Table 2A.16.2: Trends in Spinal Fusion Procedures, United States 1998-2013

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>81.00-81.08 Spinal Fusion</td>
<td>1998</td>
<td>204,000</td>
<td>18%</td>
<td>226,000</td>
<td>20%</td>
<td>200,345,000</td>
<td>109.57</td>
<td>49.0</td>
<td>4.7</td>
<td>$37,159</td>
<td>$7.59</td>
<td>200,000</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>242,000</td>
<td>18%</td>
<td>263,000</td>
<td>20%</td>
<td>209,128,094</td>
<td>125.93</td>
<td>49.4</td>
<td>4.3</td>
<td>$43,290</td>
<td>17%</td>
<td>$10.47</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>289,000</td>
<td>20%</td>
<td>323,000</td>
<td>23%</td>
<td>215,122,788</td>
<td>150.07</td>
<td>50.2</td>
<td>4.4</td>
<td>$54,387</td>
<td>26%</td>
<td>$15.73</td>
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<td></td>
<td>2004</td>
<td>307,000</td>
<td>6%</td>
<td>307,000</td>
<td>-5%</td>
<td>220,398,637</td>
<td>139.29</td>
<td>51.8</td>
<td>4.5</td>
<td>$69,601</td>
<td>27%</td>
<td>$21.19</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>354,000</td>
<td>15%</td>
<td>380,000</td>
<td>24%</td>
<td>224,769,279</td>
<td>169.02</td>
<td>53.2</td>
<td>4.2</td>
<td>$88,977</td>
<td>29%</td>
<td>$31.47</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>457,442</td>
<td>29%</td>
<td>521,000</td>
<td>37%</td>
<td>235,205,323</td>
<td>221.51</td>
<td>55.7</td>
<td>3.8</td>
<td>$105,636</td>
<td>19%</td>
<td>$48.32</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>434,530</td>
<td>-5%</td>
<td>445,000</td>
<td>-15%</td>
<td>242,542,967</td>
<td>183.29</td>
<td>56.4</td>
<td>3.9</td>
<td>$112,000</td>
<td>6%</td>
<td>$48.67</td>
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</table>

15-Year Rate of Change

<table>
<thead>
<tr>
<th>Year</th>
<th>113%</th>
<th>137%</th>
<th>201%</th>
<th>542%</th>
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</thead>
<tbody>
<tr>
<td>81.30-81.393 Spinal Refusion [5]</td>
<td>1998</td>
<td>12,000</td>
<td>12,000</td>
<td>200,345,000</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>13,000</td>
<td>13,000</td>
<td>209,128,094</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>19,000</td>
<td>19,000</td>
<td>215,122,788</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>19,000</td>
<td>19,000</td>
<td>220,398,637</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>20,000</td>
<td>21,000</td>
<td>224,769,279</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>30,900</td>
<td>34,000</td>
<td>235,205,323</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>30,040</td>
<td>31,000</td>
<td>242,542,967</td>
</tr>
</tbody>
</table>

15-Year Rate of Change

<table>
<thead>
<tr>
<th>Year</th>
<th>157%</th>
<th>187%</th>
<th>247%</th>
<th>792%</th>
</tr>
</thead>
<tbody>
<tr>
<td>81.00-81.08 + 81.30-81.393 Total</td>
<td>1998</td>
<td>214,000</td>
<td>231,000</td>
<td>200,345,000</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>253,000</td>
<td>277,000</td>
<td>209,128,094</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>304,000</td>
<td>343,000</td>
<td>215,122,788</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>321,000</td>
<td>327,000</td>
<td>220,398,637</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>373,000</td>
<td>401,000</td>
<td>224,769,279</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>488,300</td>
<td>555,000</td>
<td>235,205,323</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>438,950</td>
<td>475,000</td>
<td>242,542,967</td>
</tr>
</tbody>
</table>

15-Year Rate of Change

| Year | 105% | 140% | 201% | 518% |

[1] Up to 15 procedures per patient are included in years 1998 to 2011; multiple spine procedures per patient can be coded. Discharges with a spinal refusion have been removed from spinal fusions discharges.


[3] "Charges" refers to hospitalization charges and does not include professional (i.e., physician fees), drugs or non-covered charges. Due to patient discharges with multiple procedures, total charges for combined fusion and refusion patients is the most valid estimate. Mean charges for patients with a spinal refusion procedure were typically higher than for those with spinal fusion only.


[5] Prior to 2002, spinal refusion procedures were coded to the single code, 81.09. In 2002, this code was dropped and multiple codes implemented. Nearly all spinal refusion patient discharges also underwent spinal fusion procedures; however, discharges with a spinal refusion have been removed from spinal fusion discharges to produce a more accurate number of new fusion procedure discharges.