

Positive TAVR Results in Intermediate-Risk Patients Lead to Trials in Low-Risk Patients

The world of transcatheter aortic valve replacement (TAVR) is changing rapidly, and cardiothoracic surgeons have the opportunity to “help drive the train”—or get left behind.

TAVR was approved in 2011 for use in patients who are at high risk for conventional surgical aortic valve replacement (SAVR). Recently, trials in intermediate-risk patients have shown that TAVR is equivalent and possibly superior to SAVR. These findings have now opened the door to trials in low-risk patients, who make up about 80% of patients with aortic stenosis, according to an analysis of data in the STS Adult Cardiac Surgery Database and the STS/ACC TVT Registry™.

“The results from these low-risk trials likely will change surgical practice forevermore,” said STS Past President Michael J. Mack, MD. “Over the next 10 years, I think we’re going to see an 80% shift from open procedures to transcatheter procedures. Surgeons need to be totally engaged and proficient at performing TAVR.”

RESULTS FROM INTERMEDIATE-RISK TRIALS

Data from two trials in intermediate-risk patients were presented at the American College of Cardiology Annual Scientific Sessions in Chicago this past April.



Vinod H. Thourani, MD presented results from intermediate-risk TAVR trials at ACC 2016.

“The results from these low-risk trials likely will change surgical practice forevermore.”

—Michael J. Mack, MD

PARTNER IIA, a randomized trial comparing TAVR with the SAPIEN XT to SAVR, found equivalent outcomes of death and stroke between the two procedures at 2 years. However, when transfemoral TAVR—which was performed in almost 90% of patients—was considered separately, these outcomes were better for TAVR patients than SAVR patients.

The PARTNER II SAPIEN 3 (S3i) trial compared SAVR data from PARTNER IIA to outcomes from TAVR procedures using a third-generation SAPIEN 3 valve. At 1 year, the researchers found that TAVR was superior to SAVR for mortality and stroke, as well as the combined endpoint of mortality, stroke, and aortic regurgitation greater than moderate.

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U.S. News Awards Credit for STS Public Reporting Participation

Institutions participating in STS Public Reporting Online for adult cardiac surgery soon will receive extra credit in *U.S. News & World Report’s* rankings of best hospitals.

The publication recently updated the methodology for its Best Hospitals in Cardiology & Heart Surgery rankings to include a maximum of three points for hospitals that publicly report via both STS.org and the American College of Cardiology’s National Cardiovascular Data Registry. Hospitals that report via just one outlet will receive two points, and hospitals that do not participate in either will receive no credit.

“Our goal in reporting on provider performance is to assist patients in making informed health care decisions,” said Ben Harder, Chief of Health Analysis at *U.S. News*. “STS’s analyses yield important, high-quality data that can benefit the patients who use our decision support tools. But that information is only available to patients and the public if STS participants choose to voluntarily report it.”

Previously, *U.S. News* awarded hospitals credit in the publication’s Heart Bypass Surgery ratings for publicly reporting their isolated coronary artery bypass grafting outcomes via STS.org. The amount of credit

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Knowledge Starts With Good Data

Joseph E. Bavaria, MD, President

As surgeons, we are on an eternal quest to achieve the best outcomes for our patients. The questions we ask ourselves include: Should we perform an invasive procedure or can we use a minimally invasive approach? Which valve do we use? Which access point is the best? The answers often lie in results from research based on quality data.

Prescient leaders of the Society, including Richard Clark, Bob Replogle, Dick Anderson, and Fred Grover, among others, launched the STS National Database in 1989 so that we could use high-quality, risk-adjusted clinical data for practice improvement.

The STS National Database now houses more than 6 million procedure records and has become the envy of many other specialty societies. Data from the Database form the foundation for groundbreaking clinical research, participation in the Database is at the heart of new physician payment models being developed in Washington, and processes for the Database are setting important and unifying standards worldwide.

Similarly, the Transcatheter Valve Therapy Registry that STS and the American College of Cardiology launched in 2011 offers rich opportunities for innovation in cardiothoracic surgery. You can read about some of the latest clinical trial results for TAVR on page 1.

These findings and the resulting positive changes for our patients would not have been possible without someone trying to scratch an itch by asking the right questions and conducting research. Finding the answers starts with good data.

When I'm socializing with colleagues, the conversation often turns to job frustrations and then leads into how STS can help.

One way is through the STS National Database. By submitting data to the Database, publicly reporting outcomes, and conducting research, you can help improve your practice and the specialty itself.

In this era of increasing demand for transparency, accountability, and access to quality data, STS leadership is placing an even higher priority on the Database. In the coming months, the user interface will be modernized so that participants can enter data continuously and receive next-day feedback of basic information. Customizable participant reports will help make it easier to detect important performance signals early.

We're also working on making data elements conform to electronic standards, which will facilitate linkages with other data sources and allow some information, such as demographics, dates, and times, to be extracted automatically from EHRs.

Additionally, we have increased funding for Access & Publications (A&P) projects to help more investigators access data for research.

SUBMITTING DATA REQUESTS

Some of our members have said that submitting requests to use STS data can be daunting. But it doesn't have to be.

Make sure the research proposal you submit is realistic, has an original hypothesis, and asks for data that the STS National Database collects; submission instructions and data endpoints are listed on the website.

STS accepts several types of data requests. Forms are available on the STS website, and Research Center Coordinator Emily Conrad (econrad@sts.org) is available to answer any process questions you may have.

Research proposals made through the A&P process are reviewed twice per year in each discipline. For the upcoming review cycle, adult cardiac proposals are due on August 1, general thoracic proposals are due on September 1, and congenital heart proposals are due on October 1.

Two projects currently in the manuscript development process involve one from Penn on longitudinal outcomes following surgical repair of post-infarction ventricular septal defect and one from The University of

Chicago on the relationship between body mass index extremes and morbidity after lung resection.

Research projects also may be submitted through the Longitudinal Follow-up and Linked Registries process.

You can read about one of these types of projects—on biomarkers to predict readmission—on page 14.

The TVT Registry currently has more than 63,000 patient records submitted from more than 400 sites in the United States. I encourage you to consider helping us build the body of knowledge about transcatheter procedures by using data from the TVT Registry for research. Expanding our understanding of transcatheter therapy, coupled with our surgical valve experience and knowledge, will enable surgeons to assist patients in making informed decisions concerning valve therapy. The process for requesting data from the TVT Registry can be found at tvregistry.org.

PRESENTING NEW KNOWLEDGE

Once you have your research results, it is important to share that new knowledge with your colleagues. My bias is for presenting that information at the STS Annual Meeting and in *The Annals of Thoracic Surgery*.

Although the deadline has passed to submit an abstract for presentation consideration at the upcoming STS Annual Meeting in Houston, we plan to open a late-breaking abstract submission site this fall.

I'm looking forward to reading your abstracts and learning more about the questions you have about cardiothoracic surgery, so that by using quality data, we can work together to make positive incremental changes for our patients and the specialty. ■

The Society's mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy.

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Following the repeal of the Sustainable Growth Rate, the Centers for Medicare & Medicaid Services has made it clear that it intends to focus on value, rather than the current fee-for-service payment structure. In this issue of STS News, Dr. Matthew Blum describes how cardiothoracic surgeons actually may be positioned to benefit from the impending changes in health care financing.

Frank L. Fazzalari, MD, MBA, Chair, Workforce on Practice Management

Shift from Volume to Value Drives Hospital Employment, Changes Compensation Models

Matthew Blum, MD

The increasing emphasis on quality over quantity is driving a number of changes in cardiothoracic surgical practice, and cardiothoracic surgeons are well-positioned to take advantage of these opportunities.

Data from the Medical Group Management Association show that 70% of cardiovascular surgeons were employed by health care organizations and hospitals in 2014, while 30% remained in physician-owned practices. Since then, there has been a continued shift toward more surgeons being employed, suggesting that the current percentage of hospital-employed surgeons is even higher.

Hospitals also are increasingly subsidizing losses to physician groups. Consequently, hospitals try to recover those losses by leveraging higher reimbursements and avoiding penalties through improved coordination of care, quality of care, and development of "high-value provider networks."

High-value provider networks are created by health plans for certain providers and programs that consistently meet quality and safety metrics and are more efficient relative to their peers. By shifting away from pure volume metrics and focusing on efficiency and quality, these networks are an increasingly important tool for health plans to reduce costs and provide incentives for providers. The consequence for employed physicians is that their value to an organization increasingly depends on being able to offer integrated, high-quality service, rather than simply a high volume of patients.

REIMBURSEMENT TIED TO QUALITY

Experts have estimated that 10% of reimbursement currently is linked to quality metrics. With that percentage expected to increase, pressure also will mount to bundle services, as has already occurred in orthopedics.

Co-management contracting is one mechanism for explicitly linking compensation to administrative duties, such as coordinating medical services and monitoring quality. Physician contracting models can include compensation for management services, care improvement services, and quality incentives. These models parallel service line models and are ones that physicians often have undertaken with minimal or no compensation. Physician compensation for such activities increasingly is being scrutinized, so contracts

should clearly define management responsibilities and how time spent on them is documented.

The bottom line is that employed physicians—especially cardiothoracic surgeons—are in a good position. As more

emphasis is placed on coordination and quality, physician compensation is becoming more aligned with organizational goals. As a result, compensation for cardiothoracic surgeons is shifting away from pure RVU models to the benefit of both physicians and their employers. ■

Compensation for cardiothoracic surgeons is shifting away from pure RVU models.

See page 12 for tips on how to accurately code common procedures and maximize your reimbursements.





On Budget

Robert A. Wynbrandt, Executive Director & General Counsel
Keith J. Bura, Director of Finance & Administration

With this edition of STS News, we return to an old favorite: the guest column by a member of our management team who shares insights with the membership about his or her area of expertise and operational activity. In the installment below, Keith Bura, our Director of Finance and Administration, discusses our annual budgeting process that consumes members of our staff for much of the summer. Keith joined the STS management team in February of 2015, after having served in senior finance capacities at the American College of Surgeons, the Academy of General Dentistry, and the Association Forum of Chicagoland.

Summer is here in full force, and so is budget season at STS. Although budgeting probably is not a favorite task for most, it is critically important to the Society's operational and financial success. One key ingredient to this success is participation by both staff and surgeon leaders.

The first step in the budget process is for staff to build a bottom up (zero-based) budget that reflects the organization's operational and strategic initiatives. One major operational initiative that will be reflected in the 2017 budget relates to an anticipated lease renewal or relocation of STS Headquarters in Chicago. The current lease with the American College of Surgeons expires on April 30, 2018.

To help with this initiative, the Society has retained CBRE Group, Inc., the largest commercial real estate service firm in the world. In addition, an architect will be selected to assist and advise the Society on space planning options.

As detailed in the Spring 2016 issue of STS News, the Society has a new strategic plan that includes three broad-based strategic initiatives: database optimization, education, and global activities. Earlier this year, senior staff outlined milestones for each initiative to be completed over the next 2 to 3 years and provided estimated costs; these milestones were presented to the Board by Associate Executive Director Bill Seward in May. Milestones that have major budget implications for 2017 include:

- Database enhancements that will allow for continuous data harvests, web-based reporting dashboards, and expanded integration;

- A comprehensive e-textbook for adult cardiac and congenital heart surgery; and
- Collaborative educational programs in Asia, Central America, and/or South America.

In addition to the operational and strategic initiatives outlined above, the budget needs to reflect the ongoing activities of the Society. With a zero-based budgeting approach, every detail and every dollar has to be provided and justified.

Once individual department budgets are drafted, senior management performs a comprehensive review to validate assumptions, confirm to the extent possible that all figures are realistic, and analyze the bottom line results. Based on this review, the proposed budget is further adjusted so that operating income is breakeven or better.

During this whole process, staff members communicate with their respective council, workforce, and task force chairs regarding projects and budget assumptions. Surgeon

leaders also are consulted after changes from senior management are incorporated.

The next step in the process is a Finance Committee meeting that involves the review and discussion of detailed narratives highlighting major budget assumptions, explanations about all major favorable and unfavorable revenue and expense variances from the prior year's projection, and comprehensive financial statements that include historical comparisons. Based on this meeting, the Committee adjusts the proposed budget as appropriate and makes a recommendation to the Board of Directors.

Included in the proposed budget are funds for the Spending Policy. These funds are for initiatives aimed at giving back to the specialty, such as contributions to The Thoracic Surgery Foundation. The Spending Policy calls for an annual allocation of approximately 2% of the Society's investment portfolio, as measured at the close of business on June 30 of year preceding the budget year. Since the adoption of this policy in 2013, more than \$1.2 million has been spent by STS to support various CT surgery initiatives, with another \$748,000 allocated for 2016, a significant portion of which already has been spent or committed by the Board.

The final step in the process is for the Board to review detailed financial documents and approve the budget at its fall meeting. At the meeting, the Finance Committee Chair—currently STS Past President Doug Wood—provides an overview of the budget and answers questions before Board members vote.

Although these activities may be invisible to most STS members, the process is rigorous and lasts nearly as long as the Major League Baseball season. (I was told that it's mandatory to make at least one sports reference in this article.)

Unfortunately for me, as a native Chicago South Sider and diehard White Sox fan, what started out as an extremely promising spring quickly turned into a disappointing summer. And, to make matters even worse for me and fellow White Sox fans who often have deeply contemptuous feelings about Chicago's other baseball team, it looks like the Cubs remain the frontrunners to win the World Series.

At least I have the budget process to keep me occupied. ■

These funds are for initiatives aimed at giving back to the specialty, such as contributions to The Thoracic Surgery Foundation.

Member News



GUYTON RECEIVES ACC AWARD

STS Past President Robert A. Guyton, MD was honored with a Distinguished Service Award from the American College of Cardiology at its Annual Scientific Sessions in early April. The award recognizes profound contributions to medicine and/or the delivery of health

care. Dr. Guyton is the Distinguished Charles Ross Hatcher Jr. Professor of Surgery and Chief of the Division of Cardiothoracic Surgery at Emory University in Atlanta. He also received the STS Distinguished Service Award at the Society's Annual Meeting this past January. Dr. Guyton has been an STS member since 1986.



KEOGH NAMED ASA HONORARY FELLOW

Bruce E. Keogh, MD, FRCS has been named an Honorary Fellow of the American Surgical Association. Honorary Fellows are distinguished foreign surgeons whose contributions to surgery have been unusually noteworthy, of lasting value, and

worthy of the highest international recognition. Dr. Keogh currently is the Medical Director of the National Health Service in England. Prior to assuming that role, he was Professor of Cardiac Surgery at the University College, London and Director of Surgery at the Heart Hospital. He served as International Director on the STS Board of Directors from 2005 to 2011 and has been an STS member since 1995.



KIRSHBOM CHIEF OF PEDIATRIC SURGERY

Paul M. Kirshbom, MD has been named Chief of Pediatric Cardiovascular Surgery at Levine Children's Hospital in Charlotte, N.C. Previously, he was Chief of Pediatric Heart Surgery at Yale-New Haven Children's Hospital and Connecticut

Children's Medical Center in Hartford. Dr. Kirshbom has been an STS member since 2004.



SHERIDAN JOINS CALIFORNIA PACIFIC

Brett C. Sheridan, MD has been named Surgical Director of Heart Transplantation and Mechanical Circulatory Support and Chief of the Department of Cardiothoracic Surgery at California Pacific Medical Center in San Francisco. Previously, he was Director

of Mechanical Circulatory Support and Cardiac Transplantation at the University of North Carolina Hospitals in Chapel Hill. Dr. Sheridan has been an STS member since 2005.



PIGULA MOVES TO LOUISVILLE

Frank A. Pigula, MD is the new Chief of the Division of Pediatric Cardiac Surgery and Co-Director of the Heart Center at Kosair Children's Hospital in Louisville, Ky. Previously, he was Clinical Director of Pediatric Cardiac Surgery at the Children's Hospital of Boston. Dr. Pigula has been an STS member since 2002.



HARRISON NAMED CHIEF AT NEW YORK METHODIST

Sebron W. Harrison, MD has been named Chief of Thoracic Surgery at New York Methodist Hospital in Brooklyn and Attending Thoracic Surgeon at Weill-Cornell Presbyterian Hospital in Manhattan. Previously, he was an Attending Thoracic Surgeon at the University of Mississippi

Medical Center. Dr. Harrison has been an STS member since 2015.



FERDINAND JOINS ALBANY MED

Francis D. Ferdinand, MD, FRCSEd is the new Chief of the Division of Cardiothoracic Surgery and holds the Alley-Sheridan Endowed Chair in the Department of Surgery at Albany Medical College, in addition to serving as Director for Cardiothoracic Surgery at the Albany Medical

Center Hospital in New York. Previously, he was Surgical Director of Cardiovascular Quality and Strategy at Main Line Health's Lankenau Medical Center near Philadelphia. Dr. Ferdinand also recently was elected to the Executive Committee of the Board of Governors of the American College of Surgeons. He has been an STS member since 1994.



ABBAS EXPANDS ROLE AT TEMPLE

Abbas El-Sayed Abbas, MD has been appointed Thoracic Surgeon-in-Chief and Surgical Director of Lung Cancer, Thoracic Malignancy, and Foregut Disease Programs for Temple University Health System in Philadelphia.

He will continue in his current role as Vice Chair of Thoracic Medicine and Surgery at the Katz School of Medicine at Temple University. Dr. Abbas has been an STS member since 2009. ■

Submit news about yourself or a colleague to stsnews@sts.org. Submissions will be printed based on content, membership status, and space available.

In Memoriam

ROBERT L. REPLOGLE, MD

STS PAST PRESIDENT (1996-1997)



An STS Past President with a knack for thinking outside the box and championing new technologies passed away on May 9 at the age of 84.

Robert L. Replogle, MD made enormous contributions to STS that have had a lasting impact on both the organization and cardiothoracic surgery

worldwide. He attended the first meeting of the Society and held a number of leadership roles over the years, including serving as President from 1996 to 1997. He helped establish the STS Education and Research Foundation (now The Thoracic Surgery Foundation), the STS National Database, STS-PAC, and CTSNet. He also received the STS Distinguished Service Award in 2000.

"Bob's impact on STS and our specialty is immeasurable," said Mark K. Ferguson, MD, who trained under Dr. Replogle at The University of Chicago. "His visionary leadership and no-nonsense approach have had a profound influence on the lives of thousands of cardiothoracic surgeons and their patients. He loved people, and his generosity and friendship knew no bounds."

Dr. Replogle earned his medical degree from Harvard Medical School in 1960. He completed a general surgery internship at the University of Minnesota, followed by another internship at Harvard's Peter Bent Brigham Hospital (now Brigham and Women's Hospital) and residencies at Massachusetts General Hospital and Boston Children's Hospital. During his residencies, Dr. Replogle invented a double lumen drainage catheter (now known as the "Replogle Tube") for the management of esophageal atresia.

After an initial faculty position with Boston Children's Hospital, Dr. Replogle joined The University of Chicago in 1967, heading up the congenital heart surgery program and eventually becoming Division Chief. He later completed additional training in adult cardiac surgery at the Cleveland Clinic and thereafter performed both adult and pediatric open heart surgery. He led heart surgery programs at Michael Reese Hospital, Ingalls Memorial Hospital, and Columbus Hospital, all in the Chicago area.

When asked in 2013 what advice he would give today's cardiothoracic surgeons, he said: "Enjoy life. Enjoy the work but enjoy life." ■

U.S. News Awards Credit for STS Public Reporting Participation

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given was based on both the fact that a hospital publicly reported and how well the institution performed. *U.S. News* will continue to allocate credit in this way for the Heart Bypass Surgery ratings.

The new credit for the Cardiology & Heart Surgery rankings is based just on the fact that the institution reports, not what its score is.

"That's because STS.org reports ratings for hospitals in three different procedures, none of which is an exact match with the inclusion criteria we use for our Cardiology & Heart Surgery analysis," Harder said. "We want more clinician input before we decide on whether and how to assign relative weights in our Cardiology & Heart Surgery rankings to each of STS's publicly reported measures."

U.S. News reviewed the STS website in late February to gather information for its analysis. The updated Cardiology & Heart Surgery rankings are expected to be published in early August.

Institutions that do not currently participate in STS Public Reporting Online can ensure that they receive credit in the 2017 *U.S. News* rankings by signing up before mid-October. Consent forms are available at www.sts.org/publicreporting. ■

Staff Updates

Jennifer Bagley joined STS on April 4 as its Media Relations Manager. She is responsible for securing media coverage for Society initiatives, including *The Annals of Thoracic Surgery*, as well as developing content for the STS patient website, ctsurgerypatients.org. Jen has worked in media relations and scientific communications for a number of organizations, including the American Society for Clinical Pathology, Accelerated Rehabilitation Centers, Biomatrix, and Natrel Communications. She holds a bachelor's degree in journalism, news reporting, and writing from Columbia College Chicago and a master's degree in communication arts from William Paterson University in Wayne, N.J. To contact Jen, e-mail jbagley@sts.org.

Sydney Clinton joined the Society on June 6 as its Quality Metrics and Initiatives Coordinator after filling the role on a temporary basis since February. She assists with STS activities related to performance measurement development and maintenance, as well as helps coordinate STS Public Reporting Online activities. Previously, Sydney was an Administrative/Production Coordinator at Core3Creative and a Legal Assistant and Docket Clerk with Ruberry, Stalmack & Garvey, LLC. She holds a bachelor's degree in studio art from Earlham College in Richmond, Ind. To contact Sydney, e-mail sclinton@sts.org. ■

Positive TAVR Results in Intermediate-Risk Patients Lead to Trials in Low-Risk Patients

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“In this group of 3,000 intermediate-risk patients, we’re seeing superiority of transfemoral valve replacement to surgical valve therapies,” said STS Director-at-Large Vinod H. Thourani, MD, who was the co-principal investigator (PI) for the S3i trial and chairs the TVT Registry Research and Publications Subcommittee.

Importantly, the S3i data showed the lowest 1-year mortality rate (7.5%) and 1-year moderate or severe paravalvular leak rate (1.5%) for TAVR published thus far.

“The improved results may be due to aspects of the SAPIEN 3 third-generation valve. This includes the left ventricular cuff to minimize paravalvular leaks, consistent use of CT scans to assess the valve preoperatively, availability of four valve sizes, and smaller sheath sizes to allow an almost 90% transfemoral access. I believe those are the biggest factors in why we’re seeing such low mortality and paravalvular leak rates,” Dr. Thourani said.

Next year, data are expected to be reported from the SURTAVI trial, which is evaluating all-cause mortality and major stroke at 2 years between SAVR and intermediate-risk TAVR using the CoreValve system, said co-PI Michael J. Reardon, MD.

HUGE POTENTIAL IN LOW-RISK PATIENTS

Now that TAVR has shown positive results in intermediate-risk patients, the next frontier is low-risk patients. Two randomized trials currently are enrolling patients.

One trial (PARTNER III) will evaluate all-cause mortality, stroke, and rehospitalization at 1 year between

TAVR using the SAPIEN 3 valve and SAVR in low-risk patients; the second will utilize the CoreValve Evolut R and examine all-cause mortality and disabling stroke at 2 years. Both trials will include a patient substudy using 4D CT scans looking at leaflet motion abnormalities indicative of valve thrombosis in both TAVR and SAVR.

As the landscape shifts, Dr. Reardon emphasized the importance of cardiothoracic surgeons embracing new technology. “Surgeons can ignore what’s going on and be run over by the train, or they can get on board and help drive the train,” he said.

NEW RISK MODEL AVAILABLE

As surgeons await the results of the low-risk trials, there is now a tool they can use to help

identify which of their high-risk patients may be good candidates for TAVR. The TVT Registry

recently released a patient-level risk model predicting the probability of in-hospital mortality after TAVR, which is available as an app in the Apple App Store and Google Play. Search for “TAVR Risk Calculator.”

“Surgeons can ignore what’s going on and be run over by the train, or they can get on board and help drive the train.”

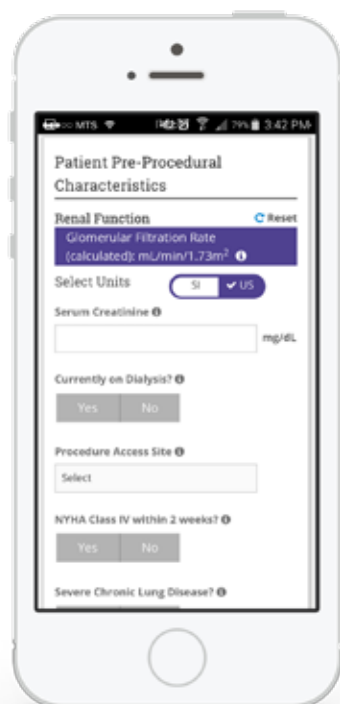
—Michael J. Reardon, MD

“The model provides an objective assessment of risk based on the large national experience embodied in the TVT Registry,” said Fred H. Edwards, MD, a former member of the TVT Registry Steering Committee and former Director of the STS Research Center. “Most existing TAVR models are based on patients having undergone procedures other than TAVR. We recognized the compelling need for a large-scale US TAVR population that could be used to develop a reliable TAVR risk model.”

The model was developed from more than 13,000 patients who underwent TAVR from November 2011 to February 2014. “Results from the model will provide valuable objective information that can inform the decision-making process, but should not dictate management decisions,” said Dr. Edwards.

Last year, the TVT Registry released a center-level, in-hospital mortality risk model as a benchmarking and quality assessment tool for TAVR patient populations.

Additional risk models currently are being developed to predict the probability of stroke and mortality at 30 days. In the future, the plan is to develop models that will predict patient benefit as well as patient risk. ■



The TAVR Risk Model app utilizes data from the TVT Registry to calculate which patients may be good candidates for the procedure.



STS PARTICIPATES IN AATS ANNUAL MEETING

In May, STS hosted a booth at the American Association for Thoracic Surgery Annual Meeting in Baltimore, Md., to share information about the Society's many activities. Visitors received the latest updates on participation in the STS National Database (including international participation), public reporting initiatives, developments from the STS Research Center, political advocacy opportunities, and STS membership benefits. ■

STS Highlighted in Magazine for Association Professionals

A new article featuring the STS National Database and STS/ACC TVT Registry™ appeared as the Centennial Signature Article in the April 2016 issue of *FORUM*, a magazine written for association management professionals. The article, "Doing It Best, Then Doing It Better," describes the value of transparency and includes interviews with STS volunteer leaders Frederick L. Grover, MD and David M. Shahian, MD, STS Executive Director & General Counsel Robert A. Wynbrandt, and Ben Harder from U.S. News & World Report. The article updates a cover story, "Beating Themselves," that was published in 2012. Read the new article at www.sts.org/forum2016. ■



AVOID PAYMENT REDUCTION BY SUBMITTING A 2016 PQRS CONSENT FORM

The STS National Database has once again been designated as a Qualified Clinical Data Registry for the Physician Quality Reporting System, and individual

surgeons participating in the Adult Cardiac Surgery component of the Database are eligible to reap the benefits of this designation.

In order to do so, those individuals must sign a consent form that will allow STS to submit data on 17 different measures to the Centers for Medicare & Medicaid Services on their behalf. Surgeons who report

these data for 2016 will avoid a 2% Medicare payment reduction in 2018. This service is free for STS members.

Visit www.sts.org/PQRS to download the consent form and learn more about the measures that STS will be reporting to CMS. A 2016 PQRS consent form is required, even if you have completed a PQRS Data Sharing Consent and Release Form in previous years. Please

note that STS cannot report for surgeons currently enrolled in the Group Practice Reporting Option or as part of an Accountable Care Organization. ■

If you have questions about PQRS, contact Donna McDonald, Director of Quality, at dmcdonald@sts.org.

New STS Treasurer-Elect Elected



In a special membership meeting on May 2, Thomas E. MacGillivray, MD was elected the Society's Treasurer-Elect. He will serve on the STS Board of Directors and spend the next year learning the role under current Treasurer Robert S.D. Higgins, MD, MSHA, who is in his 5th year of

service and is therefore ineligible to serve for another term. As Treasurer-Elect, Dr. MacGillivray also will serve on the STS Executive Committee and Finance Committee.

Dr. MacGillivray is Co-Director of Massachusetts General Hospital's

Thoracic Aortic Center and Surgical Director of its Adult Congenital Heart Disease Program. He also is the Deputy Editor for Education of *The Annals of Thoracic Surgery*. ■

TSF Award Applications Due in October

Applications are due October 15 for a number of research grants and fellowships from The Thoracic Surgery Foundation. Visit www.thoracicsurgeryfoundation.org/awards for information on

the awards and to apply. If you have questions, contact Priscilla S. Kennedy, TSF Executive Director, at (312) 202-5868 or pkennedy@sts.org. ■



2016 TSF award recipients were honored at a reception in May.

STS Leadership Self-Nomination Process Opens in September

All members are invited to participate in the Society's self-nomination process for standing committee and workforce appointments. Submissions will be accepted September 1–30. You will receive an e-mail with further information on how to self-nominate.

A full list of the Society's standing committees and workforces can be found at www.sts.org/leadershipstructure. Leadership appointments are approved by the STS Executive Committee each year, usually at its December meeting. Leadership appointments for 2017–2018

will take effect immediately after the STS 53rd Annual Meeting in Houston, January 21–25, 2017. The majority of open positions are for 3-year terms, renewable on a one-time basis. ■

If you would like to add/update your e-mail address on file, contact Sarah Foreman, Membership Coordinator, at membership@sts.org. If you have questions about the STS leadership structure and the self-nomination process, contact Elisa Robles, Governance Coordinator, at erobles@sts.org.

Register Your Team for AQO



Registration and housing for the 2016 Advances in Quality & Outcomes: A Data Managers Meeting is now available at www.sts.org/AQO. The meeting will be held at the Baltimore Marriott Waterfront in Baltimore, Md., from Wednesday, September 28, through Friday, September 30.

AQO attendees will benefit from in-depth presentations by both surgeons and data managers, who will outline practical applications of data collection and provide helpful insights on achieving quality outcomes. Sessions will focus on each of the three STS National Database components—

Adult Cardiac Surgery, General Thoracic Surgery, and Congenital Heart Surgery.

The AQO conference is designed for data managers of all experience levels. Primary data contacts and new data managers are strongly encouraged to attend. Surgeons also are urged to consider attending the conference along with their data managers. Register by Wednesday, August 31, for early bird pricing; after this date, registration fees will increase by \$100. ■

If you have questions about registration and housing, contact Amy Cacich, Meetings and Conventions Coordinator, at acacich@sts.org. If you have questions about the AQO program, contact Donna McDonald, Director of Quality, at dmcDonald@sts.org.

2017 LOOKING TO THE FUTURE SCHOLARSHIP APPLICATIONS AVAILABLE SOON

Help support the future of cardiothoracic surgery by encouraging general surgery residents and medical students interested in the specialty to apply for a 2017 STS Looking to the Future Scholarship.

Scholarships include complimentary registration for the STS 53rd Annual Meeting and STS/AATS Tech-Con 2017 in Houston, a 3-night stay at an STS-designated hotel, participation in exclusive events, an assigned mentor to help plan a schedule of educational programming and

facilitate introductions, and reimbursement of up to \$500 in related travel expenses.

If you know of a general surgery resident or medical student who may qualify for an LTTF scholarship, encourage him or her to apply. You also can offer to write a letter of recommendation on the applicant's behalf. ■

Application details will be available at www.sts.org/lttf in mid-August. For more information, contact Rachel Pebworth, Senior Coordinator, Affiliate Organizations, at rpebworth@sts.org.



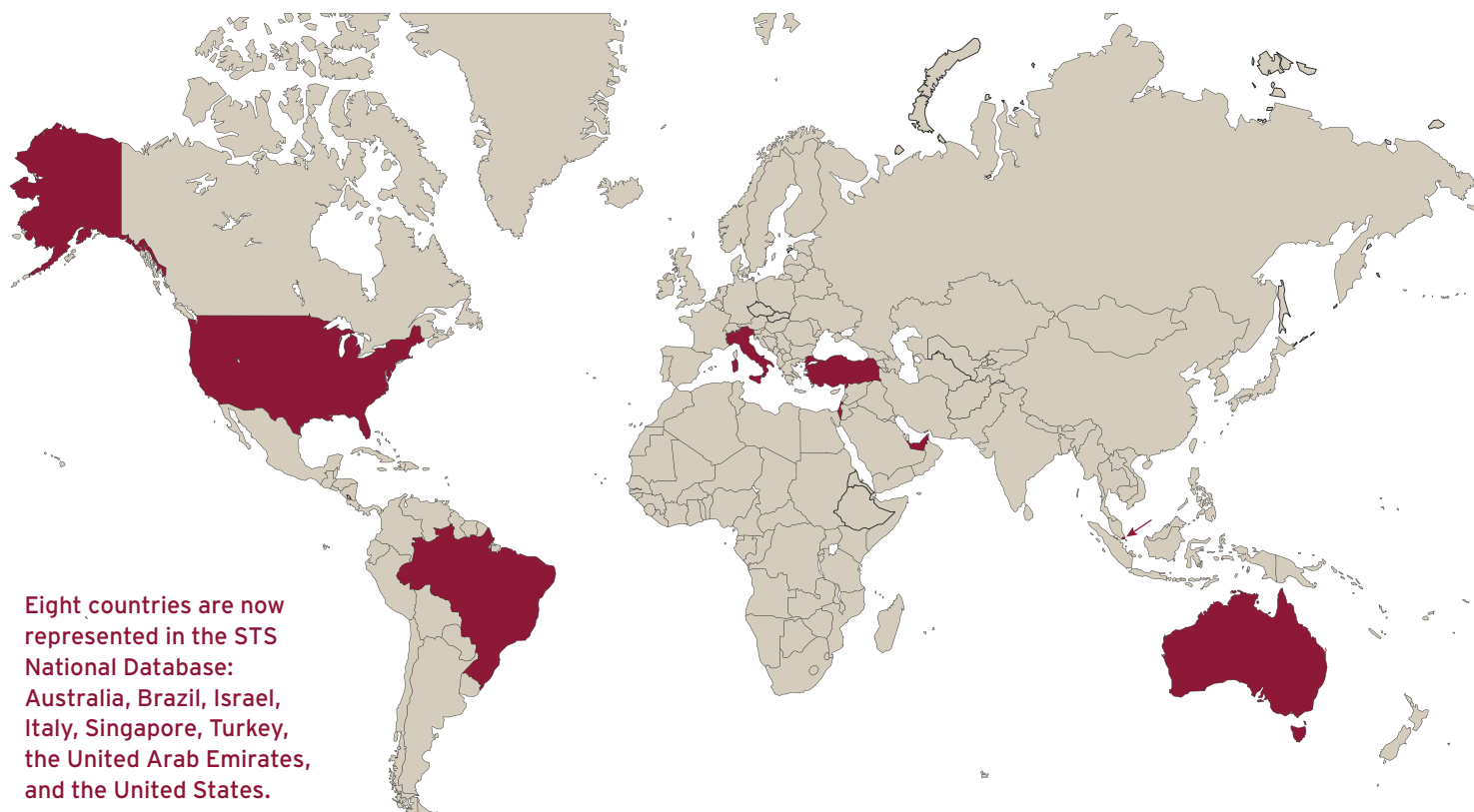
The 2016 LTTF scholarship recipients mingled with leaders in the field at the STS Annual Meeting in Phoenix, Arizona.

International Participation Expands in STS National Database

Since the beginning of the year, the Society has welcomed 11 new international sites as participants in the STS National Database. Ten of the sites are in Israel and one is in Singapore. International Database participants receive well-developed and detailed risk models, an opportunity to compare surgical outcomes to STS North

American benchmarks, and valuable aid in administrative, business, and marketing decisions. ■

To learn more about participation and pricing, visit www.sts.org/international-participation or contact Susan Becker at sbecker@sts.org or (312) 202-5828.



Eight countries are now represented in the STS National Database: Australia, Brazil, Israel, Italy, Singapore, Turkey, the United Arab Emirates, and the United States.

STS Engages the General Public via Press Release Program

As part of its continuing effort to raise public awareness about STS, cardiothoracic surgery, and the role that cardiothoracic surgeons play in the health care arena, the Society issued three press releases February 19–June 9, 2016. Brief recaps can be found below. To read the full press releases, visit www.sts.org/media.

March 31: **“Minimally Invasive Mitral Valve Surgery Offers Viable Option for Select Heart Patients”** described an article in *The Annals of Thoracic Surgery* showing that patients undergoing minimally invasive mitral valve

repair or replacement have similar outcomes as do patients undergoing conventional surgery and also experience shorter hospital stays and fewer blood transfusions.

May 5: **“Older Lung Cancer Patients Experience Excellent Survival Following Surgery”** explained how patients aged 65 years and older are living longer after lung cancer surgery, according to an article in *The Annals* that utilized data from the STS General Thoracic Surgery Database and claims data from the Centers for Medicare & Medicaid Services.

June 9: **“Lung Cancer Breath ‘Signature’ Presents Promise for Earlier Diagnosis”** described a simple breath test that can identify the return of lung cancer after surgery. According to the article in *The Annals*, the test detects the presence of four volatile organic compounds that have been linked to the disease. ■

For more information on the Society’s press release program and other public outreach efforts, please contact media@sts.org.

Maximize Your Reimbursement: Tips for Coding Common Cardiothoracic Surgical Procedures

Accurate coding of cardiothoracic surgery procedures is essential for receiving optimal reimbursement. Surgeons and coders must work together to correctly describe the work being performed. The following represent some of the common topics handled by the STS Coding Help Desk, a free resource offered to STS members and their staffs. To submit your questions or comments about Current Procedural Terminology*, billing, and/or reimbursement, go to www.sts.org/codinghelpdesk.

ADULT CARDIAC

Conduit Creation to Facilitate Cardiopulmonary Bypass

The work of placing a patient on cardiopulmonary bypass to accomplish a cardiac procedure is included in the work of the primary procedure, unless otherwise indicated in the code (for example: 33300 – *Repair of cardiac wound; without bypass*). However, there are situations in which central cardiopulmonary bypass is contraindicated (such as ascending aortic atherosclerotic disease) and the ascending aorta cannot be cannulated, so peripheral cardiopulmonary bypass is required.

For peripheral cardiopulmonary bypass in which the cannula(s) is placed directly into the artery (femoral, iliac, axillary, other), the placement of the cannula(s), initiation of bypass, cannula removal, and suture repair of the vessel(s) are included in the primary procedure. No additional codes may be reported.

However, when direct cannulation of the peripheral artery is felt to be ill-advised, a graft conduit, anastomosed directly to the peripheral artery for purposes of accomplishing cardiopulmonary bypass, may be required. The work of creating the graft conduit for initiation of cardiopulmonary

bypass, as well as the cutting or oversewing of the graft stump with sutures when cardiopulmonary bypass is no longer needed, may be reported separately. Currently, with the exception of the TAVR and ECMO codes, there is no code to report the creation of a graft conduit to facilitate arterial access. In order to report this service, the unlisted code 33999 – *Unlisted procedure, cardiac surgery* should be used.

Creation of the graft conduit is included in the work of the TAVR procedures (33361–33369). To report this service in conjunction with ECMO, use add-on code 33987.

GENERAL THORACIC

Coverage of the Bronchial Stump

Coverage of the bronchial stump typically is included in lung resection procedures when intrathoracic local tissue or structures are utilized. Examples of intrathoracic local tissues include pericardial fat pad, pericardium, pleura, and thymus. Using these local structures is considered part of the procedure and would not be separately reportable work. This is in contrast to the use of extrathoracic soft tissue—for example, muscle flaps. Coverage of the bronchial stump with intercostal, latissimus dorsi, serratus anterior, pectoralis, or other muscle flaps is reportable separately with code 15734 – *Muscle, myocutaneous, or fasciocutaneous flap; trunk*.

CONGENITAL CARDIAC

ASDs and VSDs

Several codes may be used to report atrial septal defect (ASD) repairs, ventricular septal defect (VSD) repairs, and combined ASD and VSD repairs.

The code that most accurately describes the procedure performed should be reported. For example, if an ASD (or patent foramen ovale [PFO]) and VSD repair are performed in the same session, the

combined code 33647 must be reported; you cannot separately report an ASD (33641) and VSD (33681) repair code.

There is no code for repair of multiple ASDs, as there is for closure of multiple VSDs (33675, 33676, and 33677). In circumstances where multiple ASDs are repaired in the same session, code 33641 (or the appropriate ASD repair code) only may be reported once. There is a medically unlikely edit (MUE) of “1” for Medicaid and Medicare for the ASD and VSD codes. An MUE typically represents the maximum number of units reportable on the same date of service. If different types of ASDs are repaired, such as a secundum or PFO (33641) and an ostium primum ASD (33660), both codes may be reported. Check the bundling edits for the codes; some coding combinations are bundled and will require an appropriate unbundling modifier (e.g., 59) in addition to the multiple procedure modifier (51).

It does not matter if the ASD or VSD is closed primarily (suture closure) or with a patch; the same code is used in either case. For the multiple VSD codes (33675, 33676, 33677), the code can be used only once per session—i.e., 33675 is used once for closing two, three, or more VSDs. Also, one cannot use the single VSD closure codes (33681, 33684, 33688) at the same time as the multiple VSD closure codes. ■

For an extended version of this article, visit www.sts.org/codingarticles.

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The material presented here is, to the best of our knowledge, accurate and factual to date. The information and suggestions are provided as guidelines for coding and reimbursement, however, and should not be construed as organizational policy. The Society of Thoracic Surgeons disclaims any responsibility for the consequences of actions taken based on the information presented in this article.

ATTEND STS CODING WORKSHOP THIS FALL

Registration will open soon for the 2016 STS Coding Workshop, to be held November 3-5 in New Orleans. The Workshop will provide cardiothoracic surgery coders with the tools they need to overcome common coding challenges. Experts will provide updates on new codes and policy changes for 2017. Encourage your coding staff to visit www.sts.org/codingworkshop for more information.

Annals Survey Shows Strong Monthly Following

STS members and subscribers to *The Annals of Thoracic Surgery* are loyal readers. A new survey found that 85% of respondents read *The Annals* at least once per month, and nearly all respondents (97%) said the journal keeps them up-to-date with the latest advances in the field.

DIGITAL RESOURCES EXPANDING

While the majority of subscribers (53%) primarily read the journal in print form, use of digital media is popular.

Close to half (46%) of readers reported visiting the journal's website (www.annalsthoracicsurgery.org) at least monthly, while more than one-third (35%) have accessed *The Annals* through its mobile app. Available on both iOS and Android platforms, the app allows users to create reading lists, add notes, and save articles for offline viewing. The app also includes interactive figures, tables, multimedia presentations, and supplementary content.

The Annals recently added enhanced multimedia content, including video interviews with authors and editorial board members. That content will expand as more authors include supplemental content, specifically videos, with their submissions.

The journal also started tracking how online communities engage with the content.

"All of the discussions people are having about certain articles—whether in the popular press, blogs, or social media—are now tracked and measured on *Annals* article homepages. This is but one additional means of measuring the impact of research," Berin said.

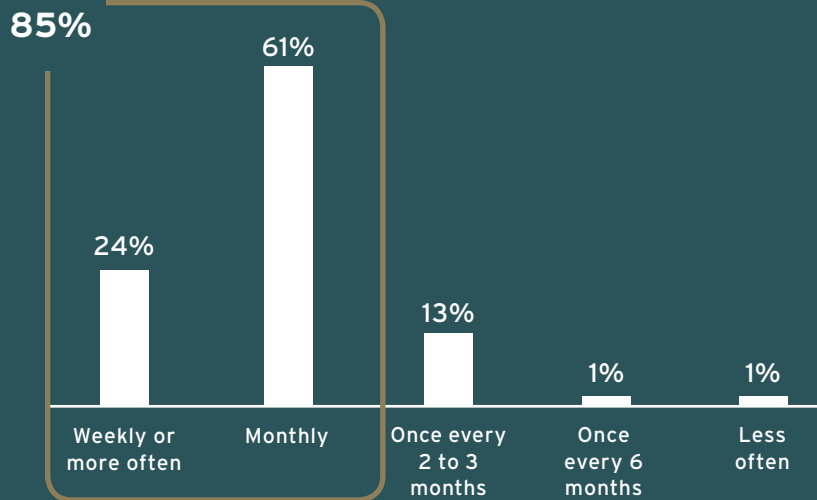
NEW SUBMISSION SITE AVAILABLE

In April, the journal launched a new manuscript submission site: www.editorialmanager.com/annals. Early feedback has been very positive.

"Authors will experience a more intuitive submission process, and editors and reviewers will have a streamlined yet powerful system for peer review," said Kavitha Reinhold, Managing Editor of *The Annals*.

Users of the previous manuscript system do not need to create another account; login information was carried over to the new manuscript tracking system. For more information on submitting a manuscript to *The Annals*, visit www.annalsthoracicsurgery.org/content/authorinfo. ■

PLEASE INDICATE HOW FREQUENTLY YOU READ
THE ANNALS OF THORACIC SURGERY



"There are many changes taking place for *The Annals*, and this survey was an important step in learning what the readership thinks is valuable," said Editor G. Alexander Patterson, MD, FRCSC. "I was impressed with the response rate, which indicates good engagement with the journal. These survey results will give us a baseline against which to evaluate our new initiatives."

Elsevier Inc., which has published the *Annals* since 1989, distributed a 36-question online survey to 6,750 members and subscribers last fall. The overall response rate was 17% (1,158), with 40% of respondents residing outside of the United States.

"The results tell us that *The Annals* is successfully serving its readers and the medical communities. We assumed this to be true, but now we have the data to prove it," said Andrew Berin, Publishing Director at Elsevier. "For example, fully 90% of those surveyed find the 'How To Do It' feature very useful or useful. This percentage rises to 96% when asked about original research published in *The Annals*. That's powerful."

"The results tell us that *The Annals* is successfully serving its readers and the medical communities."

—Andrew Berin

STS National Database May Facilitate ‘Precision Medicine’ in Readmission Study

Data from the STS National Database are being utilized in a study to understand predictors of 30-day readmission and 30-day death after heart surgery in children and adults.

The study, which began in 2014 and is expected to conclude in 2018, is funded by a \$3.2 million grant from the National Heart, Lung, and Blood Institute. Jeffrey P. Jacobs, MD, Chair of the STS Workforce on National Databases, is the site principal investigator (PI) for the Society. The project PI is STS Associate Member Jeremiah R. Brown, PhD, Associate Professor of Health Policy and Clinical Practice at The Dartmouth Institute and Geisel School of Medicine at Dartmouth.

More than 253,000 people undergo cardiac surgery each year, and approximately 20% of them are readmitted within 30 days for complications from surgery or comorbid conditions, Dr. Brown said. But little is known about the predictors of readmission.

The researchers are working to develop a novel, multi-systemic predictive model that combines perioperative biomarkers of cardiac injury (ST2, B-type natriuretic peptide, cardiac troponin T), renal injury (cystatin C), and non-specific inflammation (galectin-3, cytokines).

“Preliminary work by others in heart failure and by our investigators suggests that these novel biomarkers could help to identify patients at higher risk of readmission or mortality prior to discharge,” Dr. Brown said.

The congenital arm of the research will utilize the STS Congenital Heart Surgery Database for data on 30-day readmission.

“This study is unique because it represents the first time that data about biomarkers are being linked to clinical data from the STS National Database,” said Dr. Jacobs, Chief of Cardiovascular Surgery at Johns Hopkins All Children’s Hospital and Professor of Surgery at Johns Hopkins University. “This may be the first example of a strategy that allows the clinical data in the STS National Database to facilitate precision medicine, where medical and surgical therapy is tailored to the unique genetic or biochemical profile of the individual patient. Indeed, this initiative represents an initial attempt to link clinical data from STS to data related to genomics, proteomics, lipidomics, and metabolomics, and therefore, this analysis explores an exciting new frontier with unlimited potential.”

Early results were presented at the STS 52nd Annual Meeting this past January and are expected to be published in *The Annals of Thoracic Surgery*. Additional results will be submitted as abstracts for the STS 53rd

Annual Meeting in January 2017 and as papers to *The Annals*.

Ultimately, the researchers plan to create an online risk calculator that physicians can use to predict 30-day readmission or mortality in their cardiac surgery patients.

“If we can improve our ability to identify high-risk patients for readmission or mortality before they leave the hospital, we may succeed in reducing 30-day readmission rates and 30-day mortality while improving transitions from the hospital,” Dr. Brown said. ■

For more information about this study or the STS Research Center, contact Robert Habib, STS Research Center Director, at rhabib@sts.org.

Webinar on CABG Readmissions Available

A new webinar on readmission after coronary artery bypass grafting (CABG) surgery is available at

www.sts.org/webinars.

The webinar reviews the most common causes of readmission after CABG and outlines practical approaches to reduce their frequency.

Speakers include Gaetano Paone, MD, David M. Shahian, MD, Frank L. Shannon, MD, Kevin W. Lobdell, MD, and William T. Caine, MD.



An Interview with Rep. Larry Bucshon

Cardiothoracic surgeon Larry Bucshon, MD is both an STS member and a member of the United States House of Representatives. Rep. Bucshon (R-IN), who is running for reelection this year in Indiana's 8th District, shares his thoughts on pressing issues facing the specialty, the value of connecting with legislators at all levels of government, and the change of pace between the operating room and Capitol Hill.



Rep. Bucshon (center, holding plaque) received the Society's Legislator of the Year Award in recognition of his extraordinary efforts promoting issues of importance to cardiothoracic surgeons.

What are the most important legislative issues in the health care arena right now?

I think the most important thing is what CMS is doing as it relates to MACRA, the SGR replacement legislation. We need to make sure that as members of Congress, we have appropriate oversight. It does sound like for the most part, CMS has been listening to societies like STS during this process, but that's what we're working on.

The other thing, which is applicable to all of medicine, is the opioid situation. I have legislation, as do many others in the House and Senate, to address the opioid crisis that we have in our country.

I also think that Meaningful Use [requirements related to the mandatory use of electronic health records] is an important issue, in terms of how it affects the ability of people out in the communities to practice medicine and how it's going to be involved in assessing quality and helping to determine payment.

What are some of your biggest achievements in health care?

Obviously, one of the biggest achievements has been replacing the SGR with MACRA. It's pretty hard to top that. It's been a priority of mine since I've been in Congress, since the SGR was putting a lot of uncertainty into the health care system every year for seniors and providers.

Also, Dr. Ami Bera from California and I worked in a bipartisan way to essentially

stop CMS from eliminating global surgical payments. For cardiovascular and thoracic surgeons, this is a big deal. I feel really good about the fact that we were able to get leadership on both sides to recognize that this would be a failed policy.

What can cardiothoracic surgeons do to help you resolve these issues?

It's very important to be engaged, not only at the federal level, but also at the state and local levels. As cardiothoracic surgeons, we carry a lot of credibility. When STS members talk to legislators, their voices are really heard.

Here in Washington, I can tell you that it's important for me—even though I understand cardiothoracic surgery—to continue hearing what's actually happening in the field day to day and what challenges there are. I performed my last surgery almost 6 years ago, so things have already changed dramatically. There's no replacement for personal contact and one-on-one conversations with your legislators. That doesn't mean things are always going to go our way, but I can tell you that they won't go favorably to our specialty if legislators don't have input from people who are in the field practicing every day.

That's one of the reasons I ran for Congress in the first place. I felt like we, as physicians, needed to have more of a voice in government.

How has the Society in particular contributed to your achievements in Congress?

I think STS has been an important player in moving SGR replacement forward and continues to be very important as CMS develops its rules related to MACRA. The Society also has been very involved in talking with CMS and giving advice to legislators like myself on reimbursement

issues, as CMS has not necessarily been following the RUC recommendations for reimbursement decisions.

I think STS and other specialty societies and primary care organizations have had a tremendous impact on the legislative direction of Congress. Without the input of these organizations, I don't think the SGR would have been repealed and replaced with MACRA.

Also, just helping members of Congress understand what our specialty does, how we help patients, and how important that is to the overall makeup of the health care system has also been very important.

Is there anything else you want to say to STS members?

I just want to reiterate the importance of being engaged politically at the local, state, and federal levels. The voices of surgeons in practice do matter, and people are listening. Even though the wheels of change seem to be moving slowly, without that engagement, our voices would just not be heard. Trying to advance the goals of our specialty and ensure our continued ability to treat patients would be hampered without that engagement. ■

"The voices of surgeons in practice do matter, and people are listening."

—Rep. Larry Bucshon, MD

For more on what Rep. Bucshon has to say about how being a Congressman compares to working as a cardiothoracic surgeon, visit www.sts.org/bucshon.

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Upcoming STS Educational Events

**Advances in Quality
& Outcomes**

Baltimore, Maryland
September 28-30, 2016

Coding Workshop

New Orleans, Louisiana
November 3-5, 2016

STS/AATS Tech-Con 2017

Houston, Texas
January 21, 2017

STS 53rd Annual Meeting

Houston, Texas
January 21-25, 2017

Find out more at
www.sts.org/education-meetings.

Thank You!



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