



# Accreditation Council for Graduate Medical Education

## Neurological Surgery Case Logs

### National Data Report

**Prepared by:** Department of Applications and Data Analysis

#### I. National Resident Statistics Main Table

- A. This main table provides a national picture of educational experiences. The report is ideal for establishing and assessing national policy related to resident practical experiences.
- B. Descriptive statistics have been carefully chosen to provide the most useful information for judging performance at that national level.
  - i. "Natl Res AVE" - The national average describes the mean number of procedures performed per resident in the nation.
  - ii. "Natl Res STD" - The national standard deviation indicates how tightly the procedure counts are clustered around the national mean.
  - iii. "Natl Res MED" - The median value among procedure counts in the nation.
  - iv. "Natl Res MIN" - The minimum value among procedure counts in the nation.
  - v. "Natl Res MAX" - The maximum value seen among procedure counts in the nation.

#### 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.

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.

**NEUROLOGICAL SURGERY : NATIONAL RESIDENT REPORT (Main Table)**  
**Reporting Period: Total Experience of Residents Completing Programs in 2018-2019**  
**Residency Review Committee for Neurological Surgery**  
**Report Date: September 11, 2019**

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Number of Programs in the Nation: 79    Number of Residents in the Nation: 159

		Senior Resident Surgeon					Lead Resident Surgeon					Assistant Resident Surgeon					Senior + Lead Surgeon				
		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX
RRC Area	RRC Procedure																				
<b>Adult Craniotomy - Brain Tumor</b>	Biopsy	3.1	3	2	0	16	11.8	8	11	0	50	0.3	1	0	0	7	14.9	9	13	0	52
	Intra-axial	19.7	19	15	0	147	64.0	33	58	1	198	2.6	4	1	0	21	83.7	36	76	15	212
	Extra-axial	8.3	8	6	0	43	25.5	14	23	1	77	1.3	3	0	0	15	33.7	16	31	4	95
	Skull base and other	10.5	10	8	0	61	31.1	18	28	3	99	1.5	3	0	0	17	41.6	21	36	7	131
	TOTAL - Ad Craniotomy - Brain Tum	41.6	35	33	1	222	132.3	58	126	5	290	5.8	9	2	0	48	173.9	61	165	63	338
<b>Adult Craniotomy - Trauma</b>	Cranioplasty	4.6	5	3	0	30	16.4	10	14	0	62	0.6	2	0	0	15	20.9	12	18	3	67
	Depressed skull fract or extra-ax	14.3	12	11	0	53	42.5	27	38	0	212	2.4	4	1	0	21	56.8	31	51	13	228
	Craniect for abscess, contusn, or	6.7	7	5	0	49	18.2	12	16	0	74	1.2	3	0	0	18	24.9	15	21	2	78
	Other (adult craniotomy - trauma)	5.1	6	3	0	37	17.6	21	13	0	173	0.8	2	0	0	13	22.6	25	18	1	189
	TOTAL - Ad Craniotomy - Trauma	30.6	26	24	0	162	94.6	50	87	3	325	5.0	9	2	0	57	125.2	58	112	41	351
<b>Adult Craniotomy-Intracran Vasc</b>	AVM (adult craniotomy)	3.7	4	3	0	21	9.0	7	7	0	35	0.4	1	0	0	8	12.7	8	11	1	39
	Aneurysm (adult craniotomy)	9.8	8	9	0	35	20.6	13	18	1	75	1.8	5	0	0	34	30.4	15	28	4	90
	Other (adult craniotomy)	1.4	2	1	0	15	3.8	5	2	0	33	0.2	1	0	0	5	5.2	6	3	0	41
	TOTAL - Adult Craniotomy for IVL	14.9	11	13	0	45	33.4	19	30	1	124	2.4	6	0	0	43	48.2	22	43	11	157
<b>Endovasc Therp Tumor or Vasc</b>	AVM (endovasc therapy)	3.2	5	1	0	37	6.9	17	2	0	170	0.2	1	0	0	5	10.1	18	5	0	171
	Aneurysm (endovasc therapy)	7.1	12	3	0	86	17.9	41	5	0	323	0.4	1	0	0	8	25.0	45	10	0	340
	Tumor embo, thrombectomy, or stent	7.4	15	2	0	125	21.7	46	5	0	324	0.3	1	0	0	8	29.1	51	10	0	331
	TOTAL - Endovasc Therp Tum or	17.6	29	10	0	245	46.5	96	13	0	777	0.9	2	0	0	16	64.2	105	25	0	793
<b>Adult Craniotomy - Pain</b>	Pain (adult craniotomy)	6.6	6	5	0	27	22.1	15	18	0	100	1.3	2	0	0	17	28.8	16	25	7	103
	TOTAL - Adult Craniotomy - Pain	6.6	6	5	0	27	22.1	15	18	0	100	1.3	2	0	0	17	28.8	16	25	7	103

Statistics are based upon the numbers of primary credit procedures logged by residents in the indicated role.

**NEUROLOGICAL SURGERY : NATIONAL RESIDENT REPORT (Main Table)**  
**Reporting Period: Total Experience of Residents Completing Programs in 2018-2019**  
**Residency Review Committee for Neurological Surgery**  
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Number of Programs in the Nation: 79    Number of Residents in the Nation: 159

		Senior Resident Surgeon					Lead Resident Surgeon					Assistant Resident Surgeon					Senior + Lead Surgeon				
		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX
RRC Area	RRC Procedure																				
<b>Adult</b>	Transphen-sel/parasel tumors	7.8	8	5	0	35	27.6	16	25	0	106	1.4	4	0	0	38	35.4	17	31	15	119
	TOTAL - Transphen-Sell/Parasellar	7.8	8	5	0	35	27.6	16	25	0	106	1.4	4	0	0	38	35.4	17	31	15	119
<b>Adult - Cranial-Extracran Vasc</b>	Bypass, CEA, Ligation	3.1	3	2	0	18	9.3	8	7	0	44	0.4	1	0	0	8	12.4	9	10	5	62
	TOTAL - Extracran Vascular Procs	3.1	3	2	0	18	9.3	8	7	0	44	0.4	1	0	0	8	12.4	9	10	5	62
<b>Adult - Radiosurgery</b>	Radiosurgery	5.5	11	2	0	75	18.6	39	10	0	450	0.7	4	0	0	42	24.1	40	13	10	450
	TOTAL - Radiosurgery	5.5	11	2	0	75	18.6	39	10	0	450	0.7	4	0	0	42	24.1	40	13	10	450
<b>Adult Functional Procedures</b>	Vagal nerve stimulation	1.5	2	1	0	11	6.7	7	4	0	48	0.1	0	0	0	3	8.3	8	6	0	48
	Stimulation for pain	4.0	8	1	0	63	16.1	18	11	0	86	0.5	2	0	0	17	20.1	22	12	0	126
	DBS or lesioning	6.5	9	3	0	48	28.7	25	23	0	170	0.7	2	0	0	14	35.2	28	28	1	209
	Cordotomy/rhizotomy	1.1	7	0	0	67	1.5	5	0	0	55	0.1	0	0	0	3	2.5	10	1	0	90
	Sympathectomy	0.0	0	0	0	1	0.1	1	0	0	4	0.0	0	0	0	1	0.2	1	0	0	4
	Intrathecal & implantable pumps	3.4	4	2	0	29	13.1	13	11	0	81	0.4	1	0	0	11	16.5	14	15	0	92
	Other (adult functional proc)	3.8	5	2	0	24	16.1	19	11	0	136	0.6	2	0	0	15	19.9	19	15	0	137
	TOTAL - Functional Procedures	20.4	25	12	0	125	82.3	57	66	2	343	2.3	5	0	0	44	102.6	62	91	15	344
<b>Adult VP Shunt (CSF Diversn)</b>	VPS	13.5	12	10	0	64	46.9	25	41	4	127	2.0	4	0	0	27	60.4	27	54	13	140
	ETV	0.9	2	0	0	13	3.2	4	2	0	19	0.2	1	0	0	5	4.1	4	3	0	19
	Other CSF diversion	2.3	3	2	0	16	9.6	10	7	0	86	0.3	1	0	0	5	11.9	11	9	0	93
	TOTAL - VP Shunt	16.6	14	13	0	78	59.7	29	53	5	141	2.4	5	0	0	28	76.4	29	68	18	159
<b>TOTAL - Adult Cranial</b>	TOTAL - Adult Cranial	164.7	116	136	6	566	526.6	202	511	31	1,298	22.7	35	11	0	243	691.2	198	658	273	1,335

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		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX
RRC Area	RRC Procedure																				
<b>Adt Spinal - ACD with Instrumentn</b>	Antr cervical appr for	16.4	17	11	0	117	67.1	38	61	0	203	2.6	5	0	0	31	83.5	40	77	25	228
	TOTAL - ACD	16.4	17	11	0	117	67.1	38	61	0	203	2.6	5	0	0	31	83.5	40	77	25	228
<b>Adt Spin - C-spin Fract Op Stabiliz</b>	Postr cervical appr for	16.2	18	12	0	157	60.5	32	59	0	237	2.2	4	0	0	19	76.7	33	73	20	245
	TOTAL - C-spine Fract Op Stabil	16.2	18	12	0	157	60.5	32	59	0	237	2.2	4	0	0	19	76.7	33	73	20	245
<b>Adult Spinal - Lumbar Discectomy</b>	Lumbar discectomy	26.2	33	16	0	243	103.2	67	87	3	438	3.4	6	1	0	30	129.4	72	109	36	447
	TOTAL - Lumbar Discectomy	26.2	33	16	0	243	103.2	67	87	3	438	3.4	6	1	0	30	129.4	72	109	36	447
<b>Adult Spinal - Thorac/Lumb</b>	Thoracic/lumbar	32.0	35	21	0	228	128.5	79	119	2	391	4.2	8	1	0	47	160.5	81	144	33	412
	TOTAL - Thorac/Lumb	32.0	35	21	0	228	128.5	79	119	2	391	4.2	8	1	0	47	160.5	81	144	33	412
<b>Adult Spinal - Peripheral Nerve</b>	Neurolysis/transposition	0.2	1	0	0	4	0.7	1	0	0	5	0.0	0	0	0	3	0.9	2	0	0	9
	Nerve repair	3.1	5	1	0	31	10.5	11	7	0	78	0.3	1	0	0	7	13.5	14	10	0	91
	Peripheral nerve tumor	0.5	1	0	0	5	2.2	3	1	0	21	0.1	0	0	0	4	2.7	3	2	0	26
	Other (peripheral nerve procs)	1.7	3	1	0	18	6.2	8	4	0	69	0.2	1	0	0	5	7.9	8	6	0	70
	TOTAL - Peripheral Nerve Procs	5.5	7	3	0	34	19.6	16	16	0	135	0.7	2	0	0	13	25.0	18	19	10	157
<b>TOTAL - Adult Spinal</b>	TOTAL - Adult Spinal	96.2	96	65	0	722	378.9	192	356	5	1,250	13.1	22	4	0	106	475.1	190	437	154	1,268

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RRC Area	RRC Procedure																				
<b>Pediatric Craniotomy - Brain Tumor</b>	Craniotomy - brain tumor (ped)	4.4	5	3	0	27	14.5	13	12	0	111	0.5	1	0	0	9	18.8	13	16	5	111
	TOTAL - Ped Craniotomy - Brain	4.4	5	3	0	27	14.5	13	12	0	111	0.5	1	0	0	9	18.8	13	16	5	111
<b>Pediatric Craniotomy for Trauma</b>	Craniotomy for trauma (ped)	3.9	4	3	0	31	13.4	8	12	0	54	0.4	1	0	0	8	17.3	9	15	2	64
	Craniotomy for craniostomosis	0.3	1	0	0	8	1.0	2	0	0	18	0.0	0	0	0	1	1.3	3	0	0	20
	TOTAL - Ped Craniotomy for	4.2	5	3	0	31	14.4	9	12	0	57	0.5	1	0	0	8	18.6	10	16	7	65
<b>Pediatric Spinal Procedures</b>	Spinal procedures (ped)	2.7	3	1	0	18	13.8	11	11	0	69	0.4	1	0	0	11	16.6	12	13	5	69
	TOTAL - Ped Spinal Procedures	2.7	3	1	0	18	13.8	11	11	0	69	0.4	1	0	0	11	16.6	12	13	5	69
<b>Pediatric VP Shunt</b>	VP shunt (ped)	8.1	10	4	0	51	33.2	25	26	0	116	0.9	2	0	0	18	41.3	27	33	10	140
	TOTAL - Ped VP Shunt	8.1	10	4	0	51	33.2	25	26	0	116	0.9	2	0	0	18	41.3	27	33	10	140
<b>TOTAL - Pediatric</b>	TOTAL - Pediatric	19.4	20	11	0	115	75.9	49	65	3	346	2.3	5	0	0	32	95.4	51	78	30	346
<b>Craniotomy for Epilepsy (Adult and</b>	Craniotomy for epilepsy	6.0	7	4	0	38	17.9	19	13	0	176	0.6	1	0	0	8	23.9	21	17	10	176
	TOTAL - Epilepsy	6.0	7	4	0	38	17.9	19	13	0	176	0.6	1	0	0	8	23.9	21	17	10	176

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		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX
RRC Area	RRC Procedure																				
<b>Minor Procedures/Critical Care</b>	ICP monitor placement	4.3	7	2	0	59	14.8	12	11	0	100	0.2	1	0	0	7	19.1	15	15	5	101
	Ext ventricular drain placmnt	8.4	11	4	0	77	37.5	29	32	1	192	0.3	1	0	0	9	45.9	32	38	10	203
	VP shunt tap/programming	6.7	9	4	0	53	34.1	33	25	0	250	0.4	1	0	0	10	40.8	36	31	10	258
	Cervical spine traction	2.7	4	2	0	30	8.7	7	7	0	58	0.2	1	0	0	6	11.3	8	8	5	60
	Stereotactic frame placmnt	2.5	7	0	0	76	8.3	14	5	0	159	0.3	1	0	0	7	10.8	16	7	0	159
	CVP line placement	4.2	8	2	0	69	13.1	14	10	0	99	0.1	0	0	0	3	17.3	16	11	2	103
	Airway management	3.8	5	2	0	25	9.8	12	9	0	148	0.1	1	0	0	8	13.6	12	11	0	148
	Arterial line placement	4.1	7	2	0	60	17.4	22	11	0	187	0.1	0	0	0	3	21.5	24	14	8	198
	Angiography	19.9	46	6	0	401	74.1	164	16	0	1,170	1.6	4	0	0	34	94.0	180	27	0	1,209
	TOTAL - Critical Care		56.4	67	36	0	560	217.9	186	182	3	1,253	3.3	6	1	0	35	274.3	205	214	62
<b>TOTAL - Tracked Procedures</b>	TOTAL - Credit Procedures	<b>342.7</b>	246	283	10	1,365	<b>1,217.2</b>	447	1,185	94	2,887	<b>42.0</b>	60	22	0	327	<b>1,559.9</b>	410	1,497	658	3,039
<b>Additional Procedures</b>	Craniofacial	1.5	3	0	0	24	4.8	5	3	0	29	0.2	1	0	0	4	6.3	6	4	0	29
	Tumor resection: primary/metast	2.2	3	1	0	19	4.2	4	3	0	22	0.4	1	0	0	8	6.3	6	6	0	26
	Spinal vascular lesion resectio	0.7	1	0	0	8	1.3	2	0	0	15	0.1	1	0	0	4	2.1	3	1	0	18
	Reconstructive secondary proc	0.0	0	0	0	1	0.1	0	0	0	2	0.0	0	0	0	1	0.1	0	0	0	2
	Miscellaneous/unclassified	3.9	4	3	0	22	14.4	15	11	0	131	1.2	5	0	0	55	18.3	16	15	1	141
TOTAL - Additional Procs		8.3	9	6	0	53	24.7	21	21	0	174	2.0	5	0	0	55	33.1	23	30	1	188
<b>Non-Tracked Procedures</b>	Non-Tracked Procedures	6.1	12	2	0	89	19.1	20	13	0	120	1.2	4	0	0	40	25.2	26	17	0	163

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# NEUROLOGICAL SURGERY : NATIONAL RESIDENT REPORT (Percentiles Table)

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		Senior Resident Surgeon					Lead Resident Surgeon					Assistant Resident Surgeon				
		Resident Percentiles					Resident Percentiles					Resident Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
<b>Adult Craniotomy - Brain Tumor</b>	Biopsy	0	0	2	4	8	3	7	11	15	22	0	0	0	0	1
	Intra-axial	2	7	15	25	41	27	47	58	75	109	0	0	1	3	8
	Extra-axial	0	3	6	11	18	11	19	23	30	44	0	0	0	1	4
	Skull base and other	0	4	8	13	22	10	20	28	36	57	0	0	0	2	4
	TOTAL - Ad Craniotomy - Brain Tum	5	19	33	54	94	61	98	126	153	212	0	0	2	6	16
<b>Adult Craniotomy - Trauma</b>	Cranioplasty	0	1	3	6	11	6	11	14	19	27	0	0	0	0	2
	Depressed skull fract or extra-ax hematoma	1	6	11	19	32	16	27	38	52	81	0	0	1	2	7
	Craniect for abscess, contusn, or parnchymal	0	3	5	8	14	5	10	16	24	34	0	0	0	1	3
	Other (adult craniotomy - trauma)	0	1	3	6	13	2	9	13	19	31	0	0	0	1	2
	TOTAL - Ad Craniotomy - Trauma	4	15	24	37	65	43	67	87	110	152	0	0	2	6	12
<b>Adult Craniotomy-Intracran Vasc Lesion</b>	AVM (adult craniotomy)	0	1	3	5	8	3	5	7	11	18	0	0	0	0	1
	Aneurysm (adult craniotomy)	1	5	9	12	21	7	12	18	26	37	0	0	0	1	5
	Other (adult craniotomy)	0	0	1	1	4	0	1	2	4	8	0	0	0	0	1
	TOTAL - Adult Craniotomy for IVL	2	7	13	20	31	13	22	30	40	59	0	0	0	2	6
<b>Endovasc Therp Tumor or Vasc Lesion</b>	AVM (endovasc therapy)	0	0	1	3	9	0	0	2	5	20	0	0	0	0	1
	Aneurysm (endovasc therapy)	0	1	3	7	18	0	1	5	10	48	0	0	0	0	1
	Tumor embo, thrombectomy, or stent	0	1	2	6	19	0	1	5	13	73	0	0	0	0	1
	TOTAL - Endovasc Therp Tum or Vasc Lesn	0	4	10	18	45	0	5	13	28	147	0	0	0	0	3
<b>Adult Craniotomy - Pain</b>	Pain (adult craniotomy)	0	3	5	8	17	8	14	18	26	43	0	0	0	1	5
	TOTAL - Adult Craniotomy - Pain	0	3	5	8	17	8	14	18	26	43	0	0	0	1	5

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		Resident Percentiles					Resident Percentiles					Resident Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
<b>Adult Cran-Transphen-Sell/Parasellar Tum</b>	Transphen-sel/parasel tumors	0	2	5	10	19	12	18	25	30	47	0	0	0	1	3
	TOTAL - Transphen-Sell/Parasellar Tum	0	2	5	10	19	12	18	25	30	47	0	0	0	1	3
<b>Adult - Cranial-Extracran Vasc Proc</b>	Bypass, CEA, Ligation	0	1	2	4	8	3	5	7	10	18	0	0	0	0	2
	TOTAL - Extracran Vascular Procs	0	1	2	4	8	3	5	7	10	18	0	0	0	0	2
<b>Adult - Radiosurgery</b>	Radiosurgery	0	0	2	6	12	3	8	10	14	41	0	0	0	0	1
	TOTAL - Radiosurgery	0	0	2	6	12	3	8	10	14	41	0	0	0	0	1
<b>Adult Functional Procedures</b>	Vagal nerve stimulation	0	0	1	2	5	1	2	4	8	17	0	0	0	0	1
	Stimulation for pain	0	0	1	3	9	1	4	11	19	41	0	0	0	0	1
	DBS or lesioning	0	1	3	6	18	5	15	23	31	63	0	0	0	0	2
	Cordotomy/rhizotomy	0	0	0	0	1	0	0	0	1	3	0	0	0	0	0
	Sympathectomy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Intrathecal & implantable pumps	0	1	2	4	9	1	5	11	17	28	0	0	0	0	1
	Other (adult functional proc)	0	0	2	4	10	2	5	11	17	37	0	0	0	0	2
	TOTAL - Functional Procedures		2	6	12	21	42	27	46	66	100	153	0	0	0	2
<b>Adult VP Shunt (CSF Diversn)</b>	VPS	2	6	10	17	31	18	31	41	57	85	0	0	0	2	6
	ETV	0	0	0	1	3	0	1	2	4	8	0	0	0	0	1
	Other CSF diversion	0	1	2	2	6	2	4	7	11	18	0	0	0	0	1
	TOTAL - VP Shunt	3	8	13	19	37	24	43	53	68	103	0	0	0	2	7
<b>TOTAL - Adult Cranial</b>	TOTAL - Adult Cranial	44	89	136	205	332	285	422	511	602	783	0	1	11	27	68

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# NEUROLOGICAL SURGERY : NATIONAL RESIDENT REPORT (Percentiles Table)

Reporting Period: Total Experience of Residents Completing Programs in 2018-2019

'Residency Review Committee for 'Neurological Surgery

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Programs in the Nation: 79 Residents in the Nation: 159

		Senior Resident Surgeon					Lead Resident Surgeon					Assistant Resident Surgeon				
		Resident Percentiles					Resident Percentiles					Resident Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
<b>Adt Spinal - ACD with Instrumentn</b>	Antr cervical appr for decom/stabiliz	1	6	11	20	38	27	41	61	82	121	0	0	0	2	10
	TOTAL - ACD	1	6	11	20	38	27	41	61	82	121	0	0	0	2	10
<b>Adt Spin - C-spin Fract Op Stabiliz Proc</b>	Postr cervical appr for decom/stabiliz	1	7	12	17	36	24	43	59	71	100	0	0	0	2	6
	TOTAL - C-spine Fract Op Stabil	1	7	12	17	36	24	43	59	71	100	0	0	0	2	6
<b>Adult Spinal - Lumbar Discectomy</b>	Lumbar discectomy	3	9	16	30	60	41	66	87	116	193	0	0	1	4	10
	TOTAL - Lumbar Discectomy	3	9	16	30	60	41	66	87	116	193	0	0	1	4	10
<b>Adult Spinl - Thorac/Lumb Instrum &amp; Fusn</b>	Thoracic/lumbar instrumentn & fusion	3	12	21	37	65	42	81	119	146	237	0	0	1	3	11
	TOTAL - Thorac/Lumb Instrum & Fusn	3	12	21	37	65	42	81	119	146	237	0	0	1	3	11
<b>Adult Spinal - Peripheral Nerve Procs</b>	Neurolysis/transposition	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
	Nerve repair	0	0	1	3	7	1	4	7	12	24	0	0	0	0	1
	Peripheral nerve tumor	0	0	0	1	2	0	0	1	3	6	0	0	0	0	0
	Other (peripheral nerve procs)	0	0	1	2	4	0	2	4	7	13	0	0	0	0	1
	TOTAL - Peripheral Nerve Procs	0	2	3	6	13	7	12	16	22	39	0	0	0	0	2
<b>TOTAL - Adult Spinal</b>	TOTAL - Adult Spinal	13	43	65	109	205	162	279	356	423	630	0	0	4	11	39

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		Senior Resident Surgeon					Lead Resident Surgeon					Assistant Resident Surgeon				
		Resident Percentiles					Resident Percentiles					Resident Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
<b>Pediatric Craniotomy - Brain Tumor</b>	Craniotomy - brain tumor (ped)	0	1	3	5	11	3	8	12	18	26	0	0	0	0	1
	TOTAL - Ped Craniotomy - Brain Tum	0	1	3	5	11	3	8	12	18	26	0	0	0	0	1
<b>Pediatric Craniotomy for Trauma</b>	Craniotomy for trauma (ped)	0	1	3	5	10	6	9	12	15	22	0	0	0	0	2
	Craniotomy for craniostylosis (ped)	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
	TOTAL - Ped Craniotomy for Trauma	0	1	3	5	11	7	10	12	16	24	0	0	0	0	2
<b>Pediatric Spinal Procedures</b>	Spinal procedures (ped)	0	0	1	3	7	4	9	11	15	25	0	0	0	0	1
	TOTAL - Ped Spinal Procedures	0	0	1	3	7	4	9	11	15	25	0	0	0	0	1
<b>Pediatric VP Shunt</b>	VP shunt (ped)	0	2	4	10	23	9	18	26	39	72	0	0	0	0	2
	TOTAL - Ped VP Shunt	0	2	4	10	23	9	18	26	39	72	0	0	0	0	2
<b>TOTAL - Pediatric</b>	TOTAL - Pediatric	1	5	11	25	52	28	48	65	89	144	0	0	0	1	5
<b>Craniotomy for Epilepsy (Adult and Ped)</b>	Craniotomy for epilepsy	0	2	4	7	15	6	10	13	20	31	0	0	0	0	3
	TOTAL - Epilepsy	0	2	4	7	15	6	10	13	20	31	0	0	0	0	3

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		Senior Resident Surgeon					Lead Resident Surgeon					Assistant Resident Surgeon				
		Resident Percentiles					Resident Percentiles					Resident Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
<b>Minor Procedures/Critical Care</b>	ICP monitor placement	0	1	2	5	10	5	7	11	17	32	0	0	0	0	0
	Ext ventricular drain placmnt	0	2	4	9	19	10	20	32	44	75	0	0	0	0	1
	VP shunt tap/programming	0	1	4	8	15	9	14	25	40	67	0	0	0	0	2
	Cervical spine traction	0	0	2	3	6	2	5	7	10	17	0	0	0	0	1
	Stereotactic frame placmnt	0	0	0	2	7	0	2	5	9	20	0	0	0	0	1
	CVP line placement	0	0	2	5	9	3	8	10	12	23	0	0	0	0	0
	Airway management	0	0	2	5	9	2	6	9	11	16	0	0	0	0	0
	Arterial line placement	0	0	2	4	11	5	9	11	15	34	0	0	0	0	0
	Angiography	0	1	6	18	41	0	5	16	40	228	0	0	0	0	6
	TOTAL - Critical Care		7	22	36	63	114	67	111	182	256	378	0	0	1	3
<b>TOTAL - Tracked Procedures</b>	TOTAL - Credit Procedures	92	181	283	408	662	725	1,002	1,185	1,357	1,730	0	3	22	49	111
<b>Additional Procedures</b>	Craniofacial	0	0	0	2	4	0	1	3	6	13	0	0	0	0	1
	Tumor resection: primary/metast	0	0	1	3	6	0	1	3	5	10	0	0	0	0	2
	Spinal vascular lesion resectio	0	0	0	1	2	0	0	0	1	4	0	0	0	0	0
	Reconstructive secondary proc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Miscellaneous/unclassified	0	1	3	5	8	2	6	11	17	27	0	0	0	1	3
TOTAL - Additional Procs		0	3	6	9	19	4	14	21	30	45	0	0	0	1	6
<b>Non-Tracked Procedures</b>	Non-Tracked Procedures	0	1	2	5	17	2	7	13	21	42	0	0	0	0	3

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