

Thank you for participating in The Society of Thoracic Surgeons (STS) 2019 Practice Survey. Your response to this survey is very important for collection of critical data about the cardiothoracic surgery profession and future planning by STS.

Please respond no later than Friday, November 1, 2019.

Please note that your participation is completely confidential; all responses will be submitted directly to Relevant Research Inc., the survey research firm STS has commissioned to conduct this survey. Under no circumstances will any STS staff gain access to individually identifiable respondent data. The final survey results will be reported only in the aggregate, and individual answers will not be linked to you personally.

As a token of our appreciation, members who complete this survey by Friday, November 1st will receive a COMPLIMENTARY ADVANCE Executive Summary of the survey findings by e-mail.

Instructions:

- This survey should take 20 minutes or less to complete. Your response is very important to the success of this vital survey.
- Unless otherwise specified, all questions pertain to only your own practice and experience. If you work in a group practice, please do not report for the practice as a whole, report on your own activities.
- Please answer questions to the best of your ability. In cases where your exact figures are not available, please provide your best estimate. If you would like to report a range, use the mid-point of that range (i.e., for 100-150, use 125).

1. What year did you graduate from medical school?

2. In what state or country did you graduate from medical school?

3. Where do you currently practice?

- Inside the United States
- Outside the United States

4. How many years of post MD training did you have prior to entering practice?

5. Please indicate if you have earned an advanced professional degree since obtaining your MD. *Mark all that apply.*)

- Doctor of Philosophy (PhD):
- Juris doctor (JD):
- Masters of Business Administration (MBA):
- Masters of Public Health (MPH):
- Other (Please specify below):

5b. Other specify:

6. Please estimate your total educational debt in US dollars (\$) at the time you began active surgical practice.

7. In what year did you begin practicing cardiothoracic surgery, excluding military services or residency?

8. Are you fully retired?

Yes

No

9. In what year did you retire?

10. Did you retire earlier than planned? *(If Yes, please select all the reasons why.)*

- No
- Yes – Inadequate surgical volume
- Yes – Elective career change
- Yes – Practice not economically viable
- Yes – Health
- Yes – Reimbursement/liability insurance issues
- Yes – Lack of professional satisfaction
- Other (please specify)

11. Have you deferred retirement? *(Please select only one.)*

- No
- Yes – Cannot recruit a replacement
- Yes – Cannot afford to retire
- Yes – High level of career satisfaction
- Yes – Practice is economically viable
- Yes – Other (Please specify.)

12. At what age do you plan to retire from active, full-time cardiothoracic surgery practice?

13. Which of the following best describes your current position and activity in the field of cardiothoracic surgery? *(Please select one appropriate full-time position OR as many part-time positions as applicable.)*

| | Full-time (select only one) | Part-time (select all that apply) |
|--------------------------------------|--------------------------------|--------------------------------------|
| Academic Clinical Practice | <input type="radio"/> | <input type="radio"/> |
| Administration (no clinical surgery) | <input type="radio"/> | <input type="radio"/> |
| Consultant | <input type="radio"/> | <input type="radio"/> |
| Expert Witness | <input type="radio"/> | <input type="radio"/> |
| Private Practice | <input type="radio"/> | <input type="radio"/> |
| Research | <input type="radio"/> | <input type="radio"/> |
| Other (Please specify.) | <input type="radio"/> | <input type="radio"/> |

Other specify:

14. How many hours do you work per week, on average?

15. What percentage of time do you devote to your various activities and responsibilities?
(The total of all activities should sum to 100. Do not include % signs)

Clinical care and surgery

Research

Administration

Teaching

Other (Please explain below)

15b. Other specify:

16. What is your typical call schedule?

- Not applicable, no call schedule
- 1 day on : 4 days off
- 1 day on : 3 days off
- 1 day on : 2 days off
- 1 day on : 1 day off
- Other (Please specify.)

17. Which of the following best describes the majority of your practice? *(Please select only one.)*

- Salaried – academic medicine
- Salaried – hospital employed
- Salaried – government (national health service, military, VA)
- Salaried – HMO employed (i.e., Kaiser)
- Private Practice
- Other (Please specify.)

18. To what extent does STS adequately represents your professional needs?

- To a Large Extent
- To a Moderate Extent
- To a Small Extent
- Not at All.

19. What are some ways that STS can better meet your professional needs?

20. Do you employ surgeons who function primarily as first assistants?

Yes

No

21. How many cardiothoracic surgeons practice in your multispecialty group?

22. At how many hospitals do you personally operate and/or practice?

23. Please indicate if the total number of major operative procedures you have performed in the last 12 months has:

- Decreased compared to the prior 12 months
- Increased compared to the prior 12 months
- Remained about the same compared to the prior 12 months

24. How has catheter-based technology changed your volume over the past 12 months?

- Increased
- Decreased
- No change

25a. Which of the following surgical procedures do you personally perform? *Please select all that apply.*)

- Adult Cardiac Surgery
- Vascular Surgery
- Pulmonary Surgery
- Esophageal Surgery
- Congenital Heart Surgery in the Adult
- Congenital Heart Surgery in the Infant and Child

25b. Please report your estimated number of annual cases for each of the following surgical procedures you personally perform?

Adult Cardiac Surgery

Vascular Surgery

Pulmonary Surgery

Esophageal Surgery

Congenital Heart Surgery in the Adult

Congenital Heart Surgery in the Infant and Child

26. Please indicate whether you personally perform the following surgical procedures:

| | Currently perform | Do NOT perform | Plan to perform |
|---|-----------------------|-----------------------|-----------------------|
| Endobronchial ultrasound | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Endovascular aortic procedures | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Endoscopic mucosal resection | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Heart transplantation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Implant cardiac assist devices | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lung transplant | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| MAZE (any technique) for atrial fibrillation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Minimally invasive aortic valve repair | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Off-pump CABG | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Peripheral vascular surgery | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Robotic mitral valve replacement/repair | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Robotic lobectomy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Right thoracotomy mitral valve replacement/repair | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Thoroscopic esophagectomy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tracheal surgery | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Transcatheter aortic valve replacement | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Transcatheter mitral valve procedures | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Transvalvular procedures | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (Specify below) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(Please specify)

27. If you perform cardiac surgery, what percent of cases do you perform using a minimally invasive approach?

- 20% or less
- 21-40%
- 41-60%
- 61-80%
- 81% or more
- I do not perform cardiac surgery

28. If you perform general thoracic surgery, what percent of cases do you perform using a minimally invasive approach?

- 20% or less
- 21-40%
- 41-60%
- 61-80%
- 81% or more
- I do not perform general thoracic surgery

29. If you perform peripheral vascular surgery, are you certified in vascular surgery by the American Board of Surgery?

- Yes
- No
- I do not perform vascular surgery

30. Is your ICU opened or closed?

- Open
- Closed
- N/A

31. Keeping in mind that your answer will be kept strictly confidential, what was your net income (after expenses but before taxes) from all sources in 2018?

- Less than \$200,000
- \$200,000-399,999
- \$400,000-599,999
- \$600,000-799,999
- \$800,000 or more
- I would rather not disclose my income.

32. Does your income include a bonus structure?

- Yes
- No

33. What is your bonus based upon? (Check all that apply.)

- Quality metrics
- Work RVUs
- "Citizenship" (attendance at conferences and rounds, timely reconciliation of electronic health records, etc.)
- Academic productivity
- Other (Please explain.)

34. How satisfied are you with your income from your current surgical practice?

- Extremely satisfied
- Very satisfied
- Satisfied
- Somewhat satisfied
- Not at all satisfied

35. Does your institution have a financial funds flow model (the health system provides financial support to its medical school partner for education and research)?

- Yes
- No
- I don't know.

36. Has increased accountability for quality and outcomes made you more "risk averse" regarding your patient selection for surgery?

- Yes
- No

37. How many years has it been since your practice last hired a new surgeon?

38. Does your practice plan to hire new surgeons in the next 2 years?

- No
- Yes – One new surgeon
- Yes – Two new surgeons
- Yes – Three or more new surgeons

39. What do/would you look for when recruiting a new surgeon to your practice?

- Recent graduate
- Experienced surgeon
- Surgeon with special skills (e.g., endovascular skills, atrial fibrillation, VAD, etc.)

40. What sort of research do you perform? *(Please select all that apply.)*

- Clinical research
- Basic science/laboratory research
- Review/meta-analysis, epidemiology
- I do not conduct research
- Other (Please specify.)

41. Overall, how would you rate your current career satisfaction?

- Extremely satisfied
- Very satisfied
- Satisfied
- Somewhat satisfied
- Not at all satisfied

42. Regarding performance testing of surgeons:

- It is voluntary at my institution; I did not participate.
- It is voluntary at my institution; I participated.
- It is mandatory at my institution.
- My institution does not conduct performance testing.

43a. Please indicate the state or country of the facility where you perform most of your cardiothoracic procedures?

43b. Please indicate the zip code of the facility where you perform most of your cardiothoracic procedures?

44. Please indicate the setting of your practice.

- Rural
- Suburban
- Small or medium-sized community
- Urban

45. In your opinion, the number of cardiothoracic surgeons currently practicing in your region is:

- Too few
- Appropriate
- Too many
- Not sure

46. Are you board certified in critical care?

- Yes
- No

47. From the following, please indicate who is primarily responsible for post-operative patient care:

| | CT Surgeon | Cardiologist | Pulmonologist | Intensivist | Other physician | Mid-Level Practitioner | Step-Down Unit Personnel |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|--------------------------|
| Routine ICU patient | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Heart transplant patient | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lung transplant patient | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Assist Device patient (ECMO, VAD, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| TAVR/TEVAR patient | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

48. Where do your advanced practice providers (physician assistants, nurse practitioners, etc.) work?

- Clinics/scheduling
- Non-ICU
- Operating room
- ICU
- All of the above
- I do not have APPs in my practice.

49. Who provides the funding for the advanced practice providers?

- Hospital
- College of medicine
- Department of Surgery/CT Surgery

50. Do you participate in any component of The Society of Thoracic Surgeons National Database (Adult Cardiac Surgery Database, General Thoracic Surgery Database, Congenital Heart Surgery Database, Intermacs/Pedimacs Database)?

Yes

No

51. Please indicate the main reason why you do not participate in STS National Database.

- Cost
- Participate in a different registry
- Too time consuming
- Other (Please specify.)

52. How many full-time employees are required to maintain the STS National Database at your institution?

53. How is your STS National Database participation funded?

- Division
- Department
- Hospital
- Philanthropic body
- Personal bank account
- Other (please specify)

54. The STS National Database is undergoing major enhancements, including the deployment of a cloud-based system, significantly streamlined data collection, real-time data access, and new dashboard reporting. How else can we improve the Database?

55. Do you participate in a regional collaborative or state-mandated outcomes database?

Yes (Please specify the name of the database.)

No

Other (please specify database name.)

56. Do you think a single national outcomes database for each discipline within cardiothoracic surgery is sufficient?

Yes

No

57. How many hours per week do you spend maintaining EHR meaningful use?

- None
- 4 hours or less
- 5-8 hours
- 9-12 hours
- More than 12 hours

58. With your EHR, is your work easier or harder?

- Easier
- Harder
- Neither easier or harder

59. Which EHR do you use?

- Allscripts
- Cerner
- Epic
- McKesson
- Quadramed
- Other (please specify)

60. Do you participate in Medicare physician quality reporting through STS?

- Yes
- No, I participate through my hospital/group.
- No, I participate via other reporting mechanisms.
- No, I do not participate.

61. Do you use the STS Risk Calculator for adult cardiac prep consults?

- Yes
- No
- N/A

62. In the past year, have you learned a new surgical skill?

- Yes (Please explain.)
- No
- Other (Explain new surgical skill set learned.)

63. In the past year, have you felt symptoms of depression or burnout?

- Yes
- No

64. Please indicate the year of your birth:

65. Please indicate your gender:

- Female
- Male
- Transgender

67. Would you encourage your children or grandchildren to go into medicine today?

- Yes
- No
- Not applicable

68. Would you encourage your children or grandchildren to go into cardiothoracic surgery today?

- Yes
- No
- Not applicable

69. In the past year, have you advised a trainee or student not to pursue a career in cardiothoracic surgery?

- Yes
- No
- Not applicable

70. If you advised against a career in cardiothoracic surgery, what factors influenced your decision?

| | Very Important | Somewhat Important | Somewhat Unimportant | Very Unimportant |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Lack of jobs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Duration of training | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Salary too low | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Work-life balance | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (Please specify) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Other, specify:

On behalf of The Society of Thoracic Surgeons, thank you for your participation in this important survey!

John S. Ikonomidis, MD, PhD, Chair, Thoracic Surgery Practice & Access Task Force

Pavan Atluri, MD, Vice Chair, Thoracic Surgery Practice & Access Task Force

Stephen J. Lahey, MD, Chair, Workforce on Health Policy, Reform, and Advocacy

Alan M. Speir, MD, Chair, Council on Health Policy and Relationships

Please click Done to ensure your responses are received.