnished during a specified reporting period. Beginning in 2015, no more incentives will be offered for the program, and lack of participation will result in a payment penalty of 2 percent to be applied in 2017. EPs can report measures for the program through claims, a traditional registry, electronic health records (EHRs), or a qualified clinical data registry (QCDR). CMS finalized several key changes for PQRS 2015.

Individual measure reporting

EPs can participate in the PQRS program by reporting on individual measures or, alternatively, on measures groups. For individual measure reporting via the claims- and registry-based options, CMS requires the reporting of nine measures covering at least three National Quality Strategy domains (NQS) for 50 percent of the applicable Medicare Part B fee-for-service (FFS) patients in order to avoid a payment penalty. Previously, EPs had to report on only three PQRS measures to avoid a penalty.

A new requirement in 2015 for those EPs who have at least one face-to-face Medicare encounter is that at least one of the nine measures must be reported from the 19 cross-cutting measures identified by CMS. In CMS’ view, cross-cutting measures are broadly applicable to all physician specialties.4

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The EHR-based reporting mechanism remains unchanged from 2014. EPs may continue to report on nine measures covering three NQS domains.

QCDR
In addition to the claims-, EHR-, and traditional registry-based reporting options, beginning in 2014, EPs were able to report to PQRS using the QCDR reporting option. A QCDR is a CMS-approved entity that collects medical and/or clinical data to track patients and diseases with the goal of improving quality of care.

A QCDR differs from a traditional PQRS registry in several ways. This option was created to provide opportunity for EPs to simultaneously use existing high-quality clinical registries for quality improvement to meet PQRS reporting requirements. QCDRs can offer more flexibility in PQRS participation than other PQRS reporting options, allowing EPs to report on a variety of measure types, including those from the Clinician and Group Consumer Assessment of Healthcare Providers and Systems (CG-CAHPS) survey, measures that the National Quality Forum (NQF) has endorsed, current PQRS measures, measures used by medical boards or specialty societies, and measures used in regional quality collaboratives.

QCDRs must have the capacity to track outcomes, provide timely feedback reports, have a methodology for benchmarking, and risk adjust as appropriate. All of these capabilities are intended to result in the reporting of measures that are more relevant, clinically appropriate, and actionable for surgeons when compared with the measures currently available as PQRS reporting options. For the 2015 QCDR reporting requirements, individual EPs must report on nine measures selected by the QCDR, including three outcome measures that cover at least three NQS domains for 50 percent of applicable patients to which each measure applies. In lieu of two outcome measures, at least one outcome measure and one of the following types of measures must be reported: resource use, patient experience of care, efficiency/appropriate use, or patient safety. Beginning in 2015, QCDRs also will be required to publicly report performance results excluding measures that fail to meet a minimum patient sample of 20, fail to prove to be valid and reliable, and are being reported for the first time in 2015.

The Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) was the first ACS clinical data registry that CMS approved as a QCDR in 2014. As a QCDR, MBSAQIP participants have the option of reporting through MBSAQIP to satisfy the CMS PQRS requirements for 2014.

Measures group reporting
A PQRS measures group allows EPs to report on a set of relevant measures determined by CMS. Measures groups can only be reported through an approved CMS traditional registry. The ACS Surgeon Specific Registry was approved for 2014 PQRS reporting under this option.

The reporting requirement for the measure group option for 2015 remains the same as 2014—EPs must report one measures group for 20 majority Medicare (at least 11 Medicare) FFS patients. However, in 2014, two PQRS measures groups were relevant to surgical care: the Perioperative Care Measures Group and the General Surgery Measures Group. For 2015, CMS has eliminated the Perioperative Care Measures Group for reporting—despite the ACS’ efforts to encourage CMS to maintain the measures group, as its removal leaves surgeons with a limited number of meaningful measures to report.

CMS will continue to allow some of the perioperative care measures (#21: Selection of Prophylactic Antibiotic—First or Second Generation Cephalosporin, #22: Discontinuation of Prophylactic Parenteral Antibiotics, and #23: Venous Thromboembolism Prophylaxis When Indicated in All Patients) to be reported as individual measures via the individual claims- or registry-based option. If an EP decides to report on these three perioperative care measures, they will only count toward the reporting of nine measures across three NQS domains for claims- and registry-based reporting. Therefore, the EP would need to report...
on six additional measures while being sure to report across three NQS domains, including one cross-cutting measure. Although CMS will continue to allow EPs to report on the General Surgery Measures Group, the agency has added two new measures to the group—measure #226: Tobacco Use: Screening and Cessation Intervention, and measure #130: Documentation of Current Medications in the Medical Record, for a total of seven measures (see table, this page).

However, CMS did not include S-CAHPS as a measure reportable through PQRS for 2015. CMS explained that because of the cost and time needed to identify S-CAHPS vendors, implementation of the S-CAHPS survey for 2017 or 2018 PQRS payment adjustment is infeasible. CMS encourages the inclusion of the S-CAHPS as a measure included in a QCDR. The ACS is working with CMS to develop a solution for implementing the S-CAHPS in future years.

### S-CAHPS
Currently, the CG-CAHPS survey is the only patient experience of care survey measure included in PQRS. The ACS developed CAHPS for Surgical Care (S-CAHPS) in collaboration with various surgical specialty societies to expand on the CG-CAHPS by incorporating domains that are relevant to surgical care. CMS acknowledges the importance of including S-CAHPS in PQRS, noting that the CG-CAHPS survey would not accurately reflect the care provided by single- or multispecialty surgical or anesthesia groups, and that S-CAHPS expands on the CG-CAHPS by focusing on aspects of surgical quality that are important to patients and for which patients are the best source of information.

### Physician Compare website
The Physician Compare website is designed to help patients locate and obtain information on Medicare-participating physicians. CMS finalized several of its proposals for adding new information via the Physician Compare website, including but not limited to the following: adding check marks for EPs who satisfactorily report under the PQRS program and participate in the EHR Incentive Program; publicly reporting all 2015 individual EP level PQRS measures collected via registry-, EHR-, or claims-based reporting in 2016; and reporting all individual EP level 2015 PQRS QCDR registry data in 2016. CMS noted in the final rule that they will only post measures that they determine to be statistically valid and reliable, have undergone consumer
testing, and have been part of the PQRS program for more than a year. The ACS expressed concern about CMS’ rigorous timeline to post information on the Physician Compare website and urged the agency to conduct an analysis of how many consumers are using the website to make health care decisions. CMS plans to continue expansion of the website in the future.

Value-based payment modifier
The Affordable Care Act (ACA) requires that CMS apply a value-based payment modifier to physician payments, starting with some physicians in 2015 and extending the mandate to all physicians by 2017. With the application of the value-based payment modifier, Medicare physicians will be paid differentially based on the cost and quality of care they provide.

2015 payment adjustment
In 2015, the value-based payment modifier will initially apply to physicians in groups of 100 or more EPs and will be based on the providers’ 2013 quality and cost data. EPs include physicians and certain nonphysician health care practitioners. CMS plans to separate these groups of EPs into categories based on whether they successfully participate in PQRS. The value-based payment modifier for group practices that satisfactorily report PQRS quality measures will be set at zero initially, which would prevent a payment reduction in 2015. These physicians may either keep the 0 percent update or pursue a higher modifier amount based on their performance with respect to quality and cost measures—an option described as “quality tiering.” Physicians attempting to earn a higher value-based payment modifier amount through quality tiering would also be at risk, based on their quality and cost scores, for a payment decrease of up to 1 percent in 2015. Physicians in groups of 100 or more EPs who did not meet the PQRS reporting requirements for 2013 would have a modifier amount of −1 percent applied to their Medicare Part B claims in 2015.

2016 payment adjustment
The application of the value-based payment modifier in 2016 will be similar to 2015, with a few exceptions. In 2016, the value-based payment modifier will apply to physicians in groups of 10 or more EPs (down from 100 or more) based on their quality and cost data from 2014. In 2016, CMS will separate these groups of 10 or more EPs into categories based on whether they successfully participate in PQRS. All physicians in groups of 10 or more will be subject to quality tiering based on their quality and cost measures. Physicians in groups of 10–99 could receive either no adjustment or a positive adjustment under quality tiering. Physicians in groups of 100 or more could receive no adjustment, a positive adjustment, or a negative adjustment of up to −2 percent in 2016. Physicians in groups of 10 or more EPs who did not meet the PQRS reporting requirements for 2014 would have a modifier amount of −2 percent applied to their claims submitted under the PFS in 2016.

2017 payment adjustment
Starting in 2017, the value-based payment modifier will apply to all groups and individual physicians based on their quality and cost data from 2015. Similarly to previous years, in 2017 CMS will separate physicians into categories based on whether they successfully participate in PQRS. All physicians will be subject to quality tiering based on their performance with respect to quality and cost measures. Physicians in groups of two to nine EPs and solo practitioners could receive either no adjustment or a positive adjustment under quality tiering. Physicians in groups of 10 or more EPs may receive no adjustment, a positive adjustment, or a negative adjustment of up to −4 percent in 2016. Physicians in groups of two to nine EPs and solo practitioners who did not meet the PQRS reporting requirements for 2015 would have a modifier amount of −2 percent applied to their claims submitted under the MPFS in 2017. Physicians in groups of 10 or more EPs who did not meet the PQRS reporting requirements for 2015 would have a modifier amount of −4 percent applied to their claims submitted under the MPFS in 2017.


2015 CPT coding changes
will have mixed effects on payment for general surgeons

by Linda Barney, MD, FACS,
and Mark T. Savarise, MD, FACS
Significant changes in Current Procedural Terminology (CPT)* coding are being implemented in 2015, although not all of these changes were accepted by the Centers for Medicare & Medicaid Services (CMS). This article provides reporting and payment information about the codes that are relevant to general surgery and its closely related specialties.

**Lower GI endoscopy**

A number of revisions were made to the lower gastrointestinal (GI) endoscopy codes in the Colon and Rectum subsection of CPT. Definitions were revised or added at the beginning of the subsection and new guidelines were created to further clarify reporting of these procedures:

- Colonoscopy is the examination of the entire colon, from the rectum to the cecum, and may include examination of the terminal ileum or small intestine proximal to an anastomosis.

- Colonoscopy through stoma is the examination of the colon, from the colostomy stoma to the cecum, and may include examination of the terminal ileum or small intestine proximal to an anastomosis.

- When performing a diagnostic or screening endoscopic procedure on a patient who is scheduled and prepared for a total colonoscopy, if the physician is unable to advance the colonoscope to the cecum or colon-small intestine anastomosis due to unforeseen circumstances, report 45378 (colonoscopy) or 44388 (colonoscopy through stoma) with modifier 53 (discontinued procedure) and provide appropriate documentation.

- If a therapeutic colonoscopy (44389–44407, 45379, 45380, 45381, 45382, 45384, 45388, 45398) is performed and does not reach the cecum or colon-small intestine anastomosis, report the appropriate therapeutic colonoscopy code with modifier 52 (reduced services) and provide appropriate documentation.

- Report flexible sigmoidoscopy (45330–45347) for endoscopic examination during which the endoscope is not advanced beyond the splenic flexure.

- Report flexible sigmoidoscopy (45330–45347) for endoscopic examination of a patient who has undergone resection of the colon proximal to the sigmoid (eg, subtotal colectomy) and has an ileo-sigmoid or ileo-rectal anastomosis. Report pouch endoscopy codes (44385, 44386) for endoscopic examination of a patient who has undergone resection of colon with ileo-anal anastomosis (eg, J-pouch).

- Report colonoscopy (45378–45398) for endoscopic examination of a patient who has undergone segmental resection of the colon (eg, hemicolecction, sigmoid colectomy, low anterior resection).

- For colonoscopy through stoma, see 44388–44408. Report proctosigmoidoscopy (45300–45327), flexible sigmoidoscopy (45330–45347), or anoscopy (46600, 46604, 46606, 46608, 46610, 46611, 46612, 46614, 46615), as appropriate for endoscopic examination of the defunctionalized rectum or distal colon in a patient who has undergone colectomy, in addition to colonoscopy through stoma (44388–44408) or ileoscopy through stoma (44380, 44381, 44382, 44384) if appropriate.

As part of the review of the lower GI endoscopy codes, several stent placement and ablation CPT codes were deleted and new CPT codes were created that added the words “pre- and post-dilation and guide wire passage, when performed” to the descriptor.

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In addition, new CPT codes were created for reporting new technology, such as endoscopic hemorrhoid banding.

Category III codes 0226T and 0227T were converted to Category I codes 46601 and 46607. Typically either a colposcope or operating microscope is used for visualization and cannot be separately reported.

In the Medicare physician fee schedule (MPFS) final rule, discussed in detail in the article on page 10 of this issue, CMS rejected the recommended CPT code changes and the American Medical Association Relative Value Scale Update Committee (RUC) work relative value unit (RVU) recommendations. Instead, CMS decided to maintain the 2014 code descriptors and the 2014 work RVUs for calendar year (CY) 2015.

Because the code set is changing for CY 2015, including the deletion of some of the CY 2014 codes, CMS created temporary “G-codes” to allow practitioners to report services to CMS in CY 2015 using the same code descriptors they used in CY 2014 (that is, providers must report the 2015 G-code for Medicare patients in lieu of the deleted 2014 code). All Medicare payment policies applicable to the CY 2014 CPT codes will apply to the replacement G-codes. The new and revised CY 2015 CPT codes for lower GI endoscopy that Medicare will not recognize for payment in CY 2015 are denoted with an “I” (invalid for Medicare purposes).

For Medicare patients, providers should report the appropriate G-code instead of a code that has a status indicator of “I” (see Table 1, page 20).

For patients with private insurance, providers will need to check with the insurers to determine whether they will follow Medicare policy or allow providers to report the new codes. Keep in mind that the new codes do not have published RVUs. Therefore, documentation will be required to support the payment amount for a claim.

The Colonoscopy Decision Tree (see figure, page 21) is designed to assist with correct CPT code and modifier selection. There is one correction (highlighted in red) from the CPT 2015 Professional Edition; when a therapeutic procedure to the cecum is performed, report
### Table 1. Temporary G Codes

<table>
<thead>
<tr>
<th>CY 2015 CPT codes Not valid for Medicare purposes</th>
<th>CY 2015 HCPCS codes to report for Medicare patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>44381 Ileoscopy, stoma with balloon</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>44384 Ileoscopy, stoma with stent</td>
<td>G6018 Ileoscopy, stoma with stent</td>
</tr>
<tr>
<td>44401 Colonoscopy, stoma with ablation</td>
<td>G6019 Colonoscopy, stoma with ablation</td>
</tr>
<tr>
<td>44402 Colonoscopy, stoma with stent</td>
<td>G6020 Colonoscopy, stoma with stent</td>
</tr>
<tr>
<td>44403 Colonoscopy, stoma with EMR</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>44404 Colonoscopy, stoma with injection</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>44405 Colonoscopy, stoma with dilation</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>44406 Colonoscopy, stoma with ultrasound</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>44407 Colonoscopy, stoma with fine-needle aspiration/biopsy</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>44408 Colonoscopy, stoma with decompression</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>45346 Sigmoidoscopy with ablation</td>
<td>G6022 Sigmoidoscopy with ablation</td>
</tr>
<tr>
<td>45347 Sigmoidoscopy with stent</td>
<td>G6023 Sigmoidoscopy with stent</td>
</tr>
<tr>
<td>45349 Sigmoidoscopy with endoscopic mucosal resection</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>45350 Sigmoidoscopy with band ligation</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>45388 Colonoscopy with ablation</td>
<td>G6024 Colonoscopy with ablation</td>
</tr>
<tr>
<td>45389 Colonoscopy with stent</td>
<td>G6025 Colonoscopy with stent</td>
</tr>
<tr>
<td>45390 Colonoscopy with endoscopic mucosal resection</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>45393 Colonoscopy with decompression</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>45398 Colonoscopy with band ligation</td>
<td>G6021 Unlisted procedure, intestine</td>
</tr>
<tr>
<td>46601 High resolution anoscopy with brushings or washings</td>
<td>G6027 High resolution anoscopy with brushings or washings</td>
</tr>
<tr>
<td>46607 High resolution anoscopy with biopsy</td>
<td>G6028 High resolution anoscopy with biopsy</td>
</tr>
</tbody>
</table>

the appropriate colonoscopy code with no modifier. In addition, we have added the Medicare-assigned Healthcare Common Procedure Coding System (HCPCS) G-codes where appropriate under the therapeutic procedure category (highlighted in blue in the figure).

Table 2 (pages 22–25) describes the lower GI endoscopy coding changes for 2015, along with the MPFS status indicator and work RVU. To read more about these coding and payment changes in the final MPFS rule, go to: www.ofr.gov/OFRUpload/OFRData/2014-26183_PI.pdf.

CPT five-digit codes, two-digit number modifiers, and descriptions only are copyright of the AMA. No payment schedules, fee schedules, RVUs, scales, conversion factors, or components thereof are included in CPT. The AMA is not recommending that any specific relative values, fees, payment schedules, or related listings be attached to CPT. Any RVUs or relative listings assigned to CPT codes are not those of the AMA, and the AMA is not recommending use of these relative values.

### Injection for fecal incontinence

A new Category III code was established to report injection of a bulking agent to treat fecal incontinence, 0377T, Anoscopy with directed submucosal injection of bulking agent for fecal incontinence. The bulking agent should be reported separately using Level II HCPCS code L8605 and the appropriate number of units for each milliliter injected should be indicated.

### Treatment of rib fractures

Four Category III codes (0245T–0248T) were converted to three Category I codes (21811–21813) to report open treatment of rib fracture(s) with internal fixation. These new codes include thoracoscopic visualization...
as inherent and describe unilateral fixation. If fixation is bilateral, modifier 50 should be appended and unit of “1” should be reported. In tandem with the creation of these new codes, several codes were deleted, including 21800, Closed treatment of rib fracture, uncomplicated, each; and code 21810, Treatment of rib fracture requiring external fixation (flail chest). CMS has assigned a 0-day global status to these three new codes. All postoperative hospital and office evaluation and management visits after the day of the procedure should be reported, when performed, using appropriate evaluation and management (E/M) visit codes with documentation. These three new codes include the following:

- **21811** Open treatment of rib fracture(s) with internal fixation, includes thoracoscopic visualization when performed, unilateral; 1–3 ribs
- **21812** 4–6 ribs
- **21813** 7 or more ribs

### Endoscopic hypopharyngeal diverticulotomy

A new code was created to report the endoscopic repair of Zenker’s diverticulum, 43180, Esophagoscopy, rigid, transoral with diverticulectomy of hypopharynx or cervical esophagus (eg, Zenker’s diverticulum), with cricopharyngeal myotomy, includes use of telescope or oper-continued on page 25
### TABLE 2. LOWER GI ENDOSCOPY CODING CHANGES FOR 2015

<table>
<thead>
<tr>
<th>CPT code1</th>
<th>Descriptor</th>
<th>2015 MPFS status2</th>
<th>2015 work RVU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small intestinal endoscopy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▲ 44360</td>
<td>Small intestinal endoscopy, enteroscopy beyond second portion of duodenum, not including ileum; diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)</td>
<td>A</td>
<td>2.59</td>
</tr>
<tr>
<td>▲ 44363</td>
<td>Small intestinal endoscopy, enteroscopy beyond second portion of duodenum, not including ileum; with removal of foreign body(s)</td>
<td>A</td>
<td>3.49</td>
</tr>
<tr>
<td><strong>Ileoscopy, through stoma</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▲ 44380</td>
<td>Ileoscopy, through stoma; diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)</td>
<td>A</td>
<td>1.05</td>
</tr>
<tr>
<td>● 44381</td>
<td>Ileoscopy, through stoma; with transendoscopic balloon dilation</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td>44382</td>
<td>Ileoscopy, through stoma; with biopsy, single or multiple</td>
<td>A</td>
<td>1.27</td>
</tr>
<tr>
<td>D44383</td>
<td>Ileoscopy, through stoma; with transendoscopic stent placement (includes predilation)</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>● 44384</td>
<td>Ileoscopy, through stoma; with placement of endoscopic stent (includes pre- and post-dilation and guide wire passage, when performed)</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Endoscopic evaluation of small intestinal pouch</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▲ 44385</td>
<td>Endoscopic evaluation of small intestinal pouch (eg, Kock pouch, ileal reservoir [S or J]); diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)</td>
<td>A</td>
<td>1.82</td>
</tr>
<tr>
<td>▲ 44386</td>
<td>Endoscopic evaluation of small intestinal pouch (eg, Kock pouch, ileal reservoir [S or J]); with biopsy, single or multiple</td>
<td>A</td>
<td>2.12</td>
</tr>
<tr>
<td><strong>Colonoscopy through stoma</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▲ 44388</td>
<td>Colonoscopy through stoma; diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)</td>
<td>A</td>
<td>2.82</td>
</tr>
<tr>
<td>44389</td>
<td>Colonoscopy through stoma; with biopsy, single or multiple</td>
<td>A</td>
<td>3.13</td>
</tr>
<tr>
<td>▲ 44390</td>
<td>Colonoscopy through stoma; with removal of foreign body(s)</td>
<td>A</td>
<td>3.82</td>
</tr>
<tr>
<td>▲ 44391</td>
<td>Colonoscopy through stoma; with control of bleeding, any method</td>
<td>A</td>
<td>4.31</td>
</tr>
<tr>
<td>▲ 44392</td>
<td>Colonoscopy through stoma; with removal of tumor(s), polyp(s), or other lesion(s) by hot biopsy forceps</td>
<td>A</td>
<td>3.81</td>
</tr>
<tr>
<td>D44393</td>
<td>Colonoscopy through stoma; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cauteray or snare technique</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>● 44401</td>
<td>Colonoscopy through stoma; with ablation of tumor(s), polyp(s), or other lesion(s) (includes pre-and post-dilation and guide wire passage, when performed)</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td>▲ 44394</td>
<td>Colonoscopy through stoma; with removal of tumor(s), polyp(s), or other lesion(s) by snare technique</td>
<td>A</td>
<td>4.42</td>
</tr>
<tr>
<td>D44397</td>
<td>Colonoscopy through stoma; with transendoscopic stent placement (includes predilation)</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>● 44402</td>
<td>Colonoscopy through stoma; with endoscopic stent placement (including pre- and post-dilation and guide wire passage, when performed)</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td>● 44403</td>
<td>Colonoscopy through stoma; with endoscopic mucosal resection</td>
<td>I</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Notes:
1. ● = new, ▲ = revised, D = deleted
2. “A” indicates active code, “I” indicates not valid for Medicare purposes, “C” indicates contractor-priced

*continued on next page*
### TABLE 2. LOWER GI ENDOSCOPY CODING CHANGES FOR 2015 (CONTINUED)

<table>
<thead>
<tr>
<th>CPT code</th>
<th>Descriptor</th>
<th>2015 MPFS status</th>
<th>2015 work RVU</th>
</tr>
</thead>
<tbody>
<tr>
<td>44404</td>
<td>Colonoscopy through stoma; with directed submucosal injection(s), any substance</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td>44405</td>
<td>Colonoscopy through stoma; with transendoscopic balloon dilation</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td>44406</td>
<td>Colonoscopy through stoma; with endoscopic ultrasound examination, limited to the sigmoid, descending, transverse, or ascending colon and cecum and adjacent structures</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td>44407</td>
<td>Colonoscopy through stoma; with transendoscopic ultrasound guided intramural or transmural fine needle aspiration/biopsy(s), includes endoscopic ultrasound examination limited to the sigmoid, descending, transverse, or ascending colon and cecum and adjacent structures</td>
<td>I</td>
<td>0.00</td>
</tr>
<tr>
<td>44408</td>
<td>Colonoscopy through stoma; with decompression (for pathologic distention) (eg, volvulus, megacolon), including placement of decompression tube, when performed</td>
<td>I</td>
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</tr>
<tr>
<td>▲ 44799</td>
<td>Unlisted procedure, small intestine</td>
<td>I</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Sigmoidoscopy, flexible**

| ▲ 45330  | Sigmoidoscopy, flexible; diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure) | A | 0.96 |
| 45331    | Sigmoidoscopy, flexible; with biopsy, single or multiple | A | 1.15 |
| ▲ 45332  | Sigmoidoscopy, flexible; with removal of foreign body(s) | A | 1.79 |
| ▲ 45333  | Sigmoidoscopy, flexible; with removal of tumor(s), polyp(s), or other lesion(s) by hot biopsy forceps | A | 1.79 |
| ▲ 45334  | Sigmoidoscopy, flexible; with control of bleeding, any method | A | 2.73 |
| 45335    | Sigmoidoscopy, flexible; with directed submucosal injection(s), any substance | A | 1.46 |
| ▲ 45337  | Sigmoidoscopy, flexible; with decompression (for pathologic distention) (eg, volvulus, megacolon), including placement of decompression tube, when performed | A | 2.36 |
| 45338    | Sigmoidoscopy, flexible; with removal of tumor(s), polyp(s), or other lesion(s) by snare technique | A | 2.34 |
| D45339   | Sigmoidoscopy, flexible; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery or snare technique | D | D |
| ▲ 45340  | Sigmoidoscopy, flexible; with transendoscopic balloon dilation | A | 1.89 |
| 45341    | Sigmoidoscopy, flexible; with endoscopic ultrasound examination | A | 2.60 |
| 45342    | Sigmoidoscopy, flexible; with transendoscopic ultrasound guided intramural or transmural fine needle aspiration/biopsy(s) | A | 4.05 |
| D45345   | Sigmoidoscopy, flexible; with transendoscopic stent placement (includes predilation) | D | D |
| ● 45346  | Sigmoidoscopy, flexible; with ablation of tumor(s), polyp(s), or other lesion(s) (includes pre- and post-dilation and guide wire passage, when performed) | I | 0.00 |
| ● 45347  | Sigmoidoscopy, flexible; with placement of endoscopic stent (includes pre- and post-dilation and guide wire passage, when performed) | I | 0.00 |
| ● 45349  | Sigmoidoscopy, flexible; with endoscopic mucosal resection | I | 0.00 |
| ● 45350  | Sigmoidoscopy, flexible; with band ligation(s) (eg, hemorrhoids) | I | 0.00 |

**Notes:**

1. ● = new, ▲ = revised, D = deleted
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*continued on next page*
### TABLE 2. LOWER GI ENDOSCOPY CODING CHANGES FOR 2015 (CONTINUED)

<table>
<thead>
<tr>
<th>CPT code</th>
<th>Descriptor</th>
<th>2015 MPFS status</th>
<th>2015 work RVU</th>
</tr>
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<tbody>
<tr>
<td>Colonoscopy, flexible</td>
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<td>Colonoscopy, flexible; with biopsy, single or multiple</td>
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<td>D</td>
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<td>▲ 45384</td>
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<td>● 45389</td>
<td>Colonoscopy, flexible; with endoscopic stent placement (includes pre- and post-dilation and guide wire passage, when performed)</td>
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<tr>
<td>● 45390</td>
<td>Colonoscopy, flexible; with endoscopic mucosal resection</td>
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<tr>
<td>▲ 45391</td>
<td>Colonoscopy, flexible; with endoscopic ultrasound examination limited to the rectum, sigmoid, descending, transverse, or ascending colon and cecum, and adjacent structures</td>
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<td>▲ 45392</td>
<td>Colonoscopy, flexible; with transendoscopic ultrasound guided intramural or transmural fine needle aspiration/biopsy(s), includes endoscopic ultrasound examination limited to the rectum, sigmoid, descending, transverse, or ascending colon and cecum, and adjacent structures</td>
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<td>● 45393</td>
<td>Colonoscopy, flexible; with decompression (for pathologic distention) (eg, volvulus, megacolon), including placement of decompression tube, when performed</td>
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<tr>
<td>● 45398</td>
<td>Colonoscopy, flexible; with band ligation(s) (eg, hemorrhoids)</td>
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<tr>
<td>● 45399</td>
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**Anoscopy**

<table>
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<tr>
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<tr>
<td>▲ 46600</td>
<td>Anoscopy; diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)</td>
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<td>● 46601</td>
<td>Anoscopy; diagnostic, with high-resolution magnification (HRA) (eg, colposcope, operating microscope) and chemical agent enhancement, including collection of specimen(s) by brushing or washing, when performed</td>
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<tr>
<td>● 46607</td>
<td>Anoscopy; with HRA (eg, colposcope, operating microscope) and chemical agent enhancement, with biopsy, single or multiple</td>
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<td>D0226T</td>
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<td>D0227T</td>
<td>HRA (with magnification and chemical agent enhancement); with biopsy(ies)</td>
<td>D</td>
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</table>

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continued on next page
TABLE 2. LOWER GI ENDOSCOPY CODING CHANGES FOR 2015 (CONTINUED)

<table>
<thead>
<tr>
<th>CPT code</th>
<th>Descriptor</th>
<th>2015 MPFS status</th>
<th>2015 work RVU</th>
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<tbody>
<tr>
<td>G6018</td>
<td>Ileoscopy, through stoma; with transendoscopic stent placement (includes predilation)</td>
<td>A</td>
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<tr>
<td>G6019</td>
<td>Colonoscopy through stoma; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery or snare technique</td>
<td>A</td>
<td>4.83</td>
</tr>
<tr>
<td>G6020</td>
<td>Colonoscopy through stoma; with transendoscopic stent placement (includes predilation)</td>
<td>A</td>
<td>4.70</td>
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<tr>
<td>G6021</td>
<td>Unlisted procedure, intestine</td>
<td>C</td>
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<tr>
<td>G6022</td>
<td>Sigmoidoscopy, flexible; with ablation of tumor(s), polyp(s), or other lesions(s) not amenable to removal by hot biopsy forceps, bipolar cautery or snare technique</td>
<td>A</td>
<td>3.14</td>
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<tr>
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<td>Sigmoidoscopy, flexible; with transendoscopic stent placement (includes predilation)</td>
<td>A</td>
<td>2.92</td>
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<tr>
<td>G6024</td>
<td>Colonoscopy, flexible, proximal to splenic flexure; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery or snare technique</td>
<td>A</td>
<td>5.86</td>
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<td>5.90</td>
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<tr>
<td>G6027</td>
<td>HRA (with magnification and chemical agent enhancement); diagnostic, including collection of specimen(s) by brushing or washing when performed</td>
<td>C</td>
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<tr>
<td>G6028</td>
<td>HRA (with magnification and chemical agent enhancement); with biopsy(ies)</td>
<td>C</td>
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</tbody>
</table>

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Transversus abdominis plane (TAP) anesthetic block
Four Category I codes (64486–64489) were established to report unilateral or bilateral administration of local anesthetic for postoperative pain control and abdominal wall analgesia, including imaging guidance when performed. These codes may not be reported by the same physician who performs the surgical procedure. These four new codes include the following:

- •64486 TAP block (abdominal plane block, rectus sheath block) unilateral; by injection(s) (includes imaging guidance, when performed)
- •64487 TAP block by continuous infusion(s) (includes imaging guidance, when performed)
- •64488 TAP block (abdominal plane block, rectus sheath block) bilateral; by injections (includes imaging guidance, when performed)
- •64489 TAP block by continuous infusions (includes imaging guidance, when performed)

Breast ultrasound
Codes 76642 and 76645 were deleted and replaced by two new codes to describe ultrasound of the breast (76641, 76642). A complete ultrasound of the breast (76641) includes all four quadrants of the breast, the retroareolar region, and the axilla, if performed. A focused or limited ultrasound of the breast (76642) is limited to one or more of the elements in 76641, but not all of the exam elements. If only an axillary ultrasound is performed, code 76882 is reported. Codes 76641 and 76642 can only be reported
once per breast, per session. These two new codes include the following:

- 76641  Ultrasound, breast, unilateral, real time with image documentation, including axilla when performed; complete
- 76642  limited

**Negative pressure wound therapy**

For 2015, the descriptors for codes 97605 and 97606 have been revised to include “durable medical equipment (DME)” to distinguish from two new codes (97607 and 97608), which are intended to report negative pressure wound therapy using non-durable (disposable) medical equipment. In addition, the practice expense RVUs for codes 97607 and 97608 include the disposable supplies and equipment, which should not be separately reported. Codes 97607 and 97608 will be contractor priced for 2015 and will be designated“Sometimes Therapy”(38,267),(993,846) on the CMS Therapy Code List. These revised and new codes include the following:

- 97605  Negative pressure wound therapy (eg, vacuum assisted drainage collection), utilizing durable medical equipment (DME), including topical application(s), wound assessment, and instruction(s) for ongoing care, per session; total wound(s) surface area less than or equal to 50 square centimeters
- 97606  Total wound(s) surface area greater than 50 square centimeters
- 97607  Negative pressure wound therapy, (eg, vacuum assisted drainage collection), utilizing disposable, non-durable medical equipment including provision of exudate management collection system, topical application(s), wound assessment, and instructions for ongoing care, per session; total wound(s) surface area less than or equal to 50 square centimeters
- 97608  Total wound(s) surface area greater than 50 square centimeters

**Bioimpedance spectroscopy (BIS)**

Category III code 0239T was converted to Category I code 93702, *Bioimpedance spectroscopy (BIS), extracellular fluid analysis for lymphedema assessment(s)*. Code 93702 does not include physician work RVUs, as it was developed to account for practice expense only. The report that is generated is reviewed by the provider as part of an E/M service.

**CPT definition of the surgical package**

An editorial revision was made to the surgical package to expand the introductory language to indicate that surgery can be furnished by the physician or other qualified health care professional. This is consistent with changes that have been made throughout the CPT code set to be inclusive of other qualified health care professionals. These revisions are editorial and do not reflect new or different work.

**Note**

Accurate coding is the responsibility of the provider. This summary is intended only to serve as a resource to assist in the billing process.
Universities form research partnership to improve care in Mozambique

by John Rose, MD, MPH; Peter Bendix, MD, MPH; Carlos Funzamo, MD, MPH; Fernando Vaz, MD; Antonio Assis da Costa, MD; Stephen Bickler, MD, FACS; and Emilia Virginia Noormahomed, MD, PhD

HIGHLIGHTS

• Describes the physician shortages in Mozambique
• Provides details about a medical education research partnership between Universidade Eduardo Mondlane in Mozambique and the University of California, San Diego
• Outlines research findings and lessons learned from implementation
• Suggests how the research findings may be applied to improve surgical care in low-income countries
Mozambique, a country in sub-Saharan Africa, has experienced a severe physician shortage for many years, with patients having particularly limited access to surgical care. Medical education and surgical research partnerships formed in 2010 between Universidade Eduardo Mondlane (UEM) in Mozambique and the University of California, San Diego (UCSD), is developing potential solutions to the nation’s surgical care crisis. The findings that have emerged from this initiative, which are aimed at scaling up surgical services, will likely have important implications for improving surgical care in Mozambique and other underserved nations.

**Magnitude of the shortage**

Mozambique is a country of approximately 25 million people located in southeastern Africa. Mozambique gained independence in 1975 after more than four centuries as a Portuguese colony. At that time, most trained physicians fled the country, leaving Mozambique with one of the lowest physician-to-population ratios in the world. In 1977, the country descended into an intense, protracted civil war that lasted until 1992, further contributing to the physician shortage. Since 2001, Mozambique’s annual growth in gross domestic product (GDP) per capita has been among the world’s highest; however, the country still ranks among the lowest in GDP per capita, human development, measures of inequality, and average life expectancy.

As is the case in many other sub-Saharan areas of Africa, lack of surgical care is an important yet unaddressed public health problem. The maternal mortality ratio in Mozambique is 490/100,000 live births, with only 55 percent of births aided by a skilled attendant. Another surgical care challenge is that of injuries from road traffic accidents, which are the seventh leading cause of death in recent years. Other common surgical conditions include inguinal hernias, intra-abdominal catastrophes, and congenital anomalies.

From a health system’s perspective, formidable challenges exist, with only three physicians and 21 nurses per 100,000 inhabitants, compared with 256 and 937, respectively, in the U.S. Currently, there are fewer than 25 general surgeons for a total population of 25 million in Mozambique. With a national public health expenditure of $35 U.S. per capita annually—compared with $8,608 per capita in the U.S.—the need to maximize the public benefit of surgical services has never been greater.

The challenge that Mozambique health care providers face in providing surgical care is a microcosm of a global phenomenon. The World Health Organization (WHO) estimates that 2 billion people worldwide lack access to emergency and essential surgical care. Most of the surgical need exists in rural and marginalized populations in low- and middle-income countries (LMICs), where the poorest one-third of the world’s population receives less than 5 percent of all surgical services. According to the third volume of Disease Control Priorities in Developing Countries, to be released in early 2015, an estimated 1.4 million deaths and 77.2 million disability-adjusted life years (DALYs) could be averted in LMICs annually by scaling up basic surgical care at first-level hospitals. This reduced burden is roughly equal to the global burden of the human immunodeficiency virus (82.5 million DALYs) or malaria (84.4 million DALYs).

The potential to avert such a significant burden of disease by scaling up basic surgical care has led to interest in implementation strategies in LMICs. Although surgical care is cost-effective at the primary referral hospital level, many questions remain unanswered regarding optimal strategies for implementing surgical care and how best to measure its impact on the population’s health.

**UEM-UCSD surgical research partnership**

To define the surgical needs and ultimately improve delivery of care in rural Mozambique, UEM formed a research partnership with UCSD. The foundation for this partnership was established in 2008 when the two institutions began collaborating on infectious disease projects. In 2010, UEM became one of 13 academic medical centers across 12 African countries to participate in the Medical Education Partnership Initiative (MEPI) with 20 U.S. academic institutions. The MEPI represents a $130 million investment from the U.S. Department of State through the President’s Emergency Plan...
It is important to note that surgical research and innovation have always been valued in Mozambique.

for AIDS Relief and the National Institutes of Health (NIH) to address the public health crisis in sub-Saharan Africa. In Mozambique, a MEPI grant seeks to improve medical education; increase the capacity for locally driven, multidisciplinary research; strengthen the informatics infrastructure; and recruit and retain qualified medical faculty.12

The UEM-UCSD surgical research partnership is funded through the MEPI program with a MEPI linked award. The specific aims of the surgical research partnership are to identify the best strategies for building emergency and essential surgical capacity in rural areas of Mozambique and to increase capacity for surgical research at UEM and its allied institutions via training and partnerships. The partnership also has benefited from collaborations with the WHO and the Canadian Network for International Surgery. It is important to note that surgical research and innovation have always been valued in Mozambique. For example, the training of nonphysician technicians (NPTs), or técnicos de cirurgia, was pioneered by the Mozambican surgeon, Prof. Fernando Vaz, MD, to help patients in rural areas with limited access to surgical care.13 More than 20 years later, NPTs perform major procedures at rural hospitals, and they tend to practice longer in rural areas than physicians and have competitive surgical results for common procedures.14-15 One study found that after seven years, approximately 90 percent of NPTs were still working in primary referral hospitals, while almost no medical officers remained in those facilities. This model has been duplicated in other countries in sub-Saharan Africa.

Early in the partnership, a surgical research team was organized with representatives from UEM and UCSD. The team comprises senior surgical and nonsurgical research faculty from UEM; an epidemiologist from the national Ministry of Health; a lecturer at the Higher Institute of Health Sciences in Maputo, Mozambique; and surgical faculty from UCSD. Researchers meet regularly to discuss ongoing projects and to set the research agenda. The UEM-UCSD surgical research partnership also has been fortunate to have a Fogarty International Clinical Scholar and a University of California GloCal Health Fellow participate in the research. Surgical research is conducted in and around three primary referral hospitals in rural Mozambique (see Figure 1, this page). The three hospitals—Chókwè, Nhamatanda, and Ribáuè—were strategically selected to represent the southern, central, and northern regions of the country.
Each hospital has a catchment area of approximately 250,000 people, with anywhere from 60 to 125 beds. The hospitals have a full complement of health care workers, including physicians, nonphysician providers who perform surgical procedures, nurses, and support staff. Each facility is equipped with an emergency room, laboratory, operating room, X-ray machine, and ambulance. More complicated cases are transferred to the nearest referral center, which is on average 130 kilometers away from any of the three referral hospitals.

**Preliminary findings**

A spectrum of research projects was initiated in the first three years of the UEM-UCSD partnership, five of which are described in this article.

**Operations performed by nonphysician surgeons**

Little research has been conducted on the operative variety and volume of nonphysician surgeons in LMICs. To better understand their role in providing surgical care, we reviewed case logs at Chókwè Hospital.\(^{16}\) During a five-year period, nonphysician providers performed 2,637 major surgical procedures, with 52 different operations. Emergency care accounted for 73 percent of all procedures. Cesarean section was the most commonly performed operation (62 percent of all cases, 73 percent of emergent cases). Interestingly, the 10 most common procedures performed resulted in 80 percent of all major operations. The other nine were herniorrhaphy, exploratory laparotomy, salpingectomy, hysterectomy, split-thickness skin graft, wound debridement and primary closure, appendectomy, hydrocelectomy, and limb amputation. Of these 10 procedures, nine have been classified as top-priority surgical procedures for primary referral hospitals in LMICs.\(^{17}\)

**Surgical admissions to three primary referral hospitals**

The importance of surgical care delivered at primary referral hospitals in sub-Saharan Africa is often underappreciated.\(^{18}\) To better define what role surgical services play at primary referral level hospitals, we prospectively examined all hospital admissions to Chókwè, Nhamatanda, and Ribáuè hospitals.\(^{19}\) We compared the number of surgical patients and their length of stay (LOS) to patients admitted to the medicine, pediatric, and maternity wards. Patients with surgical conditions (that is, patients admitted to the general surgical service or maternity ward requiring surgery) accounted for 57.5 percent of admissions and 48 percent of inpatient-days. Most patients were admitted to the maternity ward (32.3 percent). Other admissions were more evenly distributed to the general surgery (25.2 percent), pediatric (22.5 percent), and medical (20 percent) wards. General surgery patients had the longest average LOS (8.7 days versus 1.9–7.7 days) and the highest number of total patient days (891 versus 252–703 days). In addition, up to 30 percent of patients hospitalized on the surgical service did not have a procedure, reflecting a large nonoperative component of surgical management.

**Epidemiology of pediatric trauma admissions**

Approximately 45 percent of Mozambique’s population is younger than 14 years old, and injury is common in this demographic.\(^{20}\) To better define the epidemiology of childhood injuries in rural areas of Mozambique, we examined the types of pediatric injuries presenting...
to Chókwè Hospital. Trauma admissions accounted for 12 percent of all pediatric patients admitted to the hospital and 70 percent of pediatric surgery admissions. Falls were the leading cause of injury (44 percent), followed by burns (23 percent) and traffic accidents (18 percent). The average length of stay was 12.9 days. The mortality rate due to injuries was 3 percent. Pediatric trauma results in a significant burden of disease in rural Mozambique. The pattern of injuries is similar to that of other regions of sub-Saharan Africa.

Community-based survey to define unmet needs
Little is known about the unmet need for surgical care in rural sub-Saharan Africa. We conducted a stratified, population-weighted household survey in three rural districts in Mozambique (see Figures 2–4, page 30 and this page). Of the 6,104 survey respondents, 4,498 (74 percent) reported the presence of at least one potential surgical disease. A total of 4,455 photos were taken of the potential surgical condition (99 percent frequency of photo acquisition). Review of these photos by a panel of trained surgeons revealed that 1,032 (17 percent) of all patients surveyed in the total population sample exhibited surgeon-subjective evidence of current or previous surgical disease. A total of 4,455 photos were taken of the potential surgical condition (99 percent frequency of photo acquisition). Review of these photos by a panel of trained surgeons revealed that 1,032 (17 percent) of all patients surveyed in the total population sample exhibited surgeon-subjective evidence of current or previous surgical disease. Our results demonstrate a large burden of current and historical disease requiring surgical care in the general populations of three rural districts in Mozambique. Further analysis of these and other data from LMICs may allow the quantification of both the met and unmet need for surgical care in underserved communities.

Risk-adjusted mortality of surgical patients at Chókwè Hospital
Surgical research in LMICs has traditionally focused on infrastructure rather than outcomes. To begin altering this paradigm, we developed a risk-adjustment tool for surgical patients based on the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP®) model. In the U.S., risk adjustment is achieved through rigorous data collection, including 66 preoperative variables and 30-day follow-up. Using ACS NSQIP data from U.S. hospitals, we validated statistical models that are tailored to the constraints of a Mozambican setting. We found that a minimum set of four to six variables is adequate to achieve robust risk-adjustment for inpatient outcomes (see Figures 5 and 6, page 32). A pilot study of this new tool is under way at three hospitals and will inform strategies to improve hospital guidelines and standards of care.

Keys to success
The goal of these surgical research projects is to develop an evidence base for surgical care in rural areas of Mozambique. Several factors contributed to the early success of our collaboration. Following are the lessons learned from these experiences.

Local buy-in is necessary
The importance of working in an environment in which surgical research is valued cannot be overstated.
Early success was contingent on senior Mozambican surgeons enthusiastically embracing the MEPI opportunity when it became available. The senior surgeons’ extensive experience with surgical care in Mozambique was invaluable in shaping research questions and setting priorities. Without their initial and ongoing support, the UEM-UCSD surgical partnership would not have succeeded.

Linking the surgical initiative with a medical programmatic grant

Another factor that helped this program succeed was the structure of the UEM-UCSD surgical partnership and our ability to integrate the surgical grant into a larger MEPI grant. Like the larger MEPI grant, the surgery-linked award has been structured such that it relies heavily on local leadership and priority setting. Integrating medical and surgical grants has allowed those who are interested in surgical research to take full advantage of the research infrastructure that has been developed in the other departments of Maputo Central Hospital and UEM-Faculty of Medicine. As a result, it was possible to leverage the larger grant to help create an environment in which surgical research is more easily accomplished. Examples include streamlining of the human subjects review process, the participation of surgeons in research training courses, and sharing tasks of grant administration.
Using ACS NSQIP data from U.S. hospitals, we validated statistical models that are tailored to the constraints of a Mozambican setting. We found that a minimum set of four to six variables is adequate to achieve robust risk-adjustment for inpatient outcomes.

Challenges: surgeon shortages
Despite early successes, the UEM-UCSD surgical partnership has faced several challenges, the greatest being the lack of surgeons in Mozambique. With fewer than 25 general surgeons serving a population of 25 million people in Mozambique, practicing surgeons have little time for day-to-day research activities. The Ministry of Health’s recent decision to expand the general surgery postgraduate training program should help to remedy this problem, but these efforts will take years to reach fruition. In the meantime, the MEPI team has sponsored the research of three NPTs. These técnicos de cirurgia are required to complete a research project as part of their certification through Maputo’s Higher Institute of Health Sciences. The goal of this mandate is to empower these health care professionals to perform surgical research at primary referral hospitals in rural districts.

Future directions
As the UEM-UCSD surgical partnership continues to develop, we see several areas where future research should be focused.

One of the greatest challenges of scaling up surgical care in LMICs lies in the deficiencies in the supply, training, and distribution of human resources. Surgical training takes time and money. Once qualified, surgeons are reluctant to serve in rural primary referral hospitals where the needs are greatest. Important questions remain regarding how surgical providers in LMICs should be trained, how their scope of practice should be defined, and how surgical skills should be assessed.

Another important need is the development of frameworks to assess surgical care within primary health care systems. The development of indicators for monitoring and evaluating projects and system performance is commonplace within health and economic development programs, but this process has yet to be systematically applied to the practice of surgery in LMICs. Developing population-based indicators of surgical care will

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facilitate the planning and implementation of surgical services in settings of limited resources.

In addition, assessment of surgical care in LMICs has typically focused on physical and human resources rather than processes and outcomes. Assessment of all four elements likely is necessary to gain a comprehensive understanding of how high-quality care can be delivered and how it affects the perception of the health care system. Instilling trust in a population is at the core of promoting access and proper use of health care services.

Although many challenges remain, over the past three years we have made significant progress toward establishing an environment in Mozambique in which it is possible for surgeons to undertake a broad range of surgical research projects and improve the delivery of care. Ongoing development of this enterprise will enhance Mozambique’s capacity to address important public health problems that are locally relevant and will accelerate the development of national universities. We anticipate that promotion of evidence-based surgical planning in global health care will be a lasting legacy of the MEPI program.

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REFERENCES (CONTINUED)


The first interviewee in this series is Michael R. Harrison, MD, FACS, a pediatric surgeon at the University of California, San Francisco (UCSF). Dr. Harrison has received international recognition for his pioneering work in fetal surgery.

Dr. Harrison was raised in Washington State before traveling east to study at Yale University, New Haven, CT, followed by Harvard Medical School, Boston, MA. He completed a general surgery residency at Massachusetts General Hospital, Boston, and a pediatric surgery fellowship at Children’s Hospital Los Angeles, CA. Dr. Harrison accepted his first faculty position at the University of San Francisco in 1978, where he continues to serve on the faculty as director emeritus of the Fetal Treatment Center. He performed the first successful fetal surgical procedure in 1981 and went on to receive numerous accolades and awards, including the Jacobson Innovation Award in 2002. He has co-authored more than 400 peer-reviewed publications and mentored many surgeon-scientists, including Michael T. Longaker, MD, MBA, FACS, the first recipient of the Jacobson Promising Investigator Award, presented in 2005.

Dr. Harrison was interviewed by Juliet Emamaullee, MD, PhD, chief resident in general surgery, Emory University, Atlanta, GA, and the Resident and Associate Society of the ACS representative to the Surgical Research Committee.

Profiles in surgical research:
Michael R. Harrison, MD, FACS
by Juliet E. Emamaullee, MD, PhD, and Gail E. Besner, MD, FACS

Editor’s note: The Bulletin is collaborating with the American College of Surgeons (ACS) Surgical Research Committee to present a new series titled “Profiles in Surgical Research.” These interviews will be published quarterly and will highlight prominent surgeon-scientist members of the ACS, with a focus on past recipients of the Jacobson Innovation and Jacobson Promising Investigator Awards.
When I finished general surgery training I knew I wanted to be a pediatric surgeon. During that training, I knew that I wanted to focus mostly on fetal surgery.

I went to medical school after I did my PhD; it was my interest in what I was studying scientifically that pushed me down this long road. I think it’s always good for those surgeons just starting their career to hear how people like you successfully conducted surgical research that led to clinical innovations. Did you always know you wanted to become a surgeon, or is that something that happened along the way?

My dad was a country doctor in a small town in the state of Washington. I think I just always wanted to be like him.

What about choosing pediatric surgery? Did this area become an interest as you went into your surgical training?

Yes. It is actually an interesting story because it involves one of the other Jacobson recipients. W. Hardy Hendren, MD, FACS, [2012 Jacobson Innovation Awardee] is a pediatric surgeon from Massachusetts General Hospital. I was a brand new, naive intern, and my very first rotation was on his service in pediatric surgery. I fell in love with it. I thought it was amazing. Actually, an experience in that first month of internship changed my whole life because he operated on a child with a diaphragmatic hernia, which was a beautiful operation. I got to sit with the boy for the next day or so, and then he died, like most of them do. That totally spurred my interest in [trying to fix complications] before birth.

When did you actually start engaging in scientific research?

I never considered myself a scientist. In those days, you could take time after your first two years of training and do something else. I applied to the National Institutes of Health (NIH) immunology lab and had a great time for two years studying immunology. That was my first exposure [to that kind of work], and it was enriching. Afterward, I integrated my two interests—pediatric surgery and the possibility of fetal surgery—with a little bit of science and immunology. The problem that really fascinated me and still hasn’t been solved is why the mother doesn’t reject the fetus.

When you finished your training, did you seek out a job that would allow you to incorporate research?

Absolutely. When I finished general surgery training I knew I wanted to be a pediatric surgeon. During that training, I knew that I wanted to focus mostly on fetal surgery. It was the only job I would really consider, so I looked around for institutions where this type of surgery might be possible. That’s how I ended up in San Francisco. It turns out that the pediatric surgeon, cardiologists, and scientists were developing the fetal lamb model to study congenital heart disease. I thought that would be the way to do fetal repairs in the uterus. That’s what we did. I came here, and we started operating on fetal lambs.

Were there a lot of naysayers at that time?

I often thought in retrospect that the circumstances regarding this situation were incredibly lucky for those involved. Well, part of it wasn’t luck because we, my family, decided there were only two places we could live along the west coast, and one of them was San Francisco. It turned out to be incredibly fortunate that UCSF was developing this new field of fetal surgery. They had incredible talent and the right attitude. They were the new folks on the block. I have often thought that I never could have done this or developed this field in any really established center like Harvard or Johns Hopkins [Baltimore, MD] or...
one of those fancy places, because they are too staid. Here, they cut me enough slack and provided enough helpful criticism, as opposed to obstruction, that we were actually able to do it. I don’t think there are many other places in the world where we could have developed this field.

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**Looking back, do you think you could have worked at one of those more established institutions? Did you make a personal choice to take a chance and go to San Francisco?**

No, I actually scouted [them] out before I took the job here. I thought that this type of research would be possible here, not necessarily because of surgery, but because it had lots of resources, the kinds that would be needed to develop this field. I knew the Harvard system very well, and some other systems a little bit, enough to know it would be exceedingly difficult or impossible to conduct this type of research at those institutions.

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**How long did it take to prepare for your first clinical patient (a child with a urethral obstruction)? How did you go about it?**

It took about four years. We set some standards for ourselves. We knew it would be such a fragile enterprise that if we had any bad experiences, we would be finished. We had to do it in animals first. We had to do the maneuvers in the most difficult animal model, non-human primates, to show it would be okay for the mother, that we could do what we intended to do surgically. So we had fairly high marks before we could offer it to the first patient.

Then, of course, we faced the huge problem of convincing our obstetric colleagues that it was the right thing to do. This could have been a real turf battle. “That’s my patient you are operating on! You don’t get to operate on them, that’s my business!” The pieces we needed in place were helpful, or at least tolerant, team members, including obstetricians, pediatricians, and anesthesiologists.

**How were you dividing time between animal experiments and working on your patients?**

Well, I was young enough to do both. I had been pretty busy from the start because I had joined a pediatric surgeon who previously had a solo practice at UCSF. It was just the two of us for around 15 years. We had a busy practice of wonderful, top-flight cases, referrals, and congenital conditions, as opposed to routine bread-and-butter operations. I was busy all the time. Then you would get to the questions I asked as a clinical surgeon.

The way we swung this deal was that the obstetricians and the neonotologists had a weekly meeting to discuss their problems. At the time, not many diseases were recognized in the fetus. So I started going to those weekly meetings and forming relationships with the prenatal diagnosis physicians, particularly those who performed sonograms. Then, we would say, “My gosh, this fetus looks like it has something we typically see after birth and that we correct surgically.” Then I would start suggesting that maybe we should fix it. I just hammered everyone about it for several years in those meetings until they started saying, “You know what? We are kind of thinking about fixing that.” That’s how we actually swung it—by attending those meetings and talking about specific cases. If you had a child and a family who now had a diagnosis and you were debating what to do, how to deliver him and so on, then people could rally around specific clinical problems.

**How were you funding that early research with animals? Large animal research is very expensive.**

It wasn’t at that time, surprisingly. It is incredibly expensive now. I came into a system in which people were doing large animal physiology all the time, almost
every day. I could sort of work with them, and they would let me do some big stuff, and then we would order a few lambs. I don’t think we had to pay for too much in the first couple of years. And then, of course, we started to get grants, and we’ve more or less received NIH funding ever since. That is true for the clinical side, too; we eventually applied for studies, NIH trial grants, and so on. The animals were often paid for out of our clinical revenue, so that was doable.

The thing that is really difficult is paying for patients. Especially when insurance could deny everything, and the costs were huge, like millions of dollars, because the patients were in the intensive care unit. It’s a huge fight that I don’t think you could win today without some incredible source of funding. In those days, everybody was used to essentially giving away care. You know, when patients couldn’t pay, everybody sort of looked the other way. That was true for all the first fetal operations. The hospital basically absorbed the costs. We didn’t really even have to argue with the administrators very much, even though we didn’t have a formal program in place.

There was no formal credentialing? The family just agreed to consent and you were able to proceed?

That’s exactly how we did it. We would, of course, go to our ethicist and offer to go in front of the human research committee, which was a new body at that time. It was a constant dialogue, but no one ever told us to get rid of the program or asked who was going to pay for it.

Describe the process of applying for your first NIH grant. Did somebody help you through it?

No, we prepared it on our own. The first one I received was a March of Dimes’ Basil O’Connor Starter Scholar Research Award. We had that for a couple of years, which got us started. Then we just taught ourselves how to write grants. No one really mentored or taught us; we just did it.

Were there any points in the process that were particularly difficult?

Yes, many of them. We had a lot of failures, of course. One example is when we first started repairing diaphragmatic hernia in utero. We decided that rather than just do this that we would actually apply to do a proper NIH-funded study, which we were awarded. In the middle of that study, things, particularly those related to licensing issues, started to go badly, and I think on several occasions the NIH set a moratorium. They said you can’t do anymore until you solve this or that problem. There were lots of problems, and starting and stopping those studies was incredible agony and required working with the bureaucracy.

How has receiving the Jacobson Award affected your career? Did you get to meet Dr. Jacobson?

It was just such a wonderful experience. Here’s a great story that involves some other folks. Dr. Jacobson is a surgeon in New York, and is an innovator who
makes tools. He spun out this tool-making endeavor and in particular developed a little, lightweight hemostat. It was called a Jacobson. Hardy Hendren loved that snap so much, and we all learned to love it and to use it in every case. We called them “Jakes.” We didn’t even know they had the full name of Jacobson. We just said, “Hey, hand me the Jake.” It was such a cool thing to meet him and tell him that story.

What role has mentorship played in your career? It sounds like locally you had your senior partner as a mentor. Do other people stand out in your mind as mentors?

Yes, but not so much on the surgery side, it was on the experimental side, the fetal side, the obstetric side. I have had many wonderful colleagues. In terms of my mentoring of other surgeons, you will have to ask Dr. Longaker.

Have you found serving as a mentor to be an enriching experience?

Oh goodness, it’s the most fun. The most fun we have is having bright young people interested in what we are doing, usually joining us in the middle of their residency years or at some other point in their early careers. These are the best and most productive people, and I must say we have had some spectacular mentees along the way. They are scattered all over, and Dr. Longaker is a perfect example.

How did you find a balance between clinical practice, research, and home life?

I just liked everything I was doing, so it wasn’t a problem to fit it all in. The split between clinical and research was never a problem because in our work, the
We had a lot of failures, of course. One example is when we first started repairing diaphragmatic hernia in utero.

two were one and the same. There was no, “Let’s go to the lab and study a problem.” It was always, “Here is a problem in a patient. Let’s figure out what to do.” I didn’t have a distinction between clinical surgery and research.

In terms of personal life, that could have been a huge problem, but I managed to find a great wife. During that busy time, we raised four kids here in San Francisco. We lived close enough to the hospital that I could either run or walk to work, so I could be with them a lot. One of them is a third-year medical student, and she wants to be a surgeon.

What advice do you give to potential surgeons who come through your lab and really want to conduct research and be clinically active?

I don’t think I ever formulated that sort of advice. Our system is more of providing an example, and I think people see how much fun it is. I would just say do what you like to do and have some fun.

Do you see any big challenges facing young surgeon-scientists today? Obviously the funding environment is challenging, and a lot of academic departments are not as supportive of protected time for research.

Yes, it’s terrible. I feel bad looking at our young people now because there is so much pressure on them to justify their existence by making money and operating that it can be really difficult to succeed in science. Also, I think maybe the expectation of being a triple threat—I don’t know if it is even possible or even a good goal anymore. I say, if you want to do something creative, do something about what you see. I don’t think it’s right anymore to do what folks used to do, which is have one clinical life and one research life that aren’t connected.

Is there anything you think we can do as a community to support the concept of surgeon-scientists? It seems like it is almost a dying breed.

I totally agree. The usual answer is that departments at teaching hospitals need to encourage and pay for it, to allow for surgeons to take time off to do research. But that is an old answer. I can’t think of a new answer for that situation.

How often do you hear back from patients and families from all of these studies over the years?

All the time. It’s wonderful. I’m not clinically active anymore, otherwise I would still be seeing them. I still have contact with my first successful fetal surgery patient; he sends me cards. Seeing the benefit is absolutely the best part of it.

What do you think is your greatest accomplishment so far?

Four kids!

Clinically, moving this field forward has inspired you from day one—that has to be a great accomplishment.

Yes, it’s always really fun to do something brand new. I guess that would be the best accomplishment, doing something completely new. ♦
Each year, the Communications Committee of the Resident and Associate Society of the American College of Surgeons (RAS-ACS) selects a topic of broad interest to RAS-ACS members and solicits brief essays from those individuals who are interested in the subject. A panel of 10 Communications Committee members evaluates the essays, and the author of the winning essay receives a $500 prize during the Focus on RAS-ACS session at the annual Clinical Congress. In addition, the top five essays are published in the Bulletin.

The theme of the 2014 RAS-ACS essay contest was When I Want to Quit and Why I Don’t. The winning essay was written by Carla Pajak, MD, from the University of British Columbia, Vancouver. Dr. Pajak and the other authors each describe an overwhelming situation that led them to consider veering away from their career plans. The life of a surgeon is, by definition, extremely demanding, both physically and emotionally. Each professional trait—medical knowledge mastery, surgical judgment, technical skill, and a compassionate personality—should be combined to make the “perfect” surgeon. But how easy is this to accomplish? These essays focus on unique, albeit arduous, situations that young surgeons and surgical residents have experienced, revealing how difficult but, at the same time, how rewarding it is to be a surgeon.

RAS-ACS is currently accepting essays for the 2015 essay contest. Refer to the submission guidelines posted on the ACS Communities for the RAS-ACS, or send an e-mail to Alison Casey at RAS-News@facs.org. ◆
Sometimes it has to come from an old man with white hair,” explained Dr. Wilson. With that, we set out for the patient’s room.

Dr. Wilson filled an already crowded space. He introduced himself to the worried siblings and terrified mother. The patient lay in bed, stoic; his leg was before him, splayed open with muscle bellies bursting from linear wounds. He had a missed vascular injury; smooth skin concealed a torn vessel. He called out in pain, but the referring hospital’s unfair assessment mistook pain for a budding addiction.

“Your leg must come off. I am sorry. You may not live if it doesn’t,” Dr. Wilson informed the patient.

Those were the facts. They spilled into the room like the tissues freed by fasciotomy. Fear seeped in, as did the realization that the man with white hair was right—there was only one way forward. So ended an afternoon of deliberation; the patient, only 17 years old and a basketball player, would face life without a leg.

Consents were shuffled, and then there was ink-stained skin with a surgeon’s initials—a requirement in Canada to mark the patient prior to surgery. There was a Foley, positioning, pink prep, and sterile drapes. When the saw appeared, I felt nauseous. It was routine until the saw. The discolored and dying muscle demanded the saw.

Dr. Wilson stared directly at me, perfectly still. “Everyone has patients they don’t forget. He will be one of yours.”

I turned away when we dropped it into a specimen bucket. Our patient turned away when we lifted the sheets to reveal the stump.

I left the operating room for a dimly lit call room. My TV dinner cooled and solidified on the desk before me. I couldn’t believe what we had done. Our wound would be with him for ever. He would try to hide it with baggy clothes, and he would hesitate on prom night, self-conscious of how his body had changed, because of it. It would haunt us—both of us.

A tear rolled down my cheek. Maybe I wasn’t up for this. When we had wheeled him into our room, under the bright lights, I had seen barely bridled terror. We were mask-wearing clipboard holders who had betrayed him. A slower exam might have noticed the pulse that slipped away. What if it had been me that judged him wrongly? Was I ready for these high stakes?

When our bloodshot eyes met again on morning rounds I realized I had changed. I saw that I had the opportunity to be something I had always wanted to be. Surgery is more than incisions and knots—it is also wounds. I carry this patient’s wound with me. It makes me hesitate before I dismiss a symptom or a patient’s plea. It makes me sit so patients can see my eyes, and it makes me use my hands to hold other hands just as readily as I hold scalpels. Being a surgeon is a tremendous privilege, and I am grateful for it. ✷
He died for want of a plastic tube in his nose, which, in general surgery, is akin to a mortal sin. I was paged about his nausea while rushing to the operating room (OR) with a little girl who was carried into the emergency department with a mile of free air under her diaphragm. He was a cirrhosis patient on his ninth life who had happily been eating Jello that morning. The pediatric patient took precedence in my mind.

The floor nurse called again as my hands traced a familiar path from the ligament of Treitz towards the cecum. The OR nurse repeated the message out loud—my patient was coding.

The crowd parted for me as I arrived at a scene from a horror show—a pool of vomit, no pulse, no airway, pitiful access, yet a hundred hands—a gruesome scene I had helped to create. I bent my head and got to work, but the patient succumbed to darkness, to the black and bilious secretions thick in his lungs.

I think of him now, months later. There is no going back, no undoing the mistakes of the past. I work every day toward a future where I balance the demands of taking care of the sickest patients in the hospital with equal care and foresight. Every order signed, incision made, and suture tied is a promise to be better. Yet I realize, with a face more stoic than my heart, that I have caused tears and pain and will do so again and again.

My classmates in other specialties are more than halfway through their residencies. They’re looking at job offers; they’re stretching their wings, looking forward to taking less call, and being big, bad chiefs.

I have many years of darkness ahead: of predawn rounds and frantic midnight calls, of fledgling judgment, and of errors by my hands, with each year’s increasing responsibility promising even more devastating complications. Why do 20 percent of residents quit general surgery training? If you have to ask, you have your eyes closed and your hands clapped over your ears. A better question: Why do we stay?

At the end of the day, the toll of death and destruction is not the only tally worth counting. I remember the first time I disagreed with a radiologist—and was proven right in the OR. Or when I gave someone bad news, and he thanked me. Mustering the daily courage to soothe a difficult family and finding you’ve become the one they trust, or climbing the podium at a morbidity and mortality conference to take responsibility and grow from this experience are worth counting. Realizing I could finish rounds on 20 patients before a medicine resident’s alarm clock sounded. I came to know the feeling when 100 pleading eyes settle on you—and somehow, you know exactly where to begin.

So, I will work until the job is done, tally the marks, good and bad, and reset my alarm to do it again tomorrow. I owe this to myself. I owe it to the patients I left behind and to the many patients yet to come.
I think we should separate,” my husband whispered over the phone line. All at once, everything stopped. Suddenly I could see the fibers of the life I wanted splitting apart, threatening my very identity, character, and values. In the weeks that followed, I analyzed the situation from various angles, and I finally came to the point at which I asked myself, “What is the most important thing in my life, and what will I think when I look back 50 years from now?” It was at that moment that I almost walked away from my surgical training.

I embarked on my internship filled with unabashed enthusiasm for taking care of patients and for operating. Two years left me exhausted, disillusioned by the violence of surgical training—from the difficult personalities to the ignominious position of residents in the hospital food chain—with only the comfort of knowing that it used to be worse. As a new mother and wife, my responsibilities on the home front were taking more focused time and energy than I had at any given time, and sleepless nights at work combined with sleepless nights at home meant I barely survived, let alone thrived, as I had once envisioned.

The saving grace of the experience was the satisfaction and joy I found in caring for patients, performing procedures, and managing diseases. Every day in our small, uncomely community hospital, I found myself motivated, engaged, desiring to improve, learn, and grow. The opportunity to relieve pain, to restore life, and to be with patients and their families at their moment of crisis, is more meaningful and fulfilling than I ever imagined prior to residency. My loving, sensitive husband was burdened with the strain and fatigue of residency but without the rewards I reaped in the work.

I was face to face with the decision to lay down my professional desires instead of losing my marriage. Although I love surgery deeply, I realized my commitment to love my husband and the need to protect my family were still my greatest priority. I’d heard that marriage is hard work, but I never would have believed my marriage would end my training in surgery.

My husband’s response to my determination to resign was visceral—he took my arm, looked straight into my eyes and said, “No! I won’t let you do that.” By revealing my commitment to our marriage, his was reignited. It wasn’t easy. As much as I gave at the hospital, I learned I had to pour just as much into my marriage to make any of it work. I’ve realized I will be satisfied with my surgical career in the long run if my husband comes through it with me, but my marriage will also suffer immeasurably if I sacrifice my deepest ambitions.

When I thought I was finished, both personally and professionally, I found greater resources deep inside to propel me forward. Surgery and residency taught me I have not yet found the limits to my capacity, and that is truly a gift.
his can’t be happening, I thought. We are 30 years old. I am a surgical resident interested in oncology, for God’s sake. But somehow there I was, staring at our new reality—a magnetic resonance imaging test result showing a large mass lesion in the right temporal lobe of my husband’s brain, nearly obliterating his ventricles, and lighting up the scan like a solar flare.

Although I had confidently walked cancer patients through their upcoming procedure many times before, assuring them that this fate was not their fault, resecting their disease, and caring for them in the postoperative period, I was suddenly paralyzed. I was no longer a surgical resident who thought she knew what it meant for patients and families to carry a diagnosis of cancer, but a wife who was about to live it every day by her husband’s side.

But surprisingly, it wasn’t then that I wanted to quit. I’d wanted to quit during my first three years of residency for less dramatic reasons.

Like the first 24-hour call shift of my internship. My phone rang so frequently that its battery died by hour 12. I frantically called my husband. “Bring my charger to the hospital!” As he pulled up to the front of the hospital, I lingered at the car window, tears welling in my eyes. “Take me home with you,” I uttered, overwhelmed.

Like the first time I thought I’d really hurt someone. As a young intern, I was convinced that my first independent decision—to give a patient 10mg of Lasix—was sure to push him into end-stage renal disease. Because of an ever-so-slight creatinine bump, I spent my post-call day in tears. How could I have chosen a career so fraught with worry, guilt, and complications?

Like when I have missed Thanksgiving and Christmas and New Year’s and holidays and weddings and birthdays, and when I have said I’d be home for dinner but never made it. Why do I sacrifice my life for others?

But I didn’t quit at any of those moments. And when quitting should have been my first thought—betrayed by the very field I have surrendered my life to studying—I didn’t think twice. Overcoming emotional adversity prepared me for the worst moment in my life and prepares me to handle the worst moments of my patients’ lives.

Surgery chose me. I know this because I tried hard to like other specialties—afraid of those things that made me want to quit. But because surgery chose me, I feel a duty to fulfill my destiny—to persevere because maybe I, like all of us in this most difficult of professions, was chosen for a reason. I don’t quit because each experience that makes me want to quit seems to be followed by a better reason to stay. Because of this path that I continue down, I am a better surgeon to my patients, a better wife to my husband, and a stronger role model to the others whom surgery has chosen.
third drawer down, to the right of my chair in my office, in an unmarked file but within reach at all times, is where I keep my “Q word” anecdotes—notes and cards that I quietly slip into my lab coat pockets. I’ve been collecting these notes since residency, and although the file is still thin, it is full of meaning.

I have considered quitting at several stages of my career. I left medical school still believing the fiction that if I worked hard enough, I could save everyone. Residency quickly shattered that illusion; my first call night as an intern, I conscientiously thought about, and then purposely did not reorder, pro re nata medication for a floor patient. Four hours later she died, and I was asking my senior resident if I had killed her. My flirtations with the Q word began that night, but every time I thought I was done with surgery, someone came along and shooed me back on the path. Here are a few examples.

• “Thank you for fixing me, doc”: The patient who was shot by two men while he was minding his own business

• “Thank you for trying to make my pain go away”: The electrical injury patient with chronic neuropathy

• “Thank you for helping me clean my patient when everyone else was busy”: One of my intensive care unit nurses

• “Thank you for crying with me”: Family, nurses, and other colleagues

• “Thank you for helping me review this article”: One of my best friends

• “Thank you for teaching me how to do a focused assessment with sonography in trauma exam”: My residents

• “Thank you for getting Mother to hospice. It was the right decision. She was at peace”: From both daughters of a woman who had fallen and was done with the pain of her non-healing fractures, and my own mother, a year after her mother moved into hospice

It never ceases to surprise me how invigorating “thank you” can be. In this era of frugality, Joint Commission regulations, and mountains of paperwork, it seems easy to forget there is a human being (one specially trained, but still human) struggling to do his or her best for strangers. My mother was right—it always pays to be polite. Much as we rarely expect gratitude for doing our jobs, sometimes we forget how many people around us are also interacting with our patients—a silo is a lonely place. A simple “thanks” goes a long way toward reestablishing the connection that I think drives the best people to be health care professionals.

Eight years after that first death, I made a promise to one of my patients in the trauma bay. He was badly burned but still lucid, and after I put him on the phone with his family, before I intubated him, I told him it would be a long haul but that I would see him when he woke up. He died four days later while I was out of the hospital. I came back to work the next day, unclear of my purpose and furious with the world. I walked into the unit, and before I said anything, the nurses thanked me for letting him speak with his family, who cherished the opportunity. The Q word vanquished yet again. ♦
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ACS OFFICERS, REGENTS, AND BOARD OF GOVERNORS’ EXECUTIVE COMMITTEE

Board of Regents/
Board of Governors’ Executive Committee

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Regional trauma system implementation has been shown to improve mortality and reduce complications. The number, level, and location of trauma centers are critical elements of trauma system function and disaster response. The importance of controlling the allocation of trauma centers, as well as the need for a process to designate trauma centers based upon regional population need, has been recognized as an essential component of trauma system design since the 1980s. Nonetheless, few trauma systems are able to operationalize these concepts, especially when faced with real or potential challenges that stem from powerful health care institutions or providers.

Without both a strong mandate and clear statutory authority that is backed by a transparent and fair process, lead agencies for many trauma systems have been unable to make potentially controversial decisions and, in some cases, have abdicated their responsibility for trauma center designation. When this situation occurs, trauma center designation becomes driven by the needs and ambitions of individual health care organizations or hospital groups rather than the needs of injured patients within the region. When changing economic fortunes determine the desirability of trauma center designation, trauma centers may opt in or out of the system based upon their own perceived gains without consideration for the needs of the populations served. The result is a situation in which the resources available for the care of injured patients change with the economic tide.

Recent changes in health care economics have made trauma center designation generally more desirable, and certain areas have developed a perceived oversupply of high-level trauma centers with potentially adverse effects on cost and efficiency of patient care. History has shown that changes in health care economics can also make trauma center designation less desirable, and, as a result, some trauma centers drop high-level designation despite demonstrated population need—a scenario that played out frequently in the 1990s. Both outcomes are detrimental to the long-term stability of a regional trauma system and to the population it serves.

The issue is not simply that the proliferation of new trauma centers is without merit—quite the contrary. It is far more common for regions to lack access to trauma care because no high-level designated trauma centers are located nearby, a need that can best be filled by encouraging the development of new trauma centers in the appropriate locations. The problem arises when a lead agency passively allows health care organizations and hospital groups to establish new trauma centers in areas that yield an economic advantage, while ignoring areas of true need. Such uncontrolled growth of trauma centers—some of which may lack long-term commitment—has the potential to undermine the quality of trauma care within a region, creating areas of oversupply and adverse competition while ignoring underserved areas entirely.

In order to best serve the needs of injured patients through optimization of regional trauma system function, the ACS Committee on Trauma supports the following guidelines:

• The designation of trauma centers is the responsibility of the governmental lead agency with oversight of the regional trauma system. The lead agency must have a strong mandate, clear statutory authority, and the political will to execute this responsibility.
Recent changes in health care economics have made trauma center designation generally more desirable, and certain areas have developed a perceived oversupply of high-level trauma centers with potentially adverse effects on cost and efficiency of patient care.

- The lead agency should be guided by the local needs of the region(s) for which it provides oversight. As such, it is the responsibility of physicians, nurses, prehospital health care providers, and their respective organizations to advocate for the interests of the patients and citizens they serve throughout the entire region. The collective interests of these citizens and patients supersede the interests of the providers and their respective organizations.

- Trauma center designation should be guided by the regional trauma plan based upon the needs of the population being served, rather than the needs of individual health care organizations or hospital groups. It is the professional obligation of the surgeons, physicians, nurses, emergency medical services (EMS) providers, and public health professionals to work together to ensure that the patients’ needs come first.

- Trauma system needs should be assessed using measures of trauma system access, quality of patient care, population mortality rates, and trauma system efficiency. Possible measures to be considered include:
  - Number of Level I and Level II centers per 1,000,000 population
  - Percentage of population within 60 minutes of a Level I/Level II center
  - EMS transport times
  - Percentage of severely injured patients seen at a trauma center
  - Trauma-related mortality
  - Frequency and nature of inter-hospital transfers
  - Percentage of time trauma hospitals are on diversion status

- Allocation of trauma centers should be reassessed on a regular schedule based on an updated assessment of trauma system needs.

- The applicability of specific metrics and benchmarks for trauma care resources, as well as the resources available to meet these needs, will vary from region to region; the details of the needs assessment methodology and regional trauma center designation criteria should be derived through a broad-based, locally driven consensus process that is balanced, fair, and equitable.

- An international group of recognized experts, stakeholders, and policymakers should be convened to discuss and plan for optimal future regional trauma system development. ♦
Guam surgeons face unique challenges

by Ricardo Eusebio, MD, FACS

At the suggestion of Tyler Hughes, a member of the American College of Surgeons (ACS) Board of Governors, Fellows practicing in Guam recently sought to establish a chapter on the island. The ACS Board of Regents approved this request at its October 2014 meeting, thus allowing Guam for the first time to have representation on the ACS Board of Governors.

In our discussions leading up to the formation of the chapter, Dr. Hughes, a surgeon in McPherson, KS, and Chair of the ACS Advisory Council for Rural Surgery; my partner, Michael Cruz, MD, FACS; and I determined that surgeons in Guam face many similar yet unique challenges as rural surgeons on the U.S. mainland. By establishing an ACS chapter in Guam, we anticipate that surgeons on the island will be better positioned to receive the benefits of full participation in the ACS and the programs offered through the Advisory Council for Rural Surgery.

Geographic isolation
Guam is one of five U.S. territories and, at 212 square miles, the largest island in the Marianas chain. Situated between 13 and 21 degrees north latitude, 144 and 146 degrees longitude, Guam arises from an extensive submerged mountain range, an arc-shaped archipelago called the Mariana Islands. Weather is characterized as tropical marine with an average temperature ranging from a high of 86 degrees to a low of 76 degrees Fahrenheit. The population is approximately 165,100 and predominantly Asian/Pacific Islander. If “rural” is primarily defined on the basis of remoteness, then Guam’s strategic location in the Pacific, where “America’s day begins,” would certainly befit the description. The average distance between Guam and its nearest neighboring countries, including the Philippines, Japan, Korea, Hong Kong, China, and Australia, is approximately 2,287 miles. The closest country is the Philippines at approximately 1,597 miles or a flight time of three hours and 30 minutes, while the farthest is the U.S. Honolulu, HI, is approximately 3,801 miles away, with a flight time of seven hours. Between “us” and “them” is the vast Pacific Ocean. Therefore, any urgent transport for specialized care necessitates some type of air travel.

Health care system
The health care system is similar to that of the rest of the U.S. Patients are covered through Medicare, Medicaid, a local program (the Medically Indigent Program), and/or private insurers. Professional licensing also mirrors stateside regulations, requiring postgraduate training in a U.S. residency program and passing the U.S. Medical Licensing Examination.

Guam has two hospitals—the Naval Hospital, Agana Heights, and Guam Memorial Hospital Authority, Tamuning. The military hospital provides care to active duty military personnel and their beneficiaries. This institution also provides civilian...
humanitarian assistance for trauma patients or acute emergencies occurring in close proximity to the military hospital.

Guam Memorial Hospital Authority is a 200-bed acute and chronic care facility managed by the local government. It has been the only hospital to serve the entire civilian populace for many years. The facility has 10 critical care beds and four operating rooms (ORs); labor and delivery have two suites of their own.

Fortunately, a new hospital will be opening soon, which will increase the number of beds and health care providers, while also delivering subspecialty care to the residents of the island—a welcome relief for many patients. Three independent, privately owned ambulatory surgery centers round out the available surgical facilities.

Without taking the military surgeons into account, surgical care in Guam is provided by five general surgeons and one surgeon in each of the following specialties: hand surgery, neurosurgery, otolaryngology, plastic surgery, and urology. Two orthopaedic surgeons and 14 obstetric surgeons complete the surgical workforce for Guam. This ratio of approximately three general surgeons per 100,000 residents falls far below the reported general surgery workforce figures for rural America—six to seven per 100,000.1

Trauma call at Guam Memorial Hospital Authority is every fifth night, and patients present with a breadth of blunt and penetrating trauma. All of the general surgeons are in private practice, and there are no surgical hospitalists. Like most rural practices, those in Guam manage a broad spectrum of traditional general surgery cases, and general surgeons are expected to provide frequent call coverage and often experience professional isolation.

Rural surgical practice in Guam

My clinic, Island Surgical Center, is a two-surgeon collaborative with myself and Dr. Cruz. We are two local boys who returned to Guam at approximately the same time after stints in the military. What has bound us together for almost 20 years is the common goal of making a difference in the health care services provided on our island.

We have a broad spectrum of case mixes in our practice, beginning with endoscopy. Guam does not have a gastroenterologist, so general surgeons perform all endoscopic procedures. Between the two of us, Dr. Cruz and I average approximately 40 to 60 endoscopies a month, including upper and lower endoscopic screenings or therapeutic polypectomies, and bronchoscopies.

Complementing each other’s areas of interest, Dr. Cruz performs a large number of breast operations, whereas I focus largely on pediatrics and vascular surgery. Crossover occurs mainly with respect to laparoscopic cholecystectomies and some colorectal procedures. Because of how busy we are with our individual case loads, finding time to assist each other can sometimes be a challenge. Hence, we usually operate separately, aided by an OR technician.

What distinguishes surgery in Guam from most rural practices
in the U.S. is that our geographic isolation often forces us to use rural solutions to address urban problems. For example, whereas severe traumatic injuries in level II or III urban hospitals are transported quickly, our distance to a level I hospital makes it nearly impossible to transport a critically ill patient. Therefore, using rural resources is frequently the only recourse available to save a patient’s life. Additionally, air ambulance transport for a critically ill patient who is on a ventilator is prohibitively expensive, nearing six figures. Generally, private insurers refuse to cover these services, and if alcohol is involved in the traumatic event, the claim will certainly be denied. Therefore, even most critically ill patients are not transported. Yet you can imagine how a severe cardiopulmonary and/or hepatic injury will consume a significant portion of the resources of the hospital and affect the surgeon’s ability to continue his or her daily practice.

Another example of what distinguishes surgery in Guam is the availability of specialized techniques like endovascular surgery to control bleeding, which is standard in most tertiary care centers. In Guam, a patient who remains unstable because of bleeding will receive an open exploratory laparotomy to control the bleeding.

Recently, I performed a splenectomy on a woman who was struck by an automobile. She remained unstable despite receiving four units of blood. Ideally, if a patient can be stabilized, some commercial airlines will provide medical transport, dedicating three seats to accommodate a stretcher. This avenue is less costly. We also have devised special bassinets to transport neonates commercially. In the last few years, we have finally received neurosurgical support, but burr holes or flaps to evacuate hematomas for neurotrauma were previously performed by the general surgeon on trauma call.

In many U.S. cities, a specialist in general surgery is frequently understood to be an intra-abdominal surgeon with laparoscopic skills or an acute care surgeon. The current definition of general surgery in the U.S. is in a state of flux as surgeons meet the challenges of regional restrictions, attitudes regarding subspecialization, and hospital privileging customs. For example, trauma and abdominal cases describe only a fraction of my practice. It is not unusual to see on my OR schedule the following assortment of operations: an endo-rectal pull-through for Hirschsprung disease, a carotid endarterectomy or an inguinal bypass, thyroidectomy, lobectomy for a pulmonary lesion, adult and pediatric hernias, and even hemorrhoidectomies. Occasionally, it may even be necessary to ligate a patent ductus arteriosus that is unresponsive to medical therapy in a premature infant.

As I stated earlier in this article, I returned to Guam to make a difference in the health care system. Due to Guam’s geographic remoteness and the difficulty in transferring patients, I feel compelled to provide a broad range of surgical services. My practice is probably similar to the practice of our surgical forefathers, people that I would call “real general surgeons.”

This type of practice is not unlike the practice of many rural surgeons in the U.S. A total of 24 percent of Americans live in...
rural areas, but many people are unaware or do not appreciate the value of these rural surgical communities. Closer scrutiny will reveal the high-quality surgical care delivered in these non-urban settings.

**Establishment of Guam Chapter**

Because of the similarity of my practice to rural surgical practices in the mainland U.S., I have had the good fortune to meet Dr. Hughes. Dr. Hughes and the rural surgery community were instrumental in encouraging the surgeons of Guam to form an ACS chapter.

Most surgeons on the island never anticipated that the College would establish a chapter here. Indeed, until we received encouragement from Dr. Hughes and his colleagues, we felt like people walking on the sidewalk of a busy city street, invisible to the larger populace until someone calls out a name. By calling out our name, Dr. Hughes and the rural community in the ACS opened the lines of communication and our existence became a reality. An ACS chapter in Guam helps resolve our sense of professional isolation, provides us with a voice in the ACS, and identifies who we are. For the first time in the history of the College, Guam has a tangible presence and is now visible to the rest of the ACS.

I came back to Guam to come home. After many years of medical training, beginning at George Washington University School of Medicine, Washington, DC, and ending at Hartford Hospital/University of Connecticut, I looked forward to making a difference in my island home. The surgeons before me were “iron men” because, quite honestly, they were even fewer in number and worked longer hours, under worse conditions. They deserve our respect and gratitude.

I learned from my forebears the value of my profession, the satisfaction of a grateful patient, the courage to tackle difficult surgical problems, and the ability to lean on the basic surgical foundations taught during residency to perform a broad spectrum of surgical procedures. I have never regretted my decision to return to Guam. I appreciate the support from other rural surgeons in the U.S., and the members of the Guam Chapter of the ACS look forward to working closely with the College in the future.

**REFERENCES**

Prominently displayed in the 26th floor reception area of the America College of Surgeons’ (ACS) headquarters building in Chicago, IL, is a remarkable item that symbolizes international unity, professional admiration, and fraternity among surgeons on both sides of the Atlantic Ocean—the 9,000 year-old skull and antlers of Megaloceros giganteus, the largest deer species that ever lived.

Sir William Taylor of the Royal College of Surgeons in Ireland (RCSI) proposed the gift of this stunning artifact of natural history to the ACS in 1921 as a symbol of friendship between the two Colleges, and it reflects the RCSI’s high esteem for history and its Fellows’ pride in their nation’s heritage.

Artifact’s origins
According to letters held in the RCSI’s archives, the deer skull and antlers were first excavated from a bog in County Leitrim in 1832 and purchased by the RCSI for the sum of 50 pounds sterling by Prof. John Hart, MD, curator of the RCSI museum from 1844 to 1846.

In 1919, shortly after the ACS moved into the Italianate limestone mansion at 40 E. Erie Street, known as the Nickerson Mansion, the RCSI proposed the gift to their colleagues in America. This offer was made in part because the mansion already housed numerous animal heads left by one of the previous owners.

Originally built for banking baron Samuel Mayo Nickerson and his family in 1883, the house was sold to Lucius George Fisher, president of Union Bag & Paper Co., upon Mr. Nickerson’s retirement in 1900. One of Mr. Fisher’s great passions was big game hunting; he converted one of the upstairs parlors into a trophy room and rare book library. Mr. Fisher lived in the mansion until his death in 1916.

The house was purchased three years later by prominent Chicago businessmen, including Cyrus H. McCormick II, William Wrigley Jr., and Julius Rosenwald, and donated to the ACS for use as its headquarters in 1919. When the College took over the property, a large number of mounted animal heads remained in the building’s trophy room, and this collection prompted the RCSI to send the Irish deer skull and antlers as a token of friendship to the ACS. In Ireland, hanging deer skulls and antlers in a home symbolizes

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a rootedness to the land and a strong sense of community.

Displaying the artifact
The deer skull and antlers proudly hung on a wall of the ACS headquarters until the ACS staff outgrew the building. Most staff relocated to 55 E. Erie Street, and then, in 1998, to the current headquarters building at 633 N. Saint Clair Street. Although the skull and antlers remained a treasured gift, after the move, their size and frailty made displaying them difficult.

In 2002, ACS Office Services Manager Daniel D. Steinke contacted Chicago’s Field Museum of Natural History, and with its assistance began the process of restoring the skull and antlers, which are more than 10 feet wide. Mr. Steinke built a vitrine to protect them from the elements and mounted the relic for proper display. In a nod to ACS history, the cortisone oak map table used to anchor the display is an original from the John B. Murphy Memorial Auditorium.

Starting this March at the Art Institute of Chicago, the Irish deer skull and antlers will be featured as part of a larger exhibit focusing on Irish art and culture. (For further details, refer to the December 2014 issue of the Bulletin, page 60.) Curator Christopher Monkhouse has traveled the globe locating the objects for this exhibition, and the ACS is honored to have this unique piece of our history included and for the opportunity to partner with the Art Institute of Chicago on this important exhibition. ♦
Surgeons should play leading role in Safety Leadership Rounds

C-suite leaders and members of the senior executive team at health care institutions have been increasingly encouraged to use weekly Safety Leadership Rounds or WalkRounds as an opportunity to learn first-hand about what is happening within their hospitals and to proactively address any problems or safety concerns. Safety Leadership Rounds not only demonstrate a commitment to patient safety, but also establish trusting relationships and open lines of communication regarding patient safety.*

Although some surgeons in leadership positions may have the opportunity to participate in Safety Leadership Rounds, other surgeons also can actively contribute, as rounds are often conducted on surgical floors and in operating rooms. During Safety Leadership Rounds, informal conversations occur between leadership and staff about safety issues within the institution. Surgeons can use Safety Leadership Rounds to demonstrate a commitment to safety and teamwork and to identify opportunities to improve the lines of communication across all levels of the organization.

Seven steps
In Patient Safety Initiative: Hospital Executive and Physician Leadership Strategies, Joint Commission Resources and the Institute for Healthcare Improvement recommend seven steps to conduct Safety Leadership Rounds, which are as follows:†

- **Prepare.** Garner commitment and regular participation from leadership and secure dedicated resources.
- **Schedule.** Set schedules months in advance to accommodate the time demands of leadership.
- **Conduct.** Determine where to conduct Safety Leadership Rounds, including possible sites where safety culture may need improvement.
- **Track.** Establish a system for tracking and ranking collected data obtained from the rounds.
- **Report.** Share data with a multidisciplinary committee so

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- **Get feedback.** Use formal methods to provide feedback to frontline providers to ensure the appropriate buy-in from all levels of the organization.
- **Measure.** Evaluate whether rounds are effective in improving the organization’s culture.

When participating in Safety Leadership Rounds, surgeons may want to consider asking or being prepared to answer the following questions:

- Have there been any near-misses that almost caused patient harm?
- Is there anything we can do to prevent the next adverse event?
- What specific intervention from leadership can make the work you do safer for patients?
- How are you engaging patients and families in their care?

Once Safety Leadership Rounds are established and implemented, it is important to assess their impact on the safety culture. An article in the July 2014 issue of *The Joint Commission Journal on Quality and Patient Safety* details how England’s National Health Service found variations in the implementation of WalkRounds, potentially mediating their impact on safety culture.

In the study, safety stakeholders revealed modification and expansion of WalkRounds, and the authors contend that such deviations risk replacing the main objectives of rounds as a form of surveillance that could alienate frontline staff and produce fallible insights. They also suggest that leadership should attempt to ensure that WalkRounds adaptations align, rather than conflict, with the intervention’s model of change.*‡

As Safety Leadership Rounds continue to evolve, surgeons can work with leadership to ensure that rounds continue to promote an institution-wide safety culture and improve patient safety and quality of care.


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The 2014 Annual Report of the National Trauma Data Bank® (NTDB®) offers an updated analysis of the largest aggregation of U.S. and Canadian trauma registry data ever assembled. The NTDB now contains more than 6 million records. The 2014 Annual Report is based on 814,663 records with valid trauma diagnoses from the single admission year of 2013. The data were submitted by 758 facilities, including 230 Level I trauma centers, 265 Level II trauma centers, and 205 Level III or IV trauma centers; 32 are Level I or Level II pediatric-only centers.

Continuous quality improvements
Each year, the NTDB has increased the requirements for the submission of quality data. This data quality effort started in earnest with the introduction of the National Trauma Data Standard (NTDS) in 2007, which was the basis of the first single admission year Annual Report of 2008. Along with this increase in data quality, over the last seven years, the number of records submitted by the nation's hospitals has increased by more than 160 percent. The 2008 Annual Report was the first to use the NTDS, and 506,452 records were submitted at that time. This year's report includes 814,663 records.

One section in each of these annual reports outlines the Injury Severity Score (ISS), a numeric scale for stratifying injury severity. These scores are based on documented diagnoses in the medical record. The ISS scores range from one to 75, with the risk of death increasing as the score increases. This report categorizes an ISS of one to eight as minor; nine to 15 as moderate; 16 to 24 as severe; and greater than 24 as very severe. Almost half of the patients (47.6 percent) fall into the minor category, with approximately one-third (31 percent) categorized as moderate. The case fatality rate rises with increasing ISS, with the most severe group experiencing a case fatality rate of almost 30 percent (see Figures 1 and 2, page 62).

Commitment to excellence
The mission of the American College of Surgeons (ACS) Committee on Trauma (COT) is to develop and implement meaningful programs for trauma care. In keeping with this objective, the NTDB is committed to being the principal national repository for data from trauma center registries. The purpose

The NTDB Annual Report 2014 is available on the ACS website as a PDF file and as a PowerPoint presentation at www.ntdb.org.

In addition, information regarding how to obtain NTDB data for more detailed study is available on the website.
of the Annual Report is to inform the medical community, the public, and policymakers about a variety of issues that characterize the current state of care for injured persons in the U.S. It has implications in many areas, including epidemiology, injury control, research, education, acute care, and resource allocation.

Many dedicated individuals on the ACS COT, as well as at trauma centers throughout the U.S., contributed both to the early development of the NTDB and its rapid growth in recent years. Building on these achievements, the goals in the coming years include improving data quality, updating analytic methods, and enabling hospital administrators and quality leaders to compare outcomes. These efforts will be reflected in future NTDB reports to participating hospitals, as well as in the Annual Reports.

Throughout the year, we will be highlighting these data through brief reports that will be published monthly in the Bulletin. The National Trauma Data Bank Annual Report 2014 is available on the ACS website as a PDF file at http://www.ntdb.org. 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.
Mark C. Weissler, MD, FACS, was elected Chair of the Board of Regents of the American College of Surgeons (ACS) at the 2014 Clinical Congress, after serving as Vice-Chair for two terms. An otolaryngologist, Dr. Weissler is the Joseph P. Riddle Distinguished Professor, department of otolaryngology–head and neck surgery, and chief, division of head and neck surgery, University of North Carolina (UNC) School of Medicine, Chapel Hill.

As Chair of the Board of Regents, Dr. Weissler will work closely with the ACS Executive Director and will chair the Regents’ Finance and Executive Committees. The College’s 22-member Board of Regents formulates policy and is ultimately responsible for managing the affairs of the College. The Board’s diversity and the variety of experiences and interests among its members enable the Regents to represent views related to myriad issues in contemporary surgery.

Dr. Weissler’s practice at UNC focuses on the treatment of head and neck cancer, laser head and neck surgery, and laryngeal/tracheal stenosis. He is also a co-investigator on the Carolina Head and Neck Cancer Epidemiology Study (CHANCE). CHANCE is a population-based, case-control study of head and neck cancer in a 46-county region of North Carolina. The study evaluates the relationship between polymorphisms of diverse genes that, in combination with exposure to tobacco and alcohol, modify the risk of head and neck cancer. His recent work has focused on new treatment paradigms for human papillomavirus-associated oropharyngeal cancer.

An ACS Fellow since 1989, Dr. Weissler has been an ACS Regent since 2006 and was Vice-Chair of the Board of Regents (2012–2014). He served on the ACS Board of Governors (2002–2007) and in other leadership capacities for the College, including: Chair, Committee on Ethics (2011–present); Chair, Central Judiciary Committee (2011–2012); member and Past-Chair, Advisory Council for Otolaryngology (2002–present); and President, North Carolina Chapter of the ACS (2002–2003).

In addition, Dr. Weissler is one of 15 directors of the American Board of Otolaryngology (2012–present), chair of the membership committee of the American Laryngological Association (2012–2014), and a member of numerous other medical and surgical associations.

Dr. Weissler is a member of the editorial board of ACS Surgery News (2007–present), was a case report associate editor for Otolaryngology–Head and Neck Surgery (2009–2012), and is a reviewer for Head & Neck (1998–present) and Archives of Otolaryngology/Head & Neck Surgery (1994–present).

A graduate of Boston University School of Medicine, MA, six-year medical program in 1980, Dr. Weissler completed two years of general surgery training at Massachusetts General Hospital, Harvard University, in 1982 and a residency in otolaryngology at Massachusetts Eye and Ear Infirmary, Harvard University, in 1985, followed by a fellowship in head and neck oncologic surgery at the University of Cincinnati, OH (1985–1986). ♦
The 2015 Nominating Committee of the Board of Governors (NCBG) will select nominees for pending vacancies on the Board of Regents that will be filled at the 2015 Clinical Congress. The NCBG uses the following guidelines when reviewing the names of candidates for nomination to the Board of Regents:

• Nominees must be loyal members of the College who have demonstrated outstanding integrity and medical statesmanship, along with an unquestioned devotion to the highest principles of surgical practice.

• Nominees must have demonstrated leadership qualities that might be reflected by service and active participation on ACS committees or in other components of the College.

• The NCBG recognizes the importance of Board of Regent members representing all health care professionals who practice surgery.

• The NCBG also considers geography, surgical specialty balance, and academic or community practice.

• The College encourages consideration of women and other underrepresented minorities. Individuals who are no longer in active surgical practice should not be nominated for election or reelection to the Board of Regents.

• All surgical specialties will be considered.

All nominations must include a letter of recommendation, a personal statement from the candidates detailing their ACS service, and the name of one reference. In addition, entities such as surgical specialty societies, ACS advisory councils, and ACS chapters that are submitting nominations must provide a description of their selection process and the total list of applicants reviewed. Any attempt to contact members of the NCBG by a candidate or on behalf of a candidate will be viewed in a negative manner and may result in disqualification of the candidate. Applications submitted without the requested information will not be considered.

The deadline for submitting nominations is February 27. Submit nominations to officerandbrnominations@facs.org.

For more information, contact Betty Sanders, Staff Liaison for the NCBG, at 312-202-5360 or bsanders@facs.org.

For information only, the current members of the Board of Regents who will be considered for re-election (all MD, FACS) are John L.D. Atkinson; Henri R. Ford; Enrique Hernandez; L. Scott Levin; Leigh A. Neumayer; Marshall Z. Schwartz; Beth H. Sutton; and Steven D. Wexner.
Attend an American College of Surgeons
2015 Surgical Coding Workshop

Each year the American College of Surgeons (ACS) hosts a series of two-day workshops, including Office and Hospital Coding: What to Bill, How to Document, and Appeal and Challenges in General Surgery Coding.

**Develop Expertise in Surgical Coding for Optimal Reimbursement**

- Avoid denials
- Avoid down coding
- Improve coding and reimbursement
- Prevent abuse and fraud
- Achieve coding compliance
- Attain optimal reimbursement
- Increase practice management competency
- Earn CME credit*

*The American College of Surgeons designates this live activity for a maximum of 6.5 AMA PRA Category 1 Credits™. American Association of Professional Coders members can also earn a maximum of 6.5 credits.

ACS members and their staff are eligible for a discounted course registration fee.

For additional dates, locations, registration fees, and to register, visit [www.facs.org/advocacy/practmanagement/workshops](http://www.facs.org/advocacy/practmanagement/workshops) or call 312-642-8310.
Register for Global Humanitarian Surgery Course, February 7–8

The Center for Global Health and Innovation at Stanford University School of Medicine (SUSM), CA, will host a one-and-a-half-day continuing medical education course, February 7–8, on humanitarian surgery missions in developing countries. The third annual International Humanitarian Aid Skills Course will review common conditions encountered in resource-limited environments. Through a variety of techniques, including skills stations and simulation, the course will provide instruction on common procedures performed in developing nations. The course will also offer instruction on the essential elements of surgical safety, ethics, and cultural considerations in such settings.

Specific procedures that will be covered include orthopaedic dislocations and fracture management with traction pins and external fixation, cesarean sections, postpartum hemorrhage, burn management and hand cutting of skin grafts, tendon repairs, tropical medicine for surgical diseases, emergency craniotomy, and low-resource anesthetic techniques. View the course description and register online at http://cme.stanford.edu/humanitarian/ by January 23. Space is limited. SUSM designates this live activity for a maximum of 10.50 AMA PRA Category 1 Credits™. Discounted hotel information is available on the website. ♦

call for nominations for ACS Officers-Elect

The 2015 Nominating Committee of the Fellows (NCF) will select nominees for the three Officer-Elect positions of the American College of Surgeons (ACS): President-Elect, First Vice-President Elect, and Second Vice-President Elect. The NCF will use the following guidelines when considering potential candidates:

- Nominees must be loyal members of the College who have demonstrated outstanding integrity and medical statesmanship, along with an unquestioned devotion to the highest principles of surgical practice.

- Nominees must have demonstrated leadership qualities that might be reflected by service and active participation on ACS committees or in other components of the College.

- Members of the Nominating Committee recognize the importance of achieving representation of all who practice surgery.

- The College encourages consideration of women and other underrepresented minorities.

All nominations must include the following:

- A letter of recommendation

- A personal statement from the candidate detailing ACS service (for President-Elect position only)

- A current curriculum vitae

- The name of one individual who can serve as a reference

In addition, nominating entities, such as surgical special societies, ACS advisory councils, and ACS chapters, must provide a description of their selection process and the total list of applicants reviewed. Any attempt to contact members of the NCF by a candidate or on behalf of a candidate will be viewed negatively and may result in disqualification. Applications submitted without the requested information will not be considered.

The deadline for submitting nominations is February 27. Submit nominations to officerandbrnominations@facs.org. If you have questions, contact Betty Sanders, staff liaison for the NCF, at 312-202-5360 or bsanders@facs.org. ♦
Congratulations to the Associates who have successfully completed the Transition to Practice (TTP) Program in General Surgery in 2014

HEIDI J. HAUN, MD
Mercer University School of Medicine

BENJAMIN E. KELLOGG, MD
University of Tennessee College of Medicine

Welcome to the following TTP Associates participating in 2014–2015:

STEVEN CHAO, MD
Alpert Medical School of Brown University

HALLE B. ELLISON, MD
Geisinger Health System

BAMDAD FARHAD, DO
Mercer University School of Medicine

KATHERINE I. HABENICHT, MD
Wake Forest University School of Medicine

REZA KERMANI, MD
University of Louisville School of Medicine

LAUREN A. LICATA, MD
The Ohio State University College of Medicine

CECILIA M. LOH, MD
Gundersen Lutheran Health System

MARIA A. PROVOST, MD, FACS
University of Tennessee College of Medicine, Chattanooga

JANE G. SUGAR, MD
Louisiana State University Health Sciences Center at Shreveport School of Medicine

JONATHAN E. TANNEBAUM, MD
Montefiore Medical Center

SARAH M. WEAKLEY, MD
University of Texas Health Science Center at San Antonio, University of Texas School of Medicine

Click: www.facs.org
E-mail: ttp@facs.org
Call: 312-202-5491

American College of Surgeons
Inspiring Quality: Highest Standards, Better Outcomes

100-years
The American College of Surgeons (ACS), in association with Pfizer, Inc., is accepting nominations for the 2015 Surgical Volunteerism Award(s) and Surgical Humanitarian Award. All nominations must be received by February 27.

Volunteerism Awards
The ACS/Pfizer Surgical Volunteerism Award—offered annually in four potential categories—recognizes surgeons who are committed to giving back to society by making significant contributions to surgical care through organized volunteer activities. The awards for domestic, international, and military outreach are intended for ACS Fellows in active surgical practice whose volunteer activities go above and beyond the usual professional commitments, or retired Fellows who have been involved in volunteerism during their active practice and into retirement. Resident Members and Associate Fellows of the College who have been involved in significant surgical volunteer activities during their postgraduate surgical training are eligible for the Resident award. Surgeons of all specialties are eligible for each of these awards.

For the purposes of these awards, “volunteerism” is defined as professional work in which one’s time or talents are donated for charitable clinical, educational, or other worthwhile activities related to surgery. Volunteerism, in this case, does not refer to uncompensated care provided as a matter of necessity in most clinical practices. Instead, volunteerism should be characterized by prospective, planned surgical care to underserved patients with no anticipation of reimbursement or economic gain.

Humanitarian Award
The ACS/Pfizer Surgical Humanitarian Award recognizes an ACS Fellow whose career has been dedicated to ensuring the provision of surgical care to underserved populations without expectation of commensurate reimbursement. This award is intended for surgeons who have dedicated a significant portion of their surgical careers to full-time or near full-time humanitarian efforts, rather than routine surgical practice. Examples include a career centered on missionary surgery, the founding and ongoing operations of a charitable organization dedicated to providing surgical care to the underserved, or a retirement characterized by surgical volunteer outreach. Having received compensation for this work does not preclude a nominee from consideration and, in fact, may be expected based on the extent of the professional obligation.

The ACS Board of Governors’ Surgical Volunteerism and Humanitarian Awards Workgroup will evaluate the nominations and forward their selections to the Board of Governors’ Executive Committee for final approval.

Nominations
The following conditions apply to the nominations process:

- Self-nominations are permissible but require at least one outside letter of support.
- Re-nomination of previous nominees is acceptable but requires completion of a new application.
American College of Surgeons Official Jewelry & Accessories designed, crafted and produced exclusively by Jim Henry, Inc.

Unnumbered Tie Tacs/Lapel Pin
- #S1 Gold-Filled $60
- #S2 Solid 14K Gold $350

Cuff Links
- #S3 Gold-Filled $200
- #S4 Solid 14K Gold $1150

Key (shown actual size of 3/4"
- #S5 Gold-Filled $85
- #S6 Solid 14K Gold $700

Miniature Key (Not Shown)
- #S7 Gold-Filled $50
- #S8 Solid 14K Gold $450

Charm (Not Shown)
- #S9 Gold-Filled $70
- #S10 Solid 14K Gold $550

Miniature Charm
- #S11 Gold-Filled $60
- #S12 Solid 14K Gold $550
- #S13 Sterling Silver w/ 18"
- #S13-1 Sterling Silver Charm $50

Ring
- #S14 Solid 14K Gold $2250
- #S14.1 Solid 10K Gold $1675 (Indicate finger size)

Tie Bar
- #S15 Gold-Filled Emblem $75

Necktie
- #S16A Dark Blue $35
- #S16B Light Blue $35
- #S17 Maroon $35

Extra long add $5.00

Diploma Plaques
- #S18 Satin Gold Finish $380
- #S19 Satin Silver Finish $380

8-1/2" x 12" metal plaque on 11"x14-1/2" walnut. Specify name, day, month, year selected.

Men’s Bow Tie (Untied) (Not Shown)
- #S22 Dark Blue $35
- #S23 Maroon $35

Women’s Scarf - Silk (Not Shown)
- #S24 36" x 36" cream w/ dark blue and maroon border $35

Rollerball Pen - Chrome
- #S25 Cross Townsend Medalist with 23K Gold Plated Emblem $135

Money Clip (Not Shown)
- #S26 With Gold-Filled emblem $75

Desk Set (Not Shown)
- #S27 Solid Walnut with Cross Gold-Filled Pen & Pencil/Gold-Filled emblem; name and year elected a Fellow engraved on gold polished plate $325

Wallet (Not Shown)
- #S28 Black cowhide with Gold-Filled emblem $90

Blazer Buttons (Not Shown)
- #S29 Gold Electroplated (set of 9) $35

Blazer Patch
- #S30 Hand embroidered $35

Shipping/Handling/Insurance
- Domestic (48 contiguous states) $15
- Alaska, Hawaii, Puerto Rico $30
- Foreign $40

For the nominee to have a fair review, detailed information is required, including the following:

- Demographic information about the nominee and nominator
- Details about the nominator’s relationship to the nominee, along with background information on the nominee’s career in surgery
- Completion of seven sections of information related to the nominee’s volunteerism or humanitarian work (minimum 250-word descriptions are required for each section that is applicable to the nominee)

Additional materials may be submitted; however, information included in the nomination form itself will take precedence in the evaluation process, so fill out the form in its entirety. If you cannot complete the nomination form in one sitting, you can save the form and complete it at another time.

The nomination website opens January 6 for electronic submissions and can be accessed through the “Announcements” section of the Operation Giving Back (OGB) website at http://www.operationgivingback.facs.org, or via www.facs.org/member-services/volunteer. Contact OGB at ogb@facs.org with any questions.
ACS Clinical Scholars in Residence Program:
Celebrating 10 years of training surgeons

by Karl Bilimoria, MD, MS, FACS; David P. Winchester, MD, FACS; and Clifford Y. Ko, MD, MS, MSHS, FACS

The American College of Surgeons (ACS) is now accepting applications for the 2016–2018 Clinical Scholar in Residence positions, and celebrating the tenth year of this well-recognized program. The ACS Clinical Scholars in Residence Program is a two-year on-site fellowship in surgical outcomes research, health services research, and health care policy. It was initiated in 2005 to advance ACS quality improvement initiatives and to offer opportunities for residents to work on these programs and do related research. More specifically, ACS Clinical Scholars in Residence perform research relevant to ongoing projects in the ACS Division of Research and Optimal Patient Care.

About the program
The primary objective of the fellowship is to address issues in health care quality, patient safety, and health policy, with the goal of helping the ACS Clinical Scholar in Residence prepare for a research career in academic surgery. The ACS Clinical Scholars in Residence have worked on projects and research within the ACS National Surgical Quality Improvement Program, the National Cancer Data Base, the National Trauma Data Bank®, the Surgeon Specific Registry, the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program, measure and guideline development initiative, and accreditation programs. Scholars are assigned to the appropriate group within the ACS based on their interests and the College’s needs.

In addition, participants earn a master’s degree in health services and outcomes research or health care quality and patient safety from Northwestern University during their two years at the ACS headquarters in Chicago, IL. The goal of this aspect of the program is to educate clinicians to become effective health services and outcomes researchers with a strong fundamental knowledge of research methods. The health services and outcomes research curriculum focuses on these issues within institutional and health care delivery systems, as well as in external environments that shape health policy centered on quality and safety issues. The program takes approximately two years to complete. All coursework is done at Northwestern University’s Chicago campus, one block from the ACS headquarters. The ACS also offers a variety of educational programs that may benefit the Clinical Scholars, including Outcomes Research and Clinical Trials courses.

The ACS assigns internal mentors to meet regularly with each ACS Clinical Scholar in Residence. Scholars also have opportunities to interact with various surgeons who are affiliated with the ACS and the Division of Research and Optimal Patient Care. Mentorship is one of the most important aspects of this fellowship. Guidance and interaction with multiple individuals from diverse backgrounds will provide the best opportunity for success. In addition, a core of ACS and Northwestern staff statisticians and project analysts serve as invaluable resources to the ACS Clinical Scholars in Residence.

Past successes
Surgical residents from throughout the U.S. have participated in the ACS Clinical Scholars in Residence program. These individuals report excellent, productive experiences that have been useful in launching their careers in the field of academic surgery. Eleven scholars have already completed the program, and six scholars are currently participating, with three more beginning in July 2015. The ACS Clinical Scholars in
Surgical residents from throughout the U.S. have participated in the ACS Clinical Scholars in Residence program. These individuals report excellent, productive experiences that have been useful in launching their careers in the field of academic surgery. Positions are due April 3, 2015. Currently, applicants are required to have funding from their institution or another grant mechanism. For more information about the program and the application requirements, go to www.facs.org/ropc/clinicalscholars.html, or send an e-mail to clinicalscholars@facs.org.

ACS honors Gary L. Timmerman, MD, FACS, with Appreciation Award for service

Gary L. Timmerman, MD, FACS, a general surgeon from Sioux Falls, SD, was honored at the American College of Surgeons (ACS) 2014 Clinical Congress with an Appreciation Award for his years of service to the ACS Board of Governors. Dr. Timmerman concluded his tenure as Chair of the Board of Governors at the annual meeting.

During the Board of Governors Dinner October 29, Dr. Timmerman received a plaque commemorating the many roles he has filled at the College. Since 1997, he has served in more than 20 volunteer positions with the ACS, seven of which were on the Board of Governors.

“Dr. Timmerman played an instrumental role during his tenure as Chair of the Board of Governors during this past year. His sensitivity to individuals and issues, wonderful sense of humor, and tireless devotion to the American College of Surgeons will be remembered for many years to come,” said Patricia L. Turner, Director, ACS Division of Member Services.

Dr. Timmerman became a Member of the Board of Governors in 2007. In 2009, he became a Member of the Board’s Nominating Committee (2009–2010). He has subsequently served as a Member of the Committee to Study the Fiscal Affairs of the College (2013–2014), Vice-Chair of the Ad Hoc Committee to Restructure Board of Governors Committees (2012–2013), Member of the Executive Committee (2011–2012), Vice-Chair of the Board of Governors (2011–2013), and, lastly, Chair of the Board of Governors (2013–2014).

In addition, he is a Past-President of the ACS South Dakota Chapter (1997–1998) and has been a member and chair of numerous other College committees, including the Committee on Young Surgeons and the Nominating Committee of the Fellows.

Dr. Timmerman is an attending surgeon at Sanford Surgical Associates, Sioux Falls, and associate professor and chair, department of surgery, Sanford School of Medicine, University of South Dakota.
The National Ultrasound Faculty of the American College of Surgeons has developed *Ultrasound for Surgeons: The Basic Course, 3rd Edition* online course for physicians and medical professionals in ultrasound imaging.

The 3rd Edition:
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- Features an updated design with state-of-the-art animations and updated content
- Identifies techniques and differentiates challenges associated with surgeon performed ultrasound
- Illustrates the possibilities and limitations of ultrasound in clinical applications
- Develops enabling strategies to improve surgeon ultrasound skills
- Fulfills the prerequisite needed for ACS Ultrasound Skills Courses
- Offers the opportunity to earn AMA PRA Category 1 Credit™ and claim Self-Assessment credit

This online, on-demand course provides the learner with basic education and training in ultrasound imaging as a foundation for specific clinical applications.

To purchase, go to [www.facs.org/education/ultrasound/basiccourse](http://www.facs.org/education/ultrasound/basiccourse) or call 866-475-4696.
YFA announces 2014–2015 Chair, Governing Council

The Young Fellows Association (YFA) of the American College of Surgeons (ACS) recently announced its new Chair for 2014–2015, as well as newly appointed members selected to serve on the YFA Governing Council. Michael Sutherland, MD, FACS, a general surgeon and assistant professor, University of Arkansas for Medical Sciences College of Medicine, Little Rock, will serve a one-year term as YFA Chair. Jacob Moalem, MD, FACS, a general surgeon and assistant professor, University of Rochester Medical Center, NY, will serve a one-year term as Vice-Chair.

New members of the YFA Governing Council are Ashley Vergis, MD, FACS, a minimally invasive and bariatric surgeon and assistant professor, University of Manitoba Faculty of Medicine, Winnipeg; Gerald R. Fortuna, Jr., MD, FACS, Lieutenant Colonel, U.S. Air Force, Senior Flight Surgeon, University of Texas Houston Memorial Hospital, department of cardiothoracic and vascular surgery; Paula Ferrada, MD, FACS, a trauma surgeon and assistant professor, Medical College of Virginia, Richmond; and Edie Chan, MD, FACS, a transplant surgeon and assistant professor, Rush Medical College of Rush University Medical Center, Chicago, IL.

For more information, go to www.facs.org/member-services/yfa/leadership. ♦

Peter N. Bretan, Jr., MD, FACS, receives AMA Benjamin Rush Award

Peter N. Bretan, Jr., MD, FACS, a urological and transplant surgeon, Novato, CA, received the Benjamin Rush Award for Citizenship and Community Service from the American Medical Association (AMA) in November 2014. The award recognizes physicians who have performed beyond expectations and made extraordinary public service contributions. Dr. Bretan received the award during the opening session of the 2014 AMA interim meeting in Dallas, TX.

The award honors Dr. Bretan for his innovative work as a renal transplant surgeon and urologist, as well as his participation in global disaster relief efforts. He is the founder of Life Plant International, a charitable organization that promotes disaster preparedness, organ donation, and early disease screening worldwide. Following the devastation of Hurricane Katrina in New Orleans, LA, in 2005, Dr. Bretan provided free medical care as part of “Team Orleans.” Since 2002, he also has made nearly 20 medical mission trips to the Philippines to perform and teach local physicians about kidney transplant and laparoscopic kidney removal operations. More recently, he served as part of a medical mission to the Philippines to provide care to victims of Typhoon Halyan.

Recipients of 2014 NIH-related awards announced

The American College of Surgeons (ACS) and several sister societies share National Institutes of Health (NIH) supplement awards, which provide additional salary support to surgical researchers who are members of these organizations and who have recently received a K08 or K23 award. This year, two surgeons have been selected to receive these awards.

Luke Brewster, MD, PhD, FACS, assistant professor, division of vascular surgery, Emory University School of Medicine, Atlanta, GA, has been selected to receive the 2014 ACS/Society for Vascular Surgery Clinical Scientist Research Career Development Award. Dr. Brewster’s NIH research project is titled Molecular Mechanism of Disturbed Flow in Arterial Stiffening.

Another NIH-related awardee, Akihiro J. Matsuoka, MD, an Associate Fellow of the ACS, was recently selected to receive the 2014 ACS/Triological Society Clinical Scientist Development Award. Dr. Matsuoka is assistant professor, division of otolaryngology-head and neck surgery, Northwestern University Feinberg School of Medicine, Chicago, IL. His NIH research project is titled Nanotechnological Regeneration of Spiral Ganglion Neurons with Human Stem Cells.

The requirements for the College’s research scholarships are posted at www.facs.org/member-services/scholarships/research.

2015 George H. A. Clowes, MD, FACS, Memorial Career Development Awardee announced

The American College of Surgeons recently selected Ankush Gosain, MD, PhD, FACS, to receive the 2015 George H.A. Clowes, MD, FACS, Memorial Career Development Award. Dr. Gosain is an assistant professor, division of pediatric surgery, University of Wisconsin-Madison. His research project is titled Gastrointestinal Mucosal Immune Defects in Hirschsprung’s Disease.

Dr. Gosain anticipates that his research will be helpful in uncovering critical knowledge about basic enteric nervous system (ENS) and gastrointestinal mucosal immune system biology. He also seeks to attain clinical expertise in the care of patients with diseases that are known to involve perturbations in ENS development.

The requirements for this award are posted at www.facs.org/member-services/scholarships/research/acsclowes.
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# Calendar of events

*Dates and locations subject to change. For more information on College events, visit www.facs.org/events or http://web2.facs.org/ChapterMeetings.cfm.

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<td>Southern California Chapter</td>
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<tr>
<td><strong>January 16–18</strong></td>
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<tr>
<td>Santa Barbara, CA</td>
</tr>
<tr>
<td>Contact: James Dowden, <a href="mailto:jdowden@prodigy.net">jdowden@prodigy.net</a>, <a href="http://www.socalsurgeons.com">www.socalsurgeons.com</a></td>
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<tr>
<td>Louisiana Chapter</td>
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<tr>
<td><strong>January 17–18</strong></td>
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<tr>
<td>New Orleans, LA</td>
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<tr>
<td>Contact: Janna Pecquet, <a href="mailto:janna@laacs.org">janna@laacs.org</a>, <a href="http://www.laacs.org">www.laacs.org</a></td>
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<tr>
<td>Montana and Wyoming, Idaho Chapters</td>
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<td><strong>January 23–25</strong></td>
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<tr>
<td>Big Sky, MT</td>
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<tr>
<td>Contact: Cyan R. Sportsman, <a href="mailto:csportsman@msurgical.com">csportsman@msurgical.com</a></td>
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<tr>
<td>South Florida Chapter</td>
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<tr>
<td><strong>January 26</strong></td>
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<tr>
<td>Fort Lauderdale, FL</td>
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<tr>
<td>Contact: Bill Bouck, <a href="mailto:bill@bouckmgmt.com">bill@bouckmgmt.com</a>, <a href="http://www.sfc-acrs.org">www.sfc-acrs.org</a></td>
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<td>Iran Chapter</td>
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<td><strong>January 28–30</strong></td>
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<tr>
<td>Kish Island, Iran</td>
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<tr>
<td>Contact: H. Kalbasi, <a href="mailto:h_kalbasi@yahoo.com">h_kalbasi@yahoo.com</a></td>
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<td>Patient-Reported Outcomes in Surgery</td>
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<tr>
<td><strong>January 29–30</strong></td>
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<tr>
<td>ACS 20 F Street Conference Center, Washington, DC</td>
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<tr>
<td>Contact: Katie Sommers, <a href="mailto:ksommers@plasticsurgery.org">ksommers@plasticsurgery.org</a>, <a href="http://www.thespf.org">www.thespf.org</a></td>
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<th>FEBRUARY</th>
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<tr>
<td>Puerto Rico Chapter</td>
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<tr>
<td><strong>February 19–21</strong></td>
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<td>San Juan, PR</td>
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<tr>
<td>Contact: Marcos Perez-Brayfield, <a href="mailto:mperezb1@yahoo.com">mperezb1@yahoo.com</a>, <a href="http://www.acspuertoricochapter.org">www.acspuertoricochapter.org</a></td>
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<tr>
<td>South Texas Chapter</td>
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<td><strong>February 26–28</strong></td>
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<tr>
<td>Houston, TX</td>
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<tr>
<td>Contact: Janna Pecquet, <a href="mailto:janna@laacs.org">janna@laacs.org</a>, <a href="http://www.southtexasacs.org">www.southtexasacs.org</a></td>
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<td><strong>March 7</strong></td>
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<td>Washington, DC</td>
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<tr>
<td>Contact: Jennifer Starkey, <a href="mailto:jennifer@executive-office.org">jennifer@executive-office.org</a>, <a href="http://www.dcfacs.org">www.dcfacs.org</a></td>
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<tr>
<td>Alaska Chapter</td>
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<td><strong>March 14</strong></td>
</tr>
<tr>
<td>Anchorage, AK</td>
</tr>
<tr>
<td>Contact: Danny Robinette, <a href="mailto:drrobinette@gmail.com">drrobinette@gmail.com</a></td>
</tr>
<tr>
<td>Peru Chapter</td>
</tr>
<tr>
<td><strong>March 25–27</strong></td>
</tr>
<tr>
<td>Lima, Peru</td>
</tr>
<tr>
<td>Contact: Jaime Herrera-Matta, <a href="mailto:juanjaimehpe@yahoo.com">juanjaimehpe@yahoo.com</a></td>
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<table>
<thead>
<tr>
<th>APRIL</th>
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<tbody>
<tr>
<td>Indiana Chapter</td>
</tr>
<tr>
<td><strong>April 17–18</strong></td>
</tr>
<tr>
<td>Indianapolis, IN</td>
</tr>
<tr>
<td>Contact: Carolyn Downing, <a href="mailto:cdowing@ismanet.org">cdowing@ismanet.org</a>, <a href="http://www.infacs.org">www.infacs.org</a></td>
</tr>
<tr>
<td>ACS Leadership &amp; Advocacy Summit</td>
</tr>
<tr>
<td><strong>April 18–21</strong></td>
</tr>
<tr>
<td>Washington, DC</td>
</tr>
<tr>
<td>Contact: Donna Tieberg, <a href="mailto:dtieberg@facs.org">dtieberg@facs.org</a>, <a href="http://www.facs.org">www.facs.org</a></td>
</tr>
<tr>
<td>Egypt Chapter</td>
</tr>
<tr>
<td><strong>April 29–May 2</strong></td>
</tr>
<tr>
<td>Cairo, Egypt</td>
</tr>
<tr>
<td>Contact: Mohey Elbanna, <a href="mailto:moheyelbanna@yahoo.com">moheyelbanna@yahoo.com</a>, <a href="http://www.egyptacs.net">www.egyptacs.net</a></td>
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## FUTURE CLINICAL CONGRESSES

<table>
<thead>
<tr>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 4–8</td>
</tr>
<tr>
<td>Chicago, IL</td>
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<table>
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<th>2016</th>
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</thead>
<tbody>
<tr>
<td>October 16–20</td>
</tr>
<tr>
<td>Washington, DC</td>
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<tr>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 22–26</td>
</tr>
<tr>
<td>San Diego, CA</td>
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