

Accreditation Council for Graduate Medical Education

Thoracic Surgery Case Logs

National Data Report

Prepared by: Department of Applications and Data Analysis

- National Resident Statistics Main Table
 - A. The main table provides a national picture of educational experiences. The report is ideal for establishing and assessing national policy related to resident practical experiences. Data are broken out by role (surgeon, assistant, etc), indicating the resident's procedures with primary credit. Procedures with secondary credit are also shown.
 - B. Descriptive statistics have been chosen to provide useful information for judging performance at the national level.
 - i. "Natl Res AVE" The national average describes the mean number of procedures performed per resident in the nation.
 - ii. "Natl Res MIN" The minimum number of procedures performed nationally.
 - ii. "Natl Res MAX" The greatest number of procedures performed nationally.
 - iv. "Natl Res MAX" The greatest number of procedures performed nationally.
- II. National Benchmark Table for Resident Statistics The table displays selected percentile benchmarks of program averages. For example, a score at the 10th percentile indicates that 10% of residents achieved less than the value while the remaining 90% achieved more than the value.
- III. National Minimums Table for Resident Statistics
 The table displays RRC minimums and Natl Res AVE for defined categories of procedures.

The information on the following pages has been created using specialty specific categories. These data should not be used for comparison across specialties as the definition of the categories will vary among the specialties. In addition, care should be exercised when comparing data from year to year as the definition of certain categories may be revised from time to time.

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Residency Review Committee for Surgery Report Date: October 31, 2018

			Surg	geon			Assi	stant			Seconda	ry Credit	
		Natl Res AVE	Natl Res MED	Nati Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Nati Res MIN	Nati Res MAX
Area	RRC Procedure												
Chest Wall	Resection of tumor	3.6	3	0	17	0.1	0	0	2	0.2	0	0	5
	Debridement rewiring sternum	9.1	6	0	46	0.7	0	0	8	0.5	0	0	6
	Repair pectus excavatum carinatum	1.5	1	0	17	0.1	0	0	3	0.0	0	0	1
	Thoracic outlet	1.9	0	0	68	0.0	0	0	1	0.0	0	0	0
	Repair sternal or rib fracture	0.9	1	0	5	0.1	0	0	2	0.1	0	0	3
	Thoracoplasty	0.2	0	0	2	0.0	0	0	0	0.0	0	0	1
	Other (chest wall)	4.2	3	0	16	0.1	0	0	2	0.2	0	0	3
	Total Chest Wall	21.4	18	0	77	1.0	0	0	11	1.1	0	0	9
ung and Pleura	Pneumonectomy	4.5	3	0	22	0.2	0	0	2	0.1	0	0	2
	Pneumonectomy w/sleeve rsxn	0.2	0	0	8	0.0	0	0	0	0.0	0	0	1
	Extrapleural pneumonectomy	0.4	0	0	6	0.0	0	0	1	0.0	0	0	1
	Lobectomy	16.5	14	0	71	0.3	0	0	4	0.9	0	0	9
	Lobectomy w/VATS	28.3	24	0	86	0.8	0	0	29	1.2	0	0	18
	Lobectomy w/sleeve rsxn	1.4	1	0	8	0.0	0	0	1	0.1	0	0	2
	Segmental resection	2.7	1	0	49	0.1	0	0	2	0.1	0	0	2
	Segmental resection w/VATS	4.9	2	0	31	0.2	0	0	12	0.2	0	0	3
	Wedge resection	0.1	0	0	6	0.0	0	0	0	0.0	0	0	2
	Wedge resection w/VATS	40.7	33	0	146	0.3	0	0	4	5.1	3	0	51
	Lung volume reduction surgery	0.5	0	0	4	0.0	0	0	0	0.0	0	0	1
	Thoracotomy for explor / biopsy	4.5	3	0	35	0.1	0	0	2	1.6	0	0	57
	Decortication	5.2	4	0	23	0.0	0	0	1	0.7	0	0	5
	Decortication w/VATS	6.6	5	0	43	0.0	0	0	1	0.3	0	0	3
	Pleurectomy pleurodesis	1.4	1	0	12	0.0	0	0	0	0.2	0	0	4
	Pleurectomy pleurodesis (w/wout bleb rsxn)	0.3	0	0	2	0.0	0	0	0	0.1	0	0	2
	Pleurectomy pleurodesis w/VATS	8.8	7	0	51	0.0	0	0	2	1.0	0	0	13
	Closure broncho pleural fistula	0.2	0	0	3	0.0	0	0	1	0.0	0	0	1
	Drainage lung abscess empyema	0.9	0	0	6	0.0	0	0	1	0.1	0	0	1
	Resection pulmonary cyst or sequestration	0.2	0	0	4	0.0	0	0	1	0.0	0	0	1
	Pulmonary resection w/en bloc chest wall	0.6	0	0	6	0.0	0	0	1	0.0	0	0	1
	Other (lung and pleura)	2.4	1	0	19	0.1	0	0	5	0.5	0	0	7
	Total Lung and Pleura	131.3	115	0	375	2.2	0	0	52	12.2	6	0	137

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			Surg	geon			Assi	stant			Seconda	ry Credit	
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Nati Res MAX
Area	RRC Procedure												
Tracheobronchial	Resection of stricture	1.0	0	0	11	0.0	0	0	2	0.0	0	0	2
	Resect tumor	0.3	0	0	4	0.0	0	0	0	0.0	0	0	1
	Repair of rupture or laceration	0.3	0	0	3	0.0	0	0	0	0.0	0	0	1
	Other (tracheobronchial)	2.3	1	0	21	0.0	0	0	1	0.2	0	0	7
	Total Tracheobronchial	4.0	3	0	29	0.1	0	0	2	0.2	0	0	7
Mediastinum	Excision of tumor cyst	3.0	2	0	19	0.0	0	0	1	0.2	0	0	4
	Excision of tumor cyst w/VATS	4.5	3	0	26	0.1	0	0	6	0.2	0	0	4
	Thymectomy	5.3	5	0	28	0.2	0	0	4	0.2	0	0	4
	Ligation of thoracic duct	1.0	0	0	13	0.0	0	0	1	0.2	0	0	9
	Mediastinotomy	3.5	3	0	15	0.2	0	0	6	0.3	0	0	3
	Other (Mediastinum)	16.0	10	0	121	0.1	0	0	3	7.6	1	0	127
	Total Mediastinum	33.2	25	0	155	0.7	0	0	8	8.6	1	0	129
Diaphragm	Repair of congenital hernia	0.2	0	0	3	0.0	0	0	1	0.0	0	0	0
	Repair of traumatic hernia	1.0	1	0	11	0.0	0	0	1	0.0	0	0	1
	Plication	1.9	1	0	14	0.1	0	0	2	0.1	0	0	2
	Other (diaphragm)	1.3	1	0	11	0.0	0	0	1	0.4	0	0	3
	Total Diaphragm	4.4	3	0	19	0.1	0	0	3	0.6	0	0	4

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			Sur	geon			Assi	stant			Seconda	ry Credit	
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Nati Res MAX
Area	RRC Procedure												
Esophagus	Esophagectomy	16.7	13	0	46	0.2	0	0	4	0.1	0	0	2
	Correction of reflux or stricture	0.4	0	0	6	0.0	0	0	1	0.0	0	0	1
	Correction of reflux or stricture w/VATS	3.7	1	0	32	0.1	0	0	1	0.3	0	0	13
	Repair paraesophageal hernia	9.5	6	0	73	0.1	0	0	6	0.6	0	0	6
	Repair paraesophageal hernia w/VATS	0.0	0	0	0	0.0	0	0	0	0.0	0	0	1
	Excision diverticulum	1.0	0	0	6	0.0	0	0	0	0.1	0	0	1
	Myotomy and reflux procedure	0.5	0	0	4	0.0	0	0	1	0.0	0	0	0
	Myotomy w/VATS	0.2	0	0	5	0.0	0	0	0	0.0	0	0	1
	Myotomy w/laparoscopy	2.0	1	0	14	0.1	0	0	2	0.0	0	0	1
	Closure of fistula	0.4	0	0	6	0.0	0	0	0	0.1	0	0	2
	Repair drainage of perforation or rupture	1.2	1	0	7	0.0	0	0	0	0.0	0	0	1
	Other (esophagus)	5.1	4	0	38	0.1	0	0	4	1.7	0	0	33
	Total Esophagus	40.7	33	0	147	0.5	0	0	10	2.8	1	0	36
Video Assisted Thoracoscopic (VATS)	Diagnostic thoracoscopy biopsy	0.1	0	0	4	0.0	0	0	0	0.1	0	0	3
	Pericardial window	0.8	0	0	6	0.0	0	0	1	0.1	0	0	2
	Drainage empyema hemothorax	0.7	0	0	12	0.0	0	0	0	0.1	0	0	2
	Sympathectomy	1.5	1	0	9	0.1	0	0	7	0.0	0	0	2
	Other (VATS)	5.6	2	0	100	0.1	0	0	2	1.4	0	0	51
	Total VATS	8.7	6	0	104	0.2	0	0	7	1.6	0	0	53
Closed Operations Congenital	Patent ductus arteriosus	1.6	1	0	26	1.4	1	0	8	0.6	0	0	6
,	Coarctation of aorta	0.5	0	0	10	1.0	1	0	7	0.0	0	0	1
	Shunting procedure	0.1	0	0	3	0.9	0	0	8	0.1	0	0	1
	BiDirectional Glenn shunt (closed)	0.0	0	0	1	0.1	0	0	1	0.0	0	0	1
	Other (closed operations congenital)	0.8	0	0	9	1.2	1	0	10	0.5	0	0	6
	Total Closed Operations Congenital	3.1	1	0	27	4.5	4	0	25	1.2	0	0	12

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			Surç	geon			Assi	stant			Seconda	ry Credit	
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Nati Res MAX
Area	RRC Procedure												
Open Congenital	Tetralogy fallot	0.3	0	0	4	1.6	1	0	8	0.0	0	0	2
	Transposition	0.1	0	0	2	0.9	0	0	8	0.0	0	0	1
	Truncus arteriosus	0.0	0	0	1	0.3	0	0	4	0.0	0	0	1
	Ventricular septum defect	1.4	1	0	14	3.2	2	0	20	0.4	0	0	4
	AV septal defect	0.1	0	0	1	1.2	0	0	7	0.1	0	0	2
	Anomalous pulmonary venous drainage	0.7	0	0	4	0.9	1	0	4	0.1	0	0	2
	Atrial septum defect	5.8	5	0	22	2.2	2	0	16	1.4	0	0	15
	BiDirectional Glenn shunt (open)	0.2	0	0	3	1.1	1	0	5	0.1	0	0	1
	Interrupted arch hypoplastic left heart	0.2	0	0	3	1.7	1	0	10	0.0	0	0	1
	Fontan procedure	0.4	0	0	5	1.4	1	0	8	0.0	0	0	1
	RVOT reconstruction	0.1	0	0	2	0.5	0	0	4	0.0	0	0	1
	Other (open congenital)	5.1	4	0	26	5.4	3	0	46	1.7	0	0	15
	Total Open Congenital	14.3	12	0	51	20.2	15	0	109	3.9	1	0	26
Valvular Heart Disease	Mitral aortic valve repair	14.4	10	0	66	4.5	1	0	40	4.4	1	0	27
	Valve replacements	66.1	60	0	183	10.3	2	0	91	15.2	7	0	77
	Aortic root replacement	10.1	7	0	63	2.1	1	0	26	0.9	0	0	10
	Re-operation for valvular disease	15.6	14	0	55	1.0	0	0	16	2.4	0	0	30
	Other (valvular heart disease)	5.4	4	0	38	0.6	0	0	13	3.8	1	0	43
	Total Valvular Heart Disease	111.6	100	0	318	18.5	6	0	136	26.8	12	0	121
Resection Cardiac Tumor	Resection cardiac tumor	1.4	1	0	7	0.2	0	0	4	0.2	0	0	2
	Total Resection Cardiac Tumor	1.4	1	0	7	0.2	0	0	4	0.2	0	0	2
Operations Coronary Atherosclerosis	Primary bypass	104.0	101	0	237	6.9	2	0	59	31.0	8	0	202
•	Re-op recurrent disease	3.9	3	0	25	0.3	0	0	5	0.5	0	0	6
	Ventricular aneurysm	0.3	0	0	3	0.1	0	0	2	0.0	0	0	1
	Acquired VSD	0.3	0	0	2	0.1	0	0	3	0.0	0	0	1
	Coronary anomalies and/or fistulae	0.2	0	0	8	0.0	0	0	1	0.0	0	0	1
	Other (operations coronary atherosclerosis)	0.2	0	0	2	0.0	0	0	0	0.2	0	0	3
	Total Oper Coronary Atherosclerosis	108.8	106	0	242	7.4	2	0	60	31.8	8	0	204

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[PAGE 5]	Number of Programs in the Nation: 60	Number	r of Keside	ents in the	Nation: 1	UU							
			Sur	geon			Assi	stant			Seconda	ry Credit	
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX
Area	RRC Procedure												
Pericardium	Pericardial window	3.9	3	0	16	0.1	0	0	3	0.1	0	0	5
	Pericardiectomy	1.0	1	0	8	0.1	0	0	2	0.2	0	0	3
	Other (pericardium)	0.4	0	0	13	0.0	0	0	1	0.1	0	0	1
	Total Pericardium	5.2	4	0	19	0.2	0	0	4	0.4	0	0	5
Other Cardiac Procedures	Arrhythmia surgery	7.4	6	0	33	0.6	0	0	8	3.5	1	0	43
	Insertion epicardial electrical device	1.8	1	0	12	0.3	0	0	3	0.5	0	0	5
	Insertion/removal cardiac assist device	8.2	7	0	32	1.8	0	0	28	1.3	0	0	19
	Removal intracardiac foreign body	0.4	0	0	3	0.0	0	0	1	0.1	0	0	2
	Repair cardiac trauma	0.4	0	0	3	0.0	0	0	1	0.1	0	0	1
	Minimally invasive surgery	0.0	0	0	2	0.0	0	0	1	0.0	0	0	2
	Other (other cardiac procedures)	19.7	13	0	80	1.4	0	0	10	2.6	1	0	42
	Total Other Cardiac Procs	37.9	34	0	116	4.1	1	0	40	8.1	3	0	71
Thoracic Vascular	Open repair traumatic injury	0.6	0	0	6	0.0	0	0	1	0.1	0	0	2
	Repair ascending aneurysm	11.6	10	0	37	1.6	0	0	19	2.4	0	0	19
	Repair desc aneurysm	3.4	2	0	30	0.5	0	0	12	1.8	0	0	30
	Repair thoracoabdominal aneurysm	1.4	0	0	10	0.2	0	0	6	0.0	0	0	1
	Pulmonary embolectomy endarterectomy	1.2	1	0	14	0.4	0	0	11	0.1	0	0	2
	Other (thoracic vascular)	0.8	1	0	5	0.1	0	0	1	0.2	0	0	2
	Total Thoracic Vascular	19.1	16	0	69	2.8	0	0	30	4.6	1	0	35
Transplantation	Heart	6.8	4	0	70	1.5	0	0	8	0.4	0	0	17
Transplantation	Lung	9.2	5	0	49	0.8	0	0	12	1.1	0	0	20
	Heart/lung	0.2	0	0	11	0.0	0	0	0	0.1	0	0	7
	Procurement heart	3.6	2	0	16	0.2	0	0	5	0.1	0	0	3
	Procurement heart/lung	1.5	0	0	25	0.1	0	0	8	0.1	0	0	4
	Other (transplantation)	0.4	0	0	13	0.0	0	0	1	0.3	0	0	8
	Total Transplantation	21.7	18	0	84	2.7	1	0	21	2.0	0	0	33

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			Surç	geon			ASSI	stant			Seconda	ary Credit	
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX
Area	RRC Procedure												
Minor Thoracic and CV	Bronchoscopy	39.1	33	0	205	0.2	0	0	4	18.7	1	0	273
	Bronchoscopy w/intervention	11.8	8	0	81	0.1	0	0	3	1.4	0	0	31
	EBUS	8.9	5	0	58	0.0	0	0	1	0.6	0	0	7
	Esophagoscopy	14.1	12	0	58	0.0	0	0	1	3.4	0	0	40
	Esophagoscopy w/intervention	21.6	17	0	129	0.2	0	0	4	1.9	0	0	48
	EUS	0.1	0	0	2	0.0	0	0	0	0.0	0	0	1
	Mediastinoscopy	16.6	15	0	51	0.1	0	0	2	1.9	0	0	27
	Tracheostomy	5.9	4	0	34	0.1	0	0	1	0.7	0	0	11
	Catheter drainage pericardium	0.2	0	0	2	0.0	0	0	0	0.0	0	0	0
	Insertion transvenous device	1.9	0	0	29	0.1	0	0	2	0.2	0	0	5
	Insertion removal IABP	4.5	3	0	23	0.1	0	0	1	0.9	0	0	24
	Insertion tunneled pleural catheter	2.4	1	0	15	0.0	0	0	1	0.4	0	0	7
	Echocardiography	0.0	0	0	1	0.0	0	0	2	0.0	0	0	1
	Insertion or removal of cardiac assist device	0.0	0	0	2	0.0	0	0	0	0.0	0	0	1
	Other (minor thoracic and CV)	22.2	19	0	82	0.5	0	0	5	4.7	1	0	114
	Total Minor Thoracic and CV	149.3	136	0	415	1.2	0	0	10	34.8	8	0	371
Endovascular	Endovascular	1.9	0	0	19	0.2	0	0	4	0.2	0	0	4
	Total Endovascular	1.9	0	0	19	0.2	0	0	4	0.2	0	0	4
Critical Care - Case Management (thoracic)	Ventilatory management (thoracic)	9.9	8	0	39	0.0	0	0	1	4.3	1	0	44
Childa Care - Case Management (thoracic)	Bleeding (non-trauma) > 3 units (thoracic)	2.1	2	0	9	0.0	0	0	1	1.7	0	0	58
	Hemodynamic instability (thoracic)	5.1		0	34			0	0	3.7	1	0	38
			4			0.0	0						
	Organ dysfunction/failure (thoracic)	3.8	3	0	24	0.0	0	0	0	3.5	1	0	32
	Dysrhythmias (thoracic)	2.3	2	0	12	0.0	0	0	0	2.3	0	0	32
	Invasive line managment/monitoring (thoracic)	4.5	3	0	26	0.0	0	0	2	5.1	0	0	37
	Nutrition (thoracic) Total CC - Case Management (thoracic)	3.9 31.6	3 28	0	23 106	0.0	0	0	0 2	3.8 24.5	0	0	58 233

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			Surg	geon			Assi	stant			Seconda	ry Credit	
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Nati Res MIN	Nati Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Nati Res MAX
Area	RRC Procedure												
Critical Care - Case Management	Ventilatory management (cardiac)	10.3	8	0	62	0.2	0	0	7	8.6	1	0	159
	Bleeding (non-trauma) > 3 units (cardiac)	3.8	3	0	15	0.0	0	0	3	3.1	0	0	52
	Hemodynamic instability (cardiac)	11.2	9	0	52	0.1	0	0	3	8.0	1	0	55
	Organ dysfunction/failure (cardiac)	7.0	5	0	70	0.0	0	0	0	6.1	0	0	53
	Dysrhythmias (cardiac)	5.5	5	0	18	0.0	0	0	1	4.8	0	0	52
	Invasive line management/monitoring	9.5	6	0	97	0.1	0	0	3	10.3	0	0	139
	Nutrition (cardiac)	2.5	1	0	14	0.0	0	0	0	4.0	0	0	66
	Total CC - Case Management (cardiac/cong)	49.7	50	0	233	0.4	0	0	10	44.9	5	0	390
Cardiopulmonary Bypass	Set-up and pump run with perfusionist	4.9	4	0	12	0.1	0	0	2	0.2	0	0	10
	Total Cardiopulmonary Bypass	4.9	4	0	12	0.1	0	0	2	0.2	0	0	10
Consultation Experience	New Patients	60.8	54	0	174	0.2	0	0	8	0.1	0	0	2
	Follow-up patients	54.6	52	0	190	0.0	0	0	1	0.1	0	0	1
	Total Consultation Experience	115.5	108	0	335	0.2	0	0	8	0.2	0	0	2
Simulation	One hour simulation	24.3	23	0	56	0.0	0	0	2	0.9	0	0	28
	Total Simulation	24.3	23	0	56	0.0	0	0	2	0.9	0	0	28
Multidisciplinary Management Conferences	Tumor board	11.9	10	0	38	0.0	0	0	1	0.3	0	0	23
	Cardiac cath conference	6.9	3	0	31	0.0	0	0	1	0.0	0	0	1
	Multidisciplinary clinics	2.4	0	0	26	0.1	0	0	4	0.0	0	0	1
	Transplant selection committee meeting	1.4	0	0	27	0.2	0	0	17	0.0	0	0	0
	Other (multidisciplinary management conf)	5.6	1	0	71	0.0	0	0	3	0.2	0	0	15
	Total Multidisciplinary Mgmt Conf	28.2	25	0	106	0.3	0	0	17	0.4	0	0	38
Non-Tracked Codes	Non-Tracked Codes	97.8	8	0	1,042	8.1	0	0	188	19.7	2	0	284

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				Surgeon	1				Assistan	ıt			Sec	ondary C	redit	
			Progr	am Perce	entiles			Progr	am Perce	entiles			Progr	am Perce	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
Chest Wall	Resection of tumor	0	2	3	4	8	0	0	0	0	0	0	0	0	0	1
	Debridement rewiring sternum	1	3	6	10	22	0	0	0	0	2	0	0	0	0	2
	Repair pectus excavatum carinatum	0	0	1	1	4	0	0	0	0	0	0	0	0	0	0
	Thoracic outlet	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Repair sternal or rib fracture	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
	Thoracoplasty	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Other (chest wall)	0	2	3	5	10	0	0	0	0	1	0	0	0	0	1
	Total Chest Wall	7	13	18	24	42	0	0	0	1	3	0	0	0	1	3
					_											
Lung and Pleura	Pneumonectomy	1	2	3	5	11	0	0	0	0	1	0	0	0	0	1
	Pneumonectomy w/sleeve rsxn	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Extrapleural pneumonectomy	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Lobectomy	4	10	14	19	33	0	0	0	0	1	0	0	0	1	2
	Lobectomy w/VATS	10	16	24	31	60	0	0	0	0	2	0	0	0	1	4
	Lobectomy w/sleeve rsxn	0	0	1	1	4	0	0	0	0	0	0	0	0	0	0
	Segmental resection	0	0	1	3	6	0	0	0	0	0	0	0	0	0	0
	Segmental resection w/VATS	0	1	2	6	15	0	0	0	0	0	0	0	0	0	1
	Wedge resection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Wedge resection w/VATS	23	28	33	45	74	0	0	0	0	1	0	1	3	6	12
	Lung volume reduction surgery	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Thoracotomy for explor / biopsy	0	1	3	5	11	0	0	0	0	0	0	0	0	1	3
	Decortication	1	3	4	7	10	0	0	0	0	0	0	0	0	1	2
	Decortication w/VATS	1	3	5	8	15	0	0	0	0	0	0	0	0	0	1
	Pleurectomy pleurodesis	0	0	1	2	4	0	0	0	0	0	0	0	0	0	1
	Pleurectomy pleurodesis (w/wout bleb rsxn)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Pleurectomy pleurodesis w/VATS	2	5	7	11	17	0	0	0	0	0	0	0	0	1	3
	Closure broncho pleural fistula	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Drainage lung abscess empyema	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Resection pulmonary cyst or sequestration	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Pulmonary resection w/en bloc chest wall	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Other (lung and pleura)	0	0	1	3	6	0	0	0	0	0	0	0	0	0	1
	Total Lung and Pleura	75	90	115	144	226	0	0	0	2	7	0	2	6	14	32

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				Surgeon	1				Assistan	ıt			Sec	ondary C	redit	
			Progr	am Perce	entiles			Progr	am Perce	entiles			Progr	am Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
Tracheobronchial	Resection of stricture	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Resect tumor	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Repair of rupture or laceration	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Other (tracheobronchial)	0	0	1	3	6	0	0	0	0	0	0	0	0	0	1
	Total Tracheobronchial	0	2	3	5	9	0	0	0	0	0	0	0	0	0	1
Mediastinum	Excision of tumor cyst	0	1	2	4	6	0	0	0	0	0	0	0	0	0	1
	Excision of tumor cyst w/VATS	0	2	3	5	11	0	0	0	0	0	0	0	0	0	1
	Thymectomy	1	3	5	6	10	0	0	0	0	1	0	0	0	0	1
	Ligation of thoracic duct	0	0	0	1	3	0	0	0	0	0	0	0	0	0	C
	Mediastinotomy	0	1	3	5	8	0	0	0	0	0	0	0	0	0	1
	Other (Mediastinum)	3	7	10	15	32	0	0	0	0	0	0	0	1	2	1
	Total Mediastinum	15	20	25	38	62	0	0	0	1	2	0	0	1	4	19
Diaphragm	Repair of congenital hernia	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Repair of traumatic hernia	0	0	1	1	3	0	0	0	0	0	0	0	0	0	C
	Plication	0	0	1	2	5	0	0	0	0	0	0	0	0	0	C
	Other (diaphragm)	0	0	1	2	3	0	0	0	0	0	0	0	0	0	2
	Total Diaphragm	1	2	3	6	10	0	0	0	0	1	0	0	0	1	2
Esophagus	Esophagectomy	9	11	13	20	32	0	0	0	0	1	0	0	0	0	0
	Correction of reflux or stricture	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Correction of reflux or stricture w/VATS	0	0	1	4	11	0	0	0	0	0	0	0	0	0	(
	Repair paraesophageal hernia	1	4	6	10	23	0	0	0	0	0	0	0	0	0	2
	Repair paraesophageal hernia w/VATS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(
	Excision diverticulum	0	0	0	1	3	0	0	0	0	0	0	0	0	0	C
	Myotomy and reflux procedure	0	0	0	0	2	0	0	0	0	0	0	0	0	0	(
	Myotomy w/VATS	0	0	0	0	1	0	0	0	0	0	0	0	0	0	C
	Myotomy w/laparoscopy	0	0	1	2	6	0	0	0	0	0	0	0	0	0	(
	Closure of fistula	0	0	0	0	1	0	0	0	0	0	0	0	0	0	(
	Repair drainage of perforation or rupture	0	0	1	2	3	0	0	0	0	0	0	0	0	0	(
	Other (esophagus)	0	2	4	6	12	0	0	0	0	0	0	0	0	1	4
	Total Esophagus	16	23	33	45	79	0	0	0	0	2	0	0	1	2	7

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				Surgeor	1				Assistar	nt			Seco	ndary C	redit	
			Progra	am Perc	entiles			Progra	ım Perc	entiles			Progra	am Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
Video Assisted Thoracoscopic (VATS)	Diagnostic thoracoscopy biopsy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pericardial window	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Drainage empyema hemothorax	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
	Sympathectomy	0	0	1	2	4	0	0	0	0	0	0	0	0	0	0
	Other (VATS)	0	1	2	5	13	0	0	0	0	0	0	0	0	1	4
	Total VATS	0	2	6	10	17	0	0	0	0	1	0	0	0	1	4
Closed Operations Congenital	Patent ductus arteriosus	0	0	1	1	5	0	0	1	2	4	0	0	0	0	2
Closed Operations Congenital	Coarctation of aorta	0	0	0	0	2	0	0	1	1	3	0	0	0	0	0
	Shunting procedure	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0
	BiDirectional Glenn shunt (closed)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other (closed operations congenital)	0	0	0	1	3	0	0	1	2	3	0	0	0	0	2
	Total Closed Operations Congenital	0	0	1	3	9	0	2	4	5	11	0	0	0	1	4
	Total Glosed Operations Congenital		U	'	3	3	U		7	3		U	U	U		_
Open Congenital	Tetralogy fallot	0	0	0	0	1	0	0	1	2	4	0	0	0	0	0
	Transposition	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
	Truncus arteriosus	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	Ventricular septum defect	0	0	1	2	4	0	1	2	4	8	0	0	0	0	2
	AV septal defect	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0
	Anomalous pulmonary venous drainage	0	0	0	1	2	0	0	1	1	2	0	0	0	0	0
	Atrial septum defect	1	3	5	8	11	0	1	2	2	5	0	0	0	2	5
	BiDirectional Glenn shunt (open)	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0
	Interrupted arch hypoplastic left heart	0	0	0	0	1	0	0	1	3	4	0	0	0	0	0
	Fontan procedure	0	0	0	0	2	0	0	1	2	4	0	0	0	0	0
	RVOT reconstruction	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
	Other (open congenital)	0	2	4	7	12	0	2	3	5	11	0	0	0	2	5
	Total Open Congenital	3	9	12	16	26	7	10	15	23	43	0	0	1	5	12

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				Surgeor	1			-	Assistar	nt			Seco	ndary C	redit	
			Progra	am Perc	entiles			Progra	ım Perc	entiles			Progra	ım Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
Valvular Heart Disease	Mitral aortic valve repair	2	6	10	19	33	0	0	1	4	14	0	0	1	6	10
	Valve replacements	27	46	60	79	115	0	0	2	10	34	0	1	7	18	4
	Aortic root replacement	1	4	7	11	20	0	0	1	2	5	0	0	0	1	3
	Re-operation for valvular disease	4	9	14	18	31	0	0	0	0	4	0	0	0	1	8
	Other (valvular heart disease)	0	2	4	7	13	0	0	0	0	2	0	0	1	4	13
	Total Valvular Heart Disease	43	74	100	145	190	0	2	6	15	60	0	2	12	29	84
Resection Cardiac Tumor	Resection cardiac tumor	0	0	1	2	3	0	0	0	0	1	0	0	0	0	1
	Total Resection Cardiac Tumor	0	0	1	2	3	0	0	0	0	1	0	0	0	0	1
Operations Coronary Atherosclerosis	Primary bypass	48	84	101	121	159	0	0	2	7	18	0	2	8	36	9
operations coronary Atherosolerosis	Re-op recurrent disease	0	2	3	4	8	0	0	0	0	1	0	0	0	0	-
	Ventricular aneurysm	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
	Acquired VSD	0	0	0	0	1	0	0	0	0	1	0	0	0	0	(
	Coronary anomalies and/or fistulae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Other (operations coronary atherosclerosis)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	,
	Total Oper Coronary Atherosclerosis	51	87	106	126	166	0	0	2	8	20	0	2	8	36	10
Pericardium	Pericardial window	0	2	3	5	8	0	0	0	0	1	0	0	0	0	(
Citodidin	Pericardiectomy	0	0	1	1	3	0	0	0	0	0	0	0	0	0	
	Other (pericardium)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	(
	Total Pericardium	1	3	4	7	10	0	0	0	0	1	0	0	0	0	2
Other Cardiac Procedures	Arrhythmia surgery	2	4	6	9	15	0	0	0	0	2	0	0	1	4	1
Outo, Jardiac i 1006dules	Insertion epicardial electrical device	0	0	1	3	4	0	0	0	0	1	0	0	0	0	
	Insertion/removal cardiac assist device	1	3	7	11	19	0	0	0	2	6	0	0	0	1	1
	Removal intracardiac foreign body	0	0	0	0	19	0	0	0	0	0	0	0	0	0	
	Repair cardiac trauma	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
	Minimally invasive surgery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Other (other cardiac procedures)	3	8	13	21	53	0	0	0	1	4	0	0	1	2	
	Total Other Cardiac Procedures)	11	21	34	47	72	0	0	1	5	11	0	1	3	7	

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				Surgeor	1				Assistan	t			Seco	ondary C	redit	
			Progra	am Perc	entiles			Progra	am Perce	entiles			Progra	am Perce	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
Thoracic Vascular	Open repair traumatic injury	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Repair ascending aneurysm	3	7	10	13	26	0	0	0	1	6	0	0	0	2	9
	Repair desc aneurysm	0	1	2	3	8	0	0	0	0	1	0	0	0	1	4
	Repair thoracoabdominal aneurysm	0	0	0	2	5	0	0	0	0	1	0	0	0	0	0
	Pulmonary embolectomy endarterectomy	0	0	1	1	3	0	0	0	0	1	0	0	0	0	1
	Other (thoracic vascular)	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1
	Total Thoracic Vascular	6	10	16	21	41	0	0	0	2	8	0	0	1	4	15
Transplantation	Heart	0	2	4	9	16	0	0	0	2	6	0	0	0	0	1
	Lung	0	0	5	11	27	0	0	0	1	2	0	0	0	0	4
	Heart/lung	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Procurement heart	0	0	2	5	11	0	0	0	0	1	0	0	0	0	0
	Procurement heart/lung	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0
	Other (transplantation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Transplantation	0	10	18	27	54	0	0	1	3	9	0	0	0	1	6
Minor Thoracic and CV	Bronchoscopy	18	26	33	39	64	0	0	0	0	1	0	0	1	9	46
WIIIIOI TITOTACIC ATIU CV	Bronchoscopy w/intervention	10	5	8	15	26	0	0	0	0	0	0	0	0	1	4
	EBUS	0	0	5	11	27	0	0	0	0	0	0	0	0	0	2
		4	8	12	16	29	0	0	0	0	0	0	0	0	1	12
	Esophagoscopy															
	Esophagoscopy w/intervention EUS	0	9	17	28	46	0	0	0	0	0	0	0	0	1	6
			0	0	0	0	0	0	0	0	0	0	0	0	0	
	Mediastinoscopy	10	12	15	20	26	0	0	0	0	0	0	0	0	1	6
	Tracheostomy	1	2	4	7	13	0	0	0	0	0	0	0	0	0	2
	Catheter drainage pericardium	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Insertion transvenous device	0	0	0	1	4	0	0	0	0	1	0	0	0	0	1
	Insertion removal IABP	0	1	3	5	12	0	0	0	0	0	0	0	0	0	3
	Insertion tunneled pleural catheter	0	0	1	3	6	0	0	0	0	0	0	0	0	0	1
	Echocardiography	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Insertion or removal of cardiac assist device	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other (minor thoracic and CV)	8	15	19	25	41	0	0	0	0	2	0	0	1	3	10
	Total Minor Thoracic and CV	88	114	136	174	222	0	0	0	1	5	0	2	8	24	

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		Surgeon			Assistant					Secondary Credit						
		Program Percentiles			Program Percentiles					Program Percentiles						
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
Endovascular	Endovascular	0	0	0	1	7	0	0	0	0	0	0	0	0	0	1
	Total Endovascular	0	0	0	1	7	0	0	0	0	0	0	0	0	0	1
															_	
Critical Care - Case Management (thoracic)	Ventilatory management (thoracic)	2	6	8	11	18	0	0	0	0	0	0	0	1	5	1
	Bleeding (non-trauma) > 3 units (thoracic)	0	1	2	3	5	0	0	0	0	0	0	0	0	0	4
	Hemodynamic instability (thoracic)	0	2	4	6	11	0	0	0	0	0	0	0	1	4	1
	Organ dysfunction/failure (thoracic)	0	2	3	5	8	0	0	0	0	0	0	0	1	3	11
	Dysrhythmias (thoracic)	0	1	2	3	5	0	0	0	0	0	0	0	0	1	8
	Invasive line managment/monitoring (thoracic)	0	2	3	5	10	0	0	0	0	0	0	0	0	5	20
	Nutrition (thoracic)	0	1	3	5	9	0	0	0	0	0	0	0	0	3	12
	Total CC - Case Management (thoracic)	20	24	28	35	48	0	0	0	0	0	0	0	4	26	68
Critical Care - Case Management (cardiac/cong)	Ventilatory management (cardiac)	2	5	8	12	22	0	0	0	0	0	0	0	1	7	26
on a control of the c	Bleeding (non-trauma) > 3 units (cardiac)	0	1	3	5	9	0	0	0	0	0	0	0	0	1	9
	Hemodynamic instability (cardiac)	3	7	9	13	21	0	0	0	0	0	0	0	1	11	27
	Organ dysfunction/failure (cardiac)	0	3	5	8	14	0	0	0	0	0	0	0	0	5	2
	Dysrhythmias (cardiac)		0	0	3	2										
	Invasive line management/monitoring (cardiac) 0 4 6 11 18 0 0 0 0 0	0	0	0	12	3										
	Nutrition (cardiac)	0	1	1	3	7	0	0	0	0	0	0	0	0	2	11
	Total CC - Case Management (cardiac/cong)	24	41	50	54	72	0	0	0	0	1	0	0	5	47	12

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			,	Surgeor	1			F	ssistan	t			Seco	ndary C	redit	
			Progra	m Perc	entiles			Progra	m Perc	entiles			Progra	m Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
Cardiopulmonary Bypass	Set-up and pump run with perfusionist	4	4	4	5	7	0	0	0	0	0	0	0	0	0	0
	Total Cardiopulmonary Bypass	4	4	4	5	7	0	0	0	0	0	0	0	0	0	0
Consultation Experience	New Patients	50	51	54	57	87	0	0	0	0	0	0	0	0	0	0
	Follow-up patients	50	51	52	55	62	0	0	0	0	0	0	0	0	0	0
	Total Consultation Experience	100	103	108	115	146	0	0	0	0	0	0	0	0	0	1
Simulation	One hour simulation	20	20	23	27	34	0	0	0	0	0	0	0	0	0	1
	Total Simulation	20	20	23	27	34	0	0	0	0	0	0	0	0	0	1
Multidisciplinary Management Conferences	Tumor board	0	5	10	17	26	0	0	0	0	0	0	0	0	0	0
	Cardiac cath conference	0	0	3	10	21	0	0	0	0	0	0	0	0	0	0
	Multidisciplinary clinics	0	0	0	1	9	0	0	0	0	0	0	0	0	0	0
	Transplant selection committee meeting	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
	Other (multidisciplinary management conf)	0	0	1	6	18	0	0	0	0	0	0	0	0	0	0
	Total Multidisciplinary Mgmt Conf	20	22	25	30	40	0	0	0	0	0	0	0	0	0	0
Non-Tracked Codes	Non-Tracked Codes	0	2	8	16	398	0	0	0	0	17	0	0	2	7	61

THORACIC SURGERY: NATIONAL RESIDENT REPORT (Defined Categories Table)

Reporting Period: Total Experience of Residents Completing Programs in 2017-2018

Residency Review Committee for Thoracic Surgery Report Date: October 31, 2018

[PAGE 1] Number of Programs in the Nation: 60 Number of Cardiac Track Residents: 66 Number of Thoracic Track Residents: 34 Cardiac **Thoracic Defined Category** Natl Res AVE **Track AVE** Track AVE Group Minimum **Minimum** Congenital Heart -Congenital Heart Disease (Assistant) 24.7 10 28.3 0 17.7 -Congenital Heart Disease (Surgeon) 17.4 21.8 0 8.9 10 Total Congenital Heart Disease 42.1 20 50.1 10 26.7 Adult Cardiac Experience 25 Acquired Valvular Heart Disease 101.5 50 124.6 56.6 Myocardial Revascularization 113.5 80 128.6 40 84.4 24.8 5 9.1 Re-Do Sternotomy 19.5 15 Interventional Skills or Procedures 46.9 20 42.1 20 56.0 Conduit Dissection and Preparation 12.8 5 11.1 10 7.6 Aortic Procedures 29.7 10 376 5 14.5 Arrhythmia Surgery 9.2 5 11.1 0 5.6 Cardiopulmonary Bypass set-up and pump 4.9 4 5.0 4 4.7 Circulatory Assist/Cardiac Transplant 10 46.5 5 21.4 38.0 Total Adult Cardiac Experience 189 433.2 104 259.9 374.3 Adult General Thoracic -Lung - Major Anatomic Resections 58.6 91.7 69.9 30 50 -Lung - Major VATS/Robotic Anatomic 33.2 5 24.2 10 50.6 25 37.0 40 -Lung - Biopsy/Wedge Resection 46.7 65.5 Total Lung 116.5 60 95.5 100 157.2 0 5 -Pleura - Major 11.8 10.6 14.2 0 -Pleura - Minor 12.9 9.8 15 18.8 Total Pluera 24.7 10 20.4 20 33.1 Chest Wall and Diaphragm 26.1 3 24.7 6 28.7 5 13.8 10.8 10 19.4 Mediastinum

0

10

5

15

93

2.8

15.6

13.8

29.4

183.7

5

20

10

30

171

6.7

30.9

31.8

62.7

307.8

Notes:

4.1

20.8

19.9

40.7

225.9

Tracheobronchial - Airway Surgery

-Esophagus - Esophagectomy

-Esophagus - Benign Major

Total Esophagus (Def Ctgv)

Total Adult General Thoracic

^{1. &}quot;Natl Res AVE" includes all graduates in both tracks.

^{2.} Procedure counts are based upon the Surgeon role, with the exception of Total Congenital Heart Disease, which is the sum of Surgeon and Assistant.

Residency Review Committee for Thoracic Surgery

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			Car	diac	Thoracic			
Group	Defined Category	Natl Res AVE	Minimum	Track AVE	Minimum	Track AVE		
Major Operative Experience	Major Operative Experience	630.0	302	652.9	285	587.4		
Minor Procedures	-Bronchoscopy - Simple	44.4	0	38.7	30	55.4		
	-Bronchoscopy - Complex	15.5	0	8.7	10	28.6		
	Total Bronchoscopy	59.9	30	47.5	40	84.0		
	-UGI - Endoscopy - Simple	24.8	0	20.3	20	33.7		
	-UGI - Endoscopy - Complex	11.0	0	7.3	5	18.1		
	Total UGI - Endoscopy	35.8	10	27.6	25	51.8		
	-Mediastinal Assessment - Other	0.6	0	0.7	0	0.4		
	-Mediastinal Assessment - Mediastinoscopy	16.6	10	14.3	15	21.0		
	-Mediastinal Assessment - EBUS/FNA	8.9	0	4.1	10	18.2		
	-Mediastinal Assessment - Chamberlain or	17.5	5	16.9	5	18.8		
	Total Mediastinal Assessment	43.6	20	36.0	30	58.4		
	Total Minor Procedures	139.3	60	111.0	95	194.3		
Total Operative Experience	Total Operative Experience	769.3	362	763.8	380	785.9		
Additional	-Consultation Experience - New Patients	60.8	50	64.7	50	53.3		
	-Consultation Experience - Follow-up	54.6	50	54.9	50	54.2		
	Total Consultation Experience	115.5	100	119.6	100	107.5		
	Multidisciplinary Patient Management Confs	28.2	20	28.8	20	26.9		
	-Thoracic Critical Care Case Management	31.6	20	30.5	20	33.6		
	-Cardiac and Congenital CC Case	49.7	20	54.0	20	41.4		
	Total Critical Care Case Management	81.3	75	84.5	75	74.9		
	Simulation	24.3	20	24.3	20	24.1		

Notes:

^{1. &}quot;Natl Res AVE" includes all graduates in both tracks.

^{2.} Procedure counts are based upon the Surgeon role, with the exception of Total Congenital Heart Disease, which is the sum of Surgeon and Assistant.