



# 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 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

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Number of Programs in the Nation: 89    Number of Residents in the Nation: 159

		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	22.7	18	18	0	89	3,603	15.2	13	12	0	77	2,415	37.8	25	31	0	129	6,018
	Aneurysm - endovascular	3.0	9	0	0	58	479	5.7	18	0	0	121	901	8.7	24	0	0	149	1,380
	AVM/other malformation - craniotomy	4.9	4	4	0	19	781	3.7	5	3	0	39	588	8.6	7	7	0	42	1,369
	AVM/other malformation - endovascular	0.7	3	0	0	23	110	1.5	5	0	0	41	232	2.2	6	0	0	42	342
	AVM/other malformation - stereotactic radiosurgery	0.2	1	0	0	11	33	0.8	3	0	0	19	134	1.1	3	0	0	19	167
	Hematoma non-traumatic	7.5	8	5	0	57	1,190	9.3	9	7	0	43	1,472	16.7	14	14	0	68	2,662
	Other - vascular (open or endovascular)	2.8	3	2	0	20	447	3.7	5	2	0	43	581	6.5	7	5	0	50	1,028
	<b>TOTAL - Cranial Procedures - Vascular</b>		<b>41.8</b>	<b>31</b>	<b>36</b>	<b>0</b>	<b>162</b>	<b>6,643</b>	<b>39.8</b>	<b>34</b>	<b>31</b>	<b>0</b>	<b>210</b>	<b>6,323</b>	<b>81.5</b>	<b>53</b>	<b>69</b>	<b>3</b>	<b>294</b>
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	59.9	42	51	0	242	9,521	59.1	36	57	0	192	9,392	118.9	58	118	3	395	18,913
	Stereotactic biopsy	4.4	5	4	0	22	707	9.7	10	7	0	81	1,545	14.2	12	11	0	102	2,252
	Intra-axial and/or extra-axial - radiosurgery	2.1	9	0	0	90	335	9.5	25	0	0	165	1,508	11.6	27	1	0	165	1,843
	Parasellar/sellar tumor - transsphenoidal	12.9	12	10	0	76	2,048	13.5	14	11	0	101	2,142	26.4	20	22	0	122	4,190
	Other - tumor (open surgery, endoscopy, endovasc)	4.1	6	2	0	39	654	4.6	6	3	0	37	726	8.7	10	5	0	46	1,380
	<b>TOTAL - Cranial Procedures- Tumor</b>		<b>83.4</b>	<b>57</b>	<b>75</b>	<b>0</b>	<b>343</b>	<b>13,265</b>	<b>96.3</b>	<b>58</b>	<b>96</b>	<b>0</b>	<b>293</b>	<b>15,313</b>	<b>179.7</b>	<b>85</b>	<b>174</b>	<b>4</b>	<b>533</b>

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RRC Area	RRC Procedure																		
<b>Cranial Procedures - Functional</b>	Epilepsy (therapeutic and/or diag) - craniotomy	4.8	6	3	0	38	768	7.4	9	4	0	54	1,170	12.2	12	9	0	64	1,938
	Epilepsy, diagnostic - stereotactic implantation	0.2	1	0	0	5	31	0.7	1	0	0	8	113	0.9	2	0	0	9	144
	Epilepsy, therapeutic - other (vagal stimulation)	1.5	3	0	0	15	231	3.4	4	2	0	20	533	4.8	5	3	0	22	764
	Movement disorder - stimulation/stereotactic lesion	4.0	6	2	0	35	636	15.9	19	9	0	109	2,522	19.9	21	13	0	119	3,158
	Pain - stimulation	0.2	1	0	0	3	29	0.6	1	0	0	7	103	0.8	1	0	0	7	132
	Percutaneous lesion creation	1.0	2	0	0	12	161	2.1	3	1	0	21	336	3.1	5	2	0	29	497
	Craniotomy/craniectomy	4.7	6	3	0	30	744	4.6	11	3	0	123	731	9.3	14	6	0	152	1,475
	Stereotactic radiosurgery (functional)	0.4	2	0	0	12	71	1.4	4	0	0	30	216	1.8	5	0	0	30	287
	Other (functional)	0.1	0	0	0	3	9	0.1	0	0	0	2	11	0.1	0	0	0	3	20
	<b>TOTAL - Cranial Procedures- Functional</b>	<b>16.9</b>	<b>15</b>	<b>13</b>	<b>0</b>	<b>72</b>	<b>2,680</b>	<b>36.1</b>	<b>33</b>	<b>29</b>	<b>0</b>	<b>220</b>	<b>5,735</b>	<b>52.9</b>	<b>39</b>	<b>45</b>	<b>0</b>	<b>256</b>	<b>8,415</b>
<b>Cranial Procedures - Trauma</b>	Depressed skull fracture/penetrating wound	2.7	3	2	0	16	423	3.9	4	3	0	28	622	6.6	6	5	0	36	1,045
	Hematoma	20.6	17	17	0	100	3,278	33.2	31	27	0	310	5,276	53.8	37	50	1	329	8,554
	Other (trauma)	1.1	3	0	0	37	170	1.5	2	1	0	17	242	2.6	4	1	0	38	412
	<b>TOTAL - Cranial Procedures - Trauma</b>	<b>24.3</b>	<b>19</b>	<b>20</b>	<b>0</b>	<b>110</b>	<b>3,871</b>	<b>38.6</b>	<b>35</b>	<b>32</b>	<b>0</b>	<b>341</b>	<b>6,140</b>	<b>63.0</b>	<b>43</b>	<b>59</b>	<b>1</b>	<b>367</b>	<b>10,011</b>

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RRC Area	RRC Procedure																		
<b>Cranial Procedures - Cranial Recon/Cranioplasty</b>	Craniosynostosis	0.1	0	0	0	5	12	0.2	1	0	0	3	30	0.3	1	0	0	6	42
	Craniofacial reconstruction	0.5	1	0	0	7	72	0.5	1	0	0	3	72	0.9	1	0	0	10	144
	Cranioplasty	4.4	5	3	0	34	698	7.6	7	6	0	45	1,207	12.0	10	10	0	56	1,905
	<b>TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty</b>	<b>4.9</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>38</b>	<b>782</b>	<b>8.2</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>45</b>	<b>1,309</b>	<b>13.2</b>	<b>10</b>	<b>11</b>	<b>0</b>	<b>57</b>	<b>2,091</b>
<b>Cranial Procedures - Other</b>	Infection/cyst/orbit/skull lesion/dural-CSF/Chiari	10.1	7	9	0	35	1,603	15.3	10	15	0	47	2,432	25.4	13	25	0	65	4,035
	<b>TOTAL - Cranial Procedures - Other</b>	<b>10.1</b>	<b>7</b>	<b>9</b>	<b>0</b>	<b>35</b>	<b>1,603</b>	<b>15.3</b>	<b>10</b>	<b>15</b>	<b>0</b>	<b>47</b>	<b>2,432</b>	<b>25.4</b>	<b>13</b>	<b>25</b>	<b>0</b>	<b>65</b>	<b>4,035</b>
<b>Extracranial/Intracranial Occlusive Vascular Dis</b>	Carotid endarterectomy	4.1	5	2	0	28	644	2.4	4	1	0	23	375	6.4	7	4	0	39	1,019
	Carotid angioplasty/stenting (endovascular)	1.1	4	0	0	36	168	2.5	12	0	0	121	391	3.5	14	0	0	123	559
	EC/IC bypass	1.4	3	0	0	19	221	0.9	2	0	0	16	143	2.3	4	1	0	29	364
	Other vascular -patch/bypass/ligation/other	0.3	1	0	0	6	48	0.3	1	0	0	4	50	0.6	1	0	0	8	98
	<b>TOTAL - Extracranial/Intracranial Occlusive Vascular Dis</b>	<b>6.8</b>	<b>9</b>	<b>3</b>	<b>0</b>	<b>50</b>	<b>1,081</b>	<b>6.0</b>	<b>14</b>	<b>3</b>	<b>0</b>	<b>132</b>	<b>959</b>	<b>12.8</b>	<b>20</b>	<b>7</b>	<b>0</b>	<b>157</b>	<b>2,040</b>

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RRC Area	RRC Procedure																		
<b>CSF Shunting</b>	Initial	12.3	10	10	0	82	1,957	25.7	18	22	0	97	4,082	38.0	22	33	3	127	6,039
	Revision	8.0	6	7	0	35	1,278	18.2	13	17	0	62	2,889	26.2	15	25	1	70	4,167
	Third ventriculostomy	1.9	3	1	0	19	303	1.7	2	1	0	11	264	3.6	4	3	0	19	567
	Other (CSF shunting procedures)	0.2	1	0	0	4	28	1.2	2	0	0	11	193	1.4	2	0	0	12	221
	TOTAL - CSF Shunting	22.4	15	20	0	92	3,566	46.7	28	44	0	150	7,428	69.1	33	65	4	188	10,994
<b>Spinal Procedures - Disc and/or Spondylosis</b>	Cervical - discectomy/decompression	15.3	15	11	0	74	2,431	25.3	25	18	0	140	4,026	40.6	33	29	0	204	6,457
	Cervical - w/ instrumentation/fusion	21.9	20	17	0	105	3,485	35.3	30	28	0	154	5,608	57.2	42	48	0	207	9,093
	Thoracic - discectomy/decompression	2.1	2	2	0	12	335	2.4	2	2	0	14	376	4.5	3	4	0	26	711
	Thoracic - w/ instrumentation/fusion	2.4	3	1	0	25	377	2.2	4	1	0	31	352	4.6	6	3	0	34	729
	Lumbar/sacral - discectomy/decompression	31.4	26	24	0	145	4,989	68.3	53	55	0	286	10,855	99.6	64	87	1	383	15,844
	Lumbar/sacral - w/ instrumentation/fusion	20.7	20	16	0	111	3,292	28.2	26	21	0	129	4,491	48.9	40	40	0	214	7,783
	TOTAL - Spinal Procedures - Disc and/or Spondylosis	93.8	64	85	0	304	14,909	161.7	113	146	0	553	25,708	255.5	145	245	3	770	40,617

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RRC Area	RRC Procedure																		
<b>Spinal Procedures - Tumor/Vascular Lesion</b>	Primary tumor resection	6.5	5	6	0	23	1,038	6.7	5	6	0	28	1,062	13.2	8	12	0	43	2,100
	Primary tumor - resection w/instrumentation/fusion	1.2	4	0	0	52	185	1.4	2	1	0	16	216	2.5	6	1	0	60	401
	Metastatic tumor resection	2.6	3	2	0	16	419	2.6	3	2	0	18	406	5.2	4	4	0	22	825
	Metastatic tumor resection w/instrumentation/fusion	1.9	3	1	0	15	296	2.4	4	1	0	23	374	4.2	5	3	0	27	670
	Vascular lesion	0.5	1	0	0	4	77	0.4	1	0	0	4	57	0.8	1	0	0	5	134
	Vascular lesion resection w/instrumentation/fusion	0.0	0	0	0	1	3	0.0	0	0	0	0	0	0.0	0	0	0	1	3
	Radiosurgery - tumor/vascular lesion	0.1	1	0	0	12	20	0.0	0	0	0	0	0	0.1	1	0	0	12	20
	Other tumor/vascular lesion (open or endovascular)	0.0	0	0	0	2	3	0.2	1	0	0	4	37	0.3	1	0	0	4	40
	<b>TOTAL - Spinal Procedures - Tumor/Vascular Lesion</b>	<b>12.8</b>	<b>10</b>	<b>12</b>	<b>0</b>	<b>57</b>	<b>2,041</b>	<b>13.5</b>	<b>11</b>	<b>11</b>	<b>0</b>	<b>69</b>	<b>2,152</b>	<b>26.4</b>	<b>16</b>	<b>25</b>	<b>0</b>	<b>93</b>	<b>4,193</b>

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RRC Area	RRC Procedure																		
<b>Spinal Procedures - Trauma</b>	Cervical - operative decompression/reduction	1.0	2	0	0	25	154	1.0	2	0	0	13	159	2.0	3	1	0	28	313
	Cervical - with instrumentation/fusion	5.4	7	4	0	54	851	6.1	7	4	0	41	976	11.5	10	9	0	66	1,827
	Thoracic - operative decompression/reduction	0.5	1	0	0	7	73	0.4	1	0	0	5	63	0.9	2	0	0	11	136
	Thoracic - with instrumentation/fusion	2.8	4	1	0	30	443	3.2	4	2	0	16	508	6.0	6	4	0	34	951
	Lumbar/sacral - operative decompression/reduction	0.6	2	0	0	18	103	0.4	1	0	0	3	60	1.0	2	0	0	19	163
	Lumbar/sacral - with instrumentation/fusion	2.1	3	1	0	22	330	2.9	3	2	0	16	458	5.0	5	4	0	27	788
	TOTAL - Spinal Procedures- Trauma		12.3	16	9	0	149	1,954	14.0	13	11	0	60	2,224	26.3	23	21	0	162
<b>Spinal Procedures - Dysraphism</b>	Spinal dysraphism	0.9	2	0	0	11	144	1.2	2	1	0	8	195	2.1	3	1	0	16	339
	TOTAL - Spinal Procedures - Dysraphism	0.9	2	0	0	11	144	1.2	2	1	0	8	195	2.1	3	1	0	16	339
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	1.9	3	1	0	28	310	7.2	9	4	0	47	1,137	9.1	10	6	0	48	1,447
	Rhizotomy	0.2	1	0	0	3	33	0.3	1	0	0	3	47	0.5	1	0	0	5	80
	Stimulation	2.2	4	1	0	34	344	7.0	10	3	0	61	1,115	9.2	12	6	0	68	1,459
	TOTAL - Spinal Procedures - Spasticity/Pain	4.3	7	2	0	63	687	14.5	16	9	0	87	2,299	18.8	19	13	0	113	2,986

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RRC Area	RRC Procedure																		
<b>Spinal Procedures - Other</b>	Vertebroplasty/kyphoplasty	1.0	2	0	0	8	152	1.8	4	0	0	36	282	2.7	5	1	0	38	434
	Non-neoplastic lesions/deformity/infection/other	7.4	6	6	0	29	1,169	13.0	10	11	0	63	2,068	20.4	12	19	0	67	3,237
	Non-neoplastic lesions - w/instrumentation/fusion	0.7	2	0	0	13	116	1.0	1	1	0	8	166	1.8	2	1	0	14	282
	<b>TOTAL - Spinal Procedures - Other</b>	<b>9.0</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>32</b>	<b>1,437</b>	<b>15.8</b>	<b>11</b>	<b>14</b>	<b>0</b>	<b>72</b>	<b>2,516</b>	<b>24.9</b>	<b>14</b>	<b>24</b>	<b>0</b>	<b>76</b>	<b>3,953</b>
<b>Peripheral Nerve Procedures</b>	Neurolysis/transposition	4.6	6	3	0	37	725	8.0	8	5	0	42	1,279	12.6	11	10	0	47	2,004
	Nerve repair	0.4	1	0	0	7	66	0.4	1	0	0	6	65	0.8	1	0	0	8	131
	Sympathectomy	0.1	0	0	0	3	8	0.1	0	0	0	3	21	0.2	1	0	0	3	29
	Nerve stimulation	0.5	1	0	0	10	85	1.8	3	1	0	24	286	2.3	3	1	0	27	371
	Peripheral nerve section/rhizotomy	0.1	0	0	0	2	19	0.4	1	0	0	4	58	0.5	1	0	0	4	77
	Excision tumor/neuroma/neurolytic agent/other	1.0	2	0	0	13	156	1.5	2	1	0	7	233	2.4	3	2	0	14	389
	<b>TOTAL - Peripheral Nerve Procedures</b>	<b>6.7</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>56</b>	<b>1,059</b>	<b>12.2</b>	<b>11</b>	<b>10</b>	<b>0</b>	<b>63</b>	<b>1,942</b>	<b>18.9</b>	<b>14</b>	<b>16</b>	<b>0</b>	<b>71</b>	<b>3,001</b>
<b>Minor/Diagnostic Procedures</b>	Muscle/nerve biopsy	1.2	2	0	0	13	192	3.1	5	1	0	24	485	4.3	6	2	0	31	677
	ICP monitoring	2.4	4	1	0	32	376	12.5	17	6	0	114	1,983	14.8	19	7	0	140	2,359
	Tongs/halo application	0.8	2	0	0	18	124	3.2	5	1	0	41	508	4.0	7	2	0	52	632
	Ventriculostomy	1.8	5	0	0	44	287	13.1	18	6	0	104	2,076	14.9	20	8	0	148	2,363
	Arteriography	8.1	33	0	0	308	1,293	18.0	57	0	0	350	2,856	26.1	74	0	0	437	4,149
	Injection/Aspiration/Biopsy/Punctures/Other	4.8	6	3	0	53	770	20.1	28	9	0	152	3,188	24.9	32	14	0	169	3,958
	<b>TOTAL - Minor/Diagnostic Procedures</b>	<b>19.1</b>	<b>36</b>	<b>9</b>	<b>0</b>	<b>308</b>	<b>3,042</b>	<b>69.8</b>	<b>85</b>	<b>44</b>	<b>0</b>	<b>514</b>	<b>11,096</b>	<b>88.9</b>	<b>104</b>	<b>57</b>	<b>0</b>	<b>627</b>	<b>14,138</b>



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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 8 ]		Number of Programs in the Nation: 89    Number of Residents in the Nation: 159																	
		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	3.9	25	0	0	244	622	6.9	37	0	0	336	1,104	10.9	48	0	0	393	1,726
	TOTAL - No Operative Procedure	3.9	25	0	0	244	622	6.9	37	0	0	336	1,104	10.9	48	0	0	393	1,726
<b>Secondary Codes</b>	Cranial - other	0.0	0	0	0	1	6	0.3	1	0	0	5	52	0.4	1	0	0	5	58
	Spinal	0.1	0	0	0	2	22	0.5	2	0	0	20	77	0.6	2	0	0	20	99
	Peripheral	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0	0	0	0	0
	TOTAL - Secondary Codes	0.2	0	0	0	2	28	0.8	2	0	0	20	129	1.0	2	0	0	20	157
<b>Unassigned</b>	Unassigned	2.6	6	1	0	46	417	7.7	17	3	0	177	1,231	10.4	20	5	0	180	1,648
	TOTAL - Unassigned	2.6	6	1	0	46	417	7.7	17	3	0	177	1,231	10.4	20	5	0	180	1,648
<b>Total Adult Cases</b>	TOTAL - Adult Cases	376.3	197	366	0	1,175	59,831	605.3	314	637	0	1,680	96,235	981.5	411	1,002	36	2,425	156,066

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Pediatric

[Page 9 ]		Number of Programs in the Nation: 89    Number of Residents in the Nation: 159																	
		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	2	19	0.3	1	0	0	6	55	0.5	1	0	0	6	74
	Aneurysm - endovascular	0.0	0	0	0	1	3	0.1	0	0	0	3	12	0.1	0	0	0	3	15
	AVM/other malformation - craniotomy	0.5	1	0	0	4	78	0.9	1	0	0	7	140	1.4	2	1	0	8	218
	AVM/other malformation - endovascular	0.1	0	0	0	3	12	0.2	1	0	0	7	28	0.3	1	0	0	7	40
	AVM/other malformation - stereotactic radiosurgery	0.0	0	0	0	1	1	0.1	1	0	0	6	16	0.1	1	0	0	6	17
	Hematoma non-traumatic	0.2	1	0	0	5	34	0.7	1	0	0	6	108	0.9	1	0	0	6	142
	Other - vascular (open or endovascular)	0.1	0	0	0	2	11	0.7	1	0	0	6	107	0.7	1	0	0	6	118
	TOTAL - Cranial Procedures - Vascular	1.0	2	0	0	11	158	2.9	3	2	0	16	466	3.9	3	3	0	20	624
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	3.0	4	1	0	23	470	9.5	8	8	0	43	1,507	12.4	8	12	0	43	1,977
	Stereotactic biopsy	0.1	1	0	0	3	21	0.6	1	0	0	6	91	0.7	1	0	0	6	112
	Intra-axial and/or extra-axial - radiosurgery	0.0	0	0	0	1	3	0.1	0	0	0	3	18	0.1	0	0	0	3	21
	Parasellar/sellar tumor - transsphenoidal	0.2	1	0	0	3	39	0.7	1	0	0	11	110	0.9	2	0	0	13	149
	Other - tumor (open surgery, endoscopy, endovasc)	0.2	1	0	0	4	34	0.6	1	0	0	7	89	0.8	1	0	0	8	123
	TOTAL - Cranial Procedures- Tumor	3.6	5	1	0	30	567	11.4	9	9	0	44	1,815	15.0	9	13	0	45	2,382
<b>Cranial Procedures - Functional</b>	Epilepsy (therapeutic and/or diag) - craniotomy	0.8	3	0	0	17	131	3.6	6	2	0	52	579	4.5	7	2	0	52	710
	Epilepsy, diagnostic - sterotactic implantation	0.0	0	0	0	1	1	0.1	0	0	0	2	10	0.1	0	0	0	2	11
	Epilepsy, therapeutic - other (vagal stimulation)	0.4	1	0	0	9	58	1.8	3	1	0	13	285	2.2	3	1	0	13	343
	Movement disorder - stimulation/stereotactic lesion	0.1	0	0	0	3	10	0.6	1	0	0	6	96	0.7	1	0	0	8	106
	TOTAL - Cranial Procedures- Functional	1.3	3	0	0	21	200	6.1	8	4	0	56	970	7.4	8	5	0	56	1,170

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Pediatric

[Page 10 ]

Number of Programs in the Nation: 89    Number of Residents in the Nation: 159

		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	1.9	3	1	0	17	306	6.3	6	5	0	57	996	8.2	7	7	0	61	1,302
<b>Cranial Procedures - Cranial Recon/Cranioplasty</b>	TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty	1.3	3	0	0	28	213	8.1	7	7	0	38	1,281	9.4	8	8	0	39	1,494
<b>Cranial Procedures - Other</b>	TOTAL - Cranial Procedures - Other	1.7	3	0	0	20	265	9.2	8	8	0	44	1,457	10.8	8	10	0	44	1,722
<b>CSF Shunting</b>	Initial	2.2	4	0	0	24	352	13.9	13	12	0	66	2,217	16.2	13	13	0	66	2,569
	Revision	3.9	6	1	0	34	619	22.0	20	17	0	111	3,495	25.9	20	24	0	112	4,114
	Third ventriculostomy	0.7	2	0	0	11	106	1.8	2	1	0	12	279	2.4	3	1	0	16	385
	Other (CSF shunting procedures)	0.1	0	0	0	2	15	1.0	2	0	0	9	155	1.1	2	0	0	9	170
	TOTAL - CSF Shunting	6.9	10	2	0	55	1,092	38.7	32	32	0	181	6,146	45.5	33	41	0	181	7,238
<b>Spinal Procedures - Dysraphism</b>	TOTAL - Spinal Procedures - Dysraphism	1.4	2	0	0	14	226	6.4	6	6	0	32	1,025	7.9	6	7	0	42	1,251
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	0.2	1	0	0	5	37	2.8	4	1	0	27	440	3.0	4	1	0	27	477
	Rhizotomy	0.1	0	0	0	2	13	0.6	1	0	0	7	90	0.6	1	0	0	8	103
	TOTAL - Spinal Procedures - Spasticity/Pain	0.3	1	0	0	6	50	3.3	5	2	0	34	530	3.6	5	2	0	34	580
<b>Spinal Procedures - Other</b>	TOTAL - Spinal Procedures - Other	0.6	1	0	0	11	96	3.1	6	2	0	59	494	3.7	6	2	0	66	590
<b>Total Pediatric Cases</b>	TOTAL - Pediatric Cases	20.0	27	10	0	157	3,173	95.5	69	87	0	342	15,180	115.4	69	107	2	342	18,353

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

[Page 1 ]

Number of Programs in the Nation: 89    Number of Residents in the Nation: 159

	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>	25.7	21	20	0	103	4,082	20.9	23	15	0	156	3,316	46.5	36	35	0	206	7,398
<b>Brain Tumors (intra-axial and/or extra axial) - Craniotomy</b>	59.9	42	51	0	242	9,521	59.1	36	57	0	192	9,392	118.9	58	118	3	395	18,913
<b>Sellar/Parasellar tumors - Transsphenoidal approach (Endoscopic or Microsurgical)</b>	12.9	12	10	0	76	2,048	13.5	14	11	0	101	2,142	26.4	20	22	0	122	4,190
<b>Trauma - Total Cranial Procedures</b>	24.3	19	20	0	110	3,871	38.6	35	32	0	341	6,140	63.0	43	59	1	367	10,011
<b>Extracranial Vascular Disease -endarterectomy/endovascular</b>	5.1	7	3	0	47	812	4.8	14	1	0	127	766	9.9	18	5	0	150	1,578
<b>Disc Disease and/or Spondylosis/Trauma with Instrumentation - Lumbar Spine</b>	27.9	23	23	0	121	4,442	36.5	30	29	0	137	5,809	64.5	45	55	0	223	10,251
<b>Peripheral Nerve Disorders - All Types</b>	6.7	8	5	0	56	1,059	12.2	11	10	0	63	1,942	18.9	14	16	0	71	3,001
<b>Total - Adult Cases</b>	162.5	87	159	0	441	25,835	185.6	98	190	0	526	29,507	348.1	142	353	10	909	55,342

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

[Page 2]

Number of Programs in the Nation: 89    Number of Residents in the Nation: 159

	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>	3.0	4	1	0	23	470	9.5	8	8	0	43	1,507	12.4	8	12	0	43	1,977
<b>Dysraphism - Spinal Procedures (all types)</b>	1.4	2	0	0	14	226	6.4	6	6	0	32	1,025	7.9	6	7	0	42	1,251
<b>Total - Pediatric Cases</b>	4.4	6	1	0	30	696	15.9	13	13	0	62	2,532	20.3	13	19	0	63	3,228

	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>	5.7	8	3	0	54	899	11.0	14	7	0	106	1,749	16.7	16	12	0	108	2,648
<b>Movement disorder - Stimulation/Stereotactic Lesion</b>	4.1	6	2	0	35	646	16.5	20	10	0	110	2,618	20.5	22	13	0	120	3,264
<b>Total - Adult and Pediatric Cases</b>	9.7	11	7	0	65	1,545	27.5	26	19	0	122	4,367	37.2	29	31	0	138	5,912

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 1 ]		Programs in the Nation: 89 Residents in the Nation: 159																	
		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	1	9	12	18	28	49	2	4	7	12	19	33	12	17	23	31	49	74
	Aneurysm - endovascular	0	0	0	0	0	7	0	0	0	0	1	10	0	0	0	0	3	21
	AVM/other malformation - craniotomy	0	1	2	4	6	12	0	1	1	3	4	8	1	3	5	7	10	17
	AVM/other malformation - endovascular	0	0	0	0	0	2	0	0	0	0	0	4	0	0	0	0	1	6
	AVM/other malformation - stereotactic radiosurgery	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3
	Hematoma non-traumatic	0	1	2	5	9	17	1	2	3	7	11	23	2	5	7	14	21	36
	Other - vascular (open or endovascular)	0	0	1	2	3	7	0	0	1	2	4	8	1	2	3	5	8	13
	<b>TOTAL - Cranial Procedures - Vascular</b>		5	17	25	36	49	77	7	17	20	31	45	79	27	39	53	69	99
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	13	29	41	51	69	111	12	28	36	57	78	108	53	73	90	118	144	191
	Stereotactic biopsy	0	1	2	4	5	9	1	3	4	7	12	21	2	5	8	11	18	27
	Intra-axial and/or extra-axial - radiosurgery	0	0	0	0	0	4	0	0	0	0	5	26	0	0	0	1	8	30
	Parasellar/sellar tumor - transsphenoidal	1	4	6	10	15	24	1	3	6	11	16	27	8	13	15	22	29	51
	Other - tumor (open surgery, endoscopy, endovasc)	0	0	1	2	4	10	0	0	1	3	6	10	0	1	3	5	10	20
	<b>TOTAL - Cranial Procedures- Tumor</b>		15	40	56	75	96	158	16	45	61	96	125	162	81	111	144	174	215

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 2 ]		Programs in the Nation: 89 Residents in the Nation: 159																	
		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	12	0	1	2	4	9	18	1	3	4	9	16	30
	Epilepsy, diagnostic - stereotactic implantation	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	3
	Epilepsy, therapeutic - other (vagal stimulation)	0	0	0	0	1	4	0	0	1	2	4	9	0	0	1	3	6	13
	Movement disorder - stimulation/stereotactic lesion	0	0	0	2	4	10	0	2	4	9	18	44	1	3	7	13	24	50
	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	6	0	0	0	2	4	8
	Craniotomy/craniectomy	0	0	1	3	6	11	0	0	1	3	4	10	1	2	3	6	9	21
	Stereotactic radiosurgery (functional)	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	1	6
	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>2</b>	<b>5</b>	<b>8</b>	<b>13</b>	<b>19</b>	<b>37</b>	<b>3</b>	<b>9</b>	<b>17</b>	<b>29</b>	<b>44</b>	<b>77</b>	<b>10</b>	<b>23</b>	<b>32</b>	<b>45</b>	<b>64</b>	<b>103</b>
<b>Cranial Procedures - Trauma</b>	Depressed skull fracture/penetrating wound	0	0	1	2	3	6	0	1	1	3	5	8	1	2	3	5	8	12
	Hematoma	4	8	11	17	26	41	7	13	19	27	39	61	17	25	31	50	65	99
	Other (trauma)	0	0	0	0	1	3	0	0	0	1	2	4	0	0	1	1	3	7
	<b>TOTAL - Cranial Procedures - Trauma</b>	<b>5</b>	<b>9</b>	<b>13</b>	<b>20</b>	<b>30</b>	<b>49</b>	<b>9</b>	<b>16</b>	<b>21</b>	<b>32</b>	<b>47</b>	<b>71</b>	<b>19</b>	<b>29</b>	<b>37</b>	<b>59</b>	<b>76</b>	<b>115</b>

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 3 ]		Programs in the Nation: 89 Residents in the Nation: 159																	
		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	1	0	0	0	0	0	1
	Craniofacial reconstruction	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	3
	Cranioplasty	0	1	1	3	6	9	1	2	3	6	9	17	3	5	6	10	15	24
	TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty	0	1	2	4	6	10	1	2	4	6	10	18	3	5	7	11	16	25
<b>Cranial Procedures - Other</b>	Infection/cyst/orbit/skull lesion/dural-CSF/Chiari	1	4	6	9	13	21	3	6	9	15	19	28	9	14	18	25	32	42
	TOTAL - Cranial Procedures - Other	1	4	6	9	13	21	3	6	9	15	19	28	9	14	18	25	32	42
<b>Extracranial/Intracranial Occlusive Vascular Dis</b>	Carotid endarterectomy	0	0	0	2	5	11	0	0	0	1	2	7	0	1	2	4	8	17
	Carotid angioplasty/stenting (endovascular)	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	6
	EC/IC bypass	0	0	0	0	1	4	0	0	0	0	0	3	0	0	0	1	2	6
	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	18	0	0	1	3	5	12	1	2	4	7	13	27



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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 4]      Programs in the Nation: 89    Residents in the Nation: 159		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	3	4	6	10	15	25	5	13	17	22	31	49	15	21	25	33	45	67
	Revision	1	3	4	7	11	15	3	6	9	17	25	36	8	13	17	25	34	47
	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	4	0	0	0	0	1	4
	<b>TOTAL - CSF Shunting</b>	<b>6</b>	<b>9</b>	<b>14</b>	<b>20</b>	<b>27</b>	<b>42</b>	<b>9</b>	<b>22</b>	<b>30</b>	<b>44</b>	<b>59</b>	<b>85</b>	<b>31</b>	<b>40</b>	<b>48</b>	<b>65</b>	<b>88</b>	<b>113</b>
<b>Spinal Procedures - Disc and/or Spondylosis</b>	Cervical - discectomy/decompression	1	4	6	11	17	32	2	5	8	18	30	63	8	15	21	29	47	90
	Cervical - w/ instrumentation/fusion	3	6	9	17	27	46	4	10	15	28	42	74	12	23	30	48	72	119
	Thoracic - discectomy/decompression	0	0	0	2	3	6	0	0	1	2	3	6	0	1	2	4	6	9
	Thoracic - w/ instrumentation/fusion	0	0	0	1	3	6	0	0	0	1	2	6	0	1	1	3	5	9
	Lumbar/sacral - discectomy/decompression	4	13	18	24	36	68	12	25	36	55	81	136	31	50	63	87	118	183
	Lumbar/sacral - w/ instrumentation/fusion	1	4	8	16	26	46	3	6	11	21	34	64	9	16	23	40	60	109
<b>TOTAL - Spinal Procedures - Disc and/or Spondylosis</b>	<b>20</b>	<b>43</b>	<b>52</b>	<b>85</b>	<b>117</b>	<b>182</b>	<b>30</b>	<b>54</b>	<b>86</b>	<b>146</b>	<b>194</b>	<b>324</b>	<b>86</b>	<b>132</b>	<b>154</b>	<b>245</b>	<b>328</b>	<b>431</b>	

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 5 ]		Programs in the Nation: 89 Residents in the Nation: 159																	
		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	4	6	8	14	1	2	3	6	8	14	4	7	8	12	16	23
	Primary tumor - resection w/instrumentation/fusion	0	0	0	0	1	2	0	0	0	1	1	3	0	0	1	1	2	4
	Metastatic tumor resection	0	0	0	2	4	7	0	0	1	2	3	6	1	2	2	4	6	11
	Metastatic tumor resection w/instrumentation/fusion	0	0	0	1	3	5	0	0	0	1	3	7	0	0	1	3	5	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>6</b>	<b>12</b>	<b>16</b>	<b>25</b>	<b>2</b>	<b>5</b>	<b>7</b>	<b>11</b>	<b>16</b>	<b>29</b>	<b>10</b>	<b>12</b>	<b>17</b>	<b>25</b>	<b>31</b>	<b>46</b>

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 6 ] Programs in the Nation: 89 Residents in the Nation: 159		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	1	3	0	0	0	0	1	3	0	0	0	1	2	6	
	Cervical - with instrumentation/fusion	0	1	2	4	6	13	0	1	2	4	7	14	1	3	6	9	15	24	
	Thoracic - operative decompression/reduction	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	3	
	Thoracic - with instrumentation/fusion	0	0	0	1	3	6	0	0	1	2	4	8	0	1	2	4	7	13	
	Lumbar/sacral - operative decompression/reduction	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	1	3	
	Lumbar/sacral - with instrumentation/fusion	0	0	0	1	2	5	0	0	1	2	4	7	0	1	2	4	6	12	
	<b>TOTAL - Spinal Procedures- Trauma</b>		0	2	3	9	14	28	1	4	6	11	17	33	3	8	13	21	33	50
<b>Spinal Procedures - Dysraphism</b>	Spinal dysraphism	0	0	0	0	1	3	0	0	0	1	2	3	0	0	0	1	3	5	
	<b>TOTAL - Spinal Procedures - Dysraphism</b>	0	0	0	0	1	3	0	0	0	1	2	3	0	0	0	1	3	5	
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	0	0	0	1	2	6	0	1	2	4	9	17	1	1	3	6	11	22	
	Rhizotomy	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	
	Stimulation	0	0	0	1	2	8	0	0	1	3	8	17	0	1	2	6	10	24	
	<b>TOTAL - Spinal Procedures - Spasticity/Pain</b>	0	0	1	2	4	11	0	2	4	9	18	36	2	3	6	13	24	44	

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 7 ]		Programs in the Nation: 89 Residents in the Nation: 159																	
		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	3	0	0	0	0	1	6	0	0	0	1	3	8
	Non-neoplastic lesions/deformity/infection/other	1	2	4	6	9	15	2	5	8	11	17	26	7	10	13	19	26	35
	Non-neoplastic lesions - w/instrumentation/fusion	0	0	0	0	1	2	0	0	0	1	1	3	0	0	0	1	2	4
	<b>TOTAL - Spinal Procedures - Other</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>8</b>	<b>11</b>	<b>19</b>	<b>3</b>	<b>6</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>29</b>	<b>8</b>	<b>12</b>	<b>17</b>	<b>24</b>	<b>30</b>	<b>44</b>
<b>Peripheral Nerve Procedures</b>	Neurolysis/transposition	0	0	1	3	5	11	0	1	3	5	10	20	1	2	5	10	16	31
	Nerve repair	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	1	3
	Sympathectomy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Nerve stimulation	0	0	0	0	0	2	0	0	0	1	2	5	0	0	0	1	3	6
	Peripheral nerve section/rhizotomy	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	2
	Excision tumor/neuroma/neurolytic agent/other	0	0	0	0	1	3	0	0	0	1	2	4	0	0	1	2	3	6
	<b>TOTAL - Peripheral Nerve Procedures</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>16</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>27</b>	<b>3</b>	<b>5</b>	<b>10</b>	<b>16</b>	<b>23</b>	<b>38</b>
<b>Minor/Diagnostic Procedures</b>	Muscle/nerve biopsy	0	0	0	0	1	3	0	0	0	1	3	9	0	0	1	2	5	13
	ICP monitoring	0	0	0	1	2	7	0	1	2	6	13	35	0	2	3	7	17	41
	Tongs/halo application	0	0	0	0	0	2	0	0	0	1	3	9	0	0	0	2	4	11
	Ventriculostomy	0	0	0	0	1	4	0	0	1	6	14	39	0	0	2	8	17	42
	Arteriography	0	0	0	0	0	16	0	0	0	0	4	37	0	0	0	0	7	50
	Injection/Aspiration/Biopsy/Punctures/Other	0	0	1	3	6	11	0	2	4	9	20	63	2	4	7	14	24	68
<b>TOTAL - Minor/Diagnostic Procedures</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>17</b>	<b>41</b>	<b>4</b>	<b>11</b>	<b>20</b>	<b>44</b>	<b>79</b>	<b>170</b>	<b>9</b>	<b>18</b>	<b>30</b>	<b>57</b>	<b>101</b>	<b>208</b>	

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Adult

[Page 8 ]		Programs in the Nation: 89 Residents in the Nation: 159																		
		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	1	0	0	0	0	0	0	2
	TOTAL - No Operative Procedure	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
<b>Secondary Codes</b>	Cranial - other	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	Spinal	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
	Peripheral	0	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	1	0	0	0	0	1	2	0	0	0	0	0	1	2
<b>Unassigned</b>	Unassigned	0	0	0	1	2	7	0	1	1	3	6	16	0	1	2	5	10	20	
	TOTAL - Unassigned	0	0	0	1	2	7	0	1	1	3	6	16	0	1	2	5	10	20	
<b>Total Adult Cases</b>	TOTAL - Adult Cases	122	255	300	366	432	626	146	353	415	637	774	991	466	684	777	1,002	1,182	1,433	

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Pediatric

[Page 9]      Programs in the Nation: 89    Residents in the Nation: 159		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	1
	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	3
	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	1	3	0	0	0	0	1	3
	Other - vascular (open or endovascular)	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	2
	<b>TOTAL - Cranial Procedures - Vascular</b>		0	0	0	0	1	3	0	0	1	2	4	7	0	1	2	3	5
<b>Cranial Procedures - Tumor</b>	Intra-axial and/or extra-axial - craniotomy	0	0	0	1	3	10	1	2	4	8	13	21	2	6	7	12	16	24
	Stereotactic biopsy	0	0	0	0	0	0	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	1
	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	1	4	11	1	3	6	9	16	23	3	7	9	13	19
<b>Cranial Procedures - Functional</b>	Epilepsy (therapeutic and/or diag) - craniotomy	0	0	0	0	0	2	0	0	0	2	4	9	0	0	1	2	5	12
	Epilepsy, diagnostic - stereotactic 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	3	6
	Movement disorder - stimulation/stereotactic lesion	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	2
	<b>TOTAL - Cranial Procedures- Functional</b>		0	0	0	0	1	4	0	0	1	4	7	16	0	1	2	5	9

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

Patient Age=Pediatric

[Page 10 ] Programs in the Nation: 89 Residents in the Nation: 159		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	2	6	0	2	2	5	8	14	1	2	4	7	10	17
<b>Cranial Procedures - Cranial Recon/Cranioplasty</b>	TOTAL - Cranial Procedures - Cranial Recon/Cranioplasty	0	0	0	0	1	4	0	2	3	7	10	19	0	3	5	8	12	21
<b>Cranial Procedures - Other</b>	TOTAL - Cranial Procedures - Other	0	0	0	0	2	5	1	2	4	8	12	18	2	4	6	10	15	21
<b>CSF Shunting</b>	Initial	0	0	0	0	2	7	1	4	6	12	17	30	2	5	9	13	19	35
	Revision	0	0	0	1	4	13	1	7	10	17	27	44	5	9	13	24	33	46
	Third ventriculostomy	0	0	0	0	0	2	0	0	0	1	2	5	0	0	0	1	3	7
	Other (CSF shunting procedures)	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	1	3
	TOTAL - CSF Shunting	0	0	0	2	8	23	2	13	21	32	49	73	8	19	26	41	56	84
<b>Spinal Procedures - Dysraphism</b>	TOTAL - Spinal Procedures - Dysraphism	0	0	0	0	2	5	0	1	2	6	8	15	0	2	4	7	11	16
<b>Spinal Procedures - Spasticity/Pain</b>	Pump implantation	0	0	0	0	0	1	0	0	0	1	3	8	0	0	1	1	4	8
	Rhizotomy	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
	TOTAL - Spinal Procedures - Spasticity/Pain	0	0	0	0	0	1	0	0	0	2	4	9	0	0	1	2	4	9
<b>Spinal Procedures - Other</b>	TOTAL - Spinal Procedures - Other	0	0	0	0	0	2	0	0	1	2	3	7	0	0	1	2	4	9
<b>Total Pediatric Cases</b>	TOTAL - Pediatric Cases	0	0	1	10	27	60	11	35	58	87	118	184	27	63	78	107	139	208

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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

[Page 1 ]	Programs in the Nation: 89 Residents in the Nation: 159																		
	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	20	30	58	3	6	9	15	24	45	12	20	26	35	55	95	
<b>Brain Tumors (intra-axial and/or extra axial) - Craniotomy</b>	13	29	41	51	69	111	12	28	36	57	78	108	53	73	90	118	144	191	
<b>Sellar/Parasellar tumors - Transsphenoidal approach (Endoscopic or Microsurgical)</b>	1	4	6	10	15	24	1	3	6	11	16	27	8	13	15	22	29	51	
<b>Trauma - Total Cranial Procedures</b>	5	9	13	20	30	49	9	16	21	32	47	71	19	29	37	59	76	115	
<b>Extracranial Vascular Disease -endarterectomy/endovascular</b>	0	0	1	3	6	14	0	0	0	1	4	9	0	1	3	5	10	20	
<b>Disc Disease and/or Spondylosis/Trauma with Instrumentation - Lumbar Spine</b>	2	9	14	23	37	60	4	10	16	29	45	81	16	28	35	55	76	135	
<b>Peripheral Nerve Disorders - All Types</b>	0	1	2	5	8	16	2	3	5	10	15	27	3	5	10	16	23	38	
<b>Total - Adult Cases</b>	48	101	129	159	197	263	49	92	126	190	245	305	186	234	293	353	422	517	



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

Reporting Period: Total Experience of Residents Completing Programs in 2009-2010

Residency Review Committee for Neurological Surgery

Report Date: October 11, 2010

[Page 2 ]	Programs in the Nation: 89 Residents in the Nation: 159																		
	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	3	10	1	2	4	8	13	21	2	6	7	12	16	24	
<b>Dysraphism - Spinal Procedures (all types)</b>	0	0	0	0	2	5	0	1	2	6	8	15	0	2	4	7	11	16	
<b>Total - Pediatric Cases</b>	0	0	0	1	5	15	2	4	7	13	20	37	4	9	11	19	26	38	

	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	6	13	1	2	3	7	13	26	2	4	7	12	19	36	
<b>Movement disorder - Stimulation/Stereotactic Lesion</b>	0	0	0	2	4	11	0	2	5	10	19	45	1	4	8	13	25	53	
<b>Total - Adult and Pediatric Cases</b>	0	1	3	7	11	22	2	5	11	19	32	66	7	13	19	31	45	79	