FEATURES

COVER STORIES: Bleeding control training

Out of unspeakable tragedy comes progress in bleeding control
Lenworth M. Jacobs, Jr., MD, MPH, FACS

Bleeding control training: An opportunity for local volunteerism, community engagement, and peer education
Jacob Moalem, MD, FACS

New adult trauma center on Chicago’s South Side will treat violence as a disease
Tony Peregrin

Implementing World Health Assembly Resolution 68.15: National surgical, obstetric, and anesthesia strategic plan development—the Zambian experience
Swagoto Mukhopadhyay, MD; Yihan Lin, MD; Peter Mwaba, MB, BCh, MMed, PhD, FRCP; John Kachimba, MB, BCh, MMed, FCS; Emmanuel Makasa, BSCHB, MB, BCh, MMed, MPH, FCS; Kennedy Lishimpi, BSc, MB, BCh, MMed, FC Rad Onc; Allison Silverstein; Salim Afshar, DMD, MD; and John G. Meara, MD, DMD, MBA, FACS

Domestic volunteerism: Dr. Freiwald brings surgical care to uninsured patients in San Diego
Brittanie Wilczak, MPH

2016 ACS Governors Survey: MACRA: Are surgeons ready?
David J. Welsh, MD, FACS; Mark W. Puls, MD, FACS; Juan C. Paramo, MD, FACS; and Peter Andreone, MD, FACS
COLUMNS

Looking forward 8
David B. Hoyt, MD, FACS

ACS Clinical Research Program: ACS CRP Dissemination and Implementation Committee issues call for participants in pilot project 48
Diana Dickson-Witmer, MD, FACS; Sarah Blair, MD, FACS; and Judy C. Boughey, MD, FACS

Your ACS benefits: New resources available for your personal and professional development 51
Connie Bura and Amanda Francescatti, MS

A look at The Joint Commission: Time-outs and their role in improving safety and quality in surgery 54
Carlos A. Pellegrini, MD, FACS, FRCSI(Hon), FRCS(Hon), FRCSEd(Hon)

NTDB data points: Asleep at the wheel: Obstructive sleep apnea 57
Richard J. Fantus, MD, FACS

NEWS

In memoriam: Thomas E. Starzl, MD, PhD, FACS, organ transplantation pioneer 59
Clyde F. Barker, MD, FACS

CQGS releases preliminary standards for quality surgical care for older adults 64

New ACS surgical practice guidelines now include patient education 67
Sapna Dalal, MHSA, and Nancy Strand, MPH, RN

Chapter news 68
Luke Moreau and Brian Frankel

Coming next month in JACS and online now 71

SCHOLARSHIPS

ACS awards six Resident Research Scholarships for 2017–2019 73
Faculty Research Fellows for 2017–2019 announced 74
Health Policy Scholars for 2017 selected 76

MEETINGS CALENDAR

Calendar of events 80

A Mirror Reflecting Surgery, Surgeons, and their College:
The Bulletin of the American College of Surgeons

by David L. Nahrwold, MD, FACS, co-author of A Century of Surgeons and Surgery: The American College of Surgeons 1913-2012

Copies of this recently published book are available for purchase from amazon.com.

Price: $15.95
Published by the American College of Surgeons.

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

100 years
The American College of Surgeons is dedicated to improving the care of the surgical patient and to safeguarding standards of care in an optimal and ethical practice environment.

Letters to the Editor should be sent with the writer’s name, address, e-mail address, and daytime telephone number via e-mail to dschneidman@facs.org, or via mail to Diane S. Schneidman, Editor-in-Chief, Bulletin, American College of Surgeons, 633 N. Saint Clair St., Chicago, IL 60611.

Letters may be edited for length or clarity. Permission to publish letters is assumed unless the author indicates otherwise.
Officers and Staff of the American College of Surgeons

Officers
Courtney M. Townsend, Jr, MD, FACS
Galveston, TX
PRESIDENT
J. David Richardson, MD, FACS
Louisville, KY
IMMEDIATE PAST-PRESIDENT
Hilary A. Sanfley, MB, BCH, MHPPE, FACS
Springfield, IL
FIRST VICE-PRESIDENT
Mary C. McCarthy, MD, FACS
Dayton, OH
SECOND VICE-PRESIDENT
Edward E. Cornwell III, MD, FACS
San Antonio, TX
VICE-CHAIR
Charles D. Mabry, MD, FACS
Houston, TX
CHAIR
Robert K. Christy, MD, FACS
Louisville, KY
SECRETARY
William G. Cioffi, Jr., MD, FACS
Chicago, IL
CHIEF FINANCIAL OFFICER

Officers-Elect (take office October 2017)
Barbara L. Bass, MD, FACS
Houston, TX
PRESIDENT-ELECT
Charles D. Mabry, MD, FACS
Pine Bluff, AR
FIRST VICE-PRESIDENT-ELECT
Basil A. Pruitt, Jr., MD, FACS
San Antonio, TX
SECOND VICE-PRESIDENT-ELECT

Board of Regents
Michael J. Zinner, MD, FACS
Boston, MA
CHAIR
Leigh A. Neumayer, MD, FACS
Tucson, AZ
VICE-CHAIR
Anthony Atala, MD, FACS
Winston-Salem, NC
John L. D. Atkinson, MD, FACS
Rochester, MN
James C. Denneny III, MD, FACS
Alexandria, VA
Margaret M. Dunn, MD, FACS
Dayton, OH

Timothy J. Eberlein, MD, FACS
St. Louis, MO
James K. Elsey, MD, FACS
Atlanta, GA
Henri R. Ford, MD, FACS
Los Angeles, CA
Gerald M. Fried, MD, FACS, FRCS
Montreal, QC
James W. Giantelli, MD, FACS
Omaha, NE
B. J. Hancock, MD, FACS, FRCS
Winnipeg, MB
Enrique Hernandez, MD, FACS
Philadelphia, PA
Lenworth M. Jacobs, Jr., MD, FACS
Harford, CT
L. Scott Levin, MD, FACS
Philadelphia, PA
Mark A. Malangoni, MD, FACS
Philadelphia, PA
Fabrizio Michelassi, MD, FACS
New York, NY
Linda G. Phillips, MD, FACS
Galveston, TX
Valerie W. Rusch, MD, FACS
New York, NY
Marshall Z. Schwartz, MD, FACS
Philadelphia, PA
Anton N. Sidawy, MD, FACS
Washington, DC
Beth H. Sutton, MD, FACS
Wichita Falls, TX
Courtney M. Townsend, Jr., MD, FACS
Galveston, TX
Steven D. Wexner, MD, FACS
Weston, FL

Diana L. Farmer, MD, FACS
Sacramento, CA
Steven C. Stain, MD, FACS
Albany, NY
Susan K. Mosier, MD, MBA, FACS, Lawrence, KS
Vice-Chair
Daniel L. Dent, MD, FACS
San Antonio, TX
Francis D. Ferdinand, MD, FACS
Wynnewood, PA

Nicole S. Gibran, MD, FACS
Seattle, WA
S. Robert Todd, MD, FACS, FCCM
Houston, TX

Advisory Council to the Board of Regents (Past-Presidents)
Kathryn D. Anderson, MD, FACS
Eastvale, CA
W. Gerald Austen, MD, FACS
Boston, MA
L. D. Britt, MD, MPH, FACS, FCCM
Norfolk, VA
John L. Cameron, MD, FACS
Baltimore, MD
Edward M. Copeland III, MD, FACS
Gainesville, FL
A. Brent Eastman, MD, FACS
Rancho Santa Fe, CA
Gerald B. Healy, MD, FACS
Wellesley, MA
R. Scott Jones, MD, FACS
Charlottesville, VA
Edward R. Laws, MD, FACS
Boston, MA
LaSalle D. Leffall, Jr., MD, FACS
Washington, DC
LaMar S. McGinnis, Jr., MD, FACS
Atlanta, GA
David G. Murray, MD, FACS
Syracuse, NY
Patricia J. Numann, MD, FACS
Syracuse, NY
Carlos A. Pellegrini, MD, FACS
Seattle, WA
Richard R. Sabo, MD, FACS
Beaverton, MT
Seymour I. Schwartz, MD, FACS
Rochester, NY
Frank C. Spencer, MD, FACS
New York, NY
Andrew L. Warshaw, MD, FACS
Boston, MA

Nicole S. Gibran, MD, FACS
Seattle, WA
S. Robert Todd, MD, FACS, FCCM
Houston, TX

Advisory Council to the Board of Regents (Past-Presidents)
Kathryn D. Anderson, MD, FACS
Eastvale, CA
W. Gerald Austen, MD, FACS
Boston, MA
L. D. Britt, MD, MPH, FACS, FCCM
Norfolk, VA
John L. Cameron, MD, FACS
Baltimore, MD
Edward M. Copeland III, MD, FACS
Gainesville, FL
A. Brent Eastman, MD, FACS
Rancho Santa Fe, CA
Gerald B. Healy, MD, FACS
Wellesley, MA
R. Scott Jones, MD, FACS
Charlottesville, VA
Edward R. Laws, MD, FACS
Boston, MA
LaSalle D. Leffall, Jr., MD, FACS
Washington, DC
LaMar S. McGinnis, Jr., MD, FACS
Atlanta, GA
David G. Murray, MD, FACS
Syracuse, NY
Patricia J. Numann, MD, FACS
Syracuse, NY
Carlos A. Pellegrini, MD, FACS
Seattle, WA
Richard R. Sabo, MD, FACS
Beaverton, MT
Seymour I. Schwartz, MD, FACS
Rochester, NY
Frank C. Spencer, MD, FACS
New York, NY
Andrew L. Warshaw, MD, FACS
Boston, MA

Advisory Council to the Board of Regents (Past-Presidents)
Kathryn D. Anderson, MD, FACS
Eastvale, CA
W. Gerald Austen, MD, FACS
Boston, MA
L. D. Britt, MD, MPH, FACS, FCCM
Norfolk, VA
John L. Cameron, MD, FACS
Baltimore, MD
Edward M. Copeland III, MD, FACS
Gainesville, FL
A. Brent Eastman, MD, FACS
Rancho Santa Fe, CA
Gerald B. Healy, MD, FACS
Wellesley, MA
R. Scott Jones, MD, FACS
Charlottesville, VA
Edward R. Laws, MD, FACS
Boston, MA
LaSalle D. Leffall, Jr., MD, FACS
Washington, DC
LaMar S. McGinnis, Jr., MD, FACS
Atlanta, GA
David G. Murray, MD, FACS
Syracuse, NY
Patricia J. Numann, MD, FACS
Syracuse, NY
Carlos A. Pellegrini, MD, FACS
Seattle, WA
Richard R. Sabo, MD, FACS
Beaverton, MT
Seymour I. Schwartz, MD, FACS
Rochester, NY
Frank C. Spencer, MD, FACS
New York, NY
Andrew L. Warshaw, MD, FACS
Boston, MA

Executive Staff
EXECUTIVE DIRECTOR
David B. Hoyt, MD, FACS
DIVISION OF ADVOCACY AND HEALTH POLICY
Frank G. Opelka, MD, FACS
Medical Director, Quality and Health Policy
Patrick V. Bailey, MD, FACS
Medical Director, Advocacy
Christian Shalgin
Director
AMERICAN COLLEGE OF SURGEONS FOUNDATION
Shane Hollett
Executive Director
ALLIANCE/AMERICAN COLLEGE OF SURGEONS
Kelly K. Hunt, MD, FACS
Chair
CONVENTION AND MEETINGS
Robert Hope
Director
DIVISION OF EDUCATION
Ajit K. Sachdeva, MD, FACS, FRCS
Director
EXECUTIVE SERVICES
Maxine Rogers
Director, Leadership Operations
FINANCE AND FACILITIES
Gay L. Vincent, CPA
Director
HUMAN RESOURCES AND OPERATIONS
Michelle McGovern
Director
INFORMATION TECHNOLOGY
Brian Harper
Interim Director
DIVISION OF INTEGRATED COMMUNICATIONS
Lynn Kuhn
Director
JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS
Timothy J. Eberlein, MD, FACS
Editor-in-Chief
DIVISION OF MEMBER SERVICES
Patricia L. Turner, MD, FACS
Director
M. Margaret Knudson, MD, FACS
Medical Director, Military Health Systems Strategic Partnership
Girma Tefera, MD, FACS
Director, Operation Giving Back
PERFORMANCE IMPROVEMENT
Will Chapleau, RN, EMTP
Director
DIVISION OF RESEARCH AND OPTIMAL PATIENT CARE
Clifford Y. Ko, MD, MS, MSHS, FACS
Director
David P. Winchester, MD, FACS
Medical Director, Cancer
M. Margaret Knudson, MD, FACS
Medical Director, Trauma
Author bios*

*Titles and locations current at the time articles were submitted for publication.

DR. AFSHAR (a) is faculty, Program in Global Surgery and Social Change, Harvard Medical School, Boston, and surgeon, department of plastic and oral surgery, Boston Children’s Hospital, MA.

DR. ANDREONE (b) is a cardiac and thoracic surgeon, Sioux Falls, SD, and a member of the American College of Surgeons (ACS) Board of Governors (B/G) Survey Workgroup.

DR. BARKER (c) is Donald Guthrie Professor of Surgery, professor of surgery, and a vascular surgeon, University of Pennsylvania, Philadelphia.

DR. BLAIR (d) is professor of surgery and vice-chair of academic affairs, department of surgery, University of California, San Diego. She is Chair, American College of Surgeons Clinical Research Program (ACS CRP) Dissemination and Implementation Committee.

DR. BOUGHEY (e) is professor of surgery and vice-chair, research, department of surgery, Mayo Clinic, Rochester, MN. She is Chair, ACS CRP Education Committee.

MS. BURA (f) is Associate Director, Division of Members Services, Chicago, IL.

MS. DALAL (g) is Senior Manager, Evidence-Based Decisions in Surgery, ACS Division of Education, Chicago, IL.

DR. DICKSON-WITMER (h) is medical director, Christiana Care Breast Center and Breast Program and Helen F. Graham Cancer Center and Research Institute, Newark, DE; and clinical assistant professor of surgery, Thomas Jefferson University Sidney Kimmel College of Medicine, Philadelphia. She is Vice-Chair, ACS CRP Dissemination and Implementation Committee and Commission on Cancer Delaware State Chair.

DR. FANTUS (i) is vice-chairman, department of surgery; medical director, trauma services; and chief, section of surgical critical care, Advocate Illinois Masonic Medical Center. He is clinical professor of surgery, University of Illinois College of Medicine, Chicago, and Past-Chair, ad hoc Trauma Registry Advisory Committee, ACS Committee on Trauma.

continued on next page
MS. FRANCESCATTI (j) is Manager, ACS CRP, Cancer Programs, Division of Research and Optimal Patient Care, Chicago, IL.

MR. FRANKEL (k) is Manager, International Chapter Services and Special Initiatives, ACS Division of Member Services.

DR. JACOBS (l) is chairman, Hartford Consensus; vice-president of academic affairs and chief academic officer and director, Trauma Institute at Hartford (CT) Hospital; and professor of surgery and assistant dean of education, University of Connecticut, Farmington. He is an ACS Regent.

DR. KACHIMBA (m) is senior medical superintendent, Livingstone Central Hospital, Zambia.

DR. LIN (n) is senior research fellow, Program in Global Surgery and Social Change, Harvard Medical School, and general surgery resident, department of surgery, University of Colorado, Denver.

DR. LISHIMPI (o) is director, cancer control, and consultant clinical oncologist and pediatrician, Ministry of Health, Lusaka, Zambia.


DR. MEARA (q) is director, Program in Global Surgery and Social Change, Harvard Medical School; chair, department of plastic and oral surgery, Boston Children’s Hospital; and co-chair, The Lancet Commission on Global Surgery.

DR. MOALEM (r) is a general surgeon and associate professor of surgery, University of Rochester Medical Center, NY, and past-Chair, ACS Young Fellows Association.

MR. MOREAU (s) is Manager, Domestic Chapter Services, ACS Division of Member Services.

continued on next page
Author bios continued

**DR. MUKHOPADHYAY** (t) is chief research fellow, Program in Global Surgery and Social Change, Harvard Medical School, and general surgery resident, department of surgery, University of Connecticut Medical School, Hartford.

**DR. MWABA** (u) is co-director, University of Zambia-University College of London Medical School Research and Training Programme, University Teaching Hospital, Lusaka.

**DR. PARAMO** (v) is a surgical oncologist, Mount Sinai Medical Center Comprehensive Cancer Center, Miami Beach; associate clinical professor of surgery, Florida International University, Miami; and associate clinical professor of surgery, Nova Southeastern University, Ft. Lauderdale, FL. He is Chair, ACS B/G Survey Workgroup.

**DR. PELLEGRINI** (w) is chief medical officer, UW Medicine, and vice-president for medical affairs, University of Washington, Seattle. He is a Past-President of the ACS.

**MR. PEREGRIN** (x) is Senior Editor, Bulletin, ACS Division of Integrated Communications, Chicago, IL.

**DR. PULS** (y) is a general surgeon in Alpena, MI; Immediate Past-Chair of the ACS B/G Survey Workgroup; and Vice-Chair, ACS Advisory Council for Rural Surgery.

**MS. SILVERSTEIN** (z) is research associate, Program in Global Surgery and Social Change, Harvard Medical School, and medical student, University of Miami, Miller School of Medicine, FL.

**MS. STRAND** (aa) is Manager, ACS Patient Education Program, Division of Education.

**DR. WELSH** (bb) is a general surgeon, Batesville, IN, and a member of the ACS B/G Survey Workgroup.

**MS. WILCZAK** (cc) is Program Administrator, Operation Giving Back, ACS Division of Member Services.
In April, representatives from the National Academies of Sciences, Engineering, and Medicine (NASEM); the American College of Surgeons (ACS) Committee on Trauma (COT); the National Highway Traffic Safety Administration; and the Department of Defense convened at the National Institutes of Health campus in Bethesda, MD, for a conference titled Achieving Zero Preventable Deaths: Building a National Trauma Care System and Research Action Plan. This meeting took place as a follow-up to the report A National Trauma Care System: Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths after Injury, which NASEM released within the last year in collaboration with the ACS COT and other stakeholders.

As noted in the October 2016 issue of the Bulletin, last year’s NASEM report offers 11 specific recommendations on how to integrate the military and civilian trauma systems to ensure that all Americans—civilian and military—receive optimal trauma care.* The report envisions a national trauma care system and calls for a unified effort to ensure the delivery of optimal trauma care to save the lives of Americans injured on U.S. soil and on the battlefield. In particular, the report calls for a national learning trauma care system that would ensure continuous improvement of trauma care best practices in military and civilian sectors.

One step up...
The 2016 report was, in many ways, a status update on a 1966 report from the National Research Council, Accidental Death and Disability: The Neglected Disease of Modern Society, which called for increased federal and voluntary financial support of basic and applied research in trauma and expansion of U.S. Public Health Service research in shock, trauma, and emergency medical conditions. Since the issuance of the 1966 paper, much progress has been made, including major reductions in mortality and complications, the establishment of professional disciplines centered on trauma care, advancements in research and data systems, and development of educational and training programs centered on trauma care.

Nonetheless, the U.S. trauma system remains a patchwork quilt with access gaps in some areas of the country. As a result, more than 130,000 Americans die from traumatic injury every year, and trauma is the leading cause of death among children and uniformed service personnel. Traumatic injury results in more lost years of life and disability than any other disease, yet trauma research receives significantly less funding than human immunodeficiency virus, cancer, heart disease, and other health care conditions.

This year’s conference
The purpose of this year’s conference was largely to begin laying out strategies for implementation of the 2016 report’s recommendations and to fill the lingering gaps in trauma care, which are highlighted in previous reports published in 1985, 1994, 1999, and 2006. A multidisciplinary group of attendees, including military and civilian trauma physicians and nurses, prehospital professionals, public health professionals, government representatives, and NASEM staff and leadership, sought to analyze the current global clinical and patient access barriers facing all trauma systems with the goal of achieving zero preventable trauma deaths by ensuring that patients receive expert trauma care quickly.

ACS COT Chair Ronald Stewart, MD, FACS; Donald Berwick, MD, MPP, FRCP, president emeritus and senior fellow, Institute for Healthcare Improvement, and former Administrator, Centers for Medicare & Medicaid Services, speaking via teleconference; and I offered welcoming remarks at the April conference, emphasizing the importance of collaborative efforts to improve trauma care. Robert Winchell, MD, FACS, a longtime member of the COT, did much to lead the development of the meeting program, which included many sessions and consensus discussions.

Pathways forward

A number of new recommendations for achieving zero preventable deaths emerged from the meeting. Eileen Metzger Bulger, MD, FACS, a member of the COT Executive Committee, led a session on research funding and direction. Session participants agreed that to achieve zero preventable deaths in trauma, we need to develop a well-defined research agenda and priorities to support advocacy efforts. The trauma community will need to tear down the internal silos of “bone, blood, burn, brain” and speak with a united voice to advocate for a national trauma research action plan and engage the public and trauma survivors in these efforts as well.

We also need to rethink the trauma center verification process. At present, hospitals may self-select for approval as Levels I or II trauma centers based on financial incentives, rather than demonstrated need in their region. Furthermore, the present system is time-consuming, expensive, and labor-intensive, both for COT surveyors and for trauma centers. Meeting participants suggested moving to outcomes-based verification using the quality measurement model centered on structure (staff, physical resources, policies); process (whether medicine was practiced properly); and outcome.

Meeting participants also agreed that trauma professionals need to do a better job of collecting and analyzing trauma care data. The importance of data was heavily emphasized in a session led by Avery B. Nathens, MD, PhD, FACS, FRCSC, another COT leader and Medical Director, ACS Trauma Quality Programs. Participants examined impediments to data linkage across the continuum of trauma care. Suggestions regarding how to overcome these barriers, including use of uniform trauma identification bands, were offered. Speakers examined evidence-based information and suggested strategies for establishing a national trauma system that incorporates clinical outcomes to reduce preventable injury and disability in the trauma patient population. We discussed methods for linking data and transitioning patients between facilities, as well as the development of a methodology to track trauma patients from injury to post-discharge.

Speakers suggested the development of a National Trauma Action Plan, which would articulate a unified research agenda across the continuum of care, define the “ask” for financial investment, set a strategy for
A unified system

A key focus of the conference was the integration of the military and civilian trauma workforce. At present, lessons learned on the battlefield are not reliably translated to civilian care. Part of the problem is the military health system has a shortage of dedicated trauma surgeons. To unify the civilian and military trauma systems, the military health services and the College have created the Military Health System Strategic Partnership American College of Surgeons (MHSSPACS). Through the MHSSPACS, we already are taking important steps to achieve the NASEM report’s goals, as M. Margaret “Peggy” Knudson, MD, FACS, Medical Director, MHSSPACS, noted at the meeting.

Furthermore, the U.S. Congress is expected to vote on the Mission Zero Act (H.R. 880) this year. The bill would provide $40 million in funding to the U.S. Department of Health and Human Services to facilitate partnerships between military trauma care teams/providers and high-volume civilian Level I trauma facilities. Passing the Mission Zero Act will allow us to take these initiatives further by partnering civilian and military surgeons and care teams at some of the busiest trauma centers in the nation.

As a trauma surgeon and COT member for many years, I have firsthand experience with the evolution of trauma surgery in the U.S. I have seen it evolve into a dedicated specialty comprised of some of the most skilled and compassionate surgeons in the profession. Nonetheless, much work needs to be done. Efforts like the ones described in this column and at the meeting in April will go a long way toward ensuring that trauma patients on and off the battlefield receive optimal care. ♦
Out of unspeakable tragedy comes progress in bleeding control

by Lenworth M. Jacobs, Jr., MD, MPH, FACS
In December 2012, the world witnessed the unspeakable—the fatal shooting of 20 children and six teachers and administrative staff at Sandy Hook Elementary School in Newtown, CT. The nation was shocked by this senseless act, but in many ways Sandy Hook was a tipping point. Several individuals and organizations began to consider ways to improve survival from these horrific situations.

Among those organizations was the American College of Surgeons (ACS), which has since launched a significant effort to improve survivability from mass casualty situations. This article summarizes the College’s role in this ongoing effort and provides an update on the initiative.

Background

Shortly after the Sandy Hook shooting, the ACS Board of Regents approved the establishment of the Joint Committee to Create a National Policy to Enhance Survivability from Intentional Mass Casualty and Active Shooter Events. The committee first met April 2, 2013, and early control of hemorrhage was identified at this meeting as critical to improving survival.

After the Boston Marathon bombing later that month, the committee’s efforts were expanded to focus on improving survival, not just from active shooter events, but all intentional mass casualty events. In early 2016, the mission was further expanded to include all causes of bleeding, such as unintentional, everyday accidents.

The committee has met four times, and its recommendations are collectively known as the Hartford Consensus. The chief tenet of the Hartford Consensus is that no one should die from uncontrolled bleeding.

In October 2015, the White House launched the Stop the Bleed® campaign, and the Hartford Consensus played a foundational role in this initiative. The goal of the Stop the Bleed campaign is to promote national resilience by empowering the general public to acquire the skills and confidence to control bleeding in emergency situations—from mass casualty incidents to everyday events—where bleeding control can save lives.

Engagement of law enforcement

In the past, law enforcement’s exclusive duties in active shooter and other intentional mass casualty incidents were to subdue the perpetrator and preserve evidence at the crime scene. Once the police declared the scene to be safe, emergency medical services (EMS) personnel were permitted to enter the area and provide care to victims.

Needless to say, victims in these situations could bleed to death waiting for medical attention. Modification of operational strategies was needed for hemorrhage control to become a core responsibility of law enforcement.

To achieve this objective, law enforcement leaders had to be willing to consider this modification. A member of the Hartford Consensus, Alexander Eastman, MD, FACS, a trauma surgeon and police lieutenant from Dallas, TX, propagated the idea to the Major Cities Chiefs Association (MCCA). The MCCA is a professional organization of police chiefs and sheriffs from the largest cities in the U.S., Canada, and the U.K. It serves as a forum for police executives to share matters related to policing large urban areas. An additional purpose of this group is to influence national law enforcement policies. The MCCA was critical in bringing about the policy change so that hemorrhage control is now viewed as a responsibility of police officers.

Once law enforcement leaders accepted this change, an educational and an operational strategy had to be implemented to achieve the hemorrhage control objective. An educational course was developed, which was
adapted from the Tactical Combat Casualty Care (TCCC) course. The TCCC program teaches members of military combat units to manage trauma on the battlefield. All soldiers who are deployed to an active theater are educated in bleeding control techniques and provided with an individual kit, which they are required to carry on their person. The kit contains personal protective equipment, tourniquets, hemostatic dressings, and a bandage.

The MCCA has modified and implemented the TCCC process in its bleeding control training, which has now been successfully deployed in police departments across the U.S. More than 300,000 law enforcement officers have been trained and equipped with individual bleeding control kits. There have been numerous reports of patients who have had life-threatening hemorrhage controlled by law enforcement officers, with successful outcomes.

The compromise that emerged from this debate was that bleeding patients would be taken from the Red Zone—or highly dangerous area—to the Yellow Zone, which is secure but not totally safe. In the Yellow Zone, immediate professional medical care would be initiated by trained and appropriately equipped EMS providers. This process was facilitated by Richard Serino, former Deputy Administrator of the Federal Emergency Management Agency (FEMA), and implemented under the direction of Ernest Mitchell, U.S. Fire Administrator.

Engagement of EMS
A second initiative in the national Stop the Bleed campaign, at the recommendation of the Hartford Consensus, was to enable EMS personnel to render care earlier in the medical response process. More specifically, part of the initiative sought to change the standard procedure of having EMS personnel remain on the periphery of an event until the scene was clear of risk and secure before rendering care.

Although this new approach appeared to be a logical concept, implementation was fraught with challenges. For instance, EMS personnel are not trained or equipped with gear to protect them from firearms or explosives, nor are they trained to preserve evidence at a crime scene. Before this recommendation could be put in place, it was important that the committee engage in considerable discussion regarding the risks and merits of deploying EMS personnel to an unsecured, active crime scene.

The compromise that emerged from this debate was that bleeding patients would be taken from the Red Zone—or highly dangerous area—to the Yellow Zone, which is secure but not totally safe. In the Yellow Zone, immediate professional medical care would be initiated by trained and appropriately equipped EMS providers. This process was facilitated by Richard Serino, former Deputy Administrator of the Federal Emergency Management Agency (FEMA), and implemented under the direction of Ernest Mitchell, U.S. Fire Administrator.

Engagement of the public
A third recommendation from the Hartford Consensus centered on public engagement. The primary directive of the Stop the Bleed campaign was to recognize that for the first few minutes following a major hemorrhage-producing injury, victims and bystanders can take action to control and limit blood loss. This concept became known as immediate responder hemorrhage control.

Support for the public to act as immediate responders was documented in a national poll of a representative sample of the general public in the U.S. In all, 92 percent of the respondents to the Hartford Consensus survey said they would be very likely or somewhat likely to try to stop bleeding in someone they did not know. When asked if they would provide assistance in a mass shooting event, 94 percent of respondents said they would try to stop bleeding if it seemed safe to do so. Interest in learning bleeding control techniques was substantial, with 82 percent of respondents indicating they would be interested in attending a local two-hour class on bleeding control and other first-aid techniques. The survey results indicate that the public is willing to help bleeding individuals and is keen on learning how to do so. Strategies are needed to inform, educate, and empower laypeople to act as immediate responders for hemorrhage control.
Bringing bleeding control to the public

Based on the results of the survey, the ACS and other contributors to the Hartford Consensus determined that now is the time to train the public to be immediate responders at mass casualty events.

Bleedingcontrol.org

The ACS designed and implemented a website, bleedingcontrol.org, which contains a compendium of the four Hartford Consensus documents, including Barack Obama’s Presidential Policy Directive that addresses national preparedness and resilience, among other resources (see Figure 1, this page). Multiple government agencies, including the U.S. military, the Department of Homeland Security, FEMA, the Federal Bureau of Investigation, and the National Security Council, provided guidance to the consensus findings. Bleedingcontrol.org also includes a list of Hartford Consensus partners.

In addition, the site serves as a comprehensive repository of bleeding control resources. Free educational materials such as videos, diagrams, and an instruction booklet are accessible from this website. A list of bleeding control classes offered throughout the country is available on the website, along with registration information.

Bleedingcontrol.org has an online store where bleeding control kits, wall-mounted stations for public places, and training materials and mannequins for practicing the techniques are available for purchase. The bleeding control kits contain an instruction booklet; a tourniquet; bandages, including hemostatic dressings; and protective gloves. All equipment in the kits meets the highest military-grade standard, and the U.S. Armed Forces have tested and deployed this equipment with positive results.

Because the kit meets the military’s high standards, the U.S. Department of Defense has authorized the ACS through a licensing agreement to co-brand the equipment. All the kits now bear the logos of the Stop the Bleed campaign, the ACS, the Hartford Consensus, and the ACS Committee on Trauma, which oversees
the initiative on the College’s behalf. These endorsements assure the public that the equipment and the educational materials are of the highest quality.

The need to control bleeding is not limited to mass casualty situations, however, and the website is of equal value to individuals seeking bleeding control resources for everyday emergencies, such as motor vehicle crashes, machinery accidents, and so on.

Since the website launched in August 2016, bleedingcontrol.org has been accessed more than 100,000 times. Complementing the website is the Twitter account, @bleedingcontrol, which also launched in August 2016. The number of followers grows daily and stood at more than 1,600 at press time.

Hollywood lends a hand
On October 10, 2016, the cast of the CBS prime-time show Code Black gave a boost to our efforts with its CBS Cares public service Stop the Bleed promotion. The public service announcement (PSA), which aired that evening after Code Black, featured actors Rob Lowe and Marcia Gay Harden and was shown to millions of viewers on CBS affiliates throughout the U.S. Besides making a compelling case for having bleeding control kits on hand, the PSA prominently featured the bleedingcontrol.org web address.

B-Con courses
The ACS Committee on Trauma and the National Association of Emergency Medical Technicians are co-sponsoring a Bleeding Control (B-Con) course suitable for individuals without medical training. The course was developed under the leadership of Peter Pons, MD, FACS, and the late Norman E. McSwain, Jr., MD, FACS. B-Con, a two- to three-hour course, is specifically designed to teach people how to save a life before professional rescuers arrive on the scene, including methods to control bleeding and secure an airway.

An hour-long B-Con Basic course has been developed to train the public in the three ways to stop bleeding. These techniques include using one’s hands to apply pressure, using hemostatic dressings and other materials such as clothing to pack a wound, and applying a tourniquet to control severe bleeding from an extremity.

To successfully bring bleeding control education to the general public, a cadre of instructors and facilities is needed. To meet the anticipated demand, the ACS will now require its verified trauma centers to offer bleeding control courses to the public. As a first step toward achieving this goal, the College offered a course at Clinical Congress 2016 in Washington, DC, to teach surgeons how to educate the public to apply the principles of bleeding control in the field (see photos, this page). More than 300 surgeons were trained as instructors during the meeting. In addition, the Eastern Association for the Surgery of Trauma provided similar education at its Scientific Assembly in January 2017.

Bleeding control training efforts have evolved into an international collaboration. Physicians in the Netherlands, guided by the leadership of Prof. L. M. G. Geeraedts, Jr., MD, have trained 130 individuals in bleeding control, 56 of whom meet the criteria to be instructors. A website similar to bleedingcontrol.org is available for a Dutch audience at www.stopdebloedingredeenleven.nl.

One of the more exciting public awareness initiatives that is taking shape was spearheaded by a partner organization, Johnson & Johnson, which engaged the award-winning advertising agency of BBDO Worldwide to develop a campaign to raise public awareness about how anyone can help to save lives by learning the basics of bleeding control. The campaign includes creative posters, website banners, and t-shirts that convey this message. At press time, plans to roll out the campaign were being finalized.
The ACS and other participants in the Hartford Consensus initiative are excited about these expressions of interest but mindful of the need to grow the program responsibly. Each decision must be made judiciously with an eye toward ensuring the long-term sustainability of a high-quality, effective program.

Our work has just begun
Although this campaign is still a nascent operation in many respects, our work is gaining traction and attention both domestically and internationally. Requests come in daily from esteemed organizations that want to partner with us, offer training courses, or make bleeding control kits available for purchase. The ACS and other participants in the Hartford Consensus initiative are excited about these expressions of interest but mindful of the need to grow the program responsibly. Each decision must be made judiciously, with an eye toward ensuring the long-term sustainability of a high-quality, effective program.

Through the deployment of the Department of Defense’s Stop the Bleed campaign and the efforts of the Hartford Consensus sponsored by the ACS, excellent strategies to inform, educate, and empower the public to act as immediate responders in severe bleeding situations have been established. But our work has just begun. We must continue to raise the public’s awareness regarding how they can become immediate responders, increase the number of certified instructors, offer classes throughout the country to teach basic bleeding control, and secure funding so that we can provide training and bleeding control kits to underserved areas. (See article, page 17, for details about how an ACS Fellow is bringing bleeding control training to community centers in Upstate New York.)

Four years ago, the ACS took a leadership role in this endeavor. This leadership, along with that of our partners, is beginning to empower the public to be immediate responders who are trained to control severe bleeding from any cause. ♦

REFERENCES
Bleeding control training:
An opportunity for local volunteerism, community engagement, and peer education

by Jacob Moalem, MD, FACS

It is an uncommon gift to come away from an academic conference motivated to implement a significant change in one’s practice; it is even more rare to be so inspired that you decide to create a whole new program or initiative. Yet such was my reaction upon learning the details of the Stop the Bleed® campaign at the American College of Surgeons (ACS) Clinical Congress 2016 in Washington, DC.

In his presentation, ACS Regent Lenworth M. Jacobs, Jr., MD, MPH, FACS, outlined the rationale, process of development, and plans for a nationwide rollout of the Stop the Bleed campaign. The beauty of the program was immediately apparent. It is simple, concise, easily teachable, and has great potential to save lives that might otherwise be lost. Although the program was created in response to the mass casualty events at Sandy Hook Elementary School, Newtown, CT, in 2012, and the 2013 attack at the Boston Marathon, MA, the skills are transferrable and applicable to the treatment of bleeding from any cause.

As I listened to Dr. Jacobs’ presentation, I kept thinking about my own family and my own community in Rochester, NY. My wife and I are both privileged to serve on the executive boards of the city’s major Jewish agencies, where heated arguments continue about whether armed guards should be hired to protect the Jewish Community Center (JCC) and the Community Day School that our three children attend. My mission became clear—I needed to teach this curriculum to the entire staff of each of these organizations and to install hemorrhage control kits in strategic locations throughout these facilities.

Implementation of the program
Implementing the program was surprisingly simple. Like many other surgeons, I attended a brief training session at Clinical Congress and became certified to teach the curriculum. Over the next few weeks, I met with the leaders of the five largest Jewish organizations in Rochester. As anticipated, they all immediately recognized the importance of this project and were enthusiastic about the opportunity to have their staff members trained—and quickly. At each organization,
an hour during the next faculty development or continuing education session was designated for hemorrhage control training.

With some training sessions scheduled, I applied for funding from the Louis S. and Molly B. Wolk Foundation, a local philanthropic organization, which awarded a $10,000 grant to launch the project in February 2017. To facilitate fundraising, I partnered with the Jewish Federation, a 501(c)(3) organization, to create a dedicated account for this project, so that contributions to the project would be tax deductible. Two additional grant applications were under review at press time.

Staff of the Kessler Trauma Center at the University of Rochester embraced the project and volunteered to help run the hands-on portion of the training sessions. They also supplied the training tourniquets and the practice models. As the project gained momentum, the Kessler team trained additional volunteer participants, including residents, advanced practice providers, and faculty from the University of Rochester’s departments of surgery and emergency medicine.

The resources available at bleedingcontrol.org made it easy to run the training sessions. The prepared lecture requires approximately 25 minutes to present and is succinct, practical, and effective. It is followed by a hands-on component during which participants interact directly with trained instructor volunteers to practice applying direct pressure, packing wounds, and using tourniquets.

Attendees were engaged, interested, and made a number of interesting comments, such as, “But I thought that bleeding from an artery cannot be stopped,” and, “If there is a bleeding wound with glass in it, should I try to press around the glass, or remove it first and then press?” Questions like this demonstrate the astounding lack of relevant knowledge among some members of the general public and highlight the importance of this training. Others

RESPONSE TO ROCHESTER’S STOP THE BLEED TRAINING PROGRAM

Our Hillel team is incredibly appreciative of the Stop the Bleed program and the trainers for this informative and much-needed training. My teachers and staff feel better prepared, logistically and emotionally, to provide highly effective responses in full and smaller scale situations involving bleeding and wound care. As a school principal, the physical and emotional safety of our children and staff is paramount to every professional thought that I have and decision that I make. This hands-on and informative training provided my school’s team the information and experiences necessary to proactively protect and potentially save the lives of our children and community members. As the school’s leader, I know that I feel much more secure in our team’s ability to ensure that we are doing and will continue to do our very best for our children because of this highly effective training experience.

Tracie Glazer, head of school, Hillel Community Day School, Rochester

Stop the Bleed is a deeply impactful program. Giving our community members the opportunity to learn how to save lives is very empowering. The program provided exceptional training to our staff and volunteers. All participants commented after the training that they felt they could truly make a difference in a life-threatening emergency and were grateful for the learning opportunity. Our federation believes in the concept that when you save one life it is as if you have saved the world. This program is the quintessential example of that philosophy and allows us to put our beliefs into practical action.

Meredith Dragon, chief executive officer, Jewish Federation of Greater Rochester

continued on next page

Stop the Bleed training class in Rochester
recalled being warned decades ago, as Cub Scouts, to “never apply a tourniquet” and were particularly happy to learn that today’s tourniquets are safe and can, indeed, save lives.

Warm reception leads to expansion
To date, seven training sessions have been offered in Rochester, with 15 to 110 individuals trained at each session. One to 10 volunteer trainers have assisted with each of these programs, and they all have reported finding the experience to be enjoyable and inspiring and have asked to be included in future training sessions. A total of 12 wall-mounted bleeding control stations, available at bleedingcontrol.org, have been purchased and installed. Additional stations will be purchased as more funding is secured.

As anticipated, the response to the program from participating volunteers and course attendees has been uniformly positive (see sidebars, page 18 and this page). Numerous teachers expressed heartfelt thanks and admitted that they were previously uninform or intimidated by the subject of bleeding control but now feel empowered to intervene. Some attendees have requested that we run training sessions with other organizations with which they are affiliated. Perhaps the best example of how the program has been received was its recent selection for the Elmer Louis Award, to be presented by the Rochester Jewish Federation. This award honors superior programming that has left a lasting impact, is of great benefit to the community, and has demonstrated proven achievement.

In addition, the program has been expanded, with plans to run training sessions and to install hemorrhage control kits in all 19 Jewish organizations in the greater Rochester area, including summer camps, synagogues, and day care centers. Moreover, as interest in this topic has grown, additional training sessions, open to the entire Rochester community, are scheduled to take place at the JCC.

RESPONSE TO ROCHESTER’S STOP THE BLEED TRAINING PROGRAM (CONTINUED)

My experience with Stop the Bleed has been very rewarding. It is great to teach people who want to help their fellow man in the time of need. I found people of all walks of life learning first-aid techniques that can be unpleasant, but [they also] see that sometimes we all need to rise up and help in any way we can.

Todd Chennell, MS, ANP-C, endocrine surgery, associate professor of nursing, University of Rochester School of Nursing

Safety is a key element for us at the JCC. Educating our staff and leadership on how to save lives by taking specific actions to stop life-threatening bleeding is a skill that we should all know how to implement, but one we hope we never need to use. Stop the Bleed puts us in a position to try to save lives in an emergency situation.

Arnie Sohinki, executive director, Louis S. Wolk Jewish Community Center, Rochester

It was such a privilege to be able to teach others in the community practical and potentially lifesaving skills. The beauty of Stop the Bleed is its simplicity, ability to engage, and its effectiveness.

Candice Lee, MD, general surgery chief resident, University of Rochester
Sadly, the launch of this project proved to be all-too timely. January and February 2017 were marked by a flare of anti-Semitic activity, with numerous acts of targeted vandalism and violent crime. In addition, more than 100 bomb threats to JCCs (two to ours, in Rochester) and other Jewish education organizations across the U.S. and Canada had been made as of press time, each resulting in evacuation and a full search of the facilities. Fortunately, no bombs were ever found, and an active Federal Bureau of Investigation review is under way.

**Make a difference**

As acts of violence become more commonplace and as our nation debates whether this trend is attributable to too many or too few firearms, this program transcends politics and ideology. It is a golden opportunity for surgeons across the country to step up and bring critical, potentially lifesaving knowledge to their communities; to dispel misinformation; and to teach critical skills that hopefully will never require use.

Implementing the Stop the Bleed program is proving to be one of the most satisfying and gratifying endeavors of my career. However, while I have been repeatedly thanked for this work, I truly believe that such thanks are largely undeserved and that my work is simply a fulfillment of a shared obligation that we all have to do our part in improving our communities. The real thanks should go to the College, and to Dr. Jacobs in particular, for creating and promoting such a visionary program that will surely save countless lives.

Finally, of the numerous ACS activities that I have participated in, this program makes me most proud of my Fellowship in the College and of the amazing work that our organization does on behalf of our patients. It is my sincere hope that other surgeons also will be inspired to teach this course in their own communities and that these skills will never be tested. ♦
New adult trauma center on Chicago’s South Side will treat violence as a disease

by Tony Peregrin
Closing a more than quarter-century gap in trauma care on the South Side of Chicago, IL, the University of Chicago Medicine (UCM) is building a Level 1 adult trauma center, part of a new and expanded emergency department (ED), which is expected to cut travel time to surgery by 50 percent.1,2

The call for an adult trauma center at the university gained momentum in 2010 after the death of drive-by shooting victim Damian Turner. Mr. Turner, 18 years old, was shot three blocks from UCM, but died en route to Northwestern Memorial Hospital’s adult trauma center located on the Near North Side of Chicago.3,4 The South Side of Chicago has been without an adult trauma center since 1991.

Selwyn O. Rogers, Jr., MD, MPH, FACS, formerly chief medical officer, University of Texas Medical Branch, Galveston, will lead the development of the new adult trauma center, which is scheduled to open in spring 2018. Dr. Rogers, a public health expert and chief, section for trauma and acute care surgery, UCM Trauma Center, has acknowledged the challenging history between UCM and the South Side of Chicago, and is focused on specifically addressing the health care needs of the underserved communities in the area.

This article describes the state-of-the-art development of UCM’s new ED and adult trauma center—which will feature an efficient design plan to reduce wait, admission, and discharge times—and to identify how this center could be a model for adult trauma program expansion in other urban areas.

“A big part of my role—in addition to setting up a Level 1 trauma center—is community engagement.... How can we possibly fix a problem, if we don’t get close to a problem? At the University of Chicago Medicine, we’re not simply waiting for the trauma to happen and then reacting to it.”

—Dr. Rogers

**NEW ADULT TRAUMA CENTER**

A demonstrated need for the new ED/adult trauma center

The number of adult visits at UCM’s current ED, built in 1983, continues to increase, according to UCM administrators, and would fail to meet the needs of the community without this expansion. From 2009 to 2016, adult ED visits grew from 39,000 to more than 59,000.5 In addition, as many as 6,000 patients choose to leave UCM’s ED each year without being seen because of excessive wait times.6 The new ED will be 76 percent larger (29,017 square feet versus 16,517 square feet) than the present structure and will accommodate more patients and their care more efficiently.6

The UCM adult trauma center will be one of five such centers in Chicago, including Stroger Hospital (formerly Cook County Hospital) and Mount Sinai on the West Side, Northwestern Memorial Hospital, and Advocate Illinois Masonic Medical Center on the North Side. Other Level 1 adult trauma centers in Cook County are in the suburbs of Oak Lawn, Maywood, Park Ridge, and Evanston. Patients who are critically injured on the South Side of the city, as was the case with Mr. Turner, are routinely taken to centers that are far from the point of injury to receive adult trauma care.

A study published in the June 2013 issue of the *American Journal of Public Health* revealed relative “trauma deserts” in certain areas of Chicago, which “adversely affected mortality from gunshot wounds,” particularly for patients who have longer transport times.7
Specifically, patients shot more than five miles from a trauma center (trauma deserts) were 23 percent more likely to die. The study was intended, in part, to “inform decisions about trauma system planning and funding” and the new UCM adult trauma center will likely help to alleviate the trauma desert problem in this Chicago neighborhood.7

“I think it can be a difficult concept for those not involved within the region to see what the transport patterns are,” said Richard J. Fantus, MD, FACS, chairman of both the Chicago region trauma center medical directors committee and the Illinois Department of Public Health (IDPH) State Trauma Advisory Council. “But I think that there will be a benefit, ultimately, to patients in those nearby communities because [the UCM trauma center] will shorten transport time.”

Dr. Fantus also noted that trauma system development in Illinois has been affected by the geographic location of existing institutions. “Unlike Starbucks franchises, where you are able to go out and assess the market, and you are able to place them geographically in the exact location that would handle the population, large centers that actually have the capacity to be Level 1 facilities are restricted based on where they are currently located.”

Door-to-doctor design enhances patient experience

UCM’s new ED, a build-out that is expected to require a $39 million investment, will have 11 more treatment stations than the existing ED and four new trauma resuscitation bays, in addition to imaging facilities, a rapid assessment unit for patients with minor medical conditions, and an on-site biocontainment unit to treat patients with infectious diseases.

“I think one of the unique features of how we designed our ED was having detailed input from the people on the ground—including our physicians, nurses, technicians, environmental services, transporters, radiologists—everyone who plays a role in the care of patients in the ED,” said Linda Druelinger, MD, section chief, emergency medicine, UCM.

“The staff input, to Dr. Druelinger’s point, from the frontline clinicians who are actually working in the environment and making the decisions was important in determining what this new environment will look like and how patient flow can be maximized,” explained Vikas Ghayal, executive director, patient care operations, UCM. “We followed the Lean methodology, which means that for the last four years, we conducted week-long, very structured process improvement (PI) events called ‘kaizens’ facilitated by a trained Lean professional to gather input from the clinicians.” According to Mr. Ghayal, these PI events included approximately 240 hours devoted to generating a design plan for the ED.

When completed, the new ER will have 33 treatment rooms, including four psychiatric rooms, 12 internal waiting areas, and one bariatric room. Another key feature of the revamped ED is the placement of computed tomography (CT) scanners in close proximity to the trauma resuscitation bays. Additionally, the ED will be much closer to the critical care beds, interventional radiology, and all of the key resources required to provide optimal care to these patients, Dr. Druelinger noted.

“With the addition of the trauma center—and redesigning the floor plan to incorporate the trauma resuscitation rooms—we had the good fortune of being able to partner with Dr. Rogers for his input,” Dr. Druelinger added. “We designed a very open space—our ambulance entrance will lead directly...
from the ambulance bay, a quick straight shot into our trauma bays. With this open concept, we can visually see patients and attend to their needs,” she said. “Right now, it can take close to 20 minutes to get from our current ED space to the operating room (OR),” Mr. Ghayal added. “Moving into the new ED, we are going to be right next to the Center for Care and Discovery, and we should be able to get to the OR within seven to 10 minutes, which is how we’ve timed it when we’ve walked it ourselves.” The new ED will be connected to the Center for Care and Discovery hospital, located on the UCM campus, which will allow efficient access to lifesaving care via the OR.

“From a through-put standpoint, getting patients in and out of the department—there is a lot that the ED physicians and nursing leadership team have done during the last couple of years to look at patients coming in and out of our department and determine ways of removing waste while creating value-added steps to the care process,” Mr. Ghayal said. “What we are currently seeing with the different processes that we have put in place is that we are able to shave off an hour’s length of stay per patient.”

“A lot of EDs across the country are starting to use a model where they put a physician in the triage area to improve door-to-doctor time,” Dr. Druelinger explained. “As soon as the physician sees the patient, we can get a brief, directed history and we can actually implement orders for tests that the patient is going to need, enabling the nurses to begin acting on those orders pretty quickly.”

Adequate staffing is another way UCM administrators intend to improve door-to-doctor time. At press time, UCM had hired eight faculty members to augment the existing roster of 20 faculty members, with a goal of bringing in five more faculty members before the center opens in 2018, according to Dr. Druelinger.

“Our intention is to provide adequate faculty supervision of house staff and adequate faculty to care for patients as well,” Dr. Druelinger explained. “Working with Dr. Rogers, we’re determining how we’ll partner together to care for the trauma patients when they present in the ED.”

In fact, Dr. Rogers is currently building an interdisciplinary team of specialists to treat patients suffering from life-threatening trauma. “We have to recruit trauma faculty who will be key leaders, but really adequate staffing is about teams and identifying all the current gaps of where we are now and where we need to be to be an American College of Surgeons (ACS)-verified trauma center,” Dr. Rogers said.

**Designated trauma center**

A facility earns the title of “designated trauma center” when it meets the requirements of the government or other authorized entities. At press time, the IDPH, a state agency, is in the process of verifying these requirements for the UCM adult trauma center. The ACS does not designate trauma centers—the ACS Committee on Trauma confirms that a trauma center has the necessary resources for delivering optimal trauma care as outlined in the guidebook *Resources for Optimal Care of the Injured Patient.*

To determine if a hospital meets ACS trauma center standards, a team of trauma experts completes an on-site review of relevant features of the facility’s trauma program. The review examines components including commitment, readiness, resources, policies, patient care, and performance improvement.

“Our goal is to be accredited by Illinois when we open, and then, within three years, to get the ACS accreditation,” Mr. Ghayal said. “Right now, we are focusing on having the appropriate faculty in place and getting Dr. Rogers in a position to build his team. We’re starting to put the pieces together with people who have done this before who understand the trauma world, which will really help as we develop our processes and pursue Level 1 accreditation.”
“Even after we open next year, we know we’re going to be on a continuous quality improvement journey,” Dr. Rogers added. “And we will embrace that and continue to work toward a culture of social justice and equity.”

The new and expanded ED at UCM is projected to treat an additional 25,000 patient visits a year by 2021, according to hospital administrators, and approximately 2,700 adult trauma patients are expected in the first 12 months after the facility is approved for Level 1 trauma care.

Public health expert, trauma surgeon provides leadership

Dr. Rogers began working in his new role in January. Since then, he’s been developing policies to support the kind of cultural transformation that needs to occur at an institution that has functioned without an adult trauma center for nearly three decades. “UCM is an exceptional academic health center that performs a wide range of complex surgical services, like organ transplantation and cancer care,” Dr. Rogers said. “However, trauma care requires integration of all services of a hospital working seamlessly together for the care of the traumatized patient. That system of care alters the cadence of a hospital, including providing a multitude of services during the nights and weekends when most elective surgery is long over.” Dr. Rogers also underscored the need for quality assessment to ensure continuous quality improvement—systems he said “need to be actively in place before we open next year.”

“I think Dr. Rogers brings a wealth of experience and knowledge that’s needed to really get this program up and running,” Mr. Ghayal said. “It’s unique for an academic facility to go from no trauma designation on the adult side to a Level 1 trauma center, and there are a lot of things that we have to do to help support that throughout the organization. Having Dr. Rogers here to walk us through that process, to be the voice of reason, and really help explain all the different aspects that trauma affects, from an organization-wide standpoint, is critical.”

In addition to his leadership role at the University of Texas Medical Branch, Dr. Rogers served as chair, department of surgery, and surgeon-in-chief, Temple University Hospital, Philadelphia, PA, from 2012 to 2014, and as division chief of trauma, burn, and surgical critical care, Brigham and Women’s Hospital and Harvard University School of Medicine, Boston, MA, from 2005 to 2012.

Dr. Rogers brings 16 years of trauma care leadership experience to his role at UCM, but he also brings a clinical and research background focused specifically on the health care needs of underserved populations. At Harvard, Dr. Rogers helped to launch the Center for Surgery and Public Health, with the mission of advancing the science of surgical care delivery by studying effectiveness, quality, equity, and value at the population level and of developing surgeon-scientists committed to excellence in these areas. Building on his interest in serving marginalized communities, Dr. Rogers was appointed to the role of executive vice-president for community health engagement at UCM. In this capacity, Dr. Rogers and his team will work to develop programs and leverage the resources of the medical center and the university to improve the health of neighboring communities on the South Side.

Dr. Rogers said he intends to launch a “listening tour,” visiting community centers, churches, and other public venues to learn how the new ED and trauma center at UCM can better serve the local community. He said he feels a “sense of urgency” to respond to the level of gun violence in Chicago, and on the South Side in particular. He noted that building ongoing, permanent relationships with members of the community will be key to stemming the gun violence epidemic.

“What we are currently seeing with the different processes that we have put in place is that we are able to shave off an hour’s length of stay per patient.”

—Mr. Ghayal
“A big part of my role—in addition to setting up a Level 1 trauma center—is community engagement,” Dr. Rogers said. “I want to learn from the community, the perspectives and challenges of its members, and to find opportunities to create partnerships. I think this is critical in addressing intentional violence and gun violence. How can we possibly fix a problem, if we don’t get close to a problem? At the University of Chicago Medicine, we’re not simply waiting for the trauma to happen and then reacting to it,” he said.

**Treating the root causes**

Dr. Rogers is keenly aware of the importance of responding to the underlying causes of violence rather than focusing on the violence itself. For him, it’s a personal issue that began one night when he was a junior faculty member at Brigham and Women’s Hospital.

“This particular night I was on call, a 28-year-old African-American man came in who had been shot in the back of the head, and it was pretty clear that he was brain dead from the initial exam. There was no brain activity, but he still had a pulse and he still had blood pressure. As we waited for the family to arrive, I found myself struggling with how to explain brain death. It’s not a concept everyone is familiar with, and there are cultural and religious beliefs that support the idea that if the heart is beating and blood is flowing then the individual is still alive. So, I was trying to work through my mind, what analogy, what approach, should I use to explain to this mother what brain death was,” Dr. Rogers said.

When the victim’s mother and his young daughter arrived in the intensive care unit, the mother listened attentively to Dr. Rogers’ explanation of her son’s situation. The mother’s demeanor remained self-contained, and she responded by asking if her son’s daughter (her granddaughter) could see him one last time.

“So, I prepared them both the best that I could. I told them the son would be sleeping, that he would

Dr. Rogers said he intends to launch a “listening tour,” visiting community centers, churches, and other public venues to learn how the new ED and trauma center at UCM can better serve the local community.
have a tube in his mouth, and that they could touch him if they wanted to and that he’d feel warm but he wouldn’t react. A short time later, the young girl was ushered into the room, and she reached out and touched her dad’s hand. The mother was very resolute and focused, and to me, it was a very powerful moment. And in the end, I was very emotionally torn up inside, but I had enough courage to ask the mother, ‘What is the source of your strength?’

Dr. Rogers said he expected the mother to say her source of strength was her faith or God’s will, but her response was none of those things.

“Her response was more chilling. She very calmly said, ‘I had to do this for my other son two years ago.’ This was her second child who had died after being shot in the head. That day, I committed to the idea that we have to do more than just take care of people when they come in. As health care providers, we have to address the social determinants of this disease of violence in our communities and think about the structural things that put people at risk and then modify those risks,” Dr. Rogers said.

“One of the things that excites us about Dr. Rogers being here is the whole violence prevention component that he has experience in and is wanting to implement within the University of Chicago,” Mr. Ghayal said. “Our goal really is to develop a trust with the community to get to the root causes of some of these traumas and to provide the resources that are needed to stem the violence that is happening. I think our vision has always been that a trauma center is not the answer to the violence that is happening in Chicago or anywhere. It is a component to support the community, but you need an intentional program to help facilitate conversations and provide the necessary resources.” Modifying those risks and preventing the deaths they cause will be the driving principle that Dr. Rogers will apply at UCM’s new adult trauma center.

REFERENCES
Implementing World Health Assembly Resolution 68.15:
National surgical, obstetric, and anesthesia strategic plan development—the Zambian experience

by Swagoto Mukhopadhyay, MD;
Yihan Lin, MD;
Peter Mwaba, MB, BCh, MMed, PhD, FRCP;
John Kachimba, MB, BCh, MMed, FCS;
Emmanuel Makasa, BScHB, MB, BCh, MMed, MPH, FCS;
Kennedy Lishimpi, BSc, MB, BCh, MMed, FC Rad Onc;
Allison Silverstein;
Salim Afshar, DMD, MD;
and John G. Meara, MD, DMD, MBA, FACS
Nearly a decade ago, Paul Farmer, MD, PhD, and Jim Yong Kim, MD, PhD, co-founders of Partners In Health, a Boston, MA-based not-for-profit organization that provides health care services in developing countries, emphasized the need for global surgical system improvement, especially for the impoverished and disenfranchised populations in low- and middle-income countries (LMICs). Dr. Farmer and Dr. Kim, who also is the president of the World Bank, underscored the relative lack of attention that surgical services have received over the years by framing surgery as “the neglected stepchild of global health.”

Subsequently, groups such as the World Bank, The Lancet Commission on Global Surgery (LCoGS), the World Health Organization (WHO), and Harvard Medical School’s Program in Global Surgery and Social Change have provided clear evidence supporting the crucial role enhanced surgical services can play in strengthening health care systems. Embedded within surgical services are not only surgical specialties, but also anesthesia, obstetrics, and other health care services and professions that are necessary to ensure the delivery of safe surgical care.

In March 2015, the World Bank released the first volume of its third edition of Disease Control Priorities, a multi-volume publication highlighting the health service areas around the world requiring attention. Surgery and anesthesia constituted the first volume of this edition of the publication. This volume identified 44 surgical procedures that all surgical systems should provide as a component of essential surgical services.

Within a month, the LCoGS reported on the current state of surgical systems from a global perspective, and found that inadequate attention had led to a global crisis, with 5 billion people lacking access to surgical and anesthesia services. This finding was modeled on the three cornerstones of universal health coverage: access, safety and quality, and financial risk protection. Access was determined by distance to a surgical facility, safety by availability of pulse oximetry, and financial risk protection for the population from the likelihood of impoverishing or catastrophic expenditure due to surgical or anesthetic care costs. Furthermore, the LCoGS suggested six core indicators to measure and monitor surgical systems globally and provided a basic framework for developing national surgical system plans to address these identified gaps. This framework addressed five crucial domains: infrastructure, service delivery, workforce training and education, information management, and financing.

At the 68th World Health Assembly (WHA) of the WHO, the Zambian delegation led the effort to propose WHA Resolution 68.15. The delegation’s stated goal in introducing the resolution was “to promote emergency and essential surgery and anesthesia capacity as components integral to achieving universal health coverage.” This resolution was unanimously supported by all member states and was adopted by the WHA in 2015.

In 2016, the Harvard Program in Global Surgery and Social Change, a research program focused on the role of surgery and its impact on impoverished health systems and contributor to the third edition of Disease Control Priorities and the LCoGS report, partnered with the Zambian Ministry of Health to take the theoretical framework developed by the LCoGS and implement it. Specifically, the goal was to create Zambia’s first National Surgical, Obstetric, and Anesthesia Strategic Plan (NSOASP), the first major policy document at the time focused on global surgical systems.
Analyzing baseline indicators

The LCoGS recommended the measurement of six key indicators necessary to assess a country’s surgical system. These indicators of a surgical system are as follows:

- Two-hour access to a facility offering surgical services
- Surgical workforce density
- Surgical volume
- Perioperative mortality rate
- Protection against impoverishing expenditure
- Protection against catastrophic expenditure

The data pertinent to these six indicators are publicly available through the Zambia Health Management Information System (HMIS) and through the Institute for Health Metrics and Evaluation (IHME). These data initially indicated that 76 percent of the Zambian population have access to surgical services; however, subsequent validation showed that 74 percent of Zambians do not have access to timely, safe, and affordable surgical and anesthesia care. Furthermore, the Zambian surgical workforce density was 0.79 providers per 100,000 population, far below the density of 20 providers per 100,000 that the LCoGS recommends. Surgical volume is estimated at 1,617 cases per 100,000 population, as compared with the recommended 5,000 per 100,000 population. Perioperative mortality, the most basic measure of surgical outcomes, was difficult to reliably assess using the available data. However, issues of financial risk protection were calculated, which indicated that 56 percent of the population risk catastrophic expenditure from surgery, with a 94 percent chance of impoverishment from procedures such as cesarean delivery.
Partnering with local champions

With a baseline assessment of the Zambian health care system completed, the next step involved engaging local champions who shared a vision of timely, safe, and affordable surgical care. Emmanuel Makasa, MD, a Zambian orthopaedic surgeon turned global health diplomat at the Permanent Mission of Zambia to the United Nations, was a key advocate for the WHA resolution. Through his experience and relationship with the Zambian surgical community, he helped to identify individuals who were already advocating for surgical and anesthesia services in Zambia, referred to as local champions. The concept of creating a space for surgery in Zambian national policy was then presented to the Zambian Ministry of Health. Two co-authors of this article emerged as leaders of this process: Peter Mwaba, MB, BCH, MMed, PhD, FRCP, the Permanent Secretary of Zambia, and Kennedy Lishimpi, BSc, MB, BCH, MMed, FC Rad Onc, director of clinical care and diagnostic medicine within the Zambia Ministry of Health. With these individuals leading the process, major nongovernmental partners in Zambia were subsequently engaged in creating a space for surgery in Zambian national policy, including the Boston University Center for Global Health and Development and the U.K.-based Tropical Health and Education Trust (THET), both of which have a long-standing presence on the ground in Zambia.

With local champions in place, the next step in adding surgery to Zambian national policy consisted of systematically identifying and involving all other relevant stakeholders in strengthening the surgical system. Stakeholders in this context are individuals and groups who are directly affected by or work within the surgical system but are yet to become strong advocates for the system. A detailed stakeholder analysis was conducted and is summarized in Figures 2 (this page) and 3 (page 32). Nearly 1,500 individuals and groups relevant to the surgical system in Zambia were engaged in the process.
Building consensus

After identifying champions and stakeholders, the Ministry of Health developed a task force, under the Service Delivery Technical Working Group, charged with the responsibility of establishing next steps to address existing gaps in surgical, obstetric, and anesthesia services for Zambia. The working group consisted of more than 60 individuals from the Zambian governmental ministries, care providers from public and private hospitals, representatives of relevant professional societies, and individuals in additional roles critical to strengthening the surgical system. This task force was divided into three committees focused on the important domains of service delivery and infrastructure, workforce, and financing and information management. A technical review panel, led by the Permanent Secretary of the Ministry of Health, comprised a cohort of key stakeholders, including development partners and regulatory bodies charged with critically reviewing draft outputs from the technical working group and its committees. To guide these discussions, a comprehensive terms of reference (TOR) was developed for each committee. Data informing issues outlined in the TOR were obtained from key informant interviews and a baseline literature and data review. This task was done with support from researchers at the Harvard Medical School’s Program in Global Surgery and Social Change.

Following a review of all existing and available data, biweekly meetings were scheduled and facilitated by the Program in Global Surgery and Social Change team. These meetings included in-depth discussions of the existing surgical system in Zambia, major gaps in service provision, and consensus building on the priorities of surgical care moving forward. Between committee discussions, one-on-one follow-up meetings were scheduled to minimize the impact of potential power dynamics. The committee meetings
took place over the course of two months in early 2016 and ultimately produced hundreds of pages of information and transcripts that needed to be synthesized.

**Refining the language**
To formalize all the discussions from the committee meetings, a week-long writing workshop was convened. The primary aim of the workshop was to compose and clarify policy, as well as address the feasibility, impact, and priority of key initiatives.

A total of 25 individuals participated in a writing workshop in May 2016, including representatives from previous committee meetings, as well as new members from the Zambian Ministry of Health, to facilitate appropriate policy language (see photo, this page). The structure of the workshop was similar to prior committee meetings—participants were divided into subcommittees related to infrastructure, workforce, service delivery, and governance. Previously synthesized plans were presented to the group for further discussion and refinement. The final plan included the following domains: infrastructure, service delivery, workforce, financing, and information management.

**Milestones and metrics** were developed to be included within the upcoming National Health Strategic Plan, a five-year plan for 2017–2021.

**Financing the plan**
After developing a working draft of the NSOASP, the next step was to provide informed estimates of the cost of each part of the plan to ensure the feasibility of implementation. The Ministry of Health held a costing workshop in late July 2016 to reassess and determine the costs of the NSOASP activities as already drafted in the plan (see photo, page 35). This workshop was conducted with a similar structure to the writing workshop. Based on initial costing, the team prioritized strategies that could be implemented in Zambia given financial, workforce, and resource constraints. Additionally, efforts were made to coordinate with other existing plans within the Ministry of Health to ensure collaboration and avoid repeated efforts.

**Conclusion**
The Zambian NSOASP was a locally driven process to scale up much-needed surgical, obstetric, and anesthesia services in the country. It was developed with significant collaboration between all stakeholders, including the Ministry of Health, professional societies, and...
| Indicators define baseline | • Indicators are necessary to initiate broad conversations about surgical system development in an evidence-based manner  
• Highlighted the need to focus on skilled workforce development and institution of financial protection mechanisms  
• Much of the data needed to calculate indicators is publicly available or easily collected  
• Perioperative mortality presented a challenge; the remaining five indicators were calculated based on publicly available data from the IHME and Zambia HMIS |
| Local champions | • Local champions are critical for initial advocacy  
• Local champions were early adopters of the shared goal to address the critical situation for surgery, anesthesia, and obstetrics and led the process with the Ministry of Health (MOH) to prioritize surgical care |
| Broad stakeholder engagement | • Ministries (health, finance, and so on), clinical providers, professional societies, civil society, academic institutions, funding bodies, and implementing bodies  
• Partnerships with other major stakeholders require interests to be aligned and ensure equity in engagement and a transparent process  
• Policy change on a national level requires oversight and direction by MOH  
• Leaders must be aware of what is currently being funded to identify areas of overlapping scope, and openness of MOH allows broad partner buy-in  
• Those expected to enact and implement the intended plan should be engaged early in the process  
• Opinions of professional societies and clinical providers were prioritized |
| Working groups build consensus | • Priorities and goals of the surgical care system must be prioritized through consensus, usually through recurring committee meetings and working groups  
• Inter-meeting follow-up was included to allow for continued open discussion, especially for groups with less influence or power  
• Working groups must include both proponents and opponents of the process, to facilitate conversation and increase uptake  
• Additionally, committee members in each working group should be allocated to ensure adequate and equitable representation  
• Development of the plan should be transparent and without bias  
• External and neutral facilitator (Harvard Program in Global Surgery) was invited as a partner to help prevent bias |
| Writing the plan | • Measures for implementation and monitoring and evaluation must be included  
• This ensures sustainability of activities listed, and allows progress to be monitored  
• Policy writers are crucial to provide strength to the plan’s language  
• Key players from prior steps continued to be included throughout the process, to ensure continued engagement and relevance |
| National Surgical Forum | • National Surgical Forum promotes transparency  
• Increased buy-in from clinical providers who are implementing the plan  
• Forum provides an opportunity for continued engagement and advocacy  
• Forum was used as an opportunity to engage funders, media, and ministry |
| Costing the plan | • Costing process highlights the value of different components of the plan  
• Evaluation of cost and impact ensures the best use of resources  
• Consultative process addresses concerns of feasibility, impact, and priority |
| Implementation | • Design is determined by funders and health care implementers  
• Continued engagement of all stakeholders is necessary  
• As implementation of the plan progresses, feedback and optimization of the NSOASP is best accomplished by stakeholders experiencing the effects |
regulatory bodies, cooperating partners, the private sector, and the general public. The plan was developed using an important framework covering the following domains required for surgical care: infrastructure, service delivery, workforce, financing, and information management. These domains are codependent and can only be effective with corresponding developments in other areas.

Although the plan has been developed and its costs determined, this process is only an initial step toward adding surgery and anesthesia to Zambian national health care policy. Furthermore, although it is the first policy of its kind globally, we are still discovering what lessons can be learned from Zambia’s experience in development and implementation (see Table 1, page 34). The implementation of this plan can only be accomplished with proper monitoring and evaluation processes in place. However, the commitment of the Zambian Ministry of Health to this plan ensures continued progress toward the availability of safe and affordable surgical, obstetric, and anesthesia services for all Zambians.

**REFERENCES**

What are Project Access San Diego and Champions for Health?

Founded in 2004 as the San Diego County Medical Society Foundation, Champions for Health is a not-for-profit organization that addresses “the unanswered healthcare needs of low-income and uninsured San Diego County residents.”

Project Access San Diego Saturday Surgery Days is a joint project of Champions for Health and Kaiser Permanente San Diego. Since 2008, the two groups have partnered to provide free outpatient surgical services to uninsured San Diego county residents. Twice a year, for a half-day on a Saturday, hundreds of volunteers, representing general surgery, orthopaedics, ophthalmology, and other specialties donate their services to provide outpatient and clinic-based surgery and other procedures. We typically use four operating rooms, where the surgeon volunteers perform hernia repair, knee arthroscopy, and cataract removals. At the same time, physicians representing other specialties, including gastroenterology, urology, and vascular surgery, are performing colonoscopies, adult circumcisions,
and vein injections for non-healing venous stasis ulcer procedures in the clinic. On a typical half-day, about 14 patients undergo surgery and another 14 to 20 will have flexible sigmoidoscopy or colonoscopy. By addressing the health care needs of the community’s most vulnerable population, Project Access San Diego helps to prevent life-threatening or chronic medical conditions in uninsured patients.4

How did Project Access San Diego get started?

The Project Access model started in North Carolina in 1996.5 The physician members of the Buncombe County Medical Society, now the Western Carolina Medical Society, recognized the need for access to all aspects of health care for low-income, uninsured residents of the community. With a demonstrated commitment from physicians and other community partners, Project Access was able to begin providing care to these individuals.5,6 There are now approximately 100 volunteer programs similar to Project Access across the country, which indicates that this model is relatively easy to implement in other areas of the U.S.4

In 2008, Kaiser Permanente San Diego partnered with Champions for Health to provide two half-day events per year at Kaiser Permanente outpatient surgery centers, which are called Saturday Surgery Days. Daniel “Stony” Anderson, MD, a now-retired gastroenterologist and member of the Southern California Permanente Medical Group Board, was instrumental in obtaining support for this partnership from the leadership of Kaiser Permanente San Diego. I was invited to be the surgical lead for the project by Mark Schumacher, MD, FACS, former medical director of operating rooms at the Kaiser Foundation Hospital in San Diego, CA, who was aware of my interest in humanitarian surgery.

What is the health care situation in the area served by Project Access San Diego?

San Diego is considered home to one of the most sophisticated health care systems in the country. San Diego hospitals hold some of the highest ratings for both overall care and unique specialties. For example, in 2016, the University of California San Diego Medical Center was named the best health care facility in the region and sixth best in the state, according to U.S. News & World Report’s annual Best Hospitals issue.7 San Diego is home to 25 hospitals, and more than 26,000 unique health care and social assistance establishments that employ more than 140,000 people.8 Unfortunately, many residents of San Diego County are unable to access these services.

What is the ratio of physicians to patients in San Diego?

The San Diego County area has approximately 64 primary care physicians (PCPs) per 100,000 residents (recommended supply is 60–80 PCPs per 100,000 residents) and 147 specialists per 100,000 residents (recommended 85–105).9 Overall, California rates are 64 PCP and 130 specialists per 100,000 residents.9
What is the uninsured rate in San Diego?

As of 2014, the uninsured rate for California was at 11.9 percent, with 10.4 percent of residents receiving Medicare and 26.5 percent receiving Medi-Cal and assistance from other public programs. A total of 34 percent of California residents have annual incomes of less than $25,000; and that same demographic is likely to be uninsured. At this income level, people are potentially eligible for Medi-Cal; however, they might be ineligible for other reasons, such as not being a citizen, which is the most common cause. Of the remaining uninsured, one in four is 25–34 years old, one in three is a noncitizen, and more than half are Latino. Most of the uninsured (62 percent) were employed. The percent of uninsured individuals in San Diego is 12.4 percent.

How do patients find out about Project Access San Diego?

Community health centers and PCPs who provide services to uninsured individuals may refer these patients to Project Access San Diego for necessary specialty care. The Champions for Health medical director reviews referrals to ensure physicians assist those patients most in need of their services. (Extensive referral guidelines are posted on the Champions for Health website.) Once approved, a Project Access care manager becomes the primary contact for the patient and provides this individual with one-on-one assistance in navigating the health care system, as well as assistance with transportation and translation services.

What are the criteria to receive care through Project Access San Diego?

Patients must meet the clinical criteria for specialty referral laid out on the Champions for Health website, have a health care need of limited scope or duration, be at least 18 years old, and must earn less than 350 percent of the federal poverty level. For 2017, the federal poverty level is $12,060 for a
household with one individual, and $24,600 for a household of four.\textsuperscript{11}

They must be residents of San Diego County and must not have any health insurance or workers’ compensation coverage. Patients must be ineligible for any publicly sponsored programs including Medi-Cal, Medicare, or Covered California—the state’s official health care marketplace, where individuals, families, and small businesses can obtain health insurance under the Affordable Care Act. It is the only place to get federal premium assistance to help buy private insurance or get health insurance through the state’s Medi-Cal program.\textsuperscript{12}

Patients must agree to follow Project Access San Diego’s rules, as well as the prescribed treatment plan. Patients must promptly supply any information requested by the program, notify Project Access of income changes, apply for Medi-Cal or other programs at the request of Project Access, and be on time for all appointments.\textsuperscript{4}

What are the leading causes of death in the area where Project Access San Diego provides service?

The leading causes of death among San Diego County residents in 2010–2012 were malignant neoplasms, heart disease, Alzheimer’s disease, chronic lower respiratory diseases, and cerebrovascular diseases.\textsuperscript{13}

How did you become interested in the health care challenges facing patients in San Diego?

In 2006 and 2007, I had the privilege of working on a surgical project in Monrovia, Liberia, with Médecins Sans Frontières/Doctors Without Borders (DWB). It was an eye-opening and life-changing experience. It codified my belief that health care is a basic human right. The desire to be healthy and have your medical needs met is fundamental to our humanity. I anticipated continuing to use the generous sabbatical program the Southern California Permanente Medical Group offers to return to work with DWB. However, I gave birth to my only child in 2009, when I was 40 years old. Her arrival changed my level of comfort with traveling to potentially risky environments to provide surgical care to people in need. With that change in my life, I turned my attention to my own community, where, sadly, there are a large number of people who are unable to access specialty care.

How did you get funding for Saturday Surgery Days?

Since 2008, Kaiser Permanente San Diego has hosted 17 Saturday Surgery Days. More than 570 patients have been served and more than $3 million in care has been provided. The funding for the Saturday Surgery Days comes from the Kaiser Foundation Hospital (KFH), through its community benefit program. KFH provides the use of its facilities and other services pro bono. All of the physicians and non-union employees volunteer their time during Saturday Surgery Days. Union members also volunteer in a fashion approved by their unions—they are paid for their work and subsequently donate that money to Champions for Health.

What licensing and government approvals were needed to start the program?

Our Saturday Surgery Days are done in Kaiser Permanente facilities. Patients are provided 90 days of Kaiser coverage around the time of their operations (more if needed). The care is provided under the licensing of Kaiser Permanente.

How many health care professionals provide health care services through the Project Access network?

Throughout the county, the Project Access network includes more than 80 referring community clinics; more than 625 medical professionals who volunteer
to provide pro bono care; 10 hospitals; 14 outpatient surgical centers and ancillary health services including imaging, labs, medical equipment, physical therapy; and so on. Through March 2016, more than 1,400 operations and procedures have been provided, with a value of care of more than $10.9 million. Approximately 4,500 uninsured patients have been assisted through this program and more than 11,627 specialty care appointments have occurred. These numbers are for the entire county, including the Saturday Surgery Days that I help plan at Kaiser Permanente San Diego.

Where do you see the future of health care in San Diego heading?

Who knows where the health care situation is heading under the current presidential administration? It’s hard to imagine it will get any easier for the patients we serve to get access to health care. Our undocumented patients may have more reservations about seeking care due to fears of increased risk of deportation.

What advice would you give to other health care providers who want to start similar programs in their areas to work with uninsured patients domestically?

I’d suggest investigating whether their communities have a program similar to Project Access. Other programs may have already laid the groundwork for patient recruitment and referrals. The next step would be organizing your health care organization, partners, colleagues, hospitals, and surgery centers to host a day or half-day of volunteer operations. Recruiting volunteers is the easiest part of my job. I can send an e-mail to my partners and within minutes have more surgeons than I can use at an event. The devil is in the details in terms of making an event like Saturday Surgery Days run smoothly. Our planning committee includes leaders from surgery and anesthesia, as well as nursing administration, pharmacy, radiology, security, environmental services, media relations, engineering and facilities, and the laboratory. I’m happy to be a resource to anyone who has questions about setting up a similar program.

Describe some of the program’s success stories.

The most memorable stories are those of the people in whom we diagnose malignancies, which we then treat. In 2011, a 38-year-old gentleman presented to us for colonoscopy for hematochezia and iron-deficiency anemia. He underwent a colonoscopy, which showed Stage III rectal adenocarcinoma and familial adenomatous polyposis. After diagnosis, Project Access and Kaiser Permanente San Diego provided him with neoadjuvant chemo-radiotherapy. He then underwent pelvic exenteration by a team of Kaiser surgeons. His family, including his children, was also screened for familial adenomatous polyposis. He is alive, well, and without evidence of disease and recently celebrated his daughter’s quinceañera, her 15th birthday.

What can the ACS and OGB do to help further your mission and domestic volunteerism?

The ACS is doing a great job of getting the word out about domestic and international volunteerism. The awards for humanitarianism and international and domestic volunteerism highlight some of the work ACS members are doing at home and abroad. The ACS is also providing a variety of lectures and hands-on courses at the annual Clinical Congress on volunteerism, humanitarian projects, and practical
It can be challenging to find a project for surgeons who are interested in volunteering. The OGB website is a wonderful resource for health care providers to easily access a long list of volunteer opportunities both at home and abroad.

knowledge for working in low-resource settings. The Bulletin often highlights the work of Fellows in various underserved settings. Exposing surgeons to their peers’ volunteer work can inspire others to get involved.

It can be challenging to find a project for surgeons who are interested in volunteering. The OGB website is a wonderful resource for health care providers to easily access a long list of volunteer opportunities both at home and abroad. This list includes short- and long-term postings with secular and religious groups, for a wide variety of surgical specialties and for surgeons-in-training, in practice, or retired. This makes it easy for interested individuals to match their abilities and interests with patients who could benefit from their care.

Author’s note

For more information about Project Access San Diego and similar programs, visit the OGB website at facs.org/ogb and the Project Access San Diego website at championsforhealth.org/programs/project-access-san-diego/.

OGB launched a new portal in early 2017 called the Volunteer and Partner Portal, where volunteers and partners can sign up to find and post domestic and global volunteer opportunities. Visit the website at facs.org/ogb/portal.

The ACS is interested in learning more about what members of the College are doing in their own communities regarding surgical domestic volunteer and service opportunities. E-mail ogb@facs.org to share your story.

REFERENCES

2016 ACS Governors Survey: 
MACRA: Are surgeons ready?

by
David J. Welsh, MD, FACS;
Mark W. Puls, MD, FACS;
Juan C. Paramo, MD, FACS;
and
Peter Andreone, MD, FACS

Editor's note: The American College of Surgeons (ACS) Board of Governors (B/G) has conducted an annual survey of its members for more than 20 years. The purpose of the survey is to provide a means of communicating the Governors’ concerns to the College leadership. The 2016 ACS Governors Survey, conducted in August 2016, had an 84 percent (230/274) response rate.

The following article focuses on surgeons’ perceptions of the payment reforms that are being implemented through the Medicare Access and CHIP (Children’s Health Insurance Program) Reauthorization Act (MACRA).

After more than a decade and a half of debate, Congress repealed the flawed sustainable growth rate (SGR) formula that had been used to calculate Medicare reimbursement for physician services with the passage of MACRA in 2015. This legislation replaces the SGR with the Quality Payment Program (QPP), which is designed to encourage and reward the provision of value-based care. MACRA’s emphasis on quality is appealing to surgeons, especially Fellows of the ACS, which was founded for purposes of improving patient care and setting standards for the quality of care given in hospitals.

QPP overview
Physicians may participate in the QPP either through participation in an Advanced Alternative Payment Model (APM) or the Merit-based Incentive Payment System (MIPS). Because APMs for surgery are largely still in development, most participating surgeons will use MIPS for Medicare reimbursement—at least initially—but likely will need to conform with APMs as they are implemented to achieve proper reimbursement.

MIPS has four components, three of which are analogous to existing Centers for Medicare & Medicaid Services (CMS) quality programs: Quality, which is similar to the Physician Quality Reporting System (PQRS); Advancing Care Information (ACI), which builds on the Electronic Health Record (EHR) Incentive Program (also known as meaningful use); and Cost, which is similar to the Value-based Modifier (VM). The fourth component, Clinical Practice Improvement Activities (IA), is new.
The QPP is designed to allow these activities to be phased in gradually. Participation in these various exercises initially can prevent reductions of payments and, over time, successful participation in the program can lead to increased payments. The entire program is budget neutral with regard to CMS payments.

**Survey questions related to MACRA**

Each year, the Communications Pillar of the ACS B/G conducts a survey of the Governors in an effort to engage the Fellows with the ACS leadership and to take the pulse of surgeons. This process is a resource to gauge the concerns, feelings, and interests of the Fellows.

The 2016 survey contained 11 questions pertaining to MACRA, with particular emphasis on surgeons’ preparedness to enter into APMs. The queries investigated the surgeons’ knowledge about their practice and/or hospital’s depth of activity with outcome metrics, integrated care, benchmarking efforts, and contract and risk management.

**Use of quality and performance measures**

Not surprisingly, many surgeons are in practices that use transparent benchmarking tools to track surgical quality, safety, and outcomes. In all, 77 percent of respondents said their practices use benchmarking, clinical quality forums, or improvement projects (not including morbidity and mortality conferences), which track effectiveness improvement. Another 20 percent indicated that their practices do not use these tools, and 3 percent indicated that they were unaware of whether their practices do so (see Figure 1, this page).

Full-time academic surgeons were most likely to report (67 percent) that their hospital leadership used transparent benchmarking to track surgical quality, safety, and outcomes on a quarterly basis. Full-time hospital-employed surgeons were a close second at 64 percent. Among the respondents in private practice, 44 percent reported using quality benchmarking instruments, but 19 percent were unsure whether their practices participated in these programs (see Figure 2, this page).
When asked whether the surgeons’ practices used benchmarking, clinical quality forums, or improvement projects to track effectiveness of efforts to improve patient care, the numbers are even better. In fact, 89 percent of full-time academic surgeons reported that their institutions used these programs to improve patient care, and 75 percent of full-time hospital-employed surgeons indicated that their practices did so. Private practices lagged in this area, with only 55 percent reaching this goal (see Figure 3, this page).

In addition, just 40 percent of academic surgeons and 39 percent of hospital-employed surgeons reported that their practice revenue is based on outcome metrics, meaning that at least 10 percent of their revenues come from achieving performance metrics. Among surgeons in private practice, the percentage is much lower—14 percent (see Figure 4, this page).

Risk-based contracting
As the APMs evolve, it is anticipated that physician payments will increasingly be tied to outcome metrics as well as risk-based contracts. For most physicians, this evolution will force them to look differently at their practice activities and the health care delivery system as a whole. Most physicians are familiar with fee-for-service reimbursement policies and procedures.

Risk analysis requires that surgeons use a new approach to thinking about health care delivery, including participation in risk pools and revenue reserves. Participation in Accountable Care Organizations (ACOs), which will likely be a central component of some APMs, has taught physicians about managing groups of patients and dealing with risks. Bundled payments and the ACO experience work hand in hand. Many experts anticipate that bundling and ACOs represent the future direction of health care in the U.S.

The survey results show that very few private practice respondents (12 percent) are involved with risk-based contracts, meaning that at least 10 percent of their revenue is from ACOs or consists of bundled payments for managed care. Furthermore, only 36 percent of full-time hospital-employed surgeons
and 32 percent of full-time academic practice surgeons are involved in these types of contracts (see Figure 5, this page).

As the QPP evolves, more health care providers will likely move into Advanced APMs, which means surgeons will need to consider a range of new questions about their practices, including whether their practices assess the patient population for risk-based contracting. The B/G survey showed most do not assess patients for risk-based contracting. Hospital-employed surgeons were more likely to report engaging in this practice (26 percent) than surgeons in other practice arrangements. The reason that hospital-based surgeons are more likely to use risk-based contracts is most likely secondary to hospitals being required to assess population-based problems and their risks by different agencies, including The Joint Commission, state departments of health, and so on.

We asked the Governors whether their practices have reserves that can handle risks associated with APMs. Only 36 percent of respondents at academic medical centers indicated their practices could handle the risks, while 29 percent of hospital-employed physicians indicated their facilities had reserves to handle risks associated with APMs (see Figure 6, this page).

The survey also asked respondents whether their practices participate in risk-based contract governance committees. Not many participate in these committees—just 13 percent of surgeons in academic practices, 18 percent of those in full-time hospital-based practices, and 2 percent in private practices responded in the affirmative. Furthermore, 41 percent of surgeons in academic practice said they did not know whether their institutions participated in these committees (see Figure 7, page 46).

Moreover, not many surgeons reported that their practices have reserves to withstand annual cycles of payment and the “downside” risks of APMs in the area of staff compensation and business continuation. Among surgeons in academic practice, 36 percent said their practices had these reserves, whereas only 29 percent of hospital-based surgeons and 14 percent of private practitioners indicated they would have enough.
money set aside to withstand these fluctuations (see Figure 6, page 45).

Integrated care
For MACRA to reach its ultimate goals of improving care while reducing costs, integration of care is essential. To address this aspect of MACRA preparedness, the Governors were asked whether their practices are involved with other specialty service lines and if they participate in medical homes. When asked whether their practice works with primary care physicians in a medical home recognized by insurance companies or other payors, just 28 percent of surgeons in academic practice, 39 percent in hospital-based practice, and 19 percent in private practice responded in the affirmative (see Figure 8, this page). Furthermore, less than 40 percent of respondents’ practices were involved with medical homes (39 percent for hospital-employed surgeons), but on a brighter side, academic surgeons (70 percent) and hospital-employed surgeons (57 percent) have practices with clinical service lines aligned with other specialties (see Figure 9, page 47).

Conclusion and resources
MACRA is a bipartisan legislation developed with input from numerous stakeholders. In spite of uncertainties in Washington, DC, it is clear that pay for performance and value-based purchasing—key concepts that drive MACRA and the QPP—are here to stay.

The Governor’s survey revealed that many surgeons are exposed to value metrics and are interested in taking steps to improve quality of care and their performance. However, many Governors are unfamiliar with how MACRA and the QPP define achieving these goals and the steps they will need to take to qualify for positive payment adjustments in the future.

As surgeons, we are trained to evaluate and adapt. Like other health care professionals, surgeons adopt
new processes and procedures at different rates. The key is to avoid being in the “late adopter” group. Just as it took a while for many surgeons and other physicians to adjust to PQRS requirements, taking on the challenge of implementing MACRA will require effort and time. Fortunately, CMS is implementing the QPP incrementally through a series of steps or phases to acclimate physicians and their organizations to the new system over time. For example, the MIPS requirements for 2017, which will affect payment in 2019, are not very rigorous.* The good news for ACS Fellows is that the College offers numerous resources to help surgeons of varying levels of expertise with quality measurement to succeed under the QPP.

The ACS leadership and the Division of Advocacy and Health Policy have taken proactive steps to educate Fellows on compliance with MACRA. The ACS has created a QPP Resource Center at facs.org/advocacy/qpp. This resource comprises informational videos about QPP, which provide basic information about the program, options for participation, and other information available to members of the organization. Over time, the College will be adding tools to help surgeons maximize their success and minimize stress as QPP is phased in. Visit the Resource Center often to check for updates.

In addition to the ACS, other available resources include a Medscape web page, which contains multiple-part online sessions concerning MACRA and its options. This resource is free and can be accessed at www.medscape.com/resource/reimbursement-and-quality.

CMS also is posting information concerning MACRA on its website at www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/value-based-programs/macra-mips-and-apsms/quality-payment-program-events.html. This resource goes into great depth. Links take the reader to all of the options with their specific components. Traversing the CMS website does take some time and the additional links may appear endless. However, as a resource, the CMS site is complete.

Of course, along with these free resources, consultants are available to instruct you and your organization about MACRA for a fee. How involved surgeons want to get depends on their interest in the different options. If you are a member of a large surgical group or multispecialty group or hospital system, a dedicated team with information technology support should be considered.

How ready are surgeons for MACRA? The results of the Governor’s survey show we have work to do. As surgeons, we are programmed to adjust. Striving to provide quality care is ingrained in us. The hard part of change is just getting started. Fortunately, the College is in our corner and ready to help. Start or continue your MACRA journey using the ACS resources that are just a few clicks away. ♦

---

Surgeons strive to deliver the highest quality care to their patients. Achieving this goal generally involves following best practices and adopting the latest evidence-based methods. However, we all struggle to keep up with advances due to multiple demands on our time. Unfortunately, some institutions and payors seem to place an emphasis on volume and productivity rather than on quality of care. We also can be overwhelmed by time-consuming federal regulations, and, regrettably, continuing medical education often gets pushed to the back burner. On top of all these time management-related challenges, surgeons are often drowning in daily e-mail blasts, many of which are not applicable to our practices. How do we keep up?

What is the Dissemination and Implementation Committee?
The American College of Surgeons Clinical Research Program (ACS CRP), in conjunction with the Alliance for Clinical Trials in Oncology, has established a Dissemination and Implementation Committee that is charged with making it easier for surgeons to get the information they need to provide quality, leading-edge care. The U.S. Department of Health and Human Services (HHS) defines dissemination as “the targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to spread (‘scale-up’) and sustain knowledge and the associated evidence-based interventions.”

HHS defines implementation as “the use of strategies to adopt and integrate evidence-based health interventions and change practice patterns within specific settings.” According to HHS, dissemination and implementation research is designed “to bridge the gap between public health, clinical research, and everyday practice by building a knowledge base about how health information, interventions, and new clinical practices and policies are transmitted and translated for public health and health care service use in specific settings.”

ACS CRP Dissemination and Implementation Committee issues call for participants in pilot project

by Diana Dickson-Witmer, MD, FACS; Sarah Blair, MD, FACS; and Judy C. Boughey, MD, FACS

According to HHS, dissemination and implementation research is designed “to bridge the gap between public health, clinical research, and everyday practice by building a knowledge base about how health information, interventions, and new clinical practices and policies are transmitted and translated for public health and health care service use in specific settings.”

The gap between research and new clinical practices is often striking in oncology. Results of oncology clinical
The gap between research and new clinical practices is often striking in oncology. Results of oncology clinical trials may take up to 15 years before being fully integrated into clinical practice throughout this country.

trials may take up to 15 years before being fully integrated into clinical practice throughout the U.S. The mission of the Dissemination and Implementation Committee is to shorten this delay and bring practice-changing results of the Alliance and other national clinical trial groups to the broadest audience in formats that are most likely to facilitate thoughtful adoption into clinical practice.

**Video project**

The ACS CRP Education Committee provides up-to-date information about the latest clinical trials in surgical oncology through Panel Sessions presented at the annual ACS Clinical Congress, investigator meetings at national surgical society meetings, and via this column in the *Bulletin*. The Dissemination and Implementation Committee seeks to disseminate clinical trial information at a more granular level, and to do this successfully, the committee needs your help.

As a first step, we are including questions in the upcoming membership survey to determine your preferences regarding how you want to receive information about clinical trials and national guidelines for oncology. Second, we are developing a series of short videos explaining the results and clinical implications of recently completed clinical trials. These 10- to 15-minute videos could be useful for viewing at local tumor board meetings, and may provide inspiration for quality improvement projects for Commission on Cancer (CoC) sites.

The Dissemination and Implementation Committee is seeking volunteers who can help pilot this video project. Volunteers would be provided with the short video, questions to be asked of the audience before the video is viewed, suggested discussion questions for immediately after the video is viewed, and questions that would be asked six months after the video is viewed and discussed. The latter will be useful in assessing whether surgeons change their practice patterns as a result of the educational endeavor and whether the video and discussion were the inspiration for a quality improvement project at the institution.

The first video in the series will focus on ways to implement clinical trial results regarding axillary staging for breast cancer. For instance, the American College of Surgeons Oncology Group (ACOSOG) Z0011 trial showed that axillary lymph node dissection could be safely omitted in early-stage breast cancer patients undergoing breast conservation who have one or two positive sentinel lymph nodes.²

**Implementing Z1071 trial results**

The ACOSOG Z1071 trial examined the accuracy of sentinel lymph node surgery in patients with positive nodes who were treated with neoadjuvant chemotherapy.³ This study, together with the sentinel lymph node biopsy in patients with breast cancer before and after neoadjuvant chemotherapy (SENTINA) trial and the sentinel node biopsy after neoadjuvant chemotherapy in biopsy-proven node-positive breast cancer, the SN FNAC
Thoughtful implementation of these trials is important to ensure that trial results are not applied in circumstances excluded from the trial or in populations of patients who were ineligible for the trial.

(Sentinel Node Following Neoadjuvant Chemotherapy) study, demonstrated many important points that need dissemination, such as the superiority of using both blue dye and radioactive tracer for sentinel lymph node biopsy after chemotherapy in node-positive patients. Z1071, together with additional work in this area, has shown that placing a clip in a lymph node when percutaneous biopsy is done before chemotherapy and ensuring removal of that “clipped” node after chemotherapy are useful techniques to improve the accuracy of sentinel lymph node surgery in this setting.

Thorough implementation of these trials is important to ensure that trial results are not applied in circumstances excluded from the trial or in populations of patients who were ineligible for the trial.

Abigail Caudle, MD, FACS, a breast surgeon at the University of Texas MD Anderson Cancer Center, Houston, will kick off the video pilot project by creating a video describing the implementation of Z1071 findings, which is intended to help local tumor boards start a discussion on how to implement these findings into clinical practice.

We are looking for CoC sites that would be interested in participating in the pilot by having the video presented at their tumor board and reviewing the outcomes of the presentation. If you are interested in volunteering to use this video-based educational tool, contact Amanda Francescatti, MS, Manager, ACS CRP, at afrancescatti@facs.org.

REFERENCES


New resources available for your personal and professional development

by Connie Bura and Amanda Francescatti, MS

This month’s column features three new resources that will contribute to your personal and professional development and provide added value to you as a member of the American College of Surgeons (ACS).

On the personal side, the College remains committed to your well-being and earlier this year launched a new web page of articles and resources developed by the ACS and other leading organizations that can help you and your colleagues overcome burnout. These resources include a new assessment tool, the Physician Well-Being Index, which was made available to Fellows and Associate Fellows in January. This online tool allows users to assess their overall well-being, identify areas of risk, and access key resources.

On the professional side, the ACS Board of Governors Surgical Training Workgroup has released four new teaching aids that address key topics relevant to faculty, including Teaching Millennials, Giving Constructive Feedback, Intraoperative Teaching, and Clinical Teaching: The Teachable Moment.

This column describes an educational resource from the ACS Clinical Research Program (CRP), the Operative Standards for Cancer Surgery manuals.

Volume 1, published in 2015, is targeted at those surgeons whose practice encompasses breast, lung, pancreas, and colon cancer surgery. Volume 2 will be published later this year and will focus on operations for melanoma, gastric cancer, esophageal cancer, rectal cancer, and thyroid cancer.

Surgeon well-being

Burnout and low quality of life are common among U.S. surgeons and appear to adversely affect quality of care, job satisfaction, career longevity, and risk of suicide. The ACS is committed to providing resources to support surgeon well-being, which is vital to successful patient care.

The Physician Well-Being Index is a new ACS member benefit aimed at helping surgeons maintain an overall sense of well-being professionally and personally. It is a validated assessment tool designed to help you better understand your overall well-being and identify areas of risk in comparison with physicians across the nation.

The tool was released in January, and at press time more than 1,300 Fellows and Associate Fellows had completed the assessment. Of those ACS members, the highest levels of distress were exhibited among those surgeons 15 to 24 years into their postgraduate surgical careers. The scores among ACS members are comparable to the national sample of more than 7,300 U.S. physicians, and one-third of respondents are women. The most common resources accessed by individuals who have completed the assessment address stress and resiliency, emotional concerns, relationships, and work-life balance. A version of the tool for residents was released in February.

First-time users will need to register to access the Physician Well-Being Index. The registration screen collects the following information, which is used to create your well-being report and compare your well-being with others nationally: your e-mail address, gender, medical school graduation year, specialty, and state. This information is kept confidential. You also will need to create a password for the site and agree to the terms and conditions. A detailed privacy and confidentiality agreement is accessible from the registration page.

Once registered, you will go to the assessment screen. It should take no more than two minutes to complete, and results become available immediately. The Physician Well-Being Index tracks
MEDICAL LIABILITY COVERAGE

The American College of Surgeons has offered The Doctors Company’s medical liability insurance program as a member benefit since 2002. As the nation’s largest physician-owned medical liability carrier—insuring 10,000 surgeons and 68,000 other physicians nationwide—The Doctors Company offers insight into the broad range of surgery claims. The Doctors Company offers ACS members a unique combination of coverage features, aggressive claims defense, and unrivaled protection. Qualified ACS members receive a program discount of 5 percent and a claims-free credit of up to 25 percent, as well as participation in the company’s multi-year dividend program.

Created in 2007, the Tribute Plan rewards The Doctors Company’s members for their loyalty and their dedication to quality patient care with a significant financial award at retirement. The highest award paid to a general surgeon to date is $110,399. Learn more about this benefit at www.thedoctors.com/tribute.

Join your ACS colleagues as a member of The Doctors Company at www.thedoctors.com/ACS.

your results over time so you can retake the assessment periodically to monitor your progress and correlate changes in well-being results to life and practice events. Based on your index results, the tool provides resources when they’re needed the most. The most accurate way to assess your well-being is to benchmark your results against physicians on a national level. You will see where you exceed and where you may be at a higher risk for burnout in comparison with your peers. After completing the Physician Well-Being Index, you will have access to both national and local resources that span multiple categories and topics.

The College invites you to invest five minutes in yourself by using the Physician Well-Being Index and to retake the assessment periodically to track your progress. We welcome your feedback on the tool and encourage you to contact us at ms@facs.org with any questions about the tool and to receive your access code.

In addition to the index tool, the Surgeon Well-Being website includes a collection of articles published on burnout by the ACS and additional resources on burnout available from the American Medical Association and the Accreditation Council for Graduate Medical Education.
The ACS Board of Governors Physician Competency and Health Workgroup developed these resources and works on behalf of the members to develop new programs and tools that contribute to Fellows’ physical and mental wellness. The workgroup also is responsible for addressing issues related to surgical competency, credentialing, and practice within expected community standards.

New teaching aids for faculty
The ACS Board of Governors Surgical Training Workgroup has developed several educational resources for members that address the unique needs of faculty, particularly those surgeons practicing in nonacademic settings. Each of the following modules has been produced as a downloadable PowerPoint presentation and provides detailed strategies for resident and medical student teaching:

• Teaching Millennials covers strategies for teaching young surgeons born between 1980 and 2000.

• Giving Constructive Feedback defines feedback and addresses why it’s important, discusses obstacles to providing effective feedback, and offers suggestions for providing feedback in real-world situations.

• Intraoperative Teaching covers techniques for surgical teaching in the preoperative, intraoperative, and postoperative settings.

• Clinical Teaching: The Teachable Moment provides strategies for effectively educating students and residents.

If you have any questions or comments regarding these teaching aides, contact Connie Bura, Associate Director, Member Services, at cbura@facs.org.

Operative Standards for Cancer Surgery: An educational tool for the practicing surgical oncologist
To address the technical aspects of standardizing surgical care, the ACS CRP, a program of the Alliance for Clinical Trials in Oncology and the College, has developed the Operative Standards for Cancer Surgery manuals. First envisioned by Heidi Nelson, MD, FACS, Past-Program Director of the ACS CRP, and led by Kelly K. Hunt, MD, FACS, current Director of the ACS CRP, the manuals offer minimum standards for various cancer operations and can serve as a reference for clinical trials that involve surgical interventions.

With the participation of more than 120 surgeons, Operative Standards for Cancer Surgery Volume 1 is perhaps the best resource available on the conduct of operations for cancer of the breast, colon, lung, and pancreas. The second volume, led by Matthew H.G. Katz, MD, FACS, and Nirmal K. Veeramachaneni, MD, FACS, will be published in 2017. Volume 2 involved contributions by more than 140 surgeons and will include operations for melanoma, gastric cancer, esophageal cancer, rectal cancer, and thyroid cancer. For more information, contact Amanda Francescatti, MS, Manager, ACS CRP, at afrancescatti@facs.org.

The Physician Well-Being Index and educational modules are both important resources that are available as free benefits of ACS membership, and the Operative Standards for Cancer Surgery manual is a must-have for every surgeon’s library. Be sure to take advantage of all these products. ♦
Time-outs and their role in improving safety and quality in surgery

A time-out, which The Joint Commission defines as “an immediate pause by the entire surgical team to confirm the correct patient, procedure, and site,” was introduced in 2003, when the Joint Commission’s Board of Commissioners approved the original Universal Protocol for Preventing Wrong Site, Wrong Procedure, and Wrong Person Surgery for all accredited hospitals, ambulatory care centers, and office-based surgery facilities.1

Purpose of the time-out
While initially viewed as a safety measure to prevent harm as a result of operating on the wrong patient or the wrong site or performing the wrong procedure, time-outs evolved to include quality patient care and enhanced performance of the surgical team. The original time-out took the form of checklists, to which the surgical care team refers at different phases of a surgical procedure. At different stages of the operation, even at initiation of the incision, other elements are verified, including the plan for the procedure and team member assignments, as well as the best ways to communicate with team members during the procedure. Another pause before the end of the procedure turns the team’s attention toward ensuring that no foreign bodies are left behind and that all aspects of the operation have been successfully concluded. A final debriefing takes place at the conclusion of the operation.

When practiced in this step-by-step manner, with true involvement of all members of the team led by the senior surgeon, checklists are extremely effective during the operation and postoperatively as they contribute to improved patient outcomes.

It is important to note that strong team member commitment is key to the successful implementation of checklists in preventing harm to patients and in improving quality. As someone who participated in the development and initial application of the World Health Organization (WHO) surgical safety checklist, I became convinced early on that there is no better time to establish the necessary “bond for the day” of my team than...
During the time-out, the team comes together and develops a shared mental model of what the procedure will be like, increasing the chances that all members will have the situational awareness needed to prevent harm.

A well-executed initial time-out. In the late 2000s, during my tenure as chair of the department of surgery at The University of Washington Medical Center, Seattle, the center was one of eight hospitals around the world that participated in the development of the WHO checklist.²

A time-out breaks the ice at the beginning of the day with respectful discussion of the steps of the operation with the patient and team members, including potential challenges and a plan B if one is needed. This initial time-out is an opportunity for other members of the team to share their thoughts, which seemed to set up the group for a good day every time. During this briefing, I discussed with the resident assigned to the case his or her level of experience, and we planned what portion of the operation each of us would perform and set expectations for the rest of the procedure. We reviewed aspects of the patient medical history that may have been somewhat unrelated to the operation to be performed, yet vital to the anesthesiologist and other members of the team.

When done well, these time-outs reflected a patient-centered safety culture and developed an environment of trust in staff who were empowered to report patient safety events without fear of reprisal, while acknowledging that humans are fallible and make mistakes."³

During the time-out, the team comes together and develops a shared mental model of what the procedure will be like, increasing the chances that all members will have the situational awareness needed to prevent harm. It also establishes the leadership of the team and empowers all members to work on behalf of the patient. Administration of drugs, control of glycemia, allergies, and other factors that can affect an operation’s outcome are discussed in these briefings.

**More work to be done**

Despite the progress in time-out implementation, 104 sentinel events involving the wrong patient, wrong site, or wrong procedure were reported in 2016, according to data from The Joint Commission, making them the second-most reported sentinel events of the year.⁴ From 2005 to 2016, a total of 1,281 wrong patient, wrong site, or wrong procedure sentinel events have been reported to The Joint Commission, underscoring the crucial need for effective preoperative communication and planning for surgical teams.*

Some errors related to misuse of time-outs/checklists as determined by The Joint Commission include the following:

- Time-outs occurring before all staff members are ready or before prep and drape occur
- Performing time-outs without full participation of the staff
- Lack of senior leadership engagement in the time-out
- Staff feeling passive or unable to speak up
- Inconsistent organizational focus on patient safety
- Policy changes made with inadequate or inconsistent staff education
- Distractions or rushed time-outs

*The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these data are not an epidemiologic data set, and no conclusions should be drawn about the actual relative frequency of events or trends in events over time.

JUN 2017 BULLETIN American College of Surgeons
National Time Out Day

The Joint Commission supports the Association of periOperative Registered Nurses’ (AORN) National Time Out Day, an initiative that began in 2004 that calls for surgeons and surgical teams to hit the pause button before starting an operation and to review the importance of creating a safe environment for every patient, every time. This year’s National Time Out Day is Wednesday, June 14, and the theme is “Be a SUPERHERO—take a time-out for your patients,” which is an acronym that stands for the following:

- **Support** a safety culture
- **Use** The Joint Commission’s Universal Protocol and AORN’s Surgical Checklist
- **Proactively** reduce risk in the OR
- **Effect** change in your organization
- **Reduce** harm to patients
- **Have** frank discussions about hazardous situations
- **Empower** others to speak up when a patient is at risk

National Time Out Day ties into safety culture development for surgical teams, a concept frequently addressed in this column. By opening the lines of communication between all members of the team, and strengthening and empowering those relationships, every member of the team feels comfortable speaking up before, during, or after a procedure.

For more information on time-outs or National Time Out Day, visit www.aorn.org.

**Disclaimer**

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

**REFERENCES**

Sleep disorders are a significant health issue in the U.S. One of these disorders, sleep apnea, affects an estimated 22 million Americans, with 80 percent of the moderate to severe obstructive sleep apnea (OSA) cases going undiagnosed. Sleep apnea has three forms that include the most prevalent form, OSA, which is a mechanical blockage of the airway when the tongue collapses against the soft palate, and the soft palate collapses against the back of the throat while sleeping, effectively closing off the airway.

A second form is central sleep apnea, where there is no mechanical blockage but the brain does not signal the muscles to breathe. The third form is complex sleep apnea and is a combination of the first two forms. Each apneic event partially arouses the sleeper to signal breathing to resume. In severe cases, this process may happen hundreds of times per night—most intensely during rapid eye movement (commonly known as REM) sleep. As a result, people with sleep apnea experience fragmented and poor-quality sleep along with reduced oxygenation of the blood.*

Health risks and diagnosis
Left untreated, OSA can lead to hypertension, stroke, congestive heart failure, and atrial fibrillation and is associated with type 2 diabetes and depression. Due to persistent daytime drowsiness an individual may experience before being diagnosed and treated, OSA has been implicated in heavy machinery-related injuries and motor vehicle-related injuries. OSA strikes people of any age, including infants, and is most commonly seen in overweight or obese men older than 40 years of age.*

The only definitive diagnostic tool for this condition is a sleep study performed in a sleep laboratory overnight. Very few patients undergo a formal sleep study, which is unfortunate because the presence of sleep apnea presents a challenge for both pain management and for administering anesthesia for surgical procedures. A clinical screening for OSA is strongly advised, such as the STOP-Bang Questionnaire, which examines Snoring, Tired, Observed sleep events, Pressure (hypertension),

Body mass index, Age over 50, Neck size, Gender: male.†

To examine the occurrence of injured motor vehicle drivers with obstructive sleep apnea contained in the National Trauma Data Bank® (NTDB®) research dataset admission year 2015, medical records were searched using the International Classification of Diseases, Ninth and 10th Revisions, Clinical Modification (ICD-9-CM/ICD-10-CM) codes. Specifically searched were records that contained either a diagnosis code of 327.23/G47.33 (obstructive sleep apnea) or G47.39 (other sleep apnea) or 780.57/G47.30 (unspecified sleep apnea). These records were then searched for motor vehicle drivers as the injured person using ICD-9 codes E810–E819 (motor vehicle traffic injury) and a post-decimal code value of 1 (injured party is the driver); or an ICD-10 diagnosis code Vxx.0xxx that contained the letter V as the first character (indicating transport injury) and a value of zero for the fourth character, signifying the driver as the injured person.

A total of 52 records were found, 50 of which contained a discharge status, including 27 patients discharged to home, nine to acute care/rehab, and 12 to skilled nursing facilities; two patients died. Of these patients, 63.4 percent were men, on average 58.5 years old, had an average hospital length of stay of 7.2 days, an intensive care unit length of stay of 5.4 days, an average injury severity score of 9.8, and were on the ventilator for an average of 4.25 days (see Figure 1, this page).

Getting a good night’s sleep
Several treatment options exist for moderate to severe OSA. The most common treatment is positive airway pressure delivered by devices worn while sleeping. The shoebox-size device pushes air into the airway at a high enough pressure to prevent apnea episodes. Other treatments include avoiding sleeping on one’s back, weight loss, nighttime dental devices that push the tongue or jaw forward, as well as various surgical procedures. Whatever treatment one chooses, a good night’s sleep is far better than being asleep at the wheel while driving your car the following day.

Throughout the year, we will highlight NTDB data through brief monthly reports in the Bulletin. The NTDB Annual Report 2016 is available on the American College of Surgeons’ website as a PDF file at facs.org/quality-programs/truma/ntdb. In addition, information is available on the NTDB web page about how to obtain NTDB data for more detailed study. To submit your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.

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

The evolution of organ transplantation is one of medicine’s great stories, and much of it was written by Thomas E. Starzl, MD, PhD, FACS, who died March 4 at age 90. A Fellow of the American College of Surgeons since 1961, Dr. Starzl added a new dimension to the field of medicine by innovating and perfecting methods of replacing failing vital organs. There are few instances in which a single individual has been so primarily responsible for establishing an important field. Even this statement understates Dr. Starzl’s influence, considering the overall impact and downstream effects of transplantation on other disciplines. For example, most physicians would agree that modern immunology owes its maturation to transplantation rather than the other way around.

Lifelong interest in scientific research
Tom Starzl grew up in Le Mars, IA, a small town where his father was the editor, publisher, and owner of the local newspaper. As a boy, Tom worked on his father’s paper doing everything from acting as a printer’s devil (apprentice) and delivery boy to reporting. After graduation from Westminster College, Fulton, MO, and a year and a half in the U.S. Navy, his mother, a nurse, persuaded him to pursue a career in medicine. Entering medical school at Northwestern University School of Medicine, Chicago, IL., he supported himself by working as a copywriter for the Chicago Tribune. He developed a serious interest in neuroscience and dropped out of medical school for a year of research, earning a PhD in neurophysiology and publishing several papers still considered important classics.

After medical school, he began a surgical residency at Johns Hopkins, Baltimore, MD. At Hopkins, he did research in cardiac physiology, developing a model of complete heart block in dogs and its treatment with the first epicardial pacemaker.

After four years at Hopkins, he finished his surgical training at the University of Miami, FL. There Starzl became fascinated with the liver and its double blood supply. At first, this part-time research was aimed not at transplantation but at studying changes in the liver’s metabolism when a portacaval shunt deprived this organ of nutrients and other elements in portal blood.

Returning to Northwestern for a year of training in thoracic surgery under the pioneering open-heart surgeon John Lewis, MD, FACS, and then two years on the faculty, he continued his investigation of the liver, now with the idea of transplanting it. Because immunosuppression did not yet exist, he studied the course of liver transplant rejection in unmodified dogs. Surprisingly, he uncovered a provocative finding—occasionally a recipient, after beginning to reject its allograft, would spontaneously recover. This led him to hypothesize that rejection might be reversible, a notion that became the key to one of his major breakthroughs.

In 1962, just as Dr. Starzl moved to the University of Colorado, Denver, he learned that Roy Y. Calne, MB, BS, FACS(Hon), FRCS, at Cambridge University, U.K., and Charlie Zukowski, MD, Medical College of Virginia, Richmond, had reported that the anti-cancer drug methotrexate and its derivative Imuran could briefly delay rejection of kidney allografts in dogs. This was the first use of chemical immunosuppression. Dr. Starzl obtained a supply of the new drugs and began testing their effect in dogs with liver and kidney allografts. He soon made a crucial observation that others had missed. When Imuran alone was administered, signs of rejection always occurred.

In memoriam:
Thomas E. Starzl, MD, PhD, FACS, organ transplantation pioneer

by Clyde F. Barker, MD, FACS
There are few instances in which a single individual has been so primarily responsible for establishing an important field.

A watershed moment
Meanwhile, in Boston, MA, Joseph Murray, MD, FACS, and Professor Calne began to employ the new immunosuppressive drugs in human kidney recipients. In September 1963, the National Research Council (NRC) convened a conference to assess the outcome of human kidney transplantation. Approximately 25 of the world’s transplant clinicians reviewed the status of 200 kidney transplants that had been performed. The results presented were extremely discouraging. Less than 10 percent of the allograft recipients had survived three months. Most of these patients had been treated with total body irradiation. Only six patients had survived a year. Dr. Murray reported on his first 10 patients treated with Imuran instead of radiation. One had survived for a year; the other nine died within six months. At this point, the new drugs seemed no more effective than radiation. The mood at the conference became so gloomy that some participants questioned whether continued human transplantation could be justified. The pessimism was dispelled by a single presentation—the one by Dr. Starzl. He presented the results of his first 30 transplants. He described his immunosuppressive protocol that had allowed about 80 percent one-year graft survival. He had more surviving patients by far than the rest of the world’s participants combined.

Dr. Starzl’s presentation caused a sensation. It was a watershed event. The outlook for transplantation was completely changed. Harvard University School of Medicine, Boston, surgeon and transplant historian Nicholas Tilney, MD, FACS, described it as “letting the genie out of the bottle.”

Many conference attendees promptly followed Dr. Starzl to Denver to learn about his immunosuppressive protocol. The news of the breakthrough spread quickly. Before the NRC conference, there had been only three active renal transplant centers in North America—Boston, Denver, and Richmond. As the effectiveness of Dr. Starzl’s innovative immunosuppression became known, within a year, 50 new transplant programs began in the U.S. alone. All of them and others that began subsequently adopted the Starzl “cocktail immunosuppression.” In fact, this protocol remained the world standard for almost the next two decades.

Dr. Starzl now felt ready to approach his primary goal of liver transplantation. Despite his extensive experience with this procedure in dogs, it proved to be difficult in humans. In March 1963, his first patient bled to death on the operating table. The next four died within days, causing a self-imposed moratorium for three years of further research. One important modification was the introduction of an additional immunosuppressive agent antilymphocyte globulin; Dr. Starzl was the first surgeon to employ the agent clinically. In July 1967, he performed the world’s first successful liver transplant and followed with four more that were initially successful. Yet the procedure remained so controversial that Dr. Starzl’s colleagues at the University of Colorado refused to refer their end-stage liver failure patients to him. Although many of Dr. Starzl’s patients survived, approximately 50 percent died within a year. Thus, he had proved liver transplantation feasible, but it was a qualified success. To be accepted as
a clinical service, further improvement would be necessary.

The next innovation that can be credited to Dr. Starzl is successful application of cyclosporine. This wonder drug revolutionized transplantation by strikingly improving kidney transplant results and greatly facilitating successful extrarenal transplants. Professor Calne originated the use of this new immunosuppressive agent. He found it more potent than Imuran but also toxic in high doses, leading to infections, lymphomas, and renal damage. Initial clinical results ranged from unimpressive to poor, causing health care professionals to believe the drug should be abandoned. Once again, as he had before with Imuran, Dr. Starzl found that adding prednisone and using the new drug in appropriate doses could lead to strikingly improved outcomes for kidney transplants. In addition, this protocol was the key to transforming transplantation of extrarenal organs into a practical clinical service.

After moving to the University of Pittsburgh, PA, in 1981, Dr. Starzl was soon performing as many as 600 transplants a year with excellent results.

Cyclosporine soon became the standard baseline immunosuppressant and remained so until 1989, when Dr. Starzl showed that rejection of liver and other organ allografts resistant to treatment by cyclosporine, steroids, and antibodies could often be reversed by an even more potent drug, tacrolimus. Tacrolimus has now largely replaced cyclosporine as the usual baseline agent. In addition, it has allowed successful small bowel and multivisceral transplants, which Dr. Starzl also was the first to accomplish.

**Lasting impact**

Dr. Starzl’s immunosuppression innovations with agents such as cyclosporine, tacrolimus, and T-cell antibodies now allow excellent short-term and midterm survival of allografts. Nevertheless, because of morbidity from drug toxicity and late graft loss from chronic rejection, achievement of drug-free immunosuppression remains the ultimate goal. Plans for introducing tolerance invariably start with review of the 1953 demonstration by Billingham, Brent, and Medawar that chimerism induced in neonatal mice by inoculating them with lymphoid cells allowed acceptance of donor strain skin grafts. But in large animals and humans, exploration of donor cell inoculation for introducing tolerance was disappointing. In addition, because transplants were often successful without inoculating the recipient with donor cells, it seemed that donor cell chimerism was irrelevant. For 30 years, no one had suggested that successful organ recipients possessed donor leukocyte chimerism. But it was Dr. Starzl’s hypothesis that the recipients did.

In 1992, Dr. Starzl dramatically refocused attention on the role of chimerism by demonstrating that in a group of his patients who had maintained successful kidney or liver grafts for up to three decades, donor leukocytes were indeed present. Sensitive immunochemical and molecular assays were used to detect the donor cells. In some patients, donor cells could not be found in blood—only in biopsies of skin, lymph nodes, and other tissues. Dr. Starzl’s extensive search showed that a microchimeric state was present in all 30 patients.
Dr. Starzl’s influence has been multiplied by the accomplishments of the hundreds of surgeons who traveled to Colorado and Pittsburgh to learn from him. His disciples and subsequent generations trained by them continue to lead the transplant programs of the world.

Consummate surgeon-scientist
Dr. Starzl stopped operating more than two decades ago. At that time, he professed the intent to slow down and devote time to his nonmedical and scientific passions and interests, including Joy, his wife of 36 years; music; his dogs, which accompanied him everywhere, including his office; and the cinema. This never happened. Instead, until the time of his death, he continued to direct the Thomas E. Starzl Transplantation Institute at the University of Pittsburgh and to pursue perhaps the most important research of his career as he sought the Holy Grail of transplantation—immunologic tolerance.

When asked if he missed surgery, Dr. Starzl replied that he could never really enjoy operating because he was not emotionally equipped to deal with the loss of a patient. As he put it, “All triumphs in medicine are the forgotten sorrows of past days.” To the end of his life, he remained haunted by memories of tragic outcomes during his early transplant experience. He formed a lasting bond with his surviving patients, remaining in close touch with them for the rest of their lives.

Dr. Starzl’s influence has been multiplied by the accomplishments of the hundreds of surgeons who traveled to Colorado and Pittsburgh to learn from him. His disciples and subsequent generations trained by them continue to lead the transplant programs of the world. To show their admiration and affection for him, more than 200 of them returned to Pittsburgh in 2016 for his 90th birthday celebration.

Tom Starzl—the consummate surgeon-scientist of our time—will be greatly missed. He is survived by his wife Joy, his son Timothy, and his grandson Ravi. He was predeceased by his daughter Rebecca and his son Thomas.
The **new** QI conference that brings together staff from all surgical areas **to share experiences and learn.**

Register today!

facs.org/QualitySafetyConference
The Coalition for Quality in Geriatric Surgery (CQGS), a multidisciplinary coalition representing the American College of Surgeons (ACS) and 58 other stakeholder organizations with the support of The John A. Hartford Foundation, has released the first comprehensive set of hospital-level surgical care standards for older adults. The standards have been published online in the *Annals of Surgery* ahead of print publication in a report titled “Hospital standards to promote optimal surgical care of the older adult,” available at bit.ly/2p1TmNC.

These preliminary standards reflect the shift toward interdisciplinary care of surgical patients, while taking into account the unique physiological changes related to aging and chronic diseases that can sometimes leave older surgical patients at risk for postoperative complications.

“More older people at increasingly advanced ages are undergoing surgery, and it is critical that we move the evidence we have about good surgical care for this population into practice. These preliminary standards put a focus on outcomes that really matter to older people and their families, and are a monumental step forward. We are proud to support and partner with the American College of Surgeons on this important work,” said Terry Fulmer, PhD, RN, FAAN, president of The John A. Hartford Foundation.

**Developing the framework**

Since its formation in 2015, the CQGS has been working to develop a national framework to improve the quality of surgical care for older adults. Because no such infrastructure exists at present, geriatric surgical care is often delivered in a fractured health care system that is not readily prepared to address an aging population. And yet, this vulnerable population is on the rise—more than 40 million adults ages 65 years and older are living in the U.S. today, and that number is projected to grow to 24 percent of the population by 2060 from 15 percent in 2015, according to the U.S. Census Bureau. Further, the Centers for Disease Control and Prevention reports that of the 51.4 million procedures performed in 2010, 38 percent of the patients were 65 years and older.

The new geriatric surgical care standards build on existing quality indicators, National Quality Forum-endorsed quality measures, and previous work by the ACS, American...
These preliminary standards reflect the shift toward interdisciplinary care of surgical patients, while taking into account the unique physiological changes related to aging and chronic diseases that can sometimes leave older surgical patients at risk for postoperative complications.

Geriatrics Society, and The John A. Hartford Foundation, which have previously collaborated to develop two sets of perioperative care guidelines. However, standards of care differ from guidelines. “Guidelines are usually recommendations based on an evidence review and typically issued by professional societies or other expert panels,” explained Julia Berian, MD, lead author and an ACS Clinical Scholar. “Standards, as they exist in ACS Quality Programs, are more than recommendations—they are elevated to the level of care practices that are expected to be completed, and then verified by peer reviewers who evaluate whether the standards are being met and practiced appropriately in a clinical setting.”

For the *Annals* study, an initial 2015 CQGS stakeholders conference identified care gaps for older surgical patients and ideal future solutions across four areas: goals and decision making, perioperative optimization, clinical perioperative care, and care transitions. These categories provided structure for the preliminary standards. Through the use of a modified RAND-University of California, Los Angeles, Appropriateness Methodology, stakeholders rated these candidate standards during a second stakeholders’ conference in May 2016. “The methodology used is a validated technique for putting together the best level of published evidence with the input of thought leaders in the field, giving us a useful combination of efficacy, effectiveness, feasibility, and implementation,” said Clifford Y. Ko, MD, MS, MSHS, FACS, study co-author, CQGS Co-Principal Investigator, and Director of the ACS Division of Research and Optimal Patient Care and the ACS National Surgical Quality Improvement Program®.

**Preliminary standards**

The preliminary standards were divided into the following four sections:

- **Continuum of care**, encompassing patient-centered goals and decision making, perioperative optimization, and transitions of care
- **Clinical care**, encompassing the phases of immediately preoperative, intraoperative, and postoperative care
- **Program management**, encompassing personnel and committee structure of a geriatric surgery program, and credentialing and education standards for hospital personnel who care for older surgical patients
- **Patient outcomes and follow-up**

CQGS stakeholders reviewed and rated the 308 proposed standards of care for both validity and feasibility. The stakeholders rated 306 of 308 (99 percent) of the standards as valid to improve the quality of geriatric surgery, and 94 percent of the standards (290 out of 309) as feasible for implementation. Authors wrote, “The widespread agreement on the validity of these comprehensive standards indicates that we know what high-quality care for older adult surgical patients should look like.” However, in terms of feasibility, they found that “some standards were perceived to require high resources, and, therefore, the feasibility of implementation across hospitals that vary in size, location, and teaching status remains uncertain.”

Although the end goal is to implement the CQGS standards in a formalized verification and quality improvement program through the ACS, there is still work to be done. The preliminary standards are currently undergoing a two-phased pilot process.
Once the pilot phases have been completed and a national verification program is available, participating hospitals will make the commitment to ensure that geriatric surgical quality is interconnected with a hospital’s quality and safety culture.

“Now that we’ve confirmed what high-quality surgical care for older adults should look like, we’re ready to evaluate how these standards will work in a hospital environment. This is an important aspect of the project, and the feedback portion from hospitals is vitally important,” said Ronnie Rosenthal, MD, MS, FACS, CQGS Co-Principal Investigator.

**Pilot testing**
The alpha pilot phase launched in January and is now in its final stages. Fifteen end-user hospitals reviewed the standards to provide feedback to CQGS on anticipated challenges in meeting the standards, identifying unclear standards, and gaining insight on the value of implementing these standards in their hospital environment and with their patients.

“Although feasibility of implementation may be a challenge for some hospitals, the CQGS continues to explore ways to make these standards flexible across different hospital settings, sizes, and resource levels. Our alpha pilot will elicit real-world feedback from frontline hospitals and providers about these standards,” Dr. Berian said.

A beta pilot phase will follow in late 2017, and will engage six hospitals to actually implement the standards for older surgical patients.

Once the pilot phases have been completed and a national verification program is available, participating hospitals will make the commitment to ensure that geriatric surgical quality is interconnected with a hospital’s quality and safety culture.

This program shows great potential to transform surgery for older adults across the nation, according to Dr. Ko. “As opposed to many of the outstanding clinically based quality improvement programs that target a specific disease, this program targets an enormous and increasing segment of our population,” he said. “To that end, except for pediatric hospitals, this program has the potential to capture all or nearly all hospitals in the country. But to truly have these standards widely accepted, it will be the local health care providers and facilities that will need to understand the importance of the resources and processes needed to optimally care for geriatric surgical patients.”

**REFERENCES**


New ACS surgical practice guidelines now include patient education

by Sapna Dalal, MHSA, and Nancy Strand, MPH, RN

The American College of Surgeons (ACS) Evidence-Based Decisions in Surgery (EBDS) and Patient Education programs have collaborated to offer established surgical practice guidelines that surgeons can use at the point of care. The modules, which are viewable on all digital platforms, now include relevant patient education information to aid in high-quality care for surgical patients.

The EBDS modules provide peer-reviewed recommendations for surgeons based on clinical practice guidelines promulgated by national and international professional organizations and government agencies. The surgical recommendations are presented along with the strength of the evidence that supports the recommendations. Grading of the evidence is done with the understanding that the contribution of surgical judgment in developing effective and safe treatment strategies is essential for effective care of individual surgical patients. As such, the modules are intended to guide surgical practice, but should always take into consideration the needs and preferences of individual patients.

Each EBDS module has a section labeled “Suggested Talking Points for Patient Education,” which covers topics such as who developed the guidelines, recommended actions for patients and physicians, and potential benefits and harms associated with these recommendations. Where applicable, links will now be included in the modules that will lead the user directly to the patient education material that supports the particular topic. For example, the EBDS module for Hemodialysis Access has a link to the Patient Education section of the Central Lines Home Skills Kit. The home page for the Central Lines Home Skills Kit provides a host of information, ranging from a welcome video, to a Central Lines Home Skills booklet, to an evaluation.

At present, 13 EBDS modules have links to patient education material from the ACS. As more modules and patient education materials are developed, more comprehensive offerings will be available to surgeon members. Brochures for patients provide all pre-, peri-, and postoperative information to help patients make informed decisions and fully participate in all aspects of their care for many common surgical procedures. The Home Skills Kit series uses a multimedia approach to explain, demonstrate, and provide directed learning experiences and practice opportunities for patients requiring a lung procedure, an ostomy, feeding tube, central line placement, or complex wound care.

ACS Patient Education resources are based on contemporary principles of evidence-based medicine tailored to the individual patient’s needs, with a focus on health literacy. Patients who are trained to actively participate in their care show improved treatment compliance, decreased complications, and enhanced outcomes and satisfaction.*

With outpatient operations representing a growing share (65 percent, 17.3 million) of all procedures performed in the U.S.,† patient preparation is essential to the delivery of high-value, safe surgical care.

To learn more and view the modules, go to ebds.facs.org. After logging in with ACS credentials, click on the Topics tab and take note of the modules with a tag labeled “Updated” to find modules that have ACS Patient Education information included. This can be found in the Suggested Talking Points for Patient Education section with links directly to the content available.

Alabama Chapter hosts Resident Meeting

The Alabama Chapter of the American College of Surgeons (ACS) hosted a Resident Meeting March 4 at the Renaissance Birmingham Ross Bridge Golf Resort & Spa in Birmingham. Residents from the University of Alabama at Birmingham; Brookwood Baptist Health, Birmingham; and the University of South Alabama, Mobile, residency training programs attended the event. Sessions included the following:

- Tips & Trends: Cybersecurity & HIPAA (Health Insurance Portability and Accountability Act) Security for the Healthcare Provider
- Physician Contracts: What Should Be Included, Compensation and Benefits, and Negotiating Tips
- Financial Planning and Investment Management
- Keys to Success for the Young Surgeon

Connecticut Chapter awards scholarships to graduating physicians

Honoring its longstanding commitment to medical education, the Connecticut Chapter of the ACS recently awarded scholarships to physicians graduating from medical schools in Connecticut. The awards were created to stimulate student interest in the surgical disciplines and to recognize outstanding achievement in these areas.

Awards were presented to Parwiz Abrahami, MD, Yale School of Medicine, New Haven; Dardan Beqiri, MD, University of Connecticut School of Medicine, Farmington; and Timothy Kirk O’Rourke, MD, Frank H. Netter MD School of Medicine, Quinnipiac University, Hamden. The Connecticut Chapter has presented awards to graduating physicians from Yale and the University of Connecticut for decades and was pleased to sponsor a new award for the inaugural graduating class of the Netter School of Medicine.
Massachusetts Chapter sponsors resident attendance at ACS Leadership & Advocacy Summit

The Massachusetts Chapter of the College (MCACS) selected Erica Kane, MD, MPH, of Baystate Medical Center, Springfield, as the winner of its Sixth Annual Resident Essay Competition. She attended the 2017 Leadership & Advocacy Summit in Washington, DC, May 6–9.

To be considered for the competition, residents must be in an Accreditation Council for Graduate Medical Education-approved Massachusetts surgical residency training program and submit a brief essay on why they are interested in attending the summit. Dr. Kane expressed interest in advocacy work last December, when she attended the MCACS Annual Meeting in Boston. In her essay, she wrote, “This conference provides the unique circumstance to interact with individuals who are impassioned by the potential to metamorphose our health care system into one that protects and promotes its physicians and advocates for the best care of our patients.”

Dr. Kane also won the ACS-sponsored Summit Resident Travel Award that is given to a limited number of Resident members of the ACS who are interested in attending the Leadership & Advocacy Summit.

Southern California Chapter offers financial support to residents and young surgeons

In conjunction with the Southern California Chapter’s (SCCACS) Annual Scientific meeting, January 20–22 in Santa Barbara, CA, a Young Surgeons breakfast allowed attendees to discuss work/life balance with distinguished guest surgeons. The chapter supports its group of young surgeons by providing travel stipends of $1,200 each to three qualified surgeons to help defray meeting costs. The recipients of the 2017 Young Surgeon Travel Stipends are Jukes Namm, MD, Loma Linda University Medical Center; Karen Zaghiyan, MD, FACS, Cedars-Sinai Medical Center, Los Angeles; and Nimmi Kapoor, MD, FACS, private practice, Woodland Hills.

Resident Research Awards were given to the top three papers submitted for the Annual Scientific Meeting. The 2017 winners were as follow:

• First place ($500)—Halley Vora, MD, Cedars-Sinai, for Lobular
Carcinoma In Situ: A 15-Year Single Institution Review

• Second place ($300)—Aanaar Siletz, MD, PhD, University of California (UC), Los Angeles, for Emergent Abdominal Surgery: How Do Laparoscopic and Open Approaches Compare?

• Third place ($200)—Sarath Sujatha-Bhaskar, MD, UC Irvine, for The Growing Utilization of Laparoscopy in Emergent Colonic Disease

In addition, the Region IX Trauma Competition took place December 3 at the University of Southern California, Los Angeles. A one-day symposium featured the top clinical and basic science papers from California, Nevada, Arizona, and Hawaii. The abstracts were submitted as part of the chapter’s annual meeting submission process. The winners from the competition included the following:

• Clinical winner: Rachel Hogen MD, University of Southern California, for Adjunctive Use of Hepatic Angioembolization following Damage Control Laparotomy: A Propensity Score Matched Analysis

• Runner-up: Jason Brill, MD, Naval Medical Center, San Diego, for The Rate of Deep Vein Thrombosis Doubles in Trauma

• Basic science winner: Theresa Chan, MD, UC San Diego, for CHRFAM7A Expression Implies a Uniquely Human Mechanism Gauging Human Inflammation

• Basic science runner-up: James Becker, MD, UC Davis, for Secondary Renal Injury in the Absence of Shock in a Murine Pulmonary Contusion Model of Trauma

The winning paper in the 2017 Physician-in-Training Cancer Research Paper Competition, also held in conjunction with the SCCACS Annual Scientific Meeting, was written by Nicholas Manguso, MD, Cedars-Sinai Medical Center, and titled Prognostic Factors Associated with Outcomes in Small Bowel Neuroendocrine Tumors. Dr. Manguso’s paper will be entered in the national Physician-in-Training Cancer Research Paper Competition in October at the annual Commission on Cancer meeting.

Greece Chapter hosts three-day surgical course

The Greece Chapter of the ACS, as a recipient of the Dr. Pon Fund Initiative Award, hosted a surgical course May 26–28 in Athens for physicians, residents, and senior medical students. The course provided skills training and theoretical education in a number of basic surgical procedures presented through case studies.

Several Fellows of the College participated in the educational program, including the following:

• David B. Hoyt, MD, FACS, Executive Director, ACS

• Patricia L. Turner, MD, FACS, Director, ACS Division of Member Services

• George Velma, MD, PhD, FACS, John F. Burke Professor of Surgery, Harvard Medical School, and division chief of trauma, emergency surgery and critical care, Massachusetts General Hospital, Boston

• Richard Schulick, MD, MBA, FACS, professor and chairman of surgery, University of Colorado School of Medicine, Denver

• Adil H. Haider, MD, MPH, FACS, Kessler Director, Center for Surgery and Public Health, Brigham and Women’s Hospital, Harvard Medical School and Harvard School of Public Health, Boston

• Elias Degiannis, MD, PhD, FACS, professor of surgery, University of Witwatersrand, Johannesburg, South Africa
Portugal Chapter: Representatives from the Portugal Chapter address the audience during the XXXVII National Congress of the Portuguese Society of Surgery.

Jamal J. Hoballah, MD, MBA, FACS, chairman of surgery, American University of Beirut, Lebanon.

Portugal Chapter presents bleeding control program
Medical students from the Faculdade de Medicina da Universidade de Lisboa and the Portugal Chapter of the ACS organized a hands-on training course at the Eighth Annual International Medical Students (AIMS) Meeting, March 8–12 in Lisbon, Portugal. More than 800 individuals attended the AIMS Meeting. The focus of the course was on the ACS Stop the Bleed®—Save a Life program. (See related stories, pages 11 and 17.)

The ABCs of Bleeding, based on the comprehensive set of slides available at bleedingcontrol.org, were presented. The hands-on training sessions were structured in the following three stations:

• Station 1: Training on covering the wound and using a tourniquet
• Station 2: Arm dummies used for vascular simulation were adapted as “bleeding arms” for attendees to practice bleeding control
• Station 3: Simulated unexpected bleeding disaster

In addition, the Portugal Chapter hosted a session at the XXXVII National Congress of the Portuguese Society of Surgery, March 16–17 in Figueira da Foz. The National Congress is one of the most respected and largest events for surgeons in Portugal, with more than 550 surgeons and residents attending this year.

The Portugal Chapter session, which addressed The Uncertainty in Surgical Practice, has been gaining a relevant place in the national program. Specific topics covered included living with uncertainty, decision making based on imperfect data and limited knowledge, the ethical issues of getting a second opinion in the operating room, making decisions in the emergency department, and disruptive behavior due to uncertainty and burnout.

♦

Atish Chopra, MD; Lucyna Cieciura, MD; J. Gregory Modrall, MD, FACS; and colleagues found that over 20 years, approximately 50 percent of aorto-enteric fistula (AEF) repair patients died within 60 days. Gastrointestinal complications increase the risk of mortality more than threefold, representing an attractive surgically modifiable risk factor. Future multi-center studies are required to clarify optimal methods of arterial and gastrointestinal reconstruction in AEF.

This article and all other JACS content is available at www.journalacs.org.
Save Up to $3,762 on Group Long Term Disability Insurance

American College of Surgeons Members can save 30% on annual premiums

Current Long Term Disability Rate Chart
Annual Cost for benefits of $10,000 a month with a 90 day waiting period.

<table>
<thead>
<tr>
<th>Age</th>
<th>Base Rate</th>
<th>Your Rate</th>
<th>Your Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>$1,558.00</td>
<td>$1,090.60</td>
<td>$467.40</td>
</tr>
<tr>
<td>40</td>
<td>$2,382.80</td>
<td>$1,667.96</td>
<td>$714.84</td>
</tr>
<tr>
<td>45</td>
<td>$3,952.80</td>
<td>$2,766.96</td>
<td>$1,185.84</td>
</tr>
<tr>
<td>50</td>
<td>$7,004.80</td>
<td>$4,903.36</td>
<td>$2,101.44</td>
</tr>
<tr>
<td>55</td>
<td>$12,540.00</td>
<td>$8,778.00</td>
<td>$3,762.00</td>
</tr>
</tbody>
</table>

Lose your ability to practice due to a disabling sickness or injury and you could lose everything you’ve worked so hard to acquire. The ACS Group Long Term Disability plan can help you maintain your current lifestyle and help protect you and your family from serious debt by replacing a portion of your income with monthly benefits up to $15,000 for covered disabilities. Plus, we have added two valuable NEW features that can protect your income even more.

If your personal ACS insurance package includes one or more of the Term Life Plans, one or both the Disability or the Office Overhead Expense Plans and either one or both the Accident Death and Dismember Plan or Hospital Indemnity Plan your total premium will be reduced by 25% on all plans. Incredible savings!! The discount only applies to qualifying group plans underwritten by New York Life Insurance Company.

Apply:  Call 1-800-433-1672 or Visit acs-insurance.com

*Rates displayed include the 30% premium discount currently in effect for 2017 (not applicable to residents of CA and FL). All rates and discounts can be found on ACS-Insurance.com.

Underwritten by New York Life Insurance Company, New York, NY 10010, under Group Policy Form GMR, Call 1-800-433-1672 or visit ACS-insurance.com for plan features, costs eligibility, renewability, exclusions and limitations.

AR Insurance License #1322 | CA Insurance License # 0F76076
The American College of Surgeons (ACS) has awarded six Resident Research Scholarships for 2017–2019. The scholarships, made possible through the ACS Foundation’s Scholarship Endowment Fund, are offered to encourage residents to pursue careers in academic surgery and carry awards of $30,000 for each of two years beginning July 1, 2017.

The recipients of these scholarships are as follow:

- **Deshka Foster, MD**, postgraduate year (PGY)-2, Stanford University, CA. Projected specialty: Pediatric surgery. Research project: Characterizing the Cell Responsible for Scar Formation.

- **Daniel J. Wong, MD**, PGY-3, Beth Israel Deaconess Medical Center, Boston, MA. Projected specialty: Vascular surgery. Research project: Generation of Living Arterial Substitutes from Human Pluripotent Stem Cells.


- **Devon Livingston-Rosanoff, MD**, PGY-2, University of Wisconsin, Madison. Projected specialty: Surgical oncology. Research project: Surgical Outcomes in a Longitudinal Cohort of Ductal Carcinoma In Situ Patients.

- **Fahima Dossa, MD**, PGY-3, University of Toronto, ON. Projected specialty: Surgical oncology. Research project: Health Services Utilization after BRCA1/2 Testing in Canada.


An updated description and requirements for this program will be posted at facs.org/member-services/scholarships/resident/acsresident. The application deadline for the 2018 Resident Research Scholarships is September 1, 2017.

The Scholarship Endowment Fund was established to support scholarships and fellowships awarded by the Board of Regents. Direct contributions to support the Scholarship Endowment Fund are welcome. To make tax-deductible gifts to fund these vital programs, contact the ACS Foundation at 312-202-5338.
The American College of Surgeons (ACS) has awarded five Faculty Research Fellowships for 2017. These two-year fellowships are offered to surgeons entering careers in general surgery or a surgical speciality and carry awards of $40,000 per year from July 1, 2017, to June 30, 2019. Faculty Research Fellowships are sponsored by the ACS Foundation’s Scholarship Endowment Fund.

**Named Fellowships**
The ACS offers three Faculty Research Fellowships that recognize ACS leaders. The Franklin H. Martin, MD, FACS, Faculty Research Fellowship of the ACS honors the founder of the College. The C. James Carrico, MD, FACS, Faculty Research Fellowship for the Study of Trauma and Critical Care honors the late Dr. Carrico. The Thomas R. Russell, MD, FACS, Faculty Research Fellowship is made possible through the Thomas R. Russell Fund and supports research aimed at improving surgical outcomes.

The recipients of these fellowships are as follow:

- **Franklin H. Martin, MD, FACS, Faculty Research Fellow:** Jesse J. Smith, MD, assistant attending surgeon, colorectal service, Memorial Sloan Kettering Cancer Center, New York, NY. Specialty: Surgical oncology. **Research project:** Defining the Role of SMAD4 in Rectal Cancer Using Primary 3D Tumoroid Cultures and a Novel Endoluminal Tumor Model.

- **C. James Carrico, MD, FACS, Faculty Research Fellow:** Robert T. Russell, MD, FACS, assistant professor, division of pediatric surgery, Children’s Hospital, University of Alabama, Birmingham. Specialty: Pediatrics, trauma. **Research project:** Coagulation Abnormalities after Severe Pediatric Trauma: Bench to Bedside.

- **Thomas R. Russell, MD, FACS, Faculty Research Fellow:** Pasithorn A. Suwanabol, MD, assistant professor, division of colorectal surgery, University of Michigan, Ann Arbor. Specialty: General surgery. **Research project:** Earlier Introductions to Palliative Care in Older Adults Undergoing High-Risk Surgery.

**Undesignated Fellowships**
Additional undesignated Faculty Research Fellowships for 2017–2019 were awarded to the following surgeons:

- **David D. Odell, MD**, assistant professor, division of thoracic surgery, Northwestern University, Chicago, IL. Specialty: Cardiothoracic surgery.
These two-year fellowships are offered to surgeons entering careers in surgery or a surgical speciality. Faculty Research Fellowships are sponsored by the ACS Foundation’s Scholarship Endowment Fund.

Research project: A Learning Collaborative Model for the Study of Lung Cancer Care.

Sam C-K Wang, MD, assistant professor, department of surgery, University of Texas Southwestern Medical Center, Dallas. Specialty: Gastrointestinal surgery. Research project: Cell Type Specific ARID1A Loss Determines PDAC Precursor Identity.

Applying for and supporting fellowships
An updated description and requirements for this program will be posted to the Scholarships web page. The application deadline for the 2018 Faculty Research Fellowships is November 1, 2017. The Scholarship Endowment Fund was established to provide income for scholarships and fellowships awarded by the ACS Board of Regents. Direct contributions to support the Scholarship Endowment Fund are welcome. Fellows who would like to make tax-deductible gifts to fund these vital programs are encouraged to contact the ACS Foundation at 312-202-5338.
A total of 18 surgeons have been selected to serve as Health Policy Scholars and participate in the Leadership Program in Health Policy and Management, June 4–10, presented by the Heller School of Brandeis University, Waltham, MA.

Each scholarship includes attendance in the weeklong intensive course, followed by a year’s service in a health policy-related capacity to the American College of Surgeons (ACS) and the surgical specialty society cosponsoring the awardee.

This year’s scholars are as follow:

- ACS Health Policy Scholar for General Surgery: **Christopher Steffes, MD, FACS**, Henry Ford Health System, Detroit, MI
- ACS/Americas Hepato-Pancreato-Biliary Association Health Policy Scholar: **Charles B. Rosen, MD, FACS**, Mayo Clinic, Rochester, MN
- ACS/American Association of Neurological Surgeons Health Policy Scholar: **Bharat Guthikonda, MD**, Louisiana State University, Shreveport
- ACS/American Academy of Otolaryngology-Head & Neck Surgery Health Policy Scholar: **Gavin Setzen, MB, BCh, FACS**, Albany ENT & Allergy Services, NY
- ACS/American Association for the Surgery of Trauma Health Policy Scholar: **Christopher P. Michetti, MD, FACS**, Inova Fairfax Hospital, Falls Church, VA
- ACS/American Pediatric Surgery Association Health Policy Scholar: **Shawn St. Peter, MD, FACS**, Children’s Mercy Hospital, Kansas City, MO
- ACS/American Surgical Association Health Policy Scholar: **Lillian Kao, MD, MS, FACS**, University of Texas, Houston

**Health Policy Scholars for 2017 selected**

Dr. Pryor, Dr. Steffes, Dr. Rosen, Dr. Guthikonda

Dr. Setzen, Dr. Michetti, Dr. St. Peter, Dr. Kao
Each scholarship includes attendance in the weeklong intensive course, followed by a year’s service in a health policy-related capacity to the ACS and the surgical specialty society cosponsoring the awardee.

• ACS/American Society of Breast Surgeons Health Policy Scholar: Rachel Adams Greenup, MD, MPH, Duke University, Durham, NC

• ACS/American Society of Colon and Rectal Surgeons Health Policy Scholar: V. Liana Tsikitis, MD, MCR, FACS, FASCRS, Oregon Health & Science University, Portland

• ACS/American Society of Plastic Surgeons Health Policy Scholar: Kant Y. K. Lin, MD, FACS, University of Virginia, Charlottesville

• ACS/American Urogynecologic Society Health Policy Scholar: Elisabeth D. Erekson, MD, MPH, FACS, FACOG, The Dartmouth Institute, Lebanon, NH

• ACS/American Urological Association Health Policy Scholar: James M. Dupree, MD, University of Michigan, Ann Arbor

• ACS/Eastern Association for the Surgery of Trauma Health Policy Scholar: Tanya L. Zakrison, MD, MPH, FACS, FRCSC, University of Miami Miller School of Medicine, FL

• ACS/New England Society of Surgery Health Policy Scholar: Alik Farber, MD, FACS, Boston University School of Medicine, MA

• ACS/Society for Surgery of the Alimentary Tract Health Policy Scholar: Francis Cannizzo, Jr., MD, FACS, Western Connecticut Health Network, Danbury

• ACS/The Society of Thoracic Surgeons Health Policy Scholar: James R. Headrick, MD, MBA, FACS, University of Tennessee, Chattanooga

• ACS/Society for Vascular Surgery Health Policy Scholar: Francesco A. Aiello, MD, FACS, University of Massachusetts, Worcester
National Doctors’ Day Donor and Honoree Listing

Mary O. Aaland, md, facs, in honor of Jane M. Weaver, md, facs
Suresh Agarwal, md, facs, in honor of Lenworth M. Jacobs, Jr., md, mph, facs, in memory of Erwin F. Hirsch, md, facs
Nicole Baril, md, facs, in honor of Sherry M. Wren, md, facs
Franklin P. Bendewald, md, facs, in honor of Samer G. Mattar, mbch, facs, and Don J. Selzer, md, facs
Ruth L. Bush, md, facs, in honor of Richard A. Lynn, md, facs
Jules I. Cahan, md, facs, in honor of Mitchell A. Cahan, md, facs
David J. Carlson, md, facs, in memory of Ralph F. Carlson, md, facs
William G. Cioffi, Jr., md, facs, in honor of Basil A. Pruitt, Jr., md, facs, fccm, mccm
Barton M. Clements, md, facs, in honor of Chijen Chen, md, facs, W. Randall Russell, md, facs, Robert I. Schnall, md, and Donald N. Tomasello, md, facs
Philip H. Croyle, md, facs, in honor of W. Gerald Rainer, md, facs, in memory of Gene A. Guinn, md, facs
Christopher J. Daly, md, facs, in memory of Paul A. Ebert, md, facs
William V. Dolan, md, facs, in honor of H. Harlan Stone, md, facs
Margaret M. Dunn, md, mba, facs, in honor of Sylvia M. Ramos, md, facs
E. Christopher Ellison, md, facs, in honor of Larry C. Carey, md, facs
Guillermo A. Escobar, md, facs, in honor of Gilbert R. Upchurch, Jr., md, facs
Edward L. Felix, md, facs, in honor of Tapas K. Das Gupta, md, facs
Carlos A. Fernandez, md, facs, in honor of Vicente A. Mejia, md, facs
Tamara N. Fitzgerald, md, phd, facs, in honor of Doruk E. Ozgediz, md, facs
Leslie P. Fox, md, facs, in honor of Terry B. Gersheimer, md
Jerry Goldstone, md, facs, in honor of Wesley S. Moore, md, facs, and F. William Blaisdell, md, facs
David E. Grambort, md, facs, in honor of Marshall J. Orloff, md, facs
Kirby R. Gross, col mc us army, in honor of James A. Madura, md, facs
K. Kristene Koontz Gugliuzza, md, facs, in honor of Edward E. Etheredge, md, facs
Brian W. Haag, md, facs, in honor of Frank P. Stuart, Jr., md, facs
Linwood R. Haith, Jr., md, facs, in honor of Charles E. Hartford, md, facs
Marc A. Hoeksema, md, facs, in honor of James E. Sampliner, md, facs, and Raphael Shing-Kwan Chung, md, facs
Christopher A. Jordan, md, facs, in memory of George R. Dunlop, md, facs

Honor Your Mentors
The ACS Foundation is pleased to thank the donors who have made a National Doctors' Day tribute gift in honor or memory of their mentors and proudly recognizes the honorees for their commitment to mentoring the next generation of surgeons.

Rohan A. Joseph, mbbs, facs, in honor of Brian J. Dunkin, md, facs, and Barbara L. Bass, md, facs
Mark Kuhnke, md, facs, in honor of J. Roland Folse, md, facs, in memory of David S. Sumner, md, facs
John B. LaLonde, md, facs, in memory of Harry and Della LaLonde
Richard A. Lynn, md, facs, in honor of William Silen, md, facs
John Maa, md, facs, in memory of Thomas R. Russell, md, facs
Karippelil E. Mathew, md, facs, in honor of Magda J. H. M. Van Hoyweghen, md, facs
LaMar S. McGinnis, Jr., md, facs, in memory of Richard Smoot, md, facs, Harold Adams, md, facs, and Earl Bobo, md, facs
Anita Minghini, md, facs, and Paul Lambert, md, in honor of L.D. Britt, md, mph, d.sc(Hon), facs, fccm, frcsEng(Hon), frcsEd(Hon), fwcsc(Hon), frcsI(Hon), fcs(SA)(Hon), frcsglasg(Hon)
Chayanin Musikasinthorn, md, facs, in honor of Mihae Yu, md, facs
David H. Perrott, md, facs, in memory of Leonard B. Kaban, md, facs
Shankar Raman, mbbs, facs, in honor of Craig A. Reickert, md, facs
Danny R. Robinette, md, facs, in honor of Margaret M. Dunn, md, facs
James F. Ross, md, facs, in honor of Alexander F. Vajcner, frcsc, facs, and Rudolph G. Danzinger, frcsc, facs, in memory of Jaroslav Barwinsky, frcsc, facs
Amy L. Rutt, do, facs, in honor of Robert T. Sataloff, md, facs
William F. Sasser, md, facs, in honor of Harvey W. Bender, Jr., md, Lazar J. Greenfield, md, Keith S. Naunheim, md, facs, and Robert E. Hermann, md, facs, in memory of Charles L. Roper, md, facs
Kenneth W. Sharp, md, facs, in honor of George D. Zuidema, md, facs, and R. Phillip Burns, md, facs
Timothy R. Shaver, md, facs, in memory of Colonel Juan C. d’Avis, md, facs
Amilu Stewart, md, facs, in memory of Ben Eiseman, md, facs
Beth H. Sutton, md, facs, in honor of Grady L. Hallman, md, facs
Diane L. Switzner, md, facs, in honor of Kent T. Yamaguchi, md, facs, in memory of Steven N. Parks, md, facs
Victoria J. Teodorescu, md, facs, in honor of Harry R. Schanzer, md, facs
James J. Thomasson, Jr., md, facs, in honor of William F. Sasser, md, facs
George O. Tutt, Jr., md, facs, in honor of Stanley W. Henson, Jr., md, facs
Jon A. van Heerden, mbchb, frcs(C), facs, frcs(Edin)(Hon), in honor of Michael G. Sarr, md, facs, and David R. Farley, md, facs
Glen Y. Yoshida, md, facs, in honor of Donald W. S. Yim, md, facs, in memory of Ronald C. Hamaker, md, facs
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.

**JUNE**

- **Virginia Chapter**  
  June 2–3  
  Williamsburg, VA  
  Contact: Susan McConnell, smcconnell@ramdocs.org, www.virginiaacs.org

- **Louisiana Chapter**  
  June 2–4  
  New Orleans, LA  
  Contact: Janna Pecquet, janna@laacs.org, www.laacs.org

- **Arkansas Chapter**  
  June 3–4  
  Little Rock, AR  
  Contact: Linda Gist, lindac92@comcast.net

- **Vermont Chapter**  
  June 8  
  South Burlington, VT  
  Contact: Stephanie Winters, swinters@vtmd.org

- **Alabama Chapter and Mississippi Chapter**  
  June 8–10  
  Point Clear, AL  
  Contact: Lisa Beard, info@alabamaacs.org, www.alabamaacs.org and www.mschap-acs.com

- **Brooklyn-Long Island Chapter**  
  June 13–14  
  Garden City, NY  
  Contact: Teresa Barzyz, Acsteresa@aol.com, www.bliacs.org

- **Oregon Chapter and Washington Chapter**  
  June 15–18  
  Chelan, WA  
  Contact: Harvey Gail, harvey@spiremanagement.com, www.oregonchapteracs.org and www.wachapteracs.org

- **Austria-Hungary Chapter**  
  June 28–30  
  Vienna, Austria  
  Contact: Stefan Kriwanek, stefan.kriwanek@wienkav.at

**JULY**

- **North Carolina Chapter & South Carolina Chapter**  
  July 14–16  
  Pinehurst, NC  
  Contact: Janna Pecquet, janna@ncfacs.org, www.ncfacs.org and www.scfacs.org

**AUGUST**

- **Tennessee Chapter**  
  August 4–6  
  Nashville, TN  
  Contact: Wanda G. McKnight, wanda@tnacs.org, www.tnacs.org

- **Georgia Society of the ACS**  
  August 18–20  
  St. Simons Island, GA  
  Contact: Kathy Browning, gasacs@gmail.com, www.georgiaacs.org

- **Mexico, Federal District Chapter**  
  August 4–5  
  Acapulco, Guerrero  
  Contact: Rosa Aurora Ruiseco, informes@facs.org.mx, www.facs.org.mx

**FUTURE CLINICAL CONGRESSES**

- 2017  
  October 22–26  
  San Diego, CA

- 2018  
  October 21–25  
  Boston, MA

- 2019  
  October 27–31  
  San Francisco, CA