



# 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 standard deviation indicates how tightly the scores are clustered around the mean in the set of data.
    - iii. "Natl Res MED" — The median value among procedure counts in the nation.
    - iv. "Natl Res MODE" — The most commonly occurring value among procedure counts in the nation.
    - v. "Natl Res MIN" — The minimum value among procedure counts in the nation.
    - vi. "Natl Res MAX" — The maximum value seen among procedure counts in the nation.
    - vii. "Natl Res SUM" — This statistics represents the sum of all 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.

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Main Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

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Number of Programs in the Nation: 85    Number of Residents in the Nation: 147

		Senior Clinical Year						Other Clinical Years						Total All Years					
		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Vascular</b>	Aneurysm - craniotomy	23.4	18	18	0	84	3,444	14.3	13	11	0	61	2,097	37.7	26	31	1	132	5,541
	Aneurysm - endovascular	1.0	4	0	0	35	144	3.6	14	0	0	124	528	4.6	16	0	0	143	672
	AVM/other malformation - craniotomy	5.2	6	4	0	38	765	3.3	4	2	0	19	492	8.6	7	7	0	45	1,257
	AVM/other malformation - endovascular	0.2	1	0	0	7	34	1.9	10	0	0	106	282	2.1	10	0	0	106	316
	AVM/other malformation - stereotactic radiosurgery	0.2	2	0	0	18	36	0.5	2	0	0	15	67	0.7	2	0	0	18	103
	Hematoma non-traumatic	7.9	8	6	0	45	1,167	8.0	7	7	0	30	1,183	16.0	12	14	0	52	2,350
	Other - vascular (open or endovascular)	2.6	3	2	0	16	382	2.8	3	2	0	18	411	5.4	4	4	0	25	793
	<b>TOTAL - Cranial Procedures - Vascular</b>	<b>40.6</b>	<b>28</b>	<b>36</b>	<b>0</b>	<b>153</b>	<b>5,972</b>	<b>34.4</b>	<b>31</b>	<b>28</b>	<b>0</b>	<b>199</b>	<b>5,060</b>	<b>75.0</b>	<b>46</b>	<b>66</b>	<b>2</b>	<b>262</b>	<b>11,032</b>
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	60.2	37	56	0	183	8,847	52.1	33	49	0	182	7,654	112.3	53	108	2	284	16,501
	Stereotactic biopsy	5.6	7	4	0	46	817	8.2	7	7	0	37	1,206	13.8	11	11	0	68	2,023
	Intra-axial and/or extra-axial - radiosurgery	1.6	11	0	0	133	240	7.4	22	0	0	170	1,094	9.1	25	0	0	170	1,334
	Parasellar/sellar tumor - transsphenoidal	13.6	12	10	0	86	1,999	11.1	14	6	0	92	1,629	24.7	19	21	0	119	3,628
	Other - tumor (open surgery, endoscopy, endovasc)	5.8	7	4	0	34	849	3.8	5	2	0	28	555	9.6	10	6	0	55	1,404
	<b>TOTAL - Cranial Procedures- Tumor</b>	<b>86.7</b>	<b>53</b>	<b>81</b>	<b>0</b>	<b>256</b>	<b>12,752</b>	<b>82.6</b>	<b>56</b>	<b>78</b>	<b>0</b>	<b>302</b>	<b>12,138</b>	<b>169.3</b>	<b>78</b>	<b>156</b>	<b>3</b>	<b>397</b>	<b>24,890</b>

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Residency Review Committee for Neurological Surgery

Patient Age=Adult

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RRC Area	RRC Procedure																		
<b>Cranial Procedures - Functional</b>	Epilepsy (therapeutic and/or diag) - craniotomy	4.8	6	3	0	32	712	6.1	7	4	0	47	900	11.0	10	8	0	62	1,612
	Epilepsy, diagnostic - stereotactic implantation	0.2	1	0	0	4	35	0.3	1	0	0	4	41	0.5	1	0	0	8	76
	Epilepsy, therapeutic - other (vagal stimulation)	1.0	2	0	0	11	153	2.6	3	1	0	16	382	3.6	4	2	0	27	535
	Movement disorder - stimulation/stereotactic lesion	4.2	9	1	0	73	617	9.9	13	7	0	105	1,455	14.1	18	10	0	118	2,072
	Pain - stimulation	0.3	1	0	0	5	49	0.7	2	0	0	13	106	1.1	2	0	0	16	155
	Percutaneous lesion creation	1.4	4	0	0	40	203	2.1	4	1	0	22	306	3.5	6	2	0	59	509
	Craniotomy/craniectomy	5.0	8	3	0	66	733	4.0	6	2	0	39	595	9.0	13	5	0	105	1,328
	Stereotactic radiosurgery (functional)	0.3	2	0	0	23	47	1.0	3	0	0	34	146	1.3	4	0	0	35	193
	Other (functional)	0.0	0	0	0	1	6	0.1	0	0	0	3	17	0.2	1	0	0	4	23
	<b>TOTAL - Cranial Procedures- Functional</b>	<b>17.4</b>	<b>18</b>	<b>12</b>	<b>0</b>	<b>89</b>	<b>2,555</b>	<b>26.9</b>	<b>24</b>	<b>24</b>	<b>0</b>	<b>173</b>	<b>3,948</b>	<b>44.2</b>	<b>35</b>	<b>37</b>	<b>0</b>	<b>188</b>	<b>6,503</b>
<b>Cranial Procedures - Trauma</b>	Depressed skull fracture/penetrating wound	2.8	4	1	0	29	408	3.7	4	2	0	31	548	6.5	7	5	0	35	956
	Hematoma	20.4	16	17	0	89	3,003	32.4	27	31	0	244	4,767	52.9	34	47	4	276	7,770
	Other (trauma)	0.9	2	0	0	11	130	1.5	2	1	0	15	226	2.4	3	2	0	18	356
	<b>TOTAL - Cranial Procedures - Trauma</b>	<b>24.1</b>	<b>19</b>	<b>21</b>	<b>0</b>	<b>121</b>	<b>3,541</b>	<b>37.7</b>	<b>31</b>	<b>33</b>	<b>0</b>	<b>276</b>	<b>5,541</b>	<b>61.8</b>	<b>40</b>	<b>57</b>	<b>4</b>	<b>312</b>	<b>9,082</b>

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RRC Area	RRC Procedure																		
<b>Cranial Procedures - Cranial Recon/Cranioplasty</b>	Craniosynostosis	0.1	0	0	0	3	12	0.3	2	0	0	25	39	0.3	2	0	0	26	51
	Craniofacial reconstruction	0.8	6	0	0	76	115	0.5	1	0	0	9	70	1.3	6	0	0	76	185
	Cranioplasty	3.5	4	2	0	18	509	6.0	6	4	0	29	881	9.5	8	8	0	46	1,390
	TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty	4.3	7	2	0	76	636	6.7	7	5	0	30	990	11.1	10	9	0	76	1,626
<b>Cranial Procedures - Other</b>	Infection/cyst/orbit/skull lesion/dural-CSF/Chiari	11.6	8	10	0	44	1,709	13.6	10	12	0	42	1,998	25.2	14	23	3	78	3,707
	TOTAL - Cranial Procedures - Other	11.6	8	10	0	44	1,709	13.6	10	12	0	42	1,998	25.2	14	23	3	78	3,707
<b>Extracranial/Intracranial Occlusive Vascular Dis</b>	Carotid endarterectomy	3.8	6	2	0	35	563	3.2	5	1	0	23	473	7.0	8	5	0	44	1,036
	Carotid angioplasty/stenting (endovascular)	0.4	2	0	0	13	54	1.8	9	0	0	98	270	2.2	10	0	0	98	324
	EC/IC bypass	1.6	5	0	0	51	238	0.6	1	0	0	8	94	2.3	6	1	0	55	332
	Other vascular -patch/bypass/ligation/other	0.5	1	0	0	11	70	0.3	1	0	0	4	50	0.8	2	0	0	15	120
	TOTAL - Extracranial/Intracranial Occlusive Vascular Dis	6.3	9	3	0	53	925	6.0	12	3	0	112	887	12.3	16	8	0	130	1,812

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RRC Area	RRC Procedure																		
<b>CSF Shunting</b>	Initial	11.5	10	10	0	48	1,693	22.7	16	21	0	94	3,335	34.2	20	30	1	112	5,028
	Revision	8.0	6	7	0	38	1,171	16.5	13	16	0	84	2,432	24.5	15	22	0	84	3,603
	Third ventriculostomy	1.8	2	1	0	18	267	1.6	2	1	0	16	239	3.4	4	3	0	22	506
	Other (CSF shunting procedures)	0.3	1	0	0	7	40	0.8	1	0	0	7	117	1.1	2	0	0	8	157
	TOTAL - CSF Shunting	21.6	15	20	0	73	3,171	41.7	26	40	0	131	6,123	63.2	31	61	3	164	9,294
<b>Spinal Procedures - Disc and/or Spondylosis</b>	Cervical - discectomy/decompression	24.1	26	17	0	150	3,543	29.6	29	21	0	185	4,344	53.7	41	42	0	196	7,887
	Cervical - w/ instrumentation/fusion	18.4	19	13	0	119	2,700	32.9	28	29	0	122	4,837	51.3	37	42	1	144	7,537
	Thoracic - discectomy/decompression	1.8	2	1	0	15	262	2.8	3	2	0	14	412	4.6	3	4	0	17	674
	Thoracic - w/ instrumentation/fusion	3.5	4	2	0	23	518	2.0	3	1	0	14	298	5.6	6	4	0	28	816
	Lumbar/sacral - discectomy/decompression	35.2	38	27	0	366	5,177	73.7	63	59	0	462	10,835	108.9	77	90	2	528	16,012
	Lumbar/sacral - w/ instrumentation/fusion	24.3	24	17	0	134	3,568	29.7	29	24	0	140	4,367	54.0	42	41	0	184	7,935
TOTAL - Spinal Procedures - Disc and/or Spondylosis	107.3	89	83	0	630	15,768	170.7	122	133	0	778	25,093	278.0	156	248	7	923	40,861	

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Residency Review Committee for Neurological Surgery

Patient Age=Adult

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		Senior Clinical Year						Other Clinical Years						Total All Years					
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RRC Area	RRC Procedure																		
<b>Spinal Procedures - Tumor/Vascular Lesion</b>	Primary tumor resection	7.0	6	6	0	42	1,025	5.7	5	5	0	38	844	12.7	8	11	1	52	1,869
	Primary tumor - resection w/instrumentation/fusion	1.1	2	0	0	20	160	1.8	4	1	0	37	268	2.9	6	2	0	57	428
	Metastatic tumor resection	2.3	3	1	0	16	340	2.5	3	2	0	18	361	4.8	4	4	0	23	701
	Metastatic tumor resection w/instrumentation/fusion	2.1	3	1	0	21	307	2.1	3	1	0	14	305	4.2	4	3	0	27	612
	Vascular lesion	0.6	1	0	0	4	82	0.3	1	0	0	3	42	0.8	1	0	0	4	124
	Vascular lesion resection w/instrumentation/fusion	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0	0	0	0	0
	Radiosurgery - tumor/vascular lesion	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0	0	0	0	0
	Other tumor/vascular lesion (open or endovascular)	0.0	0	0	0	2	5	0.2	1	0	0	3	28	0.2	1	0	0	3	33
	<b>TOTAL - Spinal Procedures - Tumor/Vascular Lesion</b>	<b>13.1</b>	<b>11</b>	<b>12</b>	<b>0</b>	<b>84</b>	<b>1,919</b>	<b>12.6</b>	<b>10</b>	<b>10</b>	<b>0</b>	<b>64</b>	<b>1,848</b>	<b>25.6</b>	<b>18</b>	<b>21</b>	<b>2</b>	<b>145</b>	<b>3,767</b>

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		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
RRC Area	RRC Procedure																		
<b>Spinal Procedures - Trauma</b>	Cervical - operative decompression/reduction	1.4	2	0	0	13	200	1.1	2	1	0	10	169	2.5	3	1	0	14	369
	Cervical - with instrumentation/fusion	4.9	5	4	0	26	720	5.6	6	4	0	35	817	10.5	8	9	0	39	1,537
	Thoracic - operative decompression/reduction	0.2	1	0	0	4	29	0.3	1	0	0	4	37	0.4	1	0	0	6	66
	Thoracic - with instrumentation/fusion	3.6	4	2	0	22	529	3.2	4	2	0	23	470	6.8	6	6	0	33	999
	Lumbar/sacral - operative decompression/reduction	0.2	1	0	0	5	30	0.2	0	0	0	2	27	0.4	1	0	0	5	57
	Lumbar/sacral - with instrumentation/fusion	2.7	3	2	0	12	393	2.7	4	1	0	18	401	5.4	5	4	0	28	794
	TOTAL - Spinal Procedures- Trauma		12.9	11	12	0	54	1,901	13.1	12	10	0	50	1,921	26.0	18	25	0	90
<b>Spinal Procedures - Dysraphism</b>	Spinal dysraphism	0.9	1	0	0	6	131	1.1	2	0	0	15	156	2.0	2	1	0	15	287
	TOTAL - Spinal Procedures - Dysraphism	0.9	1	0	0	6	131	1.1	2	0	0	15	156	2.0	2	1	0	15	287
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	2.3	4	1	0	35	334	6.4	8	4	0	54	941	8.7	10	6	0	74	1,275
	Rhizotomy	0.2	1	0	0	4	25	0.5	1	0	0	8	74	0.7	1	0	0	8	99
	Stimulation	2.3	5	1	0	39	343	5.9	9	3	0	54	867	8.2	11	5	0	61	1,210
	TOTAL - Spinal Procedures - Spasticity/Pain	4.8	8	2	0	74	702	12.8	15	8	0	82	1,882	17.6	19	13	0	111	2,584

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RRC Area	RRC Procedure																		
<b>Spinal Procedures - Other</b>	Vertebroplasty/kyphoplasty	1.5	3	0	0	23	219	1.4	3	0	0	19	200	2.9	4	1	0	23	419
	Non-neoplastic lesions/deformity/infection/other	7.9	7	6	0	34	1,156	12.3	10	11	0	63	1,812	20.2	12	19	3	78	2,968
	Non-neoplastic lesions - w/instrumentation/fusion	0.9	2	0	0	11	137	1.2	2	0	0	15	172	2.1	3	1	0	18	309
	<b>TOTAL - Spinal Procedures - Other</b>	<b>10.3</b>	<b>9</b>	<b>8</b>	<b>0</b>	<b>53</b>	<b>1,512</b>	<b>14.9</b>	<b>12</b>	<b>13</b>	<b>0</b>	<b>64</b>	<b>2,184</b>	<b>25.1</b>	<b>15</b>	<b>23</b>	<b>3</b>	<b>88</b>	<b>3,696</b>
<b>Peripheral Nerve Procedures</b>	Neurolysis/transposition	4.8	6	3	0	35	699	9.4	10	6	0	46	1,377	14.1	12	11	0	57	2,076
	Nerve repair	0.4	1	0	0	7	57	0.4	1	0	0	7	56	0.8	1	0	0	8	113
	Sympathectomy	0.1	0	0	0	5	13	0.2	1	0	0	4	28	0.3	1	0	0	5	41
	Nerve stimulation	0.5	1	0	0	10	67	1.7	5	0	0	53	243	2.1	5	1	0	53	310
	Peripheral nerve section/rhizotomy	0.2	1	0	0	3	25	0.4	1	0	0	5	52	0.5	1	0	0	7	77
	Excision tumor/neuroma/neurolytic agent/other	1.1	2	1	0	9	168	1.5	2	1	0	16	224	2.7	3	2	0	18	392
	<b>TOTAL - Peripheral Nerve Procedures</b>	<b>7.0</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>40</b>	<b>1,029</b>	<b>13.5</b>	<b>13</b>	<b>10</b>	<b>0</b>	<b>96</b>	<b>1,980</b>	<b>20.5</b>	<b>16</b>	<b>16</b>	<b>0</b>	<b>99</b>	<b>3,009</b>
<b>Minor/Diagnostic Procedures</b>	Muscle/nerve biopsy	1.5	3	0	0	14	222	2.8	5	1	0	27	417	4.3	6	2	0	28	639
	ICP monitoring	2.1	4	1	0	31	306	12.2	18	5	0	106	1,787	14.2	19	7	0	113	2,093
	Tongs/halo application	1.2	3	0	0	27	178	2.9	5	1	0	38	420	4.1	6	1	0	38	598
	Ventriculostomy	2.2	5	0	0	28	324	9.8	14	3	0	78	1,434	12.0	16	5	0	83	1,758
	Arteriography	7.4	51	0	0	597	1,087	15.0	56	0	0	508	2,202	22.4	76	0	0	600	3,289
	Injection/Aspiration/Biopsy/Punctures/Other	4.2	6	2	0	36	622	19.4	29	10	0	176	2,856	23.7	31	14	0	196	3,478
	<b>TOTAL - Minor/Diagnostic Procedures</b>	<b>18.6</b>	<b>52</b>	<b>8</b>	<b>0</b>	<b>603</b>	<b>2,739</b>	<b>62.0</b>	<b>80</b>	<b>33</b>	<b>0</b>	<b>514</b>	<b>9,116</b>	<b>80.6</b>	<b>98</b>	<b>49</b>	<b>0</b>	<b>650</b>	<b>11,855</b>



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Patient Age=Adult

[Page 8 ] Number of Programs in the Nation: 85    Number of Residents in the Nation: 147																			
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
RRC Area	RRC Procedure																		
<b>No Operative Procedure</b>	No procedure this hospitalization	4.2	35	0	0	389	612	16.6	134	0	0	1,537	2,446	20.8	168	0	0	1,926	3,058
	TOTAL - No Operative Procedure	4.2	35	0	0	389	612	16.6	134	0	0	1,537	2,446	20.8	168	0	0	1,926	3,058
<b>Secondary Codes</b>	Cranial - other	0.2	1	0	0	4	32	0.6	2	0	0	14	93	0.9	2	0	0	17	125
	Spinal	0.3	1	0	0	11	40	1.0	3	0	0	28	153	1.3	4	0	0	30	193
	Peripheral	0.0	0	0	0	1	1	0.0	0	0	0	0	0	0.0	0	0	0	1	1
	TOTAL - Secondary Codes	0.5	1	0	0	11	73	1.7	4	0	0	29	246	2.2	5	0	0	30	319
<b>Unassigned</b>	Unassigned	1.9	3	1	0	17	281	10.7	17	4	0	101	1,570	12.6	18	6	0	102	1,851
	TOTAL - Unassigned	1.9	3	1	0	17	281	10.7	17	4	0	101	1,570	12.6	18	6	0	102	1,851
<b>Total Adult Cases</b>	TOTAL - Adult Cases	394.1	214	388	0	1,150	57,928	579.1	370	540	0	2,981	85,127	973.2	458	953	69	4,131	143,055

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Main Table - Pediatric Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Pediatric

[Page 9 ] Number of Programs in the Nation: 85    Number of Residents in the Nation: 147		Senior Clinical Year						Other Clinical Years						Total All Years					
		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Vascular</b>	Aneurysm - craniotomy	0.1	0	0	0	3	22	0.3	1	0	0	3	48	0.5	1	0	0	5	70
	Aneurysm - endovascular	0.0	0	0	0	1	2	0.1	1	0	0	5	16	0.1	1	0	0	5	18
	AVM/other malformation - craniotomy	0.5	1	0	0	6	80	0.9	1	0	0	7	133	1.4	2	1	0	13	213
	AVM/other malformation - endovascular	0.0	0	0	0	1	1	0.2	1	0	0	15	31	0.2	1	0	0	15	32
	AVM/other malformation - stereotactic radiosurgery	0.0	0	0	0	3	5	0.1	0	0	0	3	12	0.1	0	0	0	3	17
	Hematoma non-traumatic	0.2	0	0	0	2	24	0.6	2	0	0	15	92	0.8	2	0	0	15	116
	Other - vascular (open or endovascular)	0.2	1	0	0	4	29	0.6	1	0	0	6	92	0.8	1	0	0	6	121
	<b>TOTAL - Cranial Procedures - Vascular</b>	<b>1.1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>163</b>	<b>2.9</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>20</b>	<b>424</b>	<b>4.0</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>24</b>	<b>587</b>
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	3.3	5	1	0	32	480	8.5	7	7	0	38	1,245	11.7	8	11	0	52	1,725
	Stereotactic biopsy	0.1	0	0	0	2	21	0.6	1	0	0	4	84	0.7	1	0	0	4	105
	Intra-axial and/or extra-axial - radiosurgery	0.1	1	0	0	11	11	0.2	1	0	0	12	33	0.3	1	0	0	12	44
	Parasellar/sellar tumor - transsphenoidal	0.4	1	0	0	5	55	0.6	1	0	0	8	94	1.0	2	0	0	8	149
	Other - tumor (open surgery, endoscopy, endovasc)	0.2	1	0	0	3	32	0.4	1	0	0	4	61	0.6	1	0	0	5	93
	<b>TOTAL - Cranial Procedures- Tumor</b>	<b>4.1</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>34</b>	<b>599</b>	<b>10.3</b>	<b>8</b>	<b>9</b>	<b>0</b>	<b>40</b>	<b>1,517</b>	<b>14.4</b>	<b>9</b>	<b>14</b>	<b>0</b>	<b>59</b>	<b>2,116</b>
<b>Cranial Procedures - Functional</b>	Epilepsy (therapeutic and/or diag) - craniotomy	1.1	2	0	0	15	162	3.4	4	1	0	23	507	4.6	5	3	0	24	669
	Epilepsy, diagnostic - sterotactic implantation	0.0	0	0	0	2	5	0.1	0	0	0	2	8	0.1	0	0	0	2	13
	Epilepsy, therapeutic - other (vagal stimulation)	0.4	1	0	0	9	59	1.8	3	1	0	18	269	2.2	4	1	0	22	328
	Movement disorder - stimulation/stereotactic lesion	0.1	0	0	0	3	17	0.4	1	0	0	7	66	0.6	1	0	0	7	83
	<b>TOTAL - Cranial Procedures- Functional</b>	<b>1.7</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>243</b>	<b>5.8</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>33</b>	<b>850</b>	<b>7.4</b>	<b>7</b>	<b>6</b>	<b>0</b>	<b>38</b>	<b>1,093</b>

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Main Table - Pediatric Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Pediatric

[Page 10 ]

Number of Programs in the Nation: 85    Number of Residents in the Nation: 147

		Senior Clinical Year						Other Clinical Years						Total All Years					
		Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Trauma</b>	TOTAL - Cranial Procedures - Trauma	2.4	3	1	0	17	353	6.8	7	5	0	38	1,002	9.2	8	8	0	43	1,355
<b>Cranial Procedures - Cranial Recon/Cranioplasty</b>	TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty	1.8	3	0	0	26	267	7.5	7	6	0	45	1,105	9.3	8	8	0	48	1,372
<b>Cranial Procedures - Other</b>	TOTAL - Cranial Procedures - Other	2.6	5	1	0	29	386	7.8	7	6	0	30	1,143	10.4	8	8	0	34	1,529
<b>CSF Shunting</b>	Initial	3.1	5	1	0	29	457	12.7	12	10	0	74	1,865	15.8	13	14	0	84	2,322
	Revision	4.6	8	1	0	38	676	21.2	21	15	0	131	3,113	25.8	21	22	0	131	3,789
	Third ventriculostomy	0.5	1	0	0	5	79	1.6	2	1	0	19	237	2.1	3	2	0	20	316
	Other (CSF shunting procedures)	0.2	1	0	0	8	25	1.1	2	0	0	11	161	1.3	2	0	0	11	186
	TOTAL - CSF Shunting	8.4	14	2	0	64	1,237	36.6	32	31	0	156	5,376	45.0	33	40	0	170	6,613
<b>Spinal Procedures - Dysraphism</b>	TOTAL - Spinal Procedures - Dysraphism	1.9	3	0	0	16	274	5.3	5	3	0	30	782	7.2	6	6	0	33	1,056
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	0.4	1	0	0	9	61	2.8	4	1	0	27	415	3.2	5	2	0	27	476
	Rhizotomy	0.1	0	0	0	3	17	0.7	1	0	0	9	103	0.8	2	0	0	9	120
	TOTAL - Spinal Procedures - Spasticity/Pain	0.5	1	0	0	9	78	3.5	5	1	0	31	518	4.1	6	2	0	32	596
<b>Spinal Procedures - Other</b>	TOTAL - Spinal Procedures - Other	0.7	2	0	0	25	109	3.3	7	2	0	71	486	4.0	8	2	0	79	595
<b>Total Pediatric Cases</b>	TOTAL - Pediatric Cases	25.2	35	11	0	167	3,709	89.8	69	76	0	368	13,203	115.0	72	102	0	415	16,912

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Main Table - Index Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

[Page 1]

Number of Programs in the Nation: 85    Number of Residents in the Nation: 147

	Senior Clinical Year						Other Clinical Years						Total All Years					
	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
<b>Adult Cases</b>																		
<b>Aneurysms - Craniotomy and Endovascular</b>	24.4	19	19	0	84	3,588	17.9	18	13	0	135	2,625	42.3	30	34	1	171	6,213
<b>Brain Tumors (intra-axial and/or extra axial) - Craniotomy</b>	60.2	37	56	0	183	8,847	52.1	33	49	0	182	7,654	112.3	53	108	2	284	16,501
<b>Sellar/Parasellar tumors - Transsphenoidal approach (Endoscopic or Microsurgical)</b>	13.6	12	10	0	86	1,999	11.1	14	6	0	92	1,629	24.7	19	21	0	119	3,628
<b>Trauma - Total Cranial Procedures</b>	24.1	19	21	0	121	3,541	37.7	31	33	0	276	5,541	61.8	40	57	4	312	9,082
<b>Extracranial Vascular Disease -endarterectomy/endovascular</b>	4.2	6	2	0	35	617	5.1	11	2	0	109	743	9.3	14	6	0	123	1,360
<b>Disc Disease and/or Spondylosis/Trauma with Instrumentation - Lumbar Spine</b>	34.1	29	27	0	159	5,008	37.7	32	30	0	157	5,536	71.7	48	64	2	231	10,544
<b>Peripheral Nerve Disorders - All Types</b>	7.0	7	5	0	40	1,029	13.5	13	10	0	96	1,980	20.5	16	16	0	99	3,009
<b>Total - Adult Cases</b>	167.5	85	164	0	389	24,629	174.9	96	176	0	435	25,708	342.4	133	339	25	767	50,337

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Main Table - Index Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

[Page 2 ]

Number of Programs in the Nation: 85    Number of Residents in the Nation: 147

	Senior Clinical Year						Other Clinical Years						Total All Years					
	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
<b>Pediatric Cases</b>																		
<b>Brain Tumors (intra-axial and/or extra axial) - Craniotomy</b>	3.3	5	1	0	32	480	8.5	7	7	0	38	1,245	11.7	8	11	0	52	1,725
<b>Dysraphism - Spinal Procedures (all types)</b>	1.9	3	0	0	16	274	5.3	5	3	0	30	782	7.2	6	6	0	33	1,056
<b>Total - Pediatric Cases</b>	5.1	8	2	0	45	754	13.8	11	12	0	46	2,027	18.9	13	18	0	85	2,781

	Senior Clinical Year						Other Clinical Years						Total All Years					
	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM	Natl Res AVE	Natl Res STD	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res SUM
<b>Adult and Pediatric Cases</b>																		
<b>Epilepsy (Diagnostic and/or Therapeutic) - Craniotomy</b>	5.9	7	3	0	33	874	9.6	9	7	0	51	1,407	15.5	13	12	0	74	2,281
<b>Movement disorder - Stimulation/Stereotactic Lesion</b>	4.3	9	1	0	73	634	10.3	13	7	0	105	1,521	14.7	18	11	0	120	2,155
<b>Total - Adult and Pediatric Cases</b>	10.3	13	6	0	75	1,508	19.9	18	17	0	131	2,928	30.2	25	27	0	142	4,436

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 1 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Vascular</b>	Aneurysm - craniotomy	2	8	13	18	30	49	2	4	7	11	16	31	11	17	22	31	46	74
	Aneurysm - endovascular	0	0	0	0	0	2	0	0	0	0	0	7	0	0	0	0	1	10
	AVM/other malformation - craniotomy	0	1	2	4	6	11	0	0	1	2	4	8	1	3	4	7	11	17
	AVM/other malformation - endovascular	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	3
	AVM/other malformation - stereotactic radiosurgery	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
	Hematoma non-traumatic	0	1	3	6	10	18	0	2	3	7	11	18	2	5	8	14	20	35
	Other - vascular (open or endovascular)	0	0	1	2	3	5	0	0	1	2	3	6	1	2	3	4	7	10
	TOTAL - Cranial Procedures - Vascular	7	19	24	36	49	80	6	12	18	28	41	68	22	37	49	66	92	130
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	14	31	42	56	73	112	13	24	34	49	62	94	53	68	82	108	133	187
	Stereotactic biopsy	0	1	2	4	6	14	1	2	3	7	10	17	3	5	7	11	16	27
	Intra-axial and/or extra-axial - radiosurgery	0	0	0	0	0	3	0	0	0	0	2	23	0	0	0	0	5	23
	Parasellar/sellar tumor - transsphenoidal	1	4	6	10	17	28	1	2	4	6	10	25	7	11	14	21	28	46
	Other - tumor (open surgery, endoscopy, endovasc)	0	1	2	4	6	16	0	0	1	2	4	11	1	2	4	6	11	23
	TOTAL - Cranial Procedures- Tumor	24	48	61	81	102	160	17	38	48	78	106	157	81	104	130	156	200	275

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 2 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Functional</b>	Epilepsy (therapeutic and/or diag) - craniotomy	0	0	1	3	5	14	0	0	1	4	8	16	1	2	4	8	14	24
	Epilepsy, diagnostic - stereotactic implantation	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2
	Epilepsy, therapeutic - other (vagal stimulation)	0	0	0	0	1	3	0	0	0	1	4	8	0	0	1	2	4	9
	Movement disorder - stimulation/stereotactic lesion	0	0	0	1	3	12	0	0	1	7	12	24	0	1	3	10	16	31
	Pain - stimulation	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	3
	Percutaneous lesion creation	0	0	0	0	1	3	0	0	0	1	2	4	0	0	0	2	3	10
	Craniotomy/craniectomy	0	0	1	3	6	13	0	0	1	2	4	12	0	2	3	5	9	22
	Stereotactic radiosurgery (functional)	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	4
	Other (functional)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	<b>TOTAL - Cranial Procedures- Functional</b>	<b>1</b>	<b>5</b>	<b>7</b>	<b>12</b>	<b>19</b>	<b>39</b>	<b>2</b>	<b>5</b>	<b>10</b>	<b>24</b>	<b>34</b>	<b>57</b>	<b>7</b>	<b>14</b>	<b>24</b>	<b>37</b>	<b>55</b>	<b>94</b>
<b>Cranial Procedures - Trauma</b>	Depressed skull fracture/penetrating wound	0	0	1	1	3	7	0	0	1	2	4	10	1	2	2	5	7	14
	Hematoma	3	8	11	17	25	43	3	13	17	31	41	60	17	25	34	47	67	86
	Other (trauma)	0	0	0	0	1	3	0	0	0	1	2	4	0	0	1	2	3	5
	<b>TOTAL - Cranial Procedures - Trauma</b>	<b>4</b>	<b>10</b>	<b>12</b>	<b>21</b>	<b>29</b>	<b>48</b>	<b>4</b>	<b>14</b>	<b>20</b>	<b>33</b>	<b>51</b>	<b>71</b>	<b>19</b>	<b>32</b>	<b>39</b>	<b>57</b>	<b>76</b>	<b>111</b>

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 3 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Cranial Recon/Cranioplasty</b>	Craniosynostosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Craniofacial reconstruction	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	2
	Cranioplasty	0	0	1	2	4	9	0	1	1	4	7	15	1	2	5	8	12	19
	TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty	0	1	1	2	5	10	0	1	2	5	9	16	1	3	5	9	14	21
<b>Cranial Procedures - Other</b>	Infection/cyst/orbit/skull lesion/dural-CSF/Chiari	2	6	7	10	13	22	2	5	7	12	18	28	10	13	16	23	32	45
	TOTAL - Cranial Procedures - Other	2	6	7	10	13	22	2	5	7	12	18	28	10	13	16	23	32	45
<b>Extracranial/Intracranial Occlusive Vascular Dis</b>	Carotid endarterectomy	0	0	0	2	5	10	0	0	0	1	4	9	0	1	2	5	8	17
	Carotid angioplasty/stenting (endovascular)	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
	EC/IC bypass	0	0	0	0	1	4	0	0	0	0	1	2	0	0	0	1	2	5
	Other vascular -patch/bypass/ligation/other	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	2
	TOTAL - Extracranial/Intracranial Occlusive Vascular Dis	0	0	1	3	7	17	0	0	1	3	6	14	1	2	4	8	12	29



# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 4 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>CSF Shunting</b>	Initial	1	4	5	10	14	24	3	9	14	21	27	42	12	19	24	30	41	56
	Revision	1	3	4	7	9	17	1	5	10	16	21	32	8	12	15	22	29	45
	Third ventriculostomy	0	0	0	1	2	5	0	0	0	1	2	4	0	0	1	3	4	8
	Other (CSF shunting procedures)	0	0	0	0	0	1	0	0	0	0	1	3	0	0	0	0	1	3
	<b>TOTAL - CSF Shunting</b>		4	9	12	20	28	42	5	21	29	40	52	74	26	34	46	61	73
<b>Spinal Procedures - Disc and/or Spondylosis</b>	Cervical - discectomy/decompression	2	4	7	17	27	61	3	8	12	21	35	68	11	21	28	42	67	114
	Cervical - w/ instrumentation/fusion	1	4	6	13	21	43	1	7	13	29	44	72	10	18	24	42	64	106
	Thoracic - discectomy/decompression	0	0	0	1	2	4	0	0	1	2	4	6	1	2	3	4	5	10
	Thoracic - w/ instrumentation/fusion	0	0	1	2	4	9	0	0	0	1	2	6	0	1	2	4	7	13
	Lumbar/sacral - discectomy/decompression	5	12	18	27	40	70	5	32	40	59	89	149	35	53	62	90	133	202
	Lumbar/sacral - w/ instrumentation/fusion	1	6	11	17	30	53	2	9	13	24	31	67	11	21	28	41	67	125
<b>TOTAL - Spinal Procedures - Disc and/or Spondylosis</b>		20	43	62	83	126	201	11	90	107	133	205	342	98	154	180	248	360	495

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 5 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Spinal Procedures - Tumor/Vascular Lesion</b>	Primary tumor resection	1	2	3	6	9	14	0	2	3	5	8	11	4	6	8	11	15	23
	Primary tumor - resection w/instrumentation/fusion	0	0	0	0	1	3	0	0	0	1	2	5	0	0	1	2	3	6
	Metastatic tumor resection	0	0	1	1	3	5	0	0	1	2	3	6	1	1	2	4	6	10
	Metastatic tumor resection w/instrumentation/fusion	0	0	0	1	2	6	0	0	0	1	2	5	0	1	1	3	6	10
	Vascular lesion	0	0	0	0	1	2	0	0	0	0	0	1	0	0	0	0	1	2
	Vascular lesion resection w/instrumentation/fusion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Radiosurgery - tumor/vascular lesion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other tumor/vascular lesion (open or endovascular)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	<b>TOTAL - Spinal Procedures - Tumor/Vascular Lesion</b>	<b>2</b>	<b>5</b>	<b>7</b>	<b>12</b>	<b>17</b>	<b>26</b>	<b>1</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>15</b>	<b>26</b>	<b>8</b>	<b>12</b>	<b>15</b>	<b>21</b>	<b>31</b>	<b>47</b>

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 6 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Spinal Procedures - Trauma</b>	Cervical - operative decompression/reduction	0	0	0	0	2	4	0	0	0	1	1	3	0	0	0	1	3	6
	Cervical - with instrumentation/fusion	0	1	2	4	6	12	0	1	2	4	6	13	1	4	5	9	14	20
	Thoracic - operative decompression/reduction	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
	Thoracic - with instrumentation/fusion	0	0	1	2	5	9	0	0	1	2	4	8	0	2	3	6	9	14
	Lumbar/sacral - operative decompression/reduction	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
	Lumbar/sacral - with instrumentation/fusion	0	0	1	2	3	7	0	0	0	1	3	7	0	1	2	4	7	12
	TOTAL - Spinal Procedures- Trauma	1	3	5	12	17	27	1	3	5	10	17	29	3	9	15	25	33	51
<b>Spinal Procedures - Dysraphism</b>	Spinal dysraphism	0	0	0	0	1	3	0	0	0	0	1	3	0	0	0	1	2	5
	TOTAL - Spinal Procedures - Dysraphism	0	0	0	0	1	3	0	0	0	0	1	3	0	0	0	1	2	5
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	0	0	0	1	2	6	0	0	2	4	7	16	0	1	3	6	9	21
	Rhizotomy	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	2
	Stimulation	0	0	0	1	2	6	0	0	1	3	5	17	0	1	2	5	10	18
	TOTAL - Spinal Procedures - Spasticity/Pain	0	0	0	2	5	11	0	2	3	8	14	32	2	4	7	13	21	38

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 7 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Spinal Procedures - Other</b>	Vertebroplasty/kyphoplasty	0	0	0	0	1	5	0	0	0	0	1	4	0	0	0	1	3	9
	Non-neoplastic lesions/deformity/infection/other	1	3	3	6	10	16	2	3	7	11	16	23	6	10	14	19	24	34
	Non-neoplastic lesions - w/instrumentation/fusion	0	0	0	0	1	3	0	0	0	0	1	3	0	0	0	1	2	5
	<b>TOTAL - Spinal Procedures - Other</b>	1	4	5	8	13	21	2	4	8	13	19	30	7	13	17	23	30	42
<b>Peripheral Nerve Procedures</b>	Neurolysis/transposition	0	1	1	3	5	11	0	2	3	6	11	25	2	4	5	11	18	34
	Nerve repair	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	2
	Sympathectomy	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	Nerve stimulation	0	0	0	0	0	1	0	0	0	0	1	4	0	0	0	1	2	6
	Peripheral nerve section/rhizotomy	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2
	Excision tumor/neuroma/neurolytic agent/other	0	0	0	1	1	3	0	0	0	1	2	4	0	0	1	2	3	6
	<b>TOTAL - Peripheral Nerve Procedures</b>	0	2	3	5	8	15	1	3	6	10	16	32	4	8	11	16	25	43
<b>Minor/Diagnostic Procedures</b>	Muscle/nerve biopsy	0	0	0	0	1	5	0	0	0	1	2	9	0	0	0	2	4	14
	ICP monitoring	0	0	0	1	2	5	0	0	2	5	12	32	0	1	2	7	17	35
	Tongs/halo application	0	0	0	0	1	4	0	0	0	1	2	8	0	0	0	1	5	13
	Ventriculostomy	0	0	0	0	2	7	0	0	1	3	10	28	0	1	2	5	13	36
	Arteriography	0	0	0	0	0	9	0	0	0	0	1	22	0	0	0	0	2	54
	Injection/Aspiration/Biopsy/Punctures/Other	0	0	1	2	5	10	0	2	5	10	19	43	2	5	8	14	24	51
	<b>TOTAL - Minor/Diagnostic Procedures</b>	1	2	3	8	15	45	2	9	14	33	69	150	8	16	31	49	88	188

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Adult Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Adult

[Page 8 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>No Operative Procedure</b>	No procedure this hospitalization	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
	TOTAL - No Operative Procedure	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
<b>Secondary Codes</b>	Cranial - other	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	3
	Spinal	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	1	3
	Peripheral	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL - Secondary Codes	0	0	0	0	0	2	0	0	0	0	1	6	0	0	0	0	1	7
<b>Unassigned</b>	Unassigned	0	0	0	1	2	6	0	1	2	4	9	29	0	1	3	6	12	32
	TOTAL - Unassigned	0	0	0	1	2	6	0	1	2	4	9	29	0	1	3	6	12	32
<b>Total Adult Cases</b>	TOTAL - Adult Cases	151	226	281	388	463	683	78	344	420	540	716	919	434	639	787	953	1,133	1,410

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Pediatric Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Pediatric

[Page 9 ]		Programs in the Nation: 85 Residents in the Nation: 147																	
		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Vascular</b>	Aneurysm - craniotomy	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	2
	Aneurysm - endovascular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AVM/other malformation - craniotomy	0	0	0	0	0	2	0	0	0	0	1	3	0	0	0	1	2	4
	AVM/other malformation - endovascular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AVM/other malformation - stereotactic radiosurgery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Hematoma non-traumatic	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	2
	Other - vascular (open or endovascular)	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	2
	<b>TOTAL - Cranial Procedures - Vascular</b>		0	0	0	0	1	4	0	0	1	2	4	7	0	1	1	3	5
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	0	0	0	1	4	11	0	2	4	7	12	19	2	5	7	11	14	21
	Stereotactic biopsy	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	2
	Intra-axial and/or extra-axial - radiosurgery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Parasellar/sellar tumor - transsphenoidal	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	3
	Other - tumor (open surgery, endoscopy, endovasc)	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	2
	<b>TOTAL - Cranial Procedures- Tumor</b>		0	0	0	2	5	13	0	3	5	9	14	21	2	7	9	14	18
<b>Cranial Procedures - Functional</b>	Epilepsy (therapeutic and/or diag) - craniotomy	0	0	0	0	1	4	0	0	0	1	5	10	0	0	1	3	6	11
	Epilepsy, diagnostic - sterotactic implantation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Epilepsy, therapeutic - other (vagal stimulation)	0	0	0	0	0	1	0	0	0	1	2	5	0	0	0	1	2	7
	Movement disorder - stimulation/stereotactic lesion	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
	<b>TOTAL - Cranial Procedures- Functional</b>		0	0	0	0	1	6	0	0	1	4	8	16	0	1	2	6	10

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Pediatric Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

Patient Age=Pediatric

[Page 10 ] Programs in the Nation: 85 Residents in the Nation: 147		Senior Clinical Year						Other Clinical Years						Total All Years					
		Resident Percentiles						Resident Percentiles						Resident Percentiles					
		10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
RRC Area	RRC Procedure																		
<b>Cranial Procedures - Trauma</b>	TOTAL - Cranial Procedures - Trauma	0	0	0	1	3	6	0	1	3	5	9	16	1	3	4	8	11	20
<b>Cranial Procedures - Cranial Recon/Cranioplasty</b>	TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty	0	0	0	0	2	6	0	1	3	6	9	17	1	3	5	8	12	18
<b>Cranial Procedures - Other</b>	TOTAL - Cranial Procedures - Other	0	0	0	1	2	6	0	1	3	6	10	19	0	3	5	8	14	23
<b>CSF Shunting</b>	Initial	0	0	0	1	2	11	1	3	6	10	15	26	3	6	9	14	18	28
	Revision	0	0	0	1	4	18	1	6	9	15	25	45	4	9	13	22	30	53
	Third ventriculostomy	0	0	0	0	0	2	0	0	0	1	2	4	0	0	1	2	2	5
	Other (CSF shunting procedures)	0	0	0	0	0	1	0	0	0	0	1	3	0	0	0	0	1	3
	TOTAL - CSF Shunting	0	0	0	2	8	30	3	11	16	31	43	71	9	18	28	40	51	82
<b>Spinal Procedures - Dysraphism</b>	TOTAL - Spinal Procedures - Dysraphism	0	0	0	0	2	6	0	0	2	3	7	13	1	2	3	6	9	15
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	0	0	0	0	0	1	0	0	0	1	3	9	0	0	0	2	4	9
	Rhizotomy	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	3
	TOTAL - Spinal Procedures - Spasticity/Pain	0	0	0	0	0	2	0	0	0	1	4	10	0	0	1	2	5	10
<b>Spinal Procedures - Other</b>	TOTAL - Spinal Procedures - Other	0	0	0	0	0	2	0	0	0	2	3	7	0	0	1	2	4	8
<b>Total Pediatric Cases</b>	TOTAL - Pediatric Cases	0	1	2	11	25	73	7	30	47	76	114	186	25	62	81	102	133	201

# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Index Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

[Page 1 ]	Programs in the Nation: 85 Residents in the Nation: 147																		
	Senior Clinical Year						Other Clinical Years						Total All Years						
	Resident Percentiles						Resident Percentiles						Resident Percentiles						
	10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90	
<b>Adult Cases</b>																			
<b>Aneurysms - Craniotomy and Endovascular</b>	2	9	13	19	31	56	2	4	7	13	21	40	12	19	22	34	52	82	
<b>Brain Tumors (intra-axial and/or extra axial) - Craniotomy</b>	14	31	42	56	73	112	13	24	34	49	62	94	53	68	82	108	133	187	
<b>Sellar/Parasellar tumors - Transsphenoidal approach (Endoscopic or Microsurgical)</b>	1	4	6	10	17	28	1	2	4	6	10	25	7	11	14	21	28	46	
<b>Trauma - Total Cranial Procedures</b>	4	10	12	21	29	48	4	14	20	33	51	71	19	32	39	57	76	111	
<b>Extracranial Vascular Disease -endarterectomy/endovascular</b>	0	0	0	2	5	10	0	0	0	2	5	12	0	1	2	6	9	22	
<b>Disc Disease and/or Spondylosis/Trauma with Instrumentation - Lumbar Spine</b>	3	11	17	27	42	80	3	13	19	30	43	76	19	30	41	64	85	149	
<b>Peripheral Nerve Disorders - All Types</b>	0	2	3	5	8	15	1	3	6	10	16	32	4	8	11	16	25	43	
<b>Total - Adult Cases</b>	66	103	127	164	206	293	32	93	125	176	219	297	153	238	276	339	419	515	



# NEUROLOGICAL SURGERY: NATIONAL RESIDENT REPORT (Percentiles Table - Index Cases)

Reporting Period: Total Experience of Residents Completing Programs in 2008-2009

Residency Review Committee for Neurological Surgery

[Page 2 ]

Programs in the Nation: 85 Residents in the Nation: 147

	Senior Clinical Year						Other Clinical Years						Total All Years					
	Resident Percentiles						Resident Percentiles						Resident Percentiles					
	10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
<b>Pediatric Cases</b>																		
<b>Brain Tumors (intra-axial and/or extra axial) - Craniotomy</b>	0	0	0	1	4	11	0	2	4	7	12	19	2	5	7	11	14	21
<b>Dysraphism - Spinal Procedures (all types)</b>	0	0	0	0	2	6	0	0	2	3	7	13	1	2	3	6	9	15
<b>Total - Pediatric Cases</b>	0	0	0	2	5	18	0	3	6	12	19	30	3	8	12	18	24	36

	Senior Clinical Year						Other Clinical Years						Total All Years					
	Resident Percentiles						Resident Percentiles						Resident Percentiles					
	10	20	30	50	70	90	10	20	30	50	70	90	10	20	30	50	70	90
<b>Adult and Pediatric Cases</b>																		
<b>Epilepsy (Diagnostic and/or Therapeutic) - Craniotomy</b>	0	0	1	3	7	18	0	1	3	7	13	21	1	4	7	12	20	32
<b>Movement disorder - Stimulation/Stereotactic Lesion</b>	0	0	0	1	3	12	0	0	1	7	13	24	0	2	3	11	16	32
<b>Total - Adult and Pediatric Cases</b>	0	1	3	6	10	28	0	3	8	17	27	41	4	9	15	27	38	58