

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 MED" The median value among procedure counts in the nation.
 - iii. "Natl Res MIN" The minimum value among procedure counts in the nation.
 - iv. "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.

III. National Minimums Table for Resident Statistics

The table displays RRC minimums, Natl Res AVE, and counts of the number of residents in the nation that performed fewer than the RRC minimum.

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			All R	oles		S	enior R Surg		nt	Lead	Reside	ent Sur	geon	As	sistant Surç		ent
		Natl Res AVE	Natl Res MED	Nati Res MIN	Natl Res MAX	Natl Res AVE	Nati Res MED	Nati Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Nati Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Nati Res MIN	Nati Res MAX
RRC Area	RRC Procedure																
Adult Craniotomy - Brain Tumor	Biopsy	10.8	9	0	46	3.7	2	0	36	6.9	6	0	29	0.2	0	0	13
	Intra-axial	79.1	75	25	285	36.2	30	1	190	42.2	41	0	130	0.7	0	0	25
	Extra-axial	35.8	33	9	205	15.5	13	0	119	20.1	17	0	86	0.2	0	0	7
	Skull base and other	46.4	44	14	138	21.1	18	0	89	24.9	23	0	75	0.5	0	0	8
	TOTAL - Ad Craniotomy - Brain Tum	172.1	163	73	633	76.5	66	2	403	94.1	94	0	282	1.5	0	0	45
Adult Craniotomy - Trauma	Cranioplasty	19.8	17	1	86	11.5	10	0	64	8.1	7	0	56	0.2	0	0	13
	Depressed skull fract or extra-ax hematoma	56.9	51	12	179	31.7	27	4	156	24.7	21	0	115	0.6	0	0	20
	Craniect for abscss, contusn, or parnchyml	25.1	23	2	118	12.1	11	0	49	12.8	11	0	85	0.3	0	0	15
	Other (adult craniotomy - trauma)	18.2	15	0	124	10.9	9	0	77	7.1	5	0	45	0.2	0	0	5
	TOTAL - Ad Craniotomy - Trauma	120.0	108	43	395	66.2	59	10	323	52.7	45	1	242	1.2	0	0	43
Adult Craniotomy-Intracran Vasc Lesion	AVM (adult craniotomy)	13.0	11	1	62	5.2	4	0	57	7.5	6	0	32	0.3	0	0	15
Adult Clamotomy-intractan vasc Lesion	Aneurysm (adult craniotomy)	37.2	33	10	210	15.9	13	0	86	20.7	18	0	166	0.6	0	0	23
	Other (adult craniotomy)	0.6	0	0	210	0.3	0	0	3	0.3	0	0	21	0.0	0	0	1
	TOTAL - Adult Craniotomy for IVL	50.8	45	15	241	21.3	19	0	112	28.6	26	0	195	0.0	0	0	28
	TOTAL - Addit Graniotomy for tVE	50.0	40	13	241	21.3	19	U	112	20.0	20	U	195	0.9	U	U	20
Endovasc Therp Tumor or Vasc Lesion	AVM (endovasc therapy)	6.8	3	0	84	3.6	1	0	57	2.9	0	0	54	0.3	0	0	9
	Aneurysm (endovasc therapy)	13.4	7	0	138	6.1	3	0	103	6.7	1	0	136	0.7	0	0	18
	Tumor embo, thrombectomy, or stent	13.0	4	0	175	7.1	2	0	155	5.6	0	0	106	0.3	0	0	17
	TOTAL - Endovasc Therp Tum or Vasc Lesn	33.2	13	0	347	16.8	9	0	201	15.2	4	0	274	1.2	0	0	35
Adult Craniotomy - Pain	Pain (adult craniotomy)	13.5	10	0	56	5.1	4	0	32	8.4	7	0	49	0.1	0	0	3
,	TOTAL - Adult Craniotomy - Pain	13.5	10	0	56	5.1	4	0	32	8.4	7	0	49	0.1	0	0	3

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			All R	oles		S	enior R Surg		t	Lead	Reside	nt Surg	geon	As	sistant Surg		ent
		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	Natl Res MAX	Natl Res AVE	Nati Res MED	Nati Res MIN	Nati Res MAX
RRC Area	RRC Procedure																
Adult Cran-Transphen-Sell/Parasellar Tum	Transphen-sel/parasel tumors	40.0	34	8	189	18.5	14	0	105	21.1	18	0	135	0.4	0	0	13
	TOTAL - Transphen-Sell/Parasellar Tum	40.0	34	8	189	18.5	14	0	105	21.1	18	0	135	0.4	0	0	13
Adult - Cranial-Extracran Vasc Proc	Bypass, CEA, Ligation	14.3	11	0	88	6.0	4	0	52	8.1	6	0	58	0.2	0	0	9
	Endovascular (CAS)	3.0	1	0	32	1.4	0	0	23	1.5	0	0	30	0.0	0	0	2
	TOTAL - Extracran Vascular Procs	17.3	12	0	99	7.4	5	0	52	9.6	6	0	65	0.2	0	0	9
Adult - Radiosurgery	Radiosurgery	22.7	13	0	195	13.6	7	0	166	8.7	6	0	82	0.5	0	0	21
	TOTAL - Radiosurgery	22.7	13	0	195	13.6	7	0	166	8.7	6	0	82	0.5	0	0	21
Adult Functional Procedures	Vagal nerve stimulation	7.1	5	0	32	4.3	3	0	22	2.7	1	0	27	0.0	0	0	4
	Stimulation for pain	16.3	12	0	108	9.6	6	0	92	6.4	2	0	97	0.3	0	0	42
	DBS or lesioning	24.6	19	0	121	15.4	10	0	75	8.6	4	0	86	0.6	0	0	61
	Cordotomy/rhizotomy	1.9	1	0	41	1.0	0	0	31	0.8	0	0	38	0.0	0	0	1
	Sympathectomy	0.3	0	0	17	0.2	0	0	17	0.1	0	0	2	0.0	0	0	0
	Intrathecal & implantable pumps	14.9	12	0	57	9.4	8	0	38	5.4	3	0	46	0.0	0	0	2
	Other (adult functional proc)	13.8	10	0	75	8.8	7	0	42	4.9	2	0	70	0.1	0	0	7
	TOTAL - Functional Procedures	78.8	72	12	319	48.8	43	0	192	28.9	19	0	296	1.1	0	0	66
Adult VP Shunt (CSF Diversn)	VPS	63.7	59	10	161	39.1	36	3	103	24.2	20	0	117	0.4	0	0	22
	ETV	4.7	3	0	22	2.3	2	0	18	2.3	2	0	22	0.1	0	0	6
	Other CSF diversion	11.5	10	0	61	6.6	5	0	24	4.8	3	0	58	0.1	0	0	3
	TOTAL - VP Shunt	79.9	75	24	228	48.0	44	3	124	31.3	27	0	181	0.5	0	0	22
TOTAL - Adult Cranial	TOTAL - Adult Cranial	628.3	598	329	1,448	322.2	304	31	785	298.6	279	2	945	7.6	1	0	217
TOTAL - Adult Cranial	TOTAL - Adult Craffial	020.3	290	329	1,440	322.2	304	31	700	250.0	219		940	7.0	ı	U	217

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			All R	oles		S	enior R Surg		t	Lead	Reside	nt Surç	geon	As	sistant Surg		ent
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	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	Nati Res MED	Natl Res MIN	Natl Res MAX
RRC Area	RRC Procedure																
Adt Spinal - ACD with Instrumentn	Antr cervical appr for decom/stabiliz	72.8	69	22	218	32.7	27	0	129	39.5	35	0	137	0.6	0	0	21
	TOTAL - ACD	72.8	69	22	218	32.7	27	0	129	39.5	35	0	137	0.6	0	0	21
Adt Spin - C-spin Fract Op Stabiliz Proc	Postr cervical appr for decom/stabiliz	60.1	56	18	135	27.4	22	1	121	32.3	29	0	87	0.4	0	0	11
	TOTAL - C-spine Fract Op Stabil	60.1	56	18	135	27.4	22	1	121	32.3	29	0	87	0.4	0	0	11
Adult Spinal - Lumbar Discectomy	Lumbar discectomy	122.2	108	31	399	66.3	54	0	277	54.9	51	0	253	1.0	0	0	37
Adult Spinal - Edition Discectority	TOTAL - Lumbar Discectomy	122.2	108	31	399	66.3	54	0	277	54.9	51	0	253	1.0	0	0	37
	TOTAL - Lumbar Discectority	122.2	100	31	399	00.3	34	U	211	54.9	31	U	200	1.0	U	U	31
Adult Spinl - Thorac/Lumb Instrum & Fusn	Thoracic/lumbar instrumentn & fusion	142.3	127	24	459	76.0	61	3	297	65.5	57	0	247	8.0	0	0	35
	TOTAL - Thorac/Lumb Instrum & Fusn	142.3	127	24	459	76.0	61	3	297	65.5	57	0	247	8.0	0	0	35
Adult Spinal - Peripheral Nerve Procs	Neurolysis/transposition	0.7	0	0	8	0.3	0	0	4	0.4	0	0	8	0.0	0	0	1
	Nerve repair	16.3	13	0	70	8.6	6	0	62	7.5	4	0	55	0.1	0	0	5
	Peripheral nerve tumor	2.5	2	0	16	1.2	1	0	13	1.3	1	0	14	0.0	0	0	1
	Other (peripheral nerve procs)	6.3	4	0	46	3.7	2	0	44	2.5	1	0	33	0.0	0	0	2
	TOTAL - Peripheral Nerve Procs	25.8	20	5	100	13.9	10	0	76	11.7	9	0	87	0.2	0	0	5
	T-0-14 A L W 0 L L		222	450	000		101				400		=00				
TOTAL - Adult Spinal	TOTAL - Adult Spinal	423.1	399	156	928	216.2	194	4	717	203.9	193	0	530	3.1	0	0	80

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			All R	oles		S	enior F Surg		nt	Lead	Reside	nt Sur	geon	As	sistant Surç	Reside geon	ent
		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	Nati Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX
RRC Area	RRC Procedure																
Pediatric Craniotomy - Brain Tumor	Craniotomy - brain tumor (ped)	17.1	15	4	98	10.6	9	0	95	6.4	4	0	34	0.1	0	0	4
	TOTAL - Ped Craniotomy - Brain Tum	17.1	15	4	98	10.6	9	0	95	6.4	4	0	34	0.1	0	0	4
Pediatric Craniotomy for Trauma	Craniotomy for trauma (ped)	13.3	12	0	45	8.2	7	0	32	5.0	5	0	19	0.1	0	0	5
	TOTAL - Ped Craniotomy for Trauma	13.3	12	0	45	8.2	7	0	32	5.0	5	0	19	0.1	0	0	5
Pediatric Spinal Procedures	Spinal procedures (ped)	22.1	19	4	104	15.0	12	0	68	7.0	4	0	60	0.1	0	0	4
	TOTAL - Ped Spinal Procedures	22.1	19	4	104	15.0	12	0	68	7.0	4	0	60	0.1	0	0	4
Pediatric VP Shunt	VP shunt (ped)	45.6	39	8	199	34.0	30	0	198	11.4	6	0	85	0.2	0	0	9
rediatile Vr Sildill	TOTAL - Ped VP Shunt	45.6	39	8	199	34.0	30	0	198	11.4	6	0	85	0.2	0	0	9
TOTAL - Pediatric	TOTAL - Pediatric	98.1	85	28	373	67.8	58	0	369	29.8	21	0	153	0.5	0	0	16
Craniotomy for Epilepsy (Adult and Ped)	Craniotomy for epilepsy	22.0	18	1	100	12.0	10	0	53	9.8	8	0	65	0.1	0	0	4
,	TOTAL - Epilepsy	22.0	18	1	100	12.0	10	0	53	9.8	8	0	65	0.1	0	0	4

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			All Ro	oles		Senio	r Resid	ent Su	rgeon	Lead	Reside	ent Sur	geon	As	sistant Surg	Reside geon	ent
		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	Natl Res AVE	Natl Res MED	Nati Res MIN	Nat Res MA
RRC Area	RRC Procedure																
Minor Procedures/Critical Care	ICP monitor placement	21.6	15	0	102	17.3	11	0	94	4.1	2	0	40	0.1	0	0	6
	Ext ventricular drain placmnt	24.8	17	1	143	15.2	9	0	141	9.4	6	0	130	0.2	0	0	12
	VP shunt tap/programming	20.4	14	0	100	13.9	10	0	93	6.4	4	0	55	0.1	0	0	4
	Cervical spine traction	6.5	5	0	56	3.6	1	0	56	2.8	2	0	15	0.2	0	0	9
	Stereotactic frame placmnt	11.8	9	1	77	8.9	6	0	77	2.9	1	0	30	0.0	0	0	1
	CVP line placement	8.7	10	0	129	3.4	0	0	37	5.1	1	0	124	0.2	0	0	13
	Airway management	8.1	10	0	76	3.4	0	0	61	4.2	1	0	29	0.6	0	0	17
	Arterial line placement	11.3	10	0	174	4.4	0	0	81	6.8	3	0	167	0.2	0	0	16
	Arteriography	65.3	28	0	735	32.2	20	0	473	31.0	5	0	600	2.1	0	0	117
	TOTAL - Critical Care	178.4	137	17	828	102.1	78	8	491	72.6	50	0	708	3.7	0	0	117
TOTAL - Tracked Procedures	TOTAL - Credit Procedures	1,350.0	1,322	766	2,549	720.3	693	76	1,549	614.7	610	4	1,691	15.0	1	0	304
Additional Procedures	Craniofacial	10.9	10	0	36	8.1	7	0	33	2.8	1	0	18	0.0	0	0	3
	Tumor resection: primary/metast	19.8	19	4	47	9.5	8	0	28	10.3	9	0	32	0.1	0	0	3
	Spinal vascular lesion resectio	7.4	6	0	28	4.4	3	0	22	3.0	2	0	25	0.0	0	0	2
	Reconstructive secondary proc	0.9	0	0	7	0.5	0	0	3	0.4	0	0	5	0.0	0	0	1
	Miscellaneous/unclassified	34.8	33	5	100	22.0	20	1	69	12.5	10	0	48	0.3	0	0	18
	TOTAL - Additional Procs	73.9	72	21	129	44.4	44	4	103	29.0	26	0	88	0.5	0	0	19
Non-Tracked Procedures	Non-Tracked Procedures	18.7	14	0	210	12.4	7	0	204	6.1	4	0	43	0.3	0	0	7

		S	enior R	esident	Surgeo	n	1	_ead Re	sident (Surgeor	1	As	sistant	Resider	nt Surge	on
			Reside	nt Perc	entiles			Reside	ent Perc	entiles			Reside	ent Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
Adult Craniotomy - Brain Tumor	Biopsy	0	1	2	4	9	0	3	6	9	16	0	0	0	0	0
	Intra-axial	7	18	30	44	70	14	30	41	52	72	0	0	0	0	2
	Extra-axial	3	8	13	20	29	5	13	17	25	35	0	0	0	0	1
	Skull base and other	5	11	18	26	39	7	17	23	31	43	0	0	0	0	2
	TOTAL - Ad Craniotomy - Brain Tum	19	44	66	97	145	31	71	94	116	150	0	0	0	1	4
Adult Craniotomy - Trauma	Cranioplasty	3	6	10	14	21	1	4	7	10	17	0	0	0	0	0
Adult Graniotomy - Trauma	Depressed skull fract or extra-ax hematoma	10	19	27	37	56	4	14	21	30	51	0	0	0	0	1
	Craniect for abscss, contusn, or parachyml		7	11	15	24	2	7	11	16	25	0	0	0	0	0
	· · · · · ·	2	5		13	22			5		15	0	0	0		
	Other (adult craniotomy - trauma)	2		9			0	3		8			0		0	1
	TOTAL - Ad Craniotomy - Trauma	24	47	59	77	110	15	33	45	66	99	0	U	0	0	2
Adult Craniotomy-Intracran Vasc Lesion	AVM (adult craniotomy)	0	2	4	6	11	1	4	6	9	15	0	0	0	0	1
	Aneurysm (adult craniotomy)	3	8	13	19	31	5	12	18	23	39	0	0	0	0	1
	Other (adult craniotomy)	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	TOTAL - Adult Craniotomy for IVL	5	11	19	26	40	7	18	26	33	53	0	0	0	0	2
Endovasc Therp Tumor or Vasc Lesion	AVM (endovasc therapy)	0	0	1	3	10	0	0	0	2	7	0	0	0	0	0
	Aneurysm (endovasc therapy)	0	1	3	6	15	0	0	1	5	15	0	0	0	0	1
	Tumor embo, thrombectomy, or stent	0	1	2	5	18	0	0	0	2	14	0	0	0	0	0
	TOTAL - Endovasc Therp Tum or Vasc Lesn	0	3	9	13	42	0	0	4	9	37	0	0	0	0	2
Adult Craniotomy - Pain	Pain (adult craniotomy)	0	2	4	6	11	1	4	7	11	17	0	0	0	0	0
•	TOTAL - Adult Craniotomy - Pain	0	2	4	6	11	1	4	7	11	17	0	0	0	0	0

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		S	enior R	esident	Surgeo	n		Lead Re	sident S	Surgeon		As	sistant	Residen	t Surge	on
			Reside	ent Perc	entiles			Reside	ent Perc	entiles			Reside	ent Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
Adult Cran-Transphen-Sell/Parasellar Tum	Transphen-sel/parasel tumors	3	9	14	21	38	4	13	18	24	41	0	0	0	0	1
	TOTAL - Transphen-Sell/Parasellar Tum	3	9	14	21	38	4	13	18	24	41	0	0	0	0	1
Adult - Cranial-Extracran Vasc Proc	Bypass, CEA, Ligation	0	2	4	6	15	1	3	6	9	18	0	0	0	0	1
	Endovascular (CAS)	0	0	0	2	5	0	0	0	1	4	0	0	0	0	C
	TOTAL - Extracran Vascular Procs	1	3	5	8	19	1	4	6	11	22	0	0	0	0	1
Adult - Radiosurgery	Radiosurgery	0	2	7	12	34	0	2	6	10	18	0	0	0	0	(
	TOTAL - Radiosurgery	0	2	7	12	34	0	2	6	10	18	0	0	0	0	C
Adult Functional Procedures	Vagal nerve stimulation	0	1	3	5	10	0	0	1	3	8	0	0	0	0	
	Stimulation for pain	0	3	6	12	21	0	1	2	6	16	0	0	0	0	(
	DBS or lesioning	2	5	10	18	38	0	1	4	9	23	0	0	0	0	
	Cordotomy/rhizotomy	0	0	0	1	3	0	0	0	1	2	0	0	0	0	
	Sympathectomy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Intrathecal & implantable pumps	1	5	8	12	19	0	1	3	6	13	0	0	0	0	
	Other (adult functional proc)	0	3	7	11	19	0	1	2	5	11	0	0	0	0	
	TOTAL - Functional Procedures	15	28	43	59	88	3	11	19	31	61	0	0	0	0	
Adult VP Shunt (CSF Diversn)	VPS	17	26	36	45	74	4	14	20	32	43	0	0	0	0	
	ETV	0	1	2	3	5	0	0	2	3	6	0	0	0	0	
	Other CSF diversion	1	3	5	8	15	1	2	3	5	10	0	0	0	0	
	TOTAL - VP Shunt	21	31	44	56	91	6	19	27	39	57	0	0	0	0	
FOTAL - Adult Cranial	TOTAL - Adult Cranial	157	242	304	362	546	113	222	279	346	475	0	0	1	3	2

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

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RRC Procedure Adt Spinal - ACD with Instrumentn Antr cervical appr for decom/stabiliz 9 18 27 39 65 10 25 35 47 79 0 0 0 0 0 0 0 0 0				Senior R	esident	Surgeor	า		Lead Re	sident S	Surgeon		As	sistant l	Residen	t Surge	on
RRC Procedure Adt Spinal - ACD with Instrumentn Antr cervical appr for decom/stabiliz 9 18 27 39 65 10 25 35 47 79 0 0 0 0 0 0 0 0 0				Reside	ent Perc	entiles			Reside	nt Perc	entiles			Reside	nt Perc	entiles	
Adt Spinal - ACD with Instrumentn Antr cervical appr for decom/stabiliz 9 18 27 39 65 10 25 35 47 79 0 0 0 0 Adt Spin - C-spin Fract Op Stabiliz Proc Postr cervical appr for decom/stabiliz 7 15 22 34 54 9 19 29 43 60 0			10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Actt Spin - C-spin Fract Op Stabiliz Proc	C Area	RRC Procedure															
Add Spin - C-spin Fract Op Stabiliz Proc Postr cervical appr for decom/stabiliz 7 15 22 34 54 9 19 29 43 60 0 0 0 0 Adult Spinal - Lumbar Discectomy Lumbar discectomy 22 38 54 79 138 9 33 51 68 102 0 0 0 0 Adult Spinal - Lumbar Discectomy 22 38 54 79 138 9 33 51 68 102 0 0 0 0 Adult Spinal - Thorac/Lumb Instrum & Fusn Thoracic/lumbar instrumentn & fusion 20 42 61 92 151 15 35 57 83 122 0 0 0 0 Adult Spinal - Peripheral Nerve Procs Neurolysis/transposition 0 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0<	t Spinal - ACD with Instrumentn	Antr cervical appr for decom/stabiliz	9	18	27	39	65	10	25	35	47	79	0	0	0	0	1
Adult Spinal - Lumbar Discectomy Lumbar discectomy Lumbar discectomy 22 38 54 79 138 9 33 51 68 102 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		TOTAL - ACD	9	18	27	39	65	10	25	35	47	79	0	0	0	0	1
Adult Spinal - Lumbar Discectomy Lumbar discectomy Lumbar discectomy 22 38 54 79 138 9 33 51 68 102 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
Adult Spinal - Lumbar Discectomy Lumbar discectomy 22 38 54 79 138 9 33 51 68 102 0 0 0 0 Adult SpinI - Thorac/Lumb Instrum & Fusn Thoracic/lumbar instrumentn & fusion 20 42 61 92 151 15 35 57 83 122 0 0 0 0 Adult Spinal - Peripheral Nerve Procs Neurolysis/transposition 0 0 0 0 0 1 0 0 0 0 0 Adult Spinal - Peripheral Nerve Procs Neurolysis/transposition 0 0 0 0 1 0 0 0 1 0 0 0 0 0 Peripheral nerve tumor 0 0 1 1 3 0 0 1 2 4 0 0 0 0 Other (peripheral nerve tumor 0 1 2 4 8 0 0 1 2<	t Spin - C-spin Fract Op Stabiliz Proc	Postr cervical appr for decom/stabiliz	7	15	22	34	54	9	19	29	43	60	0	0	0	0	1
Adult SpinI - Thorac/Lumb Instrum & Fusn Thoracic/lumbar instrumentn & fusion 20 42 61 92 151 15 35 57 83 122 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		TOTAL - C-spine Fract Op Stabil	7	15	22	34	54	9	19	29	43	60	0	0	0	0	1
Adult SpinI - Thorac/Lumb Instrum & Fusn Thoracic/lumbar instrumentn & fusion 20 42 61 92 151 15 35 57 83 122 0 0 0 0 0 TOTAL - Thorac/Lumb Instrum & Fusn 20 42 61 92 151 15 35 57 83 122 0 0 0 0 0 Adult Spinal - Peripheral Nerve Procs Neurolysis/transposition 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0	No. 1 d. L. aka Birantan	Last as Provided	-00	00	F.4	70	400		00	-4	00	400		•	_	_	0
Adult SpinI - Thorac/Lumb Instrum & Fusn Thoracic/lumbar instrumentn & fusion 20 42 61 92 151 15 35 57 83 122 0 0 0 0 TOTAL - Thorac/Lumb Instrum & Fusn 20 42 61 92 151 15 35 57 83 122 0 0 0 0 Adult Spinal - Peripheral Nerve Procs Neurolysis/transposition 0 0 0 0 1 0	uit Spinai - Lumbar Discectomy	·														0	2
TOTAL - Thorac/Lumb Instrum & Fusn 20 42 61 92 151 15 35 57 83 122 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		TOTAL - Lumbar Discectomy	22	38	54	79	138	9	33	51	68	102	0	0	0	0	2
Adult Spinal - Peripheral Nerve Procs Neurolysis/transposition 0 0 0 0 1 0	ult Spinl - Thorac/Lumb Instrum & Fusn	Thoracic/lumbar instrumentn & fusion	20	42	61	92	151	15	35	57	83	122	0	0	0	0	1
Nerve repair 1 3 6 10 19 0 1 4 8 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		TOTAL - Thorac/Lumb Instrum & Fusn	20	42	61	92	151	15	35	57	83	122	0	0	0	0	1
Nerve repair 1 3 6 10 19 0 1 4 8 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
Peripheral nerve tumor 0 0 1 1 3 0 0 1 2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ult Spinal - Peripheral Nerve Procs	Neurolysis/transposition	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Other (peripheral nerve procs) 0 1 2 4 8 0 0 1 2 7 0 0 0 0		Nerve repair	1	3	6	10	19	0	1	4	8	21	0	0	0	0	0
		Peripheral nerve tumor	0	0	1	1	3	0	0	1	2	4	0	0	0	0	0
TOTAL - Peripheral Nerve Procs 4 8 10 16 25 1 4 9 14 27 0 0 0		Other (peripheral nerve procs)	0	1	2	4	8	0	0	1	2	7	0	0	0	0	0
		TOTAL - Peripheral Nerve Procs	4	8	10	16	25	1	4	9	14	27	0	0	0	0	1
TOTAL - Adult Spinal TOTAL - Adult Spinal 76 141 194 256 370 63 129 193 264 358 0 0 0	TAL Adult Spinal	TOTAL Adult Spinol	76	141	104	256	270	62	120	102	264	250	0	0	0	1	6

[Page 4] Programs in the Na	tion: 93 Residents in the Nation: 168															
		5	enior R	esident	Surgeor	1		Lead Re	sident S	Surgeon	ı	As	sistant	Residen	t Surge	on
			Reside	ent Perc	entiles			Reside	ent Perc	entiles			Reside	ent Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
Pediatric Craniotomy - Brain Tumor	Craniotomy - brain tumor (ped)	2	4	9	12	21	0	2	4	8	16	0	0	0	0	0
	TOTAL - Ped Craniotomy - Brain Tum	2	4	9	12	21	0	2	4	8	16	0	0	0	0	0
Pediatric Craniotomy for Trauma	Craniotomy for trauma (ped)	2	5	7	10	15	0	2	5	7	11	0	0	0	0	0
	TOTAL - Ped Craniotomy for Trauma	2	5	7	10	15	0	2	5	7	11	0	0	0	0	0
Pediatric Spinal Procedures	Spinal procedures (ped)	3	8	12	17	29	0	2	4	8	19	0	0	0	0	0
	TOTAL - Ped Spinal Procedures	3	8	12	17	29	0	2	4	8	19	0	0	0	0	0
Pediatric VP Shunt	VP shunt (ped)	7	19	30	40	69	0	2	6	14	29	0	0	0	0	0
Tediatric VI Oriunt	TOTAL - Ped VP Shunt	7	19	30	40	69	0	2	6	14	29	0	0	0	0	0
TOTAL - Pediatric	TOTAL - Pediatric	21	45	58	81	125	2	10	21	40	67	0	0	0	0	1
Craniotomy for Epilepsy (Adult and Ped)	Craniotomy for epilepsy	1	6	10	13	25	1	4	8	12	20	0	0	0	0	0
	TOTAL - Epilepsy	1	6	10	13	25	1	4	8	12	20	0	0	0	0	0

			Senior F	Resident	Surgeor	1		Lead Re	esident S	urgeon		A	ssistant	Residen	t Surgeo	n
			Resid	ent Perc	entiles			Resid	ent Perce	entiles			Resid	ent Perc	entiles	
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
RRC Area	RRC Procedure															
Minor Procedures/Critical Care	ICP monitor placement	1	5	11	20	43	0	0	2	5	11	0	0	0	0	0
	Ext ventricular drain placmnt	1	5	9	15	42	0	2	6	10	20	0	0	0	0	0
	VP shunt tap/programming	1	5	10	15	33	0	1	4	8	16	0	0	0	0	0
	Cervical spine traction	0	0	1	4	7	0	0	2	4	7	0	0	0	0	0
	Stereotactic frame placmnt	2	5	6	9	16	0	0	1	3	8	0	0	0	0	0
	CVP line placement	0	0	0	2	12	0	0	1	8	12	0	0	0	0	0
	Airway management	0	0	0	4	10	0	0	1	6	13	0	0	0	0	0
	Arterial line placement	0	0	0	3	11	0	0	3	10	15	0	0	0	0	0
	Arteriography	0	5	20	27	79	0	0	5	16	98	0	0	0	0	2
	TOTAL - Critical Care	24	56	78	119	215	4	28	50	75	146	0	0	0	0	9
TOTAL - Tracked Procedures	TOTAL - Credit Procedures	413	552	693	837	1,086	238	458	610	715	957	0	0	1	8	37
Additional Procedures	Craniofacial	1	4	7	10	17	0	0	1	4	8	0	0	0	0	0
	Tumor resection: primary/metast	2	5	8	12	19	2	6	9	12	21	0	0	0	0	0
	Spinal vascular lesion resectio	1	2	3	5	10	0	1	2	4	7	0	0	0	0	0
	Reconstructive secondary proc	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0
	Miscellaneous/unclassified	7	15	20	27	38	2	7	10	16	26	0	0	0	0	1
	TOTAL - Additional Procs	23	33	44	53	70	10	19	26	35	52	0	0	0	0	1
Non-Tracked Procedures	Non-Tracked Procedures	1	4	7	13	24	0	2	4	7	14	0	0	0	0	1