

STS/EACTS Latin America Cardiovascular Surgery Conference

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The STS Database: Its Role in Quality Improvement, Research and Health Policy

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**The Society
of Thoracic
Surgeons**



EACTS
European Association For Cardio-Thoracic Surgery





To enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy

Disclosures

No relevant financial disclosures

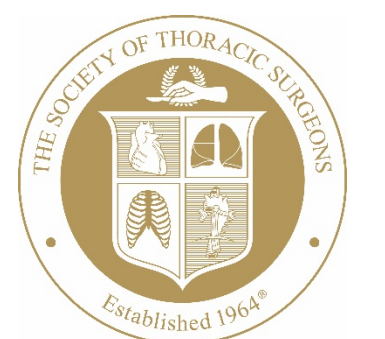
STS Workforce on National Databases

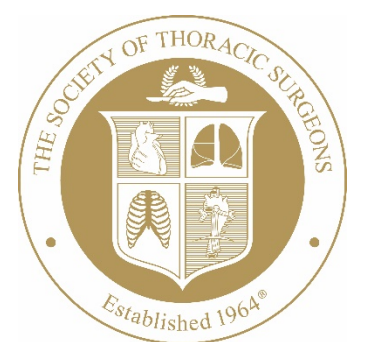
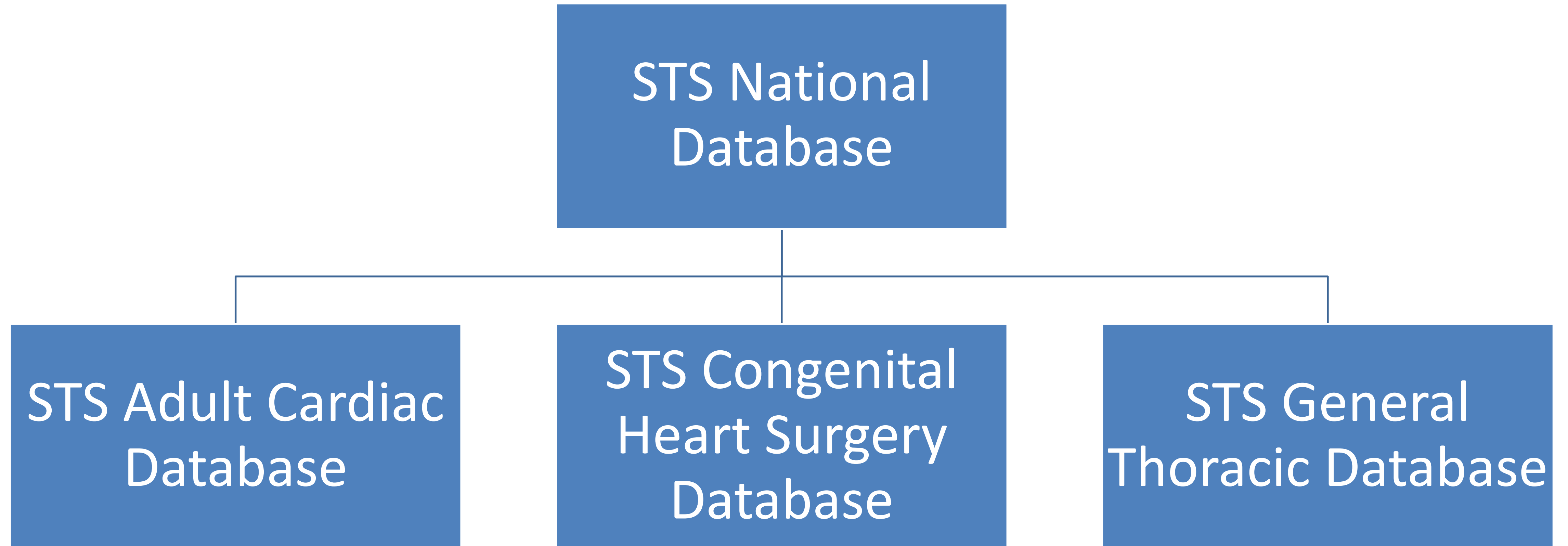
Workforce on Evidence Based Surgery

Quality Measurement Taskforce

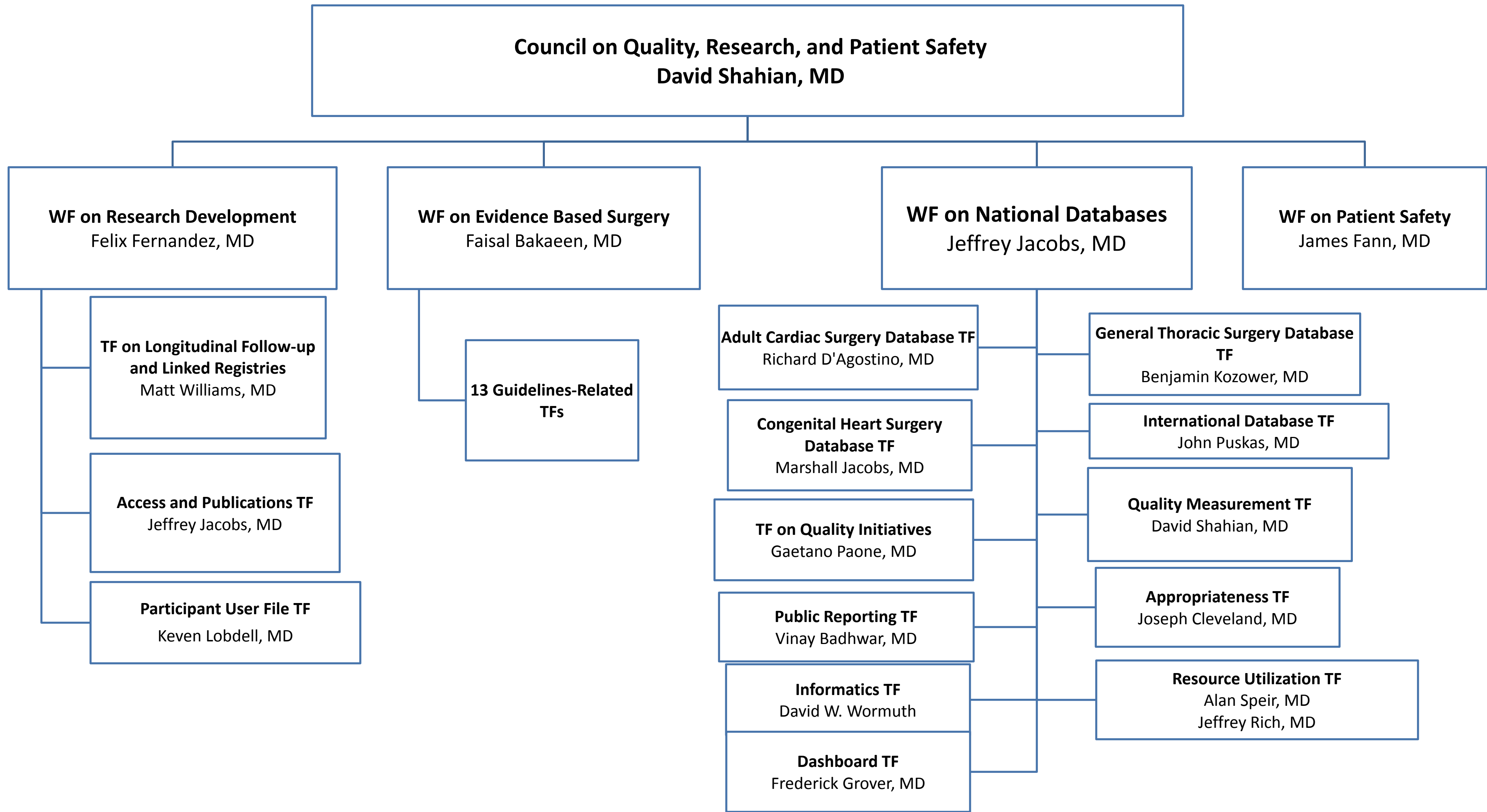
Public Reporting Taskforce

Workforce on Career Development









STS National
Database
Quality Reporting

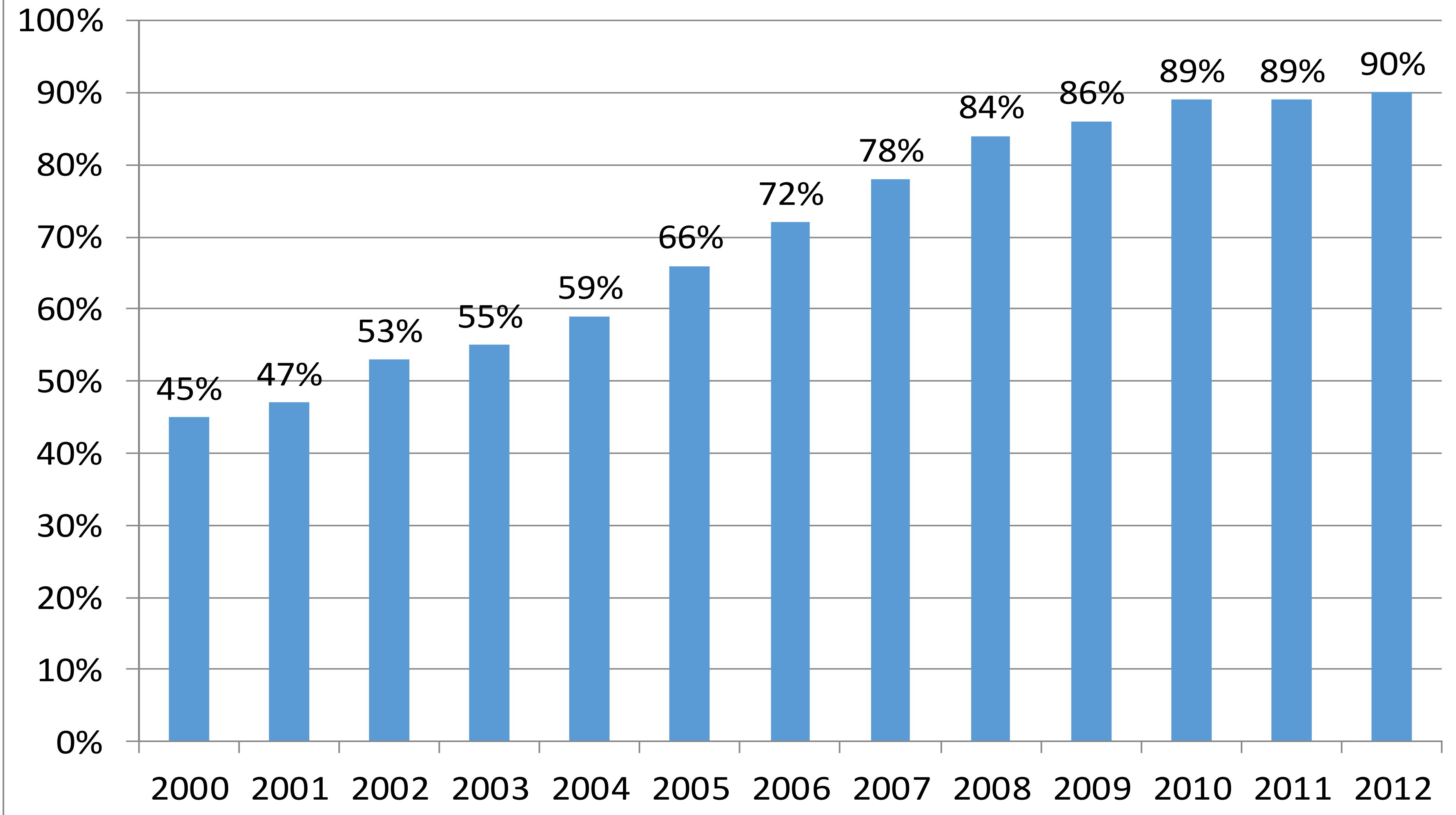
STS Quality
Measurement Task
Force

STS Task Force on
Quality Initiatives

STS Public
Reporting Task
Force



STS Adult Cardiac Surgery Database Center-level Penetration



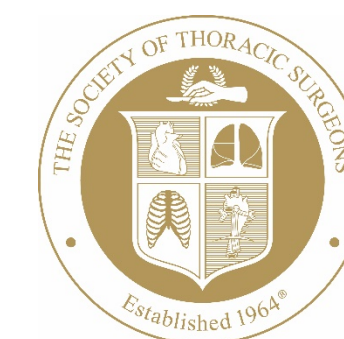
Jacobs JP, Shahian DM, He X, O'Brien SM, Badhwar V, Cleveland JC Jr, Furnary AP, Magee MJ, Kurlansky PA, Rankin JS, Welke KF, Filardo G, Dokholyan RS, Peterson ED, Brennan JM, Han JM, McDonald D, Schmitz D, Edwards FH, Prager RL, Grover FL. [Penetration, Completeness, and Representativeness of The Society of Thoracic Surgeons Adult Cardiac Surgery Database](#). Ann Thorac Surg. 2016;101:33-41.



Variable	STS Adult Cardiac Surgery Database ^a	STS Congenital Heart Surgery Database ^a	STS Congenital Cardiac Anesthesia Module ^{a,b}	STS General Thoracic Surgery Database ^a
Participants ^c in USA, No.	1,090	114	52	282
Hospitals, ^d No.	1,117	121	62	344
Surgeons, No.	2,916	370	464 (anesthesiologists)	913
Operations, ^e No.	6,041,804	383,558	84,890	458,864
States, No.	50	39	29	43
Estimated penetrance at the hospital level, ^{f,g,h} No.	>90%–95% of hospitals that perform adult heart surgery ^f	>95% of hospitals that perform pediatric heart surgery ^g	49.6% ^g	? ^h
Total countries (including USA), ⁱ No.	9	4	2	3
Participants outside USA, No.	29	6	1	2
Hospitals ^d	29	6	1	2
Surgeons, No.	182	22	1 (anesthesiologist)	8
Operations, ^e No.	9,165	11,422	0	233
Total participants	1,119	126	53	284
Total hospitals ^d	1,146	127	63	346
Total surgeons	3,098	392	465 (anesthesiologists)	921
Total operations ^e	6,050,969	394,980	84,890	459,097

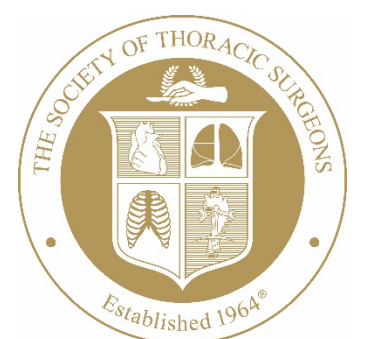


Outcomes	CABG	AVR	AVR + CABG	MVR	MVR + CABG	MV Repair	MV Repair + CABG
Operations, No.	144,940	29,158	18,016	6,857	2,582	8,658	4,205
Mortality, %							
In-hospital	1.7	1.9	3.2	4.2	9.2	1.0	4.3
Operative ^b	2.1	2.4	3.9	4.9	9.9	1.2	5.1
Major morbidity, %							
Reoperation ^c	2.3	3.9	4.7	5.8	7.5	2.7	5.4
DSWI/mediastinitis	0.3	0.2	0.2	0.1	0.4	0.1	0.3
Permanent stroke	1.3	1.1	2.3	2.0	3.8	0.9	2.5
Prolonged ventilation >24 h	8.2	7.9	13.4	18.5	30.8	5.0	21.8
Renal failure	2.0	2.0	3.8	4.3	7.9	1.1	5.4
New-onset atrial fibrillation	23.4	31.1	38.7	33.1	43.8	27.9	40.2
Readmission <30 days of discharge	9.7	10.2	11.7	14.4	15.7	8.3	13.2
Postoperative length of stay, d							
Mean	6.8	7.3	8.6	10.1	11.7	6.5	9.9
Median	6.0	6.0	7.0	7.0	9.0	5.0	8.0

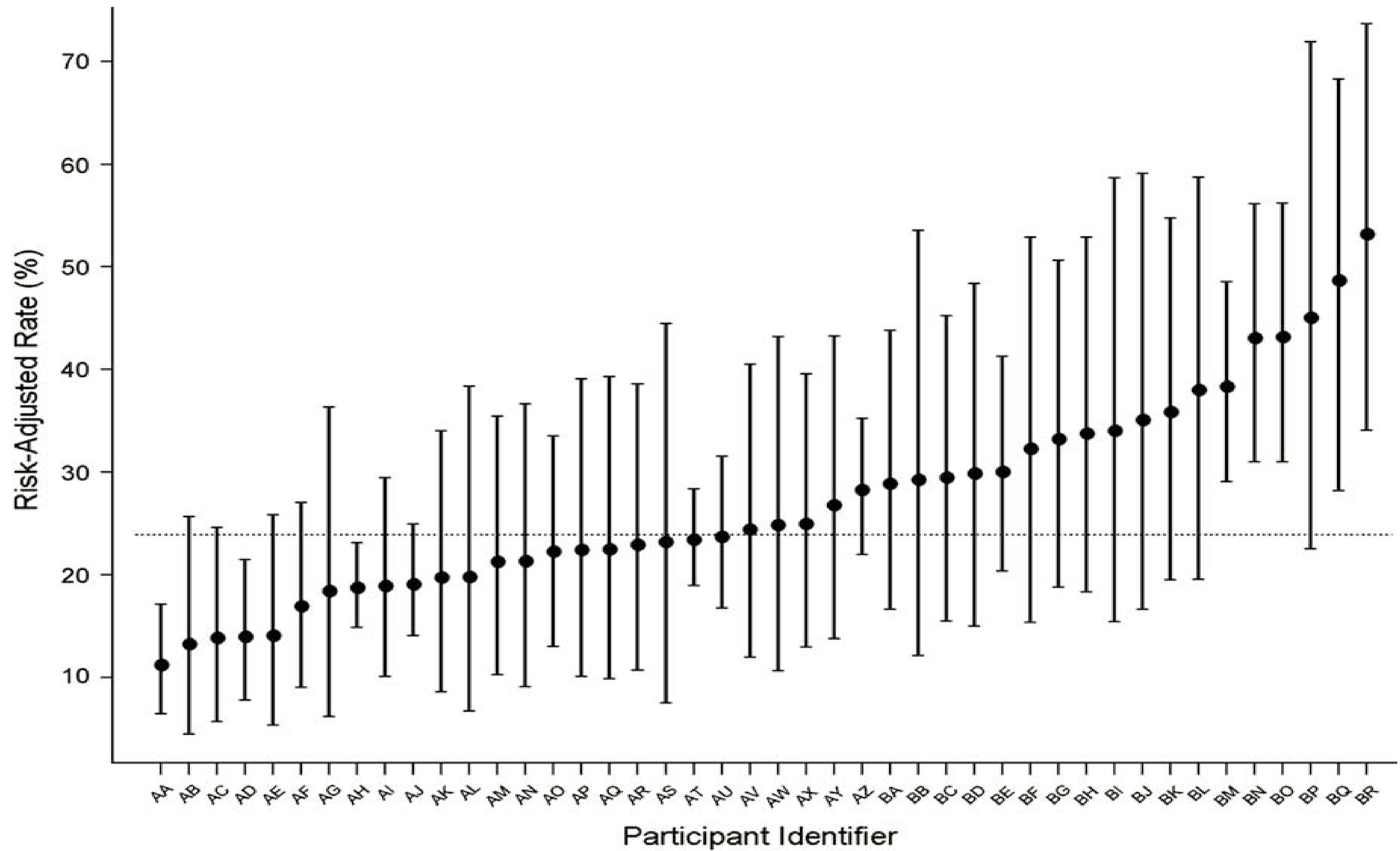


Variable	Off -Bypass Coarctation	VSD	TOF	AVC	ASO	ASO + VSD	Glenn/ Hemi- Fontan	Fontan	Truncus	Norwood
Operations, No.	3,947	6,985	4,519	3,116	1,851	798	3,946	4,164	614	2,828
Operative mortality, ^b %	1.0	0.7	1.0	3.2	2.7	5.3	2.1	1.4	9.6	15.6
Postoperative length of stay										
Aggregate average per patient, d	12.1	8.2	11.4	16.3	16.0	18.7	13.8	13.4	29.3	42.2
Median participant-specific average, d	10.4	7.7	11.0	15.5	15.4	16.1	12.4	14.0	25.4	41.0

Variable	Wedge Resection	Segmentectomy	Lobectomy	Pneumonectomy	Esophagectomy
Operations, No.	16,698	3,229	29,466	1,512	5,953
Operative mortality, ^b %	1.0	1.1	1.5	6.8	3.6
Postoperative length of stay, median d	2.0	4.0	4.0	5.0	10.0





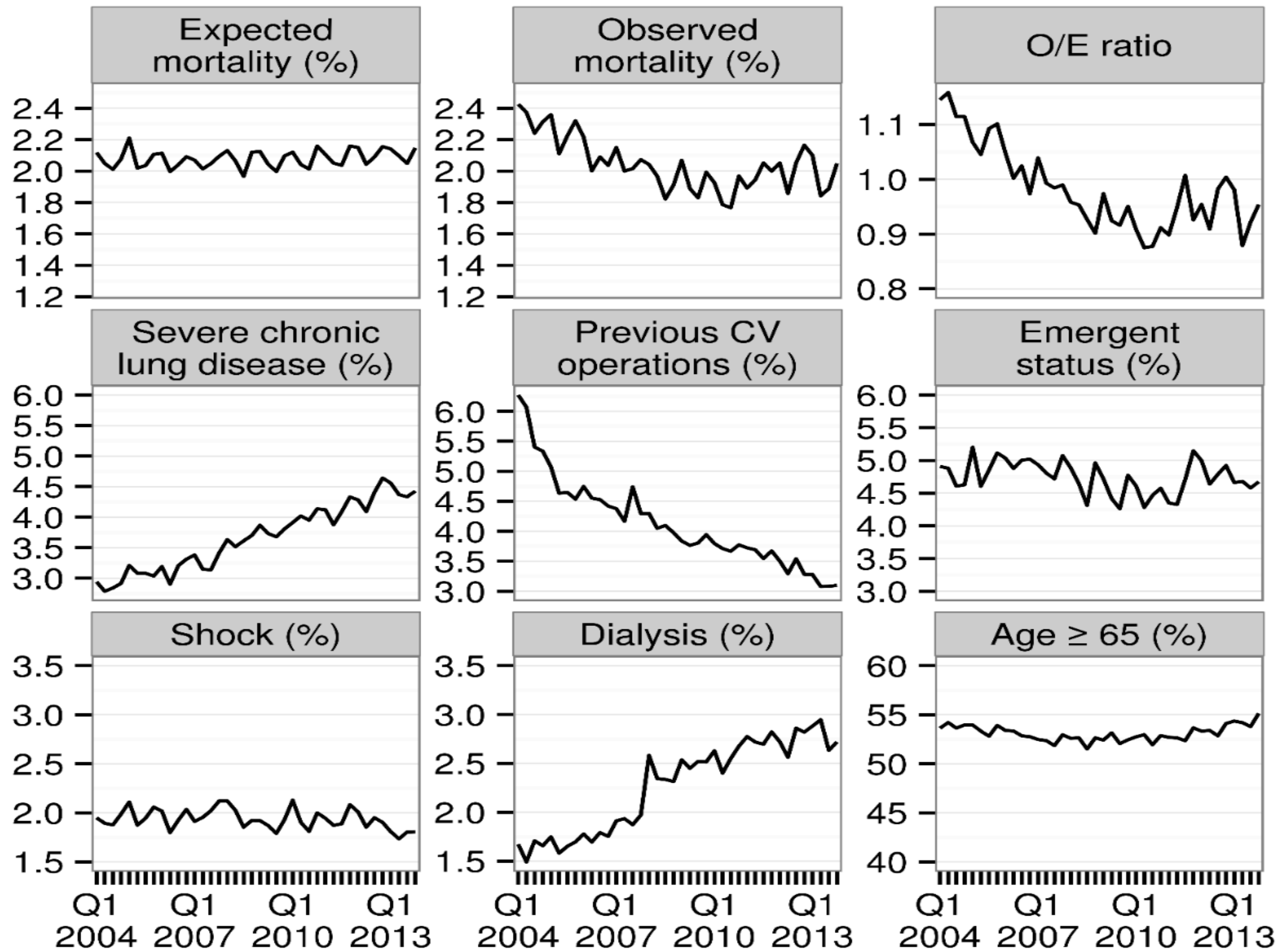


Risk-adjusted rates of morbidity after esophagectomy for cancer among Society of Thoracic Surgeons participating sites

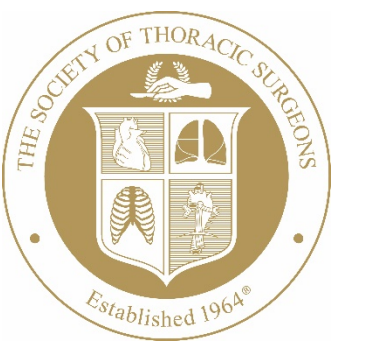


Adult Cardiac Composite Measures

- Isolated CABG
 - Isolated AVR
 - AVR+CABG
 - MVRR
 - MVRR+CABG
 - Domains
 1. Absence of Operative Mortality
 2. Absence of Major Morbidity
 3. Use of IMA*
 4. Use of All Perioperative Medications*
- *only included in the isolated CABG composite



Quarter



Science informs us what we can do;

Guidelines suggest what we should do; &

Registries show us what we are actually doing.

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Thank You

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