Bleeding Disorder
Statistics for April 2015
to March 2016
A report from the UK National Haemophilia Database
Haemophilia A
Table 1  Patients with congenital Haemophilia A registered and treated April 2015 - March 2016

<table>
<thead>
<tr>
<th>Haemophilia A</th>
<th>Age</th>
<th>Factor VIII level (iu/dl)</th>
<th>New Registrations * (including low-level carriers)</th>
<th>Treated in year** (including low-level carriers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>&lt; 1</td>
<td>1 - 5</td>
<td>&gt;5 &amp; &lt;40</td>
</tr>
<tr>
<td>&lt;18 years</td>
<td>665  (0)</td>
<td>219 (4)</td>
<td>690 (87)</td>
<td>136 (113)</td>
</tr>
<tr>
<td>≥18 years</td>
<td>1,182 (2)</td>
<td>669 (2)</td>
<td>2,983 (559)</td>
<td>990 (840)</td>
</tr>
<tr>
<td>Total</td>
<td>1,847 (2)</td>
<td>888 (6)</td>
<td>3,673 (646)</td>
<td>1,126 (953)</td>
</tr>
<tr>
<td>&lt;18 years</td>
<td>57  (0)</td>
<td>11 (0)</td>
<td>67 (15)</td>
<td>19 (18)</td>
</tr>
<tr>
<td>≥18 years</td>
<td>16  (0)</td>
<td>4 (0)</td>
<td>108 (43)</td>
<td>100 (91)</td>
</tr>
<tr>
<td>Total</td>
<td>73  (0)</td>
<td>15 (0)</td>
<td>175 (58)</td>
<td>119 (109)</td>
</tr>
<tr>
<td>&lt;18 years</td>
<td>638 (0)</td>
<td>173 (3)</td>
<td>157 (7)</td>
<td>6 (2)</td>
</tr>
<tr>
<td>≥18 years</td>
<td>1,134 (0)</td>
<td>464 (2)</td>
<td>663 (48)</td>
<td>38 (17)</td>
</tr>
<tr>
<td>Total</td>
<td>1,772 (0)</td>
<td>637 (5)</td>
<td>820 (55)</td>
<td>44 (19)</td>
</tr>
</tbody>
</table>

* New registrations are a subset of the 'In Register' numbers

** Treated includes patients 'In Register' and 'New Registrations'
### Figure 1: Carriers of Haemophilia A currently registered and newly registered, by baseline factor VIII level

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Factor VIII level (iu/dl)</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;2</td>
<td>2-9</td>
</tr>
<tr>
<td>Haemophilia A Carrier In Register (Excl. new registrations)</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Haemophilia A Carrier New Registrations</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>
# Table 2
New registrations of Haemophilia A between April 2015 & March 2016, by age at mid-year and severity

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Age (years)</th>
<th>Number of Patients (Factor VIII level (iu/dl))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;1</td>
</tr>
<tr>
<td>Haemophilia A</td>
<td>0 : 4</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>5 : 9</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>10 : 19</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>20 : 29</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>30 : 39</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>40 : 49</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>50 : 59</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>60 : 69</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>70 +</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>15</td>
</tr>
</tbody>
</table>
### Table 3: New registrations of patients with Severe Haemophilia A aged over 5 years old, and subsequent treatment by year

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New registrations per year</td>
<td>12</td>
<td>10</td>
<td>11</td>
<td>15</td>
<td>11</td>
<td>17</td>
<td>19</td>
<td>23</td>
<td>118</td>
</tr>
<tr>
<td>Treated in each year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008/09</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2009/10</td>
<td>11</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>2010/11</td>
<td>10</td>
<td>8</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>2011/12</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>2012/13</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>14</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>53</td>
</tr>
<tr>
<td>2013/14</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>9</td>
<td>16</td>
<td></td>
<td></td>
<td>63</td>
</tr>
<tr>
<td>2014/15</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>9</td>
<td>16</td>
<td>18</td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>2015/16</td>
<td>7</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>8</td>
<td>15</td>
<td>19</td>
<td>20</td>
<td>93</td>
</tr>
<tr>
<td>No treatment record</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>
Figure 2  Trend in numbers of Severe Haemophilia A patients aged 60 years and above, 1975 - 2015/16 (including HIV +ve pts)
Figure 3  Trend in numbers of non-Severe Haemophilia A patients aged 60 years and above, 1975 - 2015/16 (including HIV +ve pts)
Figure 4  Factor VIII units used by UK Haemophilia Centres 1992 - 2015/16 all diagnoses

N.B: Data for St Thomas’ were not submitted 1996-2006.
### Figure 5
Factor VIII units used by UK Haemophilia Centres to treat Severe Haemophilia A - 2010/11 - 2015/16

<table>
<thead>
<tr>
<th>Year</th>
<th>Plasma (thousands)</th>
<th>% difference since 2010/11</th>
<th>Recombinant (excluding investigational) (thousands)</th>
<th>% difference since 2010/11</th>
<th>Investigational rFVIII (thousands)</th>
<th>% difference since 2010/11</th>
<th>Total (thousands)</th>
<th>% difference since 2010/11</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/11</td>
<td>37,185</td>
<td>100.00%</td>
<td>327,010</td>
<td>100.00%</td>
<td>1,123</td>
<td>100.00%</td>
<td>365,318</td>
<td>100.00%</td>
<td>1,511</td>
</tr>
<tr>
<td>2011/12</td>
<td>33,846</td>
<td>91.02%</td>
<td>329,137</td>
<td>100.65%</td>
<td>6,645</td>
<td>591.49%</td>
<td>369,629</td>
<td>101.18%</td>
<td>1,550</td>
</tr>
<tr>
<td>2012/13</td>
<td>33,358</td>
<td>89.71%</td>
<td>330,012</td>
<td>100.92%</td>
<td>8,116</td>
<td>722.50%</td>
<td>371,487</td>
<td>101.69%</td>
<td>1,562</td>
</tr>
<tr>
<td>2013/14</td>
<td>30,189</td>
<td>81.19%</td>
<td>348,973</td>
<td>106.72%</td>
<td>18,484</td>
<td>1645.39%</td>
<td>397,464</td>
<td>108.85%</td>
<td>1,623</td>
</tr>
<tr>
<td>2014/15</td>
<td>31,438</td>
<td>84.54%</td>
<td>377,822</td>
<td>115.54%</td>
<td>17,496</td>
<td>1537.45%</td>
<td>426,756</td>
<td>116.82%</td>
<td>1,663</td>
</tr>
<tr>
<td>2015/16</td>
<td>30,094</td>
<td>80.93%</td>
<td>400,601</td>
<td>122.50%</td>
<td>14,198</td>
<td>1263.90%</td>
<td>444,893</td>
<td>121.78%</td>
<td>1,710</td>
</tr>
<tr>
<td>Treatment Period</td>
<td>FVIII Units</td>
<td>Patients (n)</td>
<td>Treatment Intensity (Units/Pt)</td>
<td>Change in treatment intensity since 2010/11 (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
<td>--------------</td>
<td>-------------------------------</td>
<td>---------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;18 Years</td>
<td>≥18 years</td>
<td>&lt;18 Years</td>
<td>≥18 years</td>
<td>&lt;18 Years</td>
<td>≥18 years</td>
<td>&lt;18 Years</td>
<td>≥18 years</td>
<td></td>
</tr>
<tr>
<td>2010/11</td>
<td>131,141,658</td>
<td>234,176,810</td>
<td>607</td>
<td>904</td>
<td>216,049</td>
<td>259,045</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>2011/12</td>
<td>128,016,899</td>
<td>241,611,622</td>
<td>597</td>
<td>953</td>
<td>214,434</td>
<td>253,527</td>
<td>99.3</td>
<td>97.9</td>
<td></td>
</tr>
<tr>
<td>2012/13</td>
<td>125,289,759</td>
<td>246,197,158</td>
<td>605</td>
<td>957</td>
<td>207,091</td>
<td>257,259</td>
<td>95.9</td>
<td>99.3</td>
<td></td>
</tr>
<tr>
<td>2013/14</td>
<td>131,810,117</td>
<td>265,836,344</td>
<td>625</td>
<td>998</td>
<td>210,896</td>
<td>266,369</td>
<td>97.6</td>
<td>102.8</td>
<td></td>
</tr>
<tr>
<td>2014/15</td>
<td>140,999,503</td>
<td>285,756,508</td>
<td>622</td>
<td>1,041</td>
<td>226,687</td>
<td>274,502</td>
<td>104.9</td>
<td>106.0</td>
<td></td>
</tr>
<tr>
<td>2015/16</td>
<td>139,722,386</td>
<td>305,170,204</td>
<td>628</td>
<td>1,082</td>
<td>222,488</td>
<td>282,043</td>
<td>103.0</td>
<td>108.9</td>
<td></td>
</tr>
</tbody>
</table>

*Treatment includes Plasma, Recombinant, Investigational factor VIII and ITI usage*
Figures 6a, b & c  Patients with Severe / Moderate / Mild Haemophilia A treated with FVIII by UK Haemophilia Centres - 2007 - 2015/16

**Figure 6a**

**Figure 6b**

**Figure 6c**
<table>
<thead>
<tr>
<th>Treatment Year</th>
<th>Haemophilia A &lt;1</th>
<th>Haemophilia A 1 - 5</th>
<th>Haemophilia A &gt;5 &amp; &lt;40</th>
<th>Haemophilia A ≥ 40</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>% difference since 2007</td>
<td>n</td>
<td>% difference since 2007</td>
</tr>
<tr>
<td>2007</td>
<td>1405</td>
<td>100.0</td>
<td>587</td>
<td>100.0</td>
</tr>
<tr>
<td>2008/09</td>
<td>1454</td>
<td>103.5</td>
<td>587</td>
<td>100.0</td>
</tr>
<tr>
<td>2009/10</td>
<td>1475</td>
<td>105.0</td>
<td>569</td>
<td>96.9</td>
</tr>
<tr>
<td>2010/11</td>
<td>1511</td>
<td>107.5</td>
<td>578</td>
<td>98.5</td>
</tr>
<tr>
<td>2011/12</td>
<td>1550</td>
<td>110.3</td>
<td>594</td>
<td>101.2</td>
</tr>
<tr>
<td>2012/13</td>
<td>1562</td>
<td>111.2</td>
<td>572</td>
<td>97.4</td>
</tr>
<tr>
<td>2013/14</td>
<td>1623</td>
<td>115.5</td>
<td>603</td>
<td>102.7</td>
</tr>
<tr>
<td>2014/15</td>
<td>1663</td>
<td>118.4</td>
<td>603</td>
<td>102.7</td>
</tr>
<tr>
<td>2015/16</td>
<td>1710</td>
<td>121.7</td>
<td>605</td>
<td>103.1</td>
</tr>
</tbody>
</table>
Figure 7  Number of Severe Haemophilia A patients treated per million capita
Figure 8  Factor VIII usage (including Inhibitor) divided per Severe Haemophilia A patients by commissioning region
### Table 5  Factor VIII usage by region for patients with Severe Haemophilia A (incl. treatment for inhibitors)

<table>
<thead>
<tr>
<th>Region</th>
<th>General Population</th>
<th>Patients treated (n)</th>
<th>Total FVIII Units (IU)</th>
<th>Mean Usage Severe Haemophilia A</th>
<th>FVIII Units Per Capita Severe Haemophilia A</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>495</td>
<td>158,483,666</td>
<td>322,777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Yorkshire &amp; Bassetlaw</td>
<td>118</td>
<td>35,383,750</td>
<td>299,862</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumbria, Northumberland &amp; Tyne and Wear</td>
<td>63</td>
<td>16,678,500</td>
<td>264,738</td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Anglia</td>
<td>60</td>
<td>15,568,000</td>
<td>259,467</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surrey &amp; Sussex</td>
<td>34</td>
<td>8,434,500</td>
<td>248,074</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wessex</td>
<td>232</td>
<td>59,075,594</td>
<td>228,774</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheshire, Warrington &amp; Wirral</td>
<td>146</td>
<td>30,905,250</td>
<td>211,680</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bristol, North Somerset &amp; South Gloucestershire</td>
<td>72</td>
<td>16,087,750</td>
<td>208,932</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leicestershire &amp; Lincolnshire</td>
<td>91</td>
<td>16,300,727</td>
<td>179,129</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birmingham &amp; Black Country</td>
<td>146</td>
<td>25,330,000</td>
<td>173,493</td>
<td></td>
<td></td>
</tr>
<tr>
<td>England</td>
<td>54,786,300</td>
<td>1,423</td>
<td>376,247,717</td>
<td>264,405</td>
<td>6.87</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1,851,600</td>
<td>69</td>
<td>15,524,750</td>
<td>224,996</td>
<td>8.38</td>
</tr>
<tr>
<td>Scotland East</td>
<td>3,021,290</td>
<td>82</td>
<td>22,173,000</td>
<td>260,859</td>
<td>7.34</td>
</tr>
<tr>
<td>Scotland West</td>
<td>2,351,710</td>
<td>56</td>
<td>13,327,500</td>
<td>237,991</td>
<td>5.67</td>
</tr>
<tr>
<td>Wales</td>
<td>3,090,100</td>
<td>83</td>
<td>17,619,603</td>
<td>212,284</td>
<td>6.69</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>65,110,000</td>
<td>1,711</td>
<td>444,892,590</td>
<td>260,019</td>
<td>6.83</td>
</tr>
</tbody>
</table>

**Source accreditation:**

**N.B:**
Patients resident in England are reported against all English commissioning areas in which they were treated, so may be counted more than once.

The total number of severe Haemophilia A patients treated in the UK in 2015/16 was 1711.

Patients resident in England and treated in Wales, Scotland or Northern Ireland are reported against their devolved administrations, regardless of where they were treated.

Patients resident in Scotland are reported against East/West Scotland according to their home postcode, rather than where they were treated.

Patients resident outside the UK are reported against the commissioning areas in which they were treated.
Figure 9  Annual FVIII usage 2015/16 in Severe Haemophilia A patients aged under 18 years with no current inhibitor, by centre, ranked by median usage

Median units (thousands) per kilogram per patient

- Great Ormond Street
- Bristol
- St Thomas’
- Liverpool
- Leicester
- Edinburgh
- Glasgow
- Manchester
- Newcastle upon Tyne
- North Hampshire
- Cambridge
- Oxford
- Cambridge
- centres with 5-9 patients meeting criteria
- centres with <=4 patients meeting criteria

N.B:
- Patients treated at more than 1 centre during the year have all their usage reported against the centre where they received the most units
- Indicated outside values show where a patient's usage is more than 1.5 times the interquartile range (IQR) from the nearest quartile at centre level
- The vertical green line indicates the 95th percentile of units, regardless of centre (11,852 IU/kg)
- The vertical red line indicates a break in the axis in order to illustrate extreme outliers
<table>
<thead>
<tr>
<th>Haemophilia Centre</th>
<th>Patients treated</th>
<th>Patients treated with weight reported</th>
<th>Total Units</th>
<th>Median Units</th>
<th>Median Units/Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfast</td>
<td>18</td>
<td>18</td>
<td>2,827,750</td>
<td>155,375</td>
<td>4,049</td>
</tr>
<tr>
<td>Birmingham</td>
<td>39</td>
<td>28</td>
<td>5,244,750</td>
<td>130,000</td>
<td>3,844</td>
</tr>
<tr>
<td>Bristol</td>
<td>23</td>
<td>12</td>
<td>4,672,250</td>
<td>157,000</td>
<td>6,545</td>
</tr>
<tr>
<td>Cambridge</td>
<td>23</td>
<td>22</td>
<td>3,077,000</td>
<td>124,500</td>
<td>4,806</td>
</tr>
<tr>
<td>Cardiff</td>
<td>10</td>
<td>9</td>
<td>1,734,750</td>
<td>175,000</td>
<td>4,290</td>
</tr>
<tr>
<td>Coventry</td>
<td>10</td>
<td>10</td>
<td>1,679,750</td>
<td>140,750</td>
<td>4,112</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>11</td>
<td>9</td>
<td>1,848,000</td>
<td>98,500</td>
<td>5,026</td>
</tr>
<tr>
<td>Glasgow</td>
<td>21</td>
<td>21</td>
<td>3,720,750</td>
<td>157,500</td>
<td>5,125</td>
</tr>
<tr>
<td>Great Ormond Street</td>
<td>77</td>
<td>76</td>
<td>19,965,240</td>
<td>245,000</td>
<td>7,462</td>
</tr>
<tr>
<td>Leeds</td>
<td>24</td>
<td>2</td>
<td>4,905,500</td>
<td>184,875</td>
<td>1,424</td>
</tr>
<tr>
<td>Leicester</td>
<td>10</td>
<td>8</td>
<td>958,200</td>
<td>96,375</td>
<td>5,056</td>
</tr>
<tr>
<td>Liverpool</td>
<td>22</td>
<td>22</td>
<td>2,984,750</td>
<td>100,500</td>
<td>3,708</td>
</tr>
<tr>
<td>Manchester</td>
<td>42</td>
<td>40</td>
<td>6,398,000</td>
<td>132,750</td>
<td>4,252</td>
</tr>
<tr>
<td>Newcastle upon Tyne</td>
<td>16</td>
<td>16</td>
<td>3,524,500</td>
<td>220,500</td>
<td>4,552</td>
</tr>
<tr>
<td>North Hampshire</td>
<td>19</td>
<td>19</td>
<td>3,102,250</td>
<td>165,000</td>
<td>4,171</td>
</tr>
<tr>
<td>Nottingham</td>
<td>19</td>
<td>5</td>
<td>1,999,500</td>
<td>87,500</td>
<td>3,609</td>
</tr>
<tr>
<td>Oxford</td>
<td>39</td>
<td>37</td>
<td>8,526,750</td>
<td>183,000</td>
<td>4,752</td>
</tr>
<tr>
<td>Royal London</td>
<td>13</td>
<td>7</td>
<td>2,234,500</td>
<td>168,000</td>
<td>3,607</td>
</tr>
<tr>
<td>Sheffield</td>
<td>15</td>
<td>10</td>
<td>2,855,250</td>
<td>111,500</td>
<td>3,856</td>
</tr>
<tr>
<td>St Thomas’</td>
<td>22</td>
<td>13</td>
<td>3,641,000</td>
<td>140,875</td>
<td>5,329</td>
</tr>
<tr>
<td>Centres with &lt;=4 patients meeting criteria</td>
<td>16</td>
<td>11</td>
<td>2,955,250</td>
<td>167,500</td>
<td>3,683</td>
</tr>
<tr>
<td>Centres with 5-9 patients meeting criteria</td>
<td>61</td>
<td>56</td>
<td>13,617,100</td>
<td>190,000</td>
<td>4,911</td>
</tr>
</tbody>
</table>
Figure 10  Annual FVIII usage 2015/16 in Severe Haemophilia A patients aged 18 years or more with no current inhibitor, by centre, ranked by median usage.

N.B:
Patients treated at more than 1 centre during the year have all their usage reported against the centre where they received the most units.
Indicated outside values show where a patient’s usage is more than 1.5 times the IQR from the nearest quartile at centre level.
The vertical green line indicates the 95th percentile of units, regardless of centre (6,980 IU/kg).
The vertical red line indicates a break in the axis in order to illustrate extreme outliers.
### Data table for Figure 10

<table>
<thead>
<tr>
<th>Haemophilia Centre</th>
<th>Patients treated</th>
<th>Patients treated with weight reported</th>
<th>Total Units</th>
<th>Median Units</th>
<th>Median Units/Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>11</td>
<td>8</td>
<td>2,892,750</td>
<td>228,000</td>
<td>2,142</td>
</tr>
<tr>
<td>Belfast</td>
<td>40</td>
<td>39</td>
<td>9,500,500</td>
<td>217,000</td>
<td>2,707</td>
</tr>
<tr>
<td>Birmingham</td>
<td>70</td>
<td>40</td>
<td>12,838,000</td>
<td>165,750</td>
<td>2,276</td>
</tr>
<tr>
<td>Bristol</td>
<td>28</td>
<td>7</td>
<td>5,757,000</td>
<td>165,000</td>
<td>1,220</td>
</tr>
<tr>
<td>Cambridge</td>
<td>32</td>
<td>31</td>
<td>10,023,000</td>
<td>332,750</td>
<td>3,671</td>
</tr>
<tr>
<td>Canterbury</td>
<td>18</td>
<td>14</td>
<td>5,729,000</td>
<td>308,500</td>
<td>2,980</td>
</tr>
<tr>
<td>Cardiff</td>
<td>35</td>
<td>23</td>
<td>6,079,353</td>
<td>164,000</td>
<td>1,821</td>
</tr>
<tr>
<td>Dundee</td>
<td>12</td>
<td>12</td>
<td>3,142,000</td>
<td>268,000</td>
<td>2,552</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>20</td>
<td>18</td>
<td>5,793,750</td>
<td>233,500</td>
<td>3,402</td>
</tr>
<tr>
<td>Glasgow</td>
<td>38</td>
<td>38</td>
<td>9,769,000</td>
<td>234,000</td>
<td>3,132</td>
</tr>
<tr>
<td>Hammersmith</td>
<td>25</td>
<td>22</td>
<td>8,234,500</td>
<td>350,500</td>
<td>4,931</td>
</tr>
<tr>
<td>Leeds</td>
<td>31</td>
<td>12</td>
<td>14,983,000</td>
<td>318,000</td>
<td>5,280</td>
</tr>
<tr>
<td>Leicester</td>
<td>18</td>
<td>15</td>
<td>4,089,027</td>
<td>241,000</td>
<td>2,440</td>
</tr>
<tr>
<td>Liverpool</td>
<td>29</td>
<td>29</td>
<td>6,153,000</td>
<td>173,000</td>
<td>2,166</td>
</tr>
<tr>
<td>Manchester</td>
<td>52</td>
<td>48</td>
<td>11,820,250</td>
<td>235,750</td>
<td>2,937</td>
</tr>
<tr>
<td>Newcastle upon Tyne</td>
<td>39</td>
<td>38</td>
<td>12,328,500</td>
<td>281,000</td>
<td>3,680</td>
</tr>
<tr>
<td>North Hampshire</td>
<td>53</td>
<td>45</td>
<td>14,129,344</td>
<td>249,000</td>
<td>3,066</td>
</tr>
<tr>
<td>Nottingham</td>
<td>26</td>
<td>6</td>
<td>6,251,000</td>
<td>231,750</td>
<td>2,647</td>
</tr>
<tr>
<td>Oxford</td>
<td>88</td>
<td>85</td>
<td>20,686,500</td>
<td>209,000</td>
<td>2,477</td>
</tr>
<tr>
<td>Royal Free</td>
<td>122</td>
<td>116</td>
<td>38,606,950</td>
<td>317,400</td>
<td>3,880</td>
</tr>
<tr>
<td>Royal London</td>
<td>43</td>
<td>27</td>
<td>12,883,410</td>
<td>285,000</td>
<td>4,515</td>
</tr>
<tr>
<td>Sheffield</td>
<td>17</td>
<td>16</td>
<td>4,410,000</td>
<td>242,000</td>
<td>3,163</td>
</tr>
<tr>
<td>Southampton</td>
<td>12</td>
<td>11</td>
<td>3,236,000</td>
<td>273,750</td>
<td>4,209</td>
</tr>
<tr>
<td>St George’s</td>
<td>26</td>
<td>26</td>
<td>5,812,000</td>
<td>241,500</td>
<td>2,794</td>
</tr>
<tr>
<td>St Thomas’</td>
<td>102</td>
<td>48</td>
<td>38,770,000</td>
<td>348,000</td>
<td>4,259</td>
</tr>
<tr>
<td>Centres with &lt;=4 patients meeting criteria</td>
<td>27</td>
<td>17</td>
<td>7,790,000</td>
<td>265,000</td>
<td>2,860</td>
</tr>
<tr>
<td>Centres with 5-9 patients meeting criteria</td>
<td>45</td>
<td>26</td>
<td>10,957,750</td>
<td>180,000</td>
<td>2,392</td>
</tr>
</tbody>
</table>
Figures 11a&b  Median factor VIII units used per kilogram body weight per year in Severe Haemophilia A patients without inhibitors by age, 2015/16

11a. Paediatrics

11b. Adults

Weight data are missing for 84/481, including 14/34 aged <12m
Weight data are missing for 257/1129
Figure 12 Median factor VIII units used per kilogram body weight per year in Severe Haemophilia A patients without inhibitors aged 16 and over, by bodyweight 2015/16

Weight data are missing for 257/1129 SHA patients known to be aged 16+.
Figure 13  Median usage of factor VIII: UK patients with severe Haemophilia A without inhibitors broken down by age, 2010/11 - 2015/16
Figure 14  Severe Haemophilia A patients with no current inhibitor between April 2015 & March 2016: median usage by inhibitor history
Table 6  Products used to treat Haemophilia A (including inhibitors) between April 2015 & March 2016

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Total Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baxalta</td>
<td>Advate</td>
<td>164,292,360</td>
</tr>
<tr>
<td></td>
<td>FEIBA</td>
<td>36,176,573</td>
</tr>
<tr>
<td>Bayer</td>
<td>Kogenate</td>
<td>21,489,750</td>
</tr>
<tr>
<td>Biotest*</td>
<td>Haemoctin</td>
<td>340,000</td>
</tr>
<tr>
<td>BPL</td>
<td>FVIII BY</td>
<td>256,620</td>
</tr>
<tr>
<td></td>
<td>Optivate</td>
<td>4,715,460</td>
</tr>
<tr>
<td>CSL Behring</td>
<td>Haemate P</td>
<td>202,000</td>
</tr>
<tr>
<td></td>
<td>Helixate Nexgen</td>
<td>27,913,250</td>
</tr>
<tr>
<td></td>
<td>Kybernin</td>
<td>6,500</td>
</tr>
<tr>
<td>Grifols</td>
<td>Alphanate</td>
<td>142,000</td>
</tr>
<tr>
<td></td>
<td>Fanhdi</td>
<td>25,281,600</td>
</tr>
<tr>
<td>Novo Nordisk</td>
<td>NovoSeven (mg)</td>
<td>23,124.00</td>
</tr>
<tr>
<td>Octapharma</td>
<td>Nuwix</td>
<td>5,218,500</td>
</tr>
<tr>
<td></td>
<td>Octanate</td>
<td>3,572,500</td>
</tr>
<tr>
<td>Pfizer</td>
<td>BeneFIX</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>ReFacto AF</td>
<td>276,868,501</td>
</tr>
<tr>
<td>SOBI/Biogen</td>
<td>Elocta</td>
<td>285,250.00</td>
</tr>
<tr>
<td>Various Manufacturers</td>
<td>Investigational Factor VIII</td>
<td>16,147,178</td>
</tr>
</tbody>
</table>

*Units in IU unless otherwise stated*
<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Patients Treated</th>
<th>Plasma FVIII (IU)</th>
<th>Recombinant FVIII (IU)</th>
<th>Investigational FVIII (IU)</th>
<th>Total FVIII (IU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemophilia A</td>
<td>2,966</td>
<td>34,510,180</td>
<td>494,997,361</td>
<td>16,147,178</td>
<td>545,654,719</td>
</tr>
<tr>
<td>Haemophilia A Carrier</td>
<td>41</td>
<td>-</td>
<td>1,070,250</td>
<td>-</td>
<td>1,070,250</td>
</tr>
<tr>
<td>Acquired Haemophilia A</td>
<td>7</td>
<td>87,000</td>
<td>48,000</td>
<td>-</td>
<td>135,000</td>
</tr>
<tr>
<td>Haemophilia B</td>
<td>1</td>
<td>-</td>
<td>500</td>
<td>-</td>
<td>500</td>
</tr>
<tr>
<td>von Willebrand disease</td>
<td>739</td>
<td>19,512,500</td>
<td>43,500</td>
<td>-</td>
<td>19,556,000</td>
</tr>
<tr>
<td>Acquired von Willebrand Disease</td>
<td>35</td>
<td>919,800</td>
<td>-</td>
<td>-</td>
<td>919,800</td>
</tr>
<tr>
<td>Platelet-type Pseudo von Willebrand D</td>
<td>2</td>
<td>4,500</td>
<td>-</td>
<td>-</td>
<td>4,500</td>
</tr>
<tr>
<td>Probable von Willebrand disease</td>
<td>1</td>
<td>2,000</td>
<td>-</td>
<td>-</td>
<td>2,000</td>
</tr>
<tr>
<td>Combined V+VIII Deficiency</td>
<td>6</td>
<td>-</td>
<td>35,750</td>
<td>-</td>
<td>35,750</td>
</tr>
<tr>
<td>Other combined diagnoses</td>
<td>20</td>
<td>343,500</td>
<td>1,370,000</td>
<td>-</td>
<td>1,713,500</td>
</tr>
<tr>
<td>Platelet defects*</td>
<td>1</td>
<td>40,000</td>
<td>-</td>
<td>-</td>
<td>40,000</td>
</tr>
<tr>
<td>Miscellaneous*</td>
<td>3</td>
<td>72,500</td>
<td>-</td>
<td>-</td>
<td>72,500</td>
</tr>
<tr>
<td>Unclassified*</td>
<td>1</td>
<td>1,000</td>
<td>-</td>
<td>-</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,823</strong></td>
<td><strong>55,492,980</strong></td>
<td><strong>497,565,361</strong></td>
<td><strong>16,147,178</strong></td>
<td><strong>569,205,519</strong></td>
</tr>
</tbody>
</table>

N.B: Haemophilia A Carrier includes females with factor VIII deficiency
Products containing VWF as well as FVIII are reported in FVIII units
Figure 15  Market Share of factor VIII concentrates issued by UK Haemophilia Centres during 2015/16
Haemophilia B
### Table 8  Patients with congenital Haemophilia B registered and treated April 2015 - March 2016

<table>
<thead>
<tr>
<th>Haemophilia B</th>
<th>Age Range</th>
<th>Factor IX level (iu/dl)</th>
<th>&lt;1</th>
<th>1 - 5</th>
<th>&gt;5 &amp; &lt;40</th>
<th>≥40</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total In Register (including low-level carriers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;18 years</td>
<td>111 (0)</td>
<td>86 (0)</td>
<td>141 (44)</td>
<td>29 (24)</td>
<td>2 (2)</td>
<td>369 (70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥18 years</td>
<td>230 (1)</td>
<td>278 (6)</td>
<td>593 (214)</td>
<td>214 (182)</td>
<td>23 (19)</td>
<td>1,338 (422)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>341 (1)</td>
<td>364 (6)</td>
<td>734 (258)</td>
<td>243 (206)</td>
<td>25 (21)</td>
<td>1,707 (492)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Registrations * (including low-level carriers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;18 years</td>
<td>7 (0)</td>
<td>4 (0)</td>
<td>10 (6)</td>
<td>3 (3)</td>
<td>1 (1)</td>
<td>25 (10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥18 years</td>
<td>3 (0)</td>
<td>2 (0)</td>
<td>22 (9)</td>
<td>18 (16)</td>
<td>5 (4)</td>
<td>50 (29)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10 (0)</td>
<td>6 (0)</td>
<td>32 (15)</td>
<td>21 (19)</td>
<td>6 (5)</td>
<td>75 (39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Treated in year** (including low-level carriers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;18 years</td>
<td>105 (0)</td>
<td>57 (0)</td>
<td>30 (1)</td>
<td>1 (1)</td>
<td>- (0)</td>
<td>193 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥18 years</td>
<td>206 (0)</td>
<td>142 (1)</td>
<td>135 (37)</td>
<td>5 (3)</td>
<td>1 (0)</td>
<td>489 (41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>311 (0)</td>
<td>199 (1)</td>
<td>165 (38)</td>
<td>6 (4)</td>
<td>1 (0)</td>
<td>682 (43)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* New registrations are a subset of the ‘In Register’ numbers
** Treated includes patients ‘In Register’ and ‘New Registrations’
The numbers in brackets are females
Figure 16  Carriers of Haemophilia B currently registered and newly registered, by baseline factor IX level

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Factor VIII Level (IU/dl)</th>
<th>&lt;2</th>
<th>2-9</th>
<th>10-19</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50+</th>
<th>N/K</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemophilia B Carrier In Register (Excl. new registrations)</td>
<td></td>
<td>1</td>
<td>12</td>
<td>40</td>
<td>83</td>
<td>114</td>
<td>91</td>
<td>106</td>
<td>0</td>
<td>453</td>
</tr>
<tr>
<td>Haemophilia B Carrier New Registrations</td>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>17</td>
<td>2</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>12</td>
<td>41</td>
<td>87</td>
<td>124</td>
<td>96</td>
<td>123</td>
<td>8</td>
<td>492</td>
</tr>
</tbody>
</table>

N.B: Haemophilia B Carrier includes: Females registered by their Haemophilia Centre as Females with FIX deficiency Females registered by their Haemophilia Centre as Haemophilia B FIX Leyden carriers
### Table 9: New registrations of Haemophilia B between April 2015 & March 2016, by age at mid-year and severity

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>&lt;1</th>
<th>1-5</th>
<th>&gt;5 &amp; &lt;40</th>
<th>≥ 40</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1-5</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>&gt;5 &amp; &lt;40</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>≥ 40</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>6</td>
<td>17</td>
<td>2</td>
<td>1</td>
<td>36</td>
</tr>
</tbody>
</table>

Coagulation Defect: Haemophilia B

N.B. Haemophilia B includes patients with FIX Leyden
Figure 17  Trend in numbers of Severe Haemophilia B patients aged 60 years and above, 1975 - 2015/16 (including HIV +ve pts)
Figure 18  Trend in numbers of non-Severe Haemophilia B patients aged 60 years and above, 1975 - 2015/16 (including HIV +ve pts)
Figure 19  Factor IX units used by UK Haemophilia Centres 1992-2015/16 all diagnoses

N.B. Data for St Thomas’ were not submitted 1996-2006
Figure 20  Number of Severe Haemophilia B patients treated per million capita
Figure 21  Factor IX Usage (including inhibitor) divided by number of Severe Haemophilia B patients by commissioning region
### Table 10  Factor IX usage by region for patients with Severe Haemophilia B (incl. treatment for inhibitors)

<table>
<thead>
<tr>
<th>Region</th>
<th>General Population</th>
<th>Patients treated (n)</th>
<th>Total FIX Units (IU)</th>
<th>Mean Usage Severe Haemophilia B Mean Usage Severe Haemophilia B</th>
<th>FIX Units Per Capita Severe Haemophilia B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birmingham &amp; Black Country</td>
<td>54,786,300</td>
<td>259</td>
<td>59,056,632</td>
<td>228,018</td>
<td>1.08</td>
</tr>
<tr>
<td>Cumbria, Northumberland &amp; Tyne and Wear</td>
<td>1,851,600</td>
<td>8</td>
<td>2,231,100</td>
<td>278,888</td>
<td>1.20</td>
</tr>
<tr>
<td>Cheshire, Warrington &amp; Wirral</td>
<td>3,021,290</td>
<td>9</td>
<td>2,502,000</td>
<td>278,007</td>
<td>0.63</td>
</tr>
<tr>
<td>London</td>
<td>2,351,710</td>
<td>14</td>
<td>2,261,250</td>
<td>161,518</td>
<td>0.96</td>
</tr>
<tr>
<td>South Yorkshire &amp; Bassetlaw</td>
<td>3,099,100</td>
<td>10</td>
<td>1,392,553</td>
<td>139,255</td>
<td>0.45</td>
</tr>
<tr>
<td>Worcestershire &amp; Lincolnshire</td>
<td>65,110,000</td>
<td>300</td>
<td>67,443,535</td>
<td>224,812</td>
<td>1.04</td>
</tr>
</tbody>
</table>

English regions ranked by mean usage

**Source accreditation:**
Figure 22  Annual FIX usage 2015/16 in Severe Haemophilia B patients aged under 18 years with no current inhibitor, by centre, ranked by median

Indicated outside values show where a patient’s usage is more than 1.5 times the IQR from the nearest quartile at centre level

The vertical green line indicates the 95th percentile of units, regardless of centre (8,291 IU/kg)

The vertical red line indicates a break in the axis in order to illustrate extreme outliers

Patients treated at more than 1 centre during the year have all their usage reported against the centre where they received the most units
<table>
<thead>
<tr>
<th>Haemophilia Centre</th>
<th>Patients treated</th>
<th>Patients treated with weight reported</th>
<th>Total Units</th>
<th>Median Units</th>
<th>Median Units/Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristol</td>
<td>5</td>
<td>4</td>
<td>632,500</td>
<td>117,500</td>
<td>5,253</td>
</tr>
<tr>
<td>Cambridge</td>
<td>6</td>
<td>6</td>
<td>563,000</td>
<td>62,375</td>
<td>2,994</td>
</tr>
<tr>
<td>Great Ormond Street</td>
<td>23</td>
<td>23</td>
<td>2,922,314</td>
<td>123,250</td>
<td>3,909</td>
</tr>
<tr>
<td>Manchester</td>
<td>9</td>
<td>9</td>
<td>1,375,500</td>
<td>140,000</td>
<td>4,464</td>
</tr>
<tr>
<td>North Hampshire</td>
<td>5</td>
<td>5</td>
<td>547,250</td>
<td>109,000</td>
<td>3,902</td>
</tr>
<tr>
<td>Oxford</td>
<td>9</td>
<td>9</td>
<td>1,132,500</td>
<td>64,500</td>
<td>2,462</td>
</tr>
<tr>
<td>Royal Free</td>
<td>5</td>
<td>5</td>
<td>1,673,000</td>
<td>344,000</td>
<td>5,707</td>
</tr>
<tr>
<td>Centres with &lt;=4 patients meeting criteria</td>
<td>39</td>
<td>35</td>
<td>5,743,152</td>
<td>96,000</td>
<td>4,058</td>
</tr>
</tbody>
</table>
Figure 23  Annual FIX usage 2015/16 in Severe Haemophilia B patients aged 18 years or more with no current inhibitor, by centre, ranked by median usage

Indicated outside values show where a patient’s usage is more than 1.5 times the IQR from the nearest quartile at centre level.

The vertical green line indicates the 95th percentile of units, regardless of centre 6,356 IU/kg.

The vertical red line indicates a break in the axis in order to illustrate extreme outliers.

Patients treated at more than 1 centre during the year have all their usage reported against the centre where they received the most units.
## Data table for Figure 23

<table>
<thead>
<tr>
<th>Treatment Year</th>
<th>Haemophilia A &lt;1 n</th>
<th>% difference since 2007</th>
<th>Haemophilia A 1 - 5 n</th>
<th>% difference since 2007</th>
<th>Haemophilia A &gt;5 &amp; &lt;40 n</th>
<th>% difference since 2007</th>
<th>Haemophilia A ≥40 n</th>
<th>% difference since 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1405</td>
<td>100.0</td>
<td>587</td>
<td>100.0</td>
<td>583</td>
<td>100.0</td>
<td>26</td>
<td>100.0</td>
</tr>
<tr>
<td>2008/09</td>
<td>1454</td>
<td>103.5</td>
<td>587</td>
<td>100.0</td>
<td>561</td>
<td>96.2</td>
<td>22</td>
<td>84.6</td>
</tr>
<tr>
<td>2009/10</td>
<td>1475</td>
<td>105.0</td>
<td>569</td>
<td>96.9</td>
<td>617</td>
<td>105.8</td>
<td>26</td>
<td>100.0</td>
</tr>
<tr>
<td>2010/11</td>
<td>1511</td>
<td>107.5</td>
<td>578</td>
<td>98.5</td>
<td>641</td>
<td>109.9</td>
<td>26</td>
<td>100.0</td>
</tr>
<tr>
<td>2011/12</td>
<td>1550</td>
<td>110.3</td>
<td>594</td>
<td>101.2</td>
<td>650</td>
<td>111.5</td>
<td>20</td>
<td>76.9</td>
</tr>
<tr>
<td>2012/13</td>
<td>1562</td>
<td>111.2</td>
<td>572</td>
<td>97.4</td>
<td>647</td>
<td>111.0</td>
<td>19</td>
<td>73.1</td>
</tr>
<tr>
<td>2013/14</td>
<td>1623</td>
<td>115.5</td>
<td>603</td>
<td>102.7</td>
<td>652</td>
<td>111.8</td>
<td>19</td>
<td>73.1</td>
</tr>
<tr>
<td>2014/15</td>
<td>1663</td>
<td>118.4</td>
<td>603</td>
<td>102.7</td>
<td>648</td>
<td>111.1</td>
<td>21</td>
<td>80.8</td>
</tr>
<tr>
<td>2015/16</td>
<td>1710</td>
<td>121.7</td>
<td>605</td>
<td>103.1</td>
<td>668</td>
<td>114.6</td>
<td>21</td>
<td>80.8</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Product</td>
<td>Total Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baxalta</td>
<td>FEIBA</td>
<td>2,204,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BPL</td>
<td>Replenine</td>
<td>2,686,610</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSL Behring</td>
<td>Mononine</td>
<td>540,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grifols</td>
<td>Alphanine</td>
<td>6,338,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novo Nordisk</td>
<td>NovoSeven (mg)</td>
<td>8,295</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pfizer</td>
<td>BeneFIX</td>
<td>79,040,670</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ReFacto AF</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI/Biogen</td>
<td>ALPROLIX</td>
<td>54,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Various Manufacturers</td>
<td>Investigational Factor IX</td>
<td>4,361,406</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>95,234,081</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Units in IU unless otherwise stated*
Table 12  Factor IX units issued by UK Haemophilia Centres between April 2015 & March 2016, broken down by diagnosis table for Figures 6a, 6b & 6c

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Patients Treated</th>
<th>Plasma FIX (IU)</th>
<th>Recombinant FIX (IU)</th>
<th>Investigational FIX (IU)</th>
<th>Total FIX (IU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemophilia A</td>
<td>1</td>
<td>-</td>
<td>1,000</td>
<td>-</td>
<td>1,000</td>
</tr>
<tr>
<td>Haemophilia B</td>
<td>628</td>
<td>9,565,210</td>
<td>79,308,170</td>
<td>4,361,406</td>
<td>93,234,786</td>
</tr>
<tr>
<td>Haemophilia B Carrier</td>
<td>41</td>
<td>78,000</td>
<td>338,500</td>
<td>-</td>
<td>416,500</td>
</tr>
<tr>
<td>Combined Diagnoses</td>
<td>1</td>
<td>-</td>
<td>5,000</td>
<td>-</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>671</strong></td>
<td><strong>9,643,210</strong></td>
<td><strong>79,652,670</strong></td>
<td><strong>4,361,406</strong></td>
<td><strong>93,657,286</strong></td>
</tr>
</tbody>
</table>

N.B: Haemophilia B includes patients with FIX Leyden
Haemophilia B Carrier includes Females with FIX deficiency and FIX Leyden carriers
Figure 24 Market Share of factor IX concentrates issued by UK Haemophilia Centres during 2015/16
Von Willebrand Disease
Table 13  Patients with von Willebrand Disease registered and treated April 2015 - March 2016

<table>
<thead>
<tr>
<th>von Willebrand disease</th>
<th>&lt;18 years (VWD Activity &lt;60/dl)</th>
<th>&gt;18 years (VWD Activity &lt;60/dl)</th>
<th>Total</th>
<th>Treated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;10</td>
<td>10-29</td>
<td>&gt;30</td>
<td>N/K</td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 1</td>
<td>20</td>
<td>155</td>
<td>135</td>
<td>15</td>
</tr>
<tr>
<td>Type 1A</td>
<td>20</td>
<td>54</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Type 1B</td>
<td>20</td>
<td>10</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Type 1M</td>
<td>18</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Type 3N</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Type 3N Unexpected</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Type 8</td>
<td>35</td>
<td>2</td>
<td>54</td>
<td>8</td>
</tr>
<tr>
<td>Type Unreported</td>
<td>88</td>
<td>14</td>
<td>244</td>
<td>10</td>
</tr>
<tr>
<td>Sub Total Males</td>
<td>3,956</td>
<td>333</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Females                |     |       |     |     |          |     |       |     |     |          |
|------------------------|     |       |     |     |          |     |       |     |     |          |
| Type 1                 | 15  | 125   | 236 | 6   | 374       | 126 | 582   | 1,797| 315 | 2,950     | 2,884 | 106    |
| Type 1A                | 20  | 22    | 10  | 0   | 96        | 114 | 88    | 86  | 7   | 289       | 544   | 69     |
| Type 1B                | 8   | 4     | 10  | 0   | 18        | 14  | 40    | 58  | 1   | 98        | 114   | 22     |
| Type 1M                | 7   | 16    | 8   | 1   | 96        | 84  | 91    | 10  | 7   | 148       | 142   | 29     |
| Type 3N                | 0   | 1     | 1   | 0   | 2         | 5   | 7     | 46  | 8   | 86        | 89    | 8      |
| Type 3N Unexpected     | 4   | 1     | 0   | 0   | 5         | 28  | 21    | 10  | 2   | 61        | 66    | 9      |
| Type 8                 | 18  | 18    | 50  | 8   | 90        |      |       |     |     |          |       |       |
| Type Unreported        | 50  | 187   | 210 | 10  | 418       | 208 | 988   | 1,987| 372 | 5,320     | 2,936 | 540    |
| Sub Total Females      | 5,742 | 411 |
| Grand Total - Males and Females | 10,798 | 744 |
Table 14: New Registrations of von Willebrand Disease between April 2015 - March 2016, by age at mid-year, severity, and gender

<table>
<thead>
<tr>
<th>von Willebrand disease</th>
<th>&lt;18 years (VWF Activity/u/dl)</th>
<th>≥18 years (VWF Activity/u/dl)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;10</td>
<td>10-29</td>
<td>≥30</td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 1</td>
<td>5</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Type 2A</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Type 2B</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type 2M</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type 2N</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type 1 Unspecified</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type 3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type Unreported</td>
<td>5</td>
<td>19</td>
<td>30</td>
</tr>
<tr>
<td><strong>Sub Total Males</strong></td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 1</td>
<td>1</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Type 2A</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Type 2B</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type 2M</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Type 2N</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type 1 Unspecified</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type 3</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Type Unreported</td>
<td>5</td>
<td>24</td>
<td>29</td>
</tr>
<tr>
<td><strong>Sub Total Females</strong></td>
<td>257</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total - Males and Females</strong></td>
<td>399</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 15  Concentrates used to treat von Willebrand Disease (including inhibitors) between April 2015 & March 2016

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Total Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baxalta</td>
<td>Advate</td>
<td>14,500</td>
</tr>
<tr>
<td>BPL</td>
<td>FVIII 8Y</td>
<td>40,000</td>
</tr>
<tr>
<td>CSL Behring</td>
<td>Haemate P</td>
<td>7,625,150</td>
</tr>
<tr>
<td></td>
<td>Voncepto</td>
<td>5,353,350</td>
</tr>
<tr>
<td>Grifols</td>
<td>Alphanate</td>
<td>780,000</td>
</tr>
<tr>
<td></td>
<td>Fanhdi</td>
<td>4,000</td>
</tr>
<tr>
<td>LFB Biomedicaments</td>
<td>Willfact /Wilfactin</td>
<td>555,000</td>
</tr>
<tr>
<td>Novo Nordisk</td>
<td>NovoSeven (mg)</td>
<td>1,956</td>
</tr>
<tr>
<td>Octapharma</td>
<td>Octaplex</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Wilate</td>
<td>5,710,000</td>
</tr>
<tr>
<td>Pfizer</td>
<td>ReFacto AF</td>
<td>29,000</td>
</tr>
<tr>
<td></td>
<td>Investigational rVWF</td>
<td>*</td>
</tr>
</tbody>
</table>

*Anonymised for confidentiality purposes

Units in IU unless otherwise stated

Products containing VWF and FVIII are reported in FVIII units
Inhibitors: Congenital and Acquired Haemophilia A, Haemophilia B and von Willebrand Disease
### Table 16  Inhibitors by Disease Severity - Haemophilia A, Haemophilia B & von Willebrand Disease

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Severity / Subtype</th>
<th>In Register *</th>
<th>Inhibitors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Newly Reported n (%)</td>
</tr>
<tr>
<td>Haemophilia A</td>
<td>&lt; 1 iu/dl</td>
<td>1,845</td>
<td>19 (1.0)</td>
</tr>
<tr>
<td></td>
<td>1 - 5 iu/dl</td>
<td>882</td>
<td>4 (0.5)</td>
</tr>
<tr>
<td></td>
<td>&gt;5 - &lt;40 iu/dl</td>
<td>3,203</td>
<td>6 (0.2)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>5,530</td>
<td>29 (0.5)</td>
</tr>
<tr>
<td>Haemophilia B</td>
<td>&lt; 1 iu/dl</td>
<td>340</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td></td>
<td>1 - 5 iu/dl</td>
<td>358</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>&gt;5 - &lt;40 iu/dl</td>
<td>516</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>1</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,215</td>
<td>2 (0.2)</td>
</tr>
<tr>
<td>von Willebrand disease</td>
<td>Type 1</td>
<td>4,626</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>Type 3</td>
<td>154</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>5,819</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>10,599</td>
<td>0 (0.0)</td>
</tr>
</tbody>
</table>

* Including patients not regularly treated
** two of these patients had no treatment in the reporting year

N.B: Haemophilia B includes patients with FIX Leyden
New=new in year
Ongoing=inhibitor in year but not new in year
Current=Sum of New + Ongoing
Historical=history of inhibitor, but not current
Table 17  Annual concentrate usage by patients with congenital bleeding disorders who were inhibitor positive at any time within 2015/16

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Haemophilia A</th>
<th>Haemophilia B</th>
<th>von Willebrand Disease</th>
<th>F.VII deficiency</th>
<th>F.XI deficiency</th>
<th>Combined Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baxalta</td>
<td>Advate</td>
<td>17,572,750</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>FEIBA</td>
<td>36,174,573</td>
<td>2,204,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>932,500</td>
</tr>
<tr>
<td>Bayer</td>
<td>Kogenate</td>
<td>5,596,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BPL</td>
<td>FVIII 8Y</td>
<td>2,066,620</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>FXI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Optivate</td>
<td>3,934,460</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CSL Behring</td>
<td>Haemate P</td>
<td>201,000</td>
<td>-</td>
<td>197,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Helixate Nexgen</td>
<td>1,940,250</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Voncento</td>
<td>-</td>
<td>-</td>
<td>34,500</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Grifols</td>
<td>Fanhdi</td>
<td>12,885,600</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Novo Nordisk</td>
<td>NovoSeven (mg)</td>
<td>23,020</td>
<td>8,295</td>
<td>1,481</td>
<td>573</td>
<td>8</td>
<td>892</td>
</tr>
<tr>
<td>Octapharma</td>
<td>Nuwiq</td>
<td>121,250</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Octanate</td>
<td>2,361,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pfizer</td>
<td>Benefix</td>
<td>-</td>
<td>2,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ReFacto AF</td>
<td>12,014,500</td>
<td>10,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Various Manufacturers</td>
<td>Investigational Factor VIII</td>
<td>143,681</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Units in IU unless otherwise stated

© UKHCDO 2016
Table 18  Concentrates used to treat Acquired Inhibitors

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Acquired Haemophilia A</th>
<th>Acquired von Willebrands</th>
<th>Acquired F.VII Deficiency</th>
<th>Acquired F.XIII Deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baxalta</td>
<td>FEIBA</td>
<td>5,263,050</td>
<td>-</td>
<td>18,000</td>
<td>-</td>
</tr>
<tr>
<td>Bayer</td>
<td>Optivate</td>
<td>32,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CSL Behring</td>
<td>Fibrogammin P</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9,000</td>
</tr>
<tr>
<td>CSL Behring</td>
<td>Haemate P</td>
<td>-</td>
<td>263,500</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CSL Behring</td>
<td>Voncento</td>
<td>-</td>
<td>108,300</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Grifols</td>
<td>Fanhdi</td>
<td>55,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IDEC Pharmaceuticals</td>
<td>Rituximab</td>
<td>9,315</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Novo Nordisk</td>
<td>NovoSeven (mg)</td>
<td>2,246</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Octapharma</td>
<td>Wilate</td>
<td>-</td>
<td>548,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pfizer</td>
<td>ReFacto AF</td>
<td>48,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Units in IU unless otherwise stated
### Table 19 FEIBA® usage: breakdown by diagnosis

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Number of Patients</th>
<th>Total (u)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemophilia A</td>
<td>98</td>
<td>36,176,573</td>
</tr>
<tr>
<td>Haemophilia B</td>
<td>6</td>
<td>2,204,000</td>
</tr>
<tr>
<td>Acquired Haemophilia A</td>
<td>88</td>
<td>5,263,050</td>
</tr>
<tr>
<td>F.XI Deficiency</td>
<td>1</td>
<td>2,000</td>
</tr>
<tr>
<td>Acquired Deficiency (other)</td>
<td>2</td>
<td>18,000</td>
</tr>
<tr>
<td>Combined Diagnoses</td>
<td>2</td>
<td>932,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>197</strong></td>
<td><strong>44,596,123</strong></td>
</tr>
</tbody>
</table>
Table 20  NovoSeven® usage: breakdown by diagnosis

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Number of Patients</th>
<th>Total (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemophilia A</td>
<td>77</td>
<td>23,124</td>
</tr>
<tr>
<td>Haemophilia B</td>
<td>10</td>
<td>8,295</td>
</tr>
<tr>
<td>von Willebrand disease</td>
<td>3</td>
<td>1,956</td>
</tr>
<tr>
<td>Acquired Haemophilia A</td>
<td>29</td>
<td>2,246</td>
</tr>
<tr>
<td>F.V deficiency</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>F.VII deficiency</td>
<td>52</td>
<td>2,174</td>
</tr>
<tr>
<td>F.XI Deficiency</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Combined Diagnoses</td>
<td>3</td>
<td>894</td>
</tr>
<tr>
<td>Bernard Soulier</td>
<td>8</td>
<td>378</td>
</tr>
<tr>
<td>Glanzmann’s Thrombasthenia</td>
<td>48</td>
<td>1,404</td>
</tr>
<tr>
<td>Platelet defects</td>
<td>3</td>
<td>37</td>
</tr>
<tr>
<td>Unclassified</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>239</strong></td>
<td><strong>40,565</strong></td>
</tr>
</tbody>
</table>
Rarer Bleeding Disorders
### Table 21: Patients with rarer types of bleeding disorders registered and treated April 2015 & March 2016

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Number of Patients in Register</th>
<th>Treated</th>
<th>% Treated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>Probable von Willebrand disease</td>
<td>185</td>
<td>48</td>
<td>137</td>
</tr>
<tr>
<td>Platelet-type Pseudo von Willebrand Disease</td>
<td>19</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>F.V deficiency</td>
<td>200</td>
<td>79</td>
<td>121</td>
</tr>
<tr>
<td>F.VII deficiency</td>
<td>1,148</td>
<td>558</td>
<td>590</td>
</tr>
<tr>
<td>F.X deficiency</td>
<td>241</td>
<td>100</td>
<td>141</td>
</tr>
<tr>
<td>F.XI Deficiency</td>
<td>2,853</td>
<td>1,202</td>
<td>1,651</td>
</tr>
<tr>
<td>F.XIII Deficiency</td>
<td>66</td>
<td>37</td>
<td>29</td>
</tr>
<tr>
<td>Combined II+VII+IX+X Deficiency</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Combined V+VIII Deficiency</td>
<td>27</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Other combined diagnoses</td>
<td>321</td>
<td>144</td>
<td>177</td>
</tr>
<tr>
<td>Prothrombin Deficiency</td>
<td>14</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>A fibrinogenemia</td>
<td>12</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Dysfibrinogenemia</td>
<td>426</td>
<td>166</td>
<td>260</td>
</tr>
<tr>
<td>Hypofibrinogenemia</td>
<td>115</td>
<td>47</td>
<td>68</td>
</tr>
<tr>
<td>Hypodysfibrinogenemia</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Fibrinogen Deficiency</td>
<td>43</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Acquired Haemophilia A</td>
<td>475</td>
<td>236</td>
<td>239</td>
</tr>
<tr>
<td>Acquired Haemophilia B</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Acquired von Willebrands</td>
<td>117</td>
<td>62</td>
<td>55</td>
</tr>
<tr>
<td>Acquired Prothrombin Deficiency</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Acquired F.XIII Deficiency</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Acquired F.V Deficiency</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Acquired Deficiency (other)</td>
<td>6</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Glanzmann’s Thrombasthenia</td>
<td>125</td>
<td>53</td>
<td>72</td>
</tr>
<tr>
<td>Bernard Soulier</td>
<td>85</td>
<td>42</td>
<td>43</td>
</tr>
<tr>
<td>Other platelet defects</td>
<td>2,222</td>
<td>695</td>
<td>1,527</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>248</td>
<td>66</td>
<td>182</td>
</tr>
<tr>
<td>Unclassified bleeding disorder</td>
<td>359</td>
<td>56</td>
<td>303</td>
</tr>
<tr>
<td>Haemophilia A with Liver Transplant</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Haemophilia B with Liver Transplant</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>von Willebrand with Liver Transplant</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9,341</td>
<td>3,675</td>
<td>5,666</td>
</tr>
</tbody>
</table>
Table 22  Patients with selected rarer bleeding disorders registered and treated April 2015 - March 2016, by disease severity

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>In Reg</th>
<th>Treated</th>
<th>In Reg</th>
<th>Treated</th>
<th>In Reg</th>
<th>Treated</th>
<th>In Reg</th>
<th>Treated</th>
<th>In Reg</th>
<th>Treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>F.V deficiency</td>
<td>46</td>
<td>8</td>
<td>154</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>200</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F.VII deficiency</td>
<td>123</td>
<td>23</td>
<td>1025</td>
<td>31</td>
<td>0</td>
<td>0</td>
<td>1148</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F.X deficiency</td>
<td>37</td>
<td>25</td>
<td>204</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>241</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F.XI Deficiency</td>
<td>225</td>
<td>24</td>
<td>2629</td>
<td>61</td>
<td>0</td>
<td>0</td>
<td>2854</td>
<td>85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>431</td>
<td>80</td>
<td>4,012</td>
<td>106</td>
<td>-</td>
<td>-</td>
<td>4,443</td>
<td>186</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>&lt;2</th>
<th>≥2</th>
<th>N/K</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Reg</td>
<td>Treated</td>
<td>In Reg</td>
<td>Treated</td>
<td>In Reg</td>
</tr>
<tr>
<td>F.XIII Deficiency</td>
<td>36</td>
<td>33</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>33</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>
### Table 23  New registrations of rarer bleeding disorders between April 2015 & March 2016 showing their coagulation defect and gender

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemophilia A with Liver Transplant</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Haemophilia B with Liver Transplant</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Platelet Type Pseudo von Willebrand Disease</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Probable von Willebrand disease</td>
<td>7</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>F.V deficiency</td>
<td>1</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>F.VII deficiency</td>
<td>61</td>
<td>73</td>
<td>134</td>
</tr>
<tr>
<td>F.XI deficiency</td>
<td>4</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>F.XII Deficiency</td>
<td>102</td>
<td>134</td>
<td>236</td>
</tr>
<tr>
<td>F.XIII Deficiency</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Afibrinogenemia</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Dysfibrinogenemia</td>
<td>28</td>
<td>59</td>
<td>87</td>
</tr>
<tr>
<td>Hypofibrinogenemia</td>
<td>26</td>
<td>33</td>
<td>59</td>
</tr>
<tr>
<td>Fibrinogen Deficiency</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Prothrombin Deficiency</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Acquired Haemophilia A</td>
<td>63</td>
<td>43</td>
<td>106</td>
</tr>
<tr>
<td>Acquired F.V deficiency</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Acquired F.XIII Deficiency</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Acquired Prothrombin Deficiency</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Acquired von Willebrands</td>
<td>15</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Glanzmann's Thrombasthenia</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Bernard Soulier</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Other platelet defects</td>
<td>85</td>
<td>199</td>
<td>284</td>
</tr>
<tr>
<td>Other combined diagnoses</td>
<td>17</td>
<td>19</td>
<td>36</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>6</td>
<td>31</td>
<td>37</td>
</tr>
<tr>
<td>Unclassified bleeding disorder</td>
<td>16</td>
<td>76</td>
<td>92</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>449</td>
<td>732</td>
<td>1181</td>
</tr>
</tbody>
</table>
**Table 24  Concentrates used to treat Rarer Bleeding Disorders between April 2015 & March 2016**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>F.V deficiency</th>
<th>F.VII deficiency</th>
<th>F.IX Leyden</th>
<th>F.IX Leyden Carrier</th>
<th>F.X deficiency</th>
<th>F.XII Deficiency</th>
<th>F.XIII Deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pts treated</td>
<td>Units</td>
<td>Pts treated</td>
<td>Units</td>
<td>Pts treated</td>
<td>Units</td>
<td>Pts treated</td>
</tr>
<tr>
<td>Basalta</td>
<td>FEIBA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>FVII</td>
<td>-</td>
<td>2</td>
<td>105,600</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>CSL Behring</td>
<td>FX</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>F XII</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Beriplex</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>52</td>
<td></td>
<td></td>
<td>780,914</td>
</tr>
<tr>
<td></td>
<td>F XIII</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Ristrep (mg)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>LFB Biomedicaments</td>
<td>Hemoleven</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Novo Nordisk</td>
<td>NovoSeven (mg)</td>
<td>2</td>
<td>10</td>
<td>53</td>
<td>2,174</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>OctoThirteen</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>30,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Octapharma</td>
<td>Octaplas (units)</td>
<td>9</td>
<td>451</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Octaplex</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Pfizer</td>
<td>BeneFIX</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Units in IU unless otherwise stated.
Adverse Events
Table 25  Adverse Events reported between April 2015 & March 2016

<table>
<thead>
<tr>
<th>Adverse Event</th>
<th>Number of Patients</th>
<th>Number of Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy Event</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Infection Event</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Inhibitor Event</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Intracranial Haemorrhage</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Malignancy Event</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Other Event</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poor Efficacy Event</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Thrombotic Event</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

See table 16 for breakdown of inhibitors by disease severity in Haemophilia A, B and von Willebrand disease
### Summary table of ‘at risk’ bleeding disorder patients who received UK sourced plasma products

<table>
<thead>
<tr>
<th>Current status of ‘at risk’ patients</th>
<th>Implicated batches</th>
<th>Non-implicated batches</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alive</td>
<td>691</td>
<td>2593</td>
<td>3284</td>
</tr>
<tr>
<td>Dead</td>
<td>118</td>
<td>623</td>
<td>741</td>
</tr>
<tr>
<td>Total</td>
<td>809</td>
<td>3216</td>
<td>4025</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Genotype</th>
<th>Implicated batches</th>
<th>Non-implicated batches</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>MV</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>VV</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Not known</td>
<td>809</td>
<td>3216</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>Implicated batches</th>
<th>Non-implicated batches</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>769</td>
<td>2639</td>
<td>3408</td>
</tr>
<tr>
<td>F</td>
<td>40</td>
<td>577</td>
<td>617</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current age band of living ‘at risk’ patients</th>
<th>Implicated batches</th>
<th>Non-implicated batches</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>0</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>20-39</td>
<td>326</td>
<td>825</td>
<td>1151</td>
</tr>
<tr>
<td>40-59</td>
<td>267</td>
<td>1058</td>
<td>1325</td>
</tr>
<tr>
<td>60-79</td>
<td>90</td>
<td>570</td>
<td>660</td>
</tr>
<tr>
<td>80+</td>
<td>8</td>
<td>110</td>
<td>118</td>
</tr>
<tr>
<td>Not known</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

These data were last updated on 30/06/2016.
Morbidity and Mortality
## Table 27: Causes of Death in Patients with Haemophilia A, Haemophilia B and All Carriers of Haemophilia A & B between April 2015 & March 2016

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Severity (factor level IU/dl)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1</td>
<td>1-5</td>
</tr>
<tr>
<td>Amyloidosis</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ARDS</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Carcinoma</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Cerebral haemorrhage</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Haemorrhage (Misc)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Hepatocellular Carcinoma</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Infection (Bacterial)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ischaemic Heart Disease</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Liver Failure</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Parkinson’s Disease</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Post-operative complications</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Stroke (Unknown)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

N.B: Includes FIX Leyden and FIX Leyden carriers
### Table 28  Causes of death in other coagulation defects

<table>
<thead>
<tr>
<th>Coagulation Defect</th>
<th>Cause of Death</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemophilia A with Liver Transplant</td>
<td>Haemorrhage (Misc)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>F.V deficiency</td>
<td>ARDS</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>F.VI deficiency</td>
<td>Carcinoma</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Ischaemic Heart Disease</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Liver Failure</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Lymphoproliferative Malignancy</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>5</td>
</tr>
<tr>
<td>F.VII deficiency</td>
<td>Motor Neurone Disease</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>F.XI Deficiency</td>
<td>Carcinoma</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>COAD</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Infection (Bacterial)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Ischaemic Heart Disease</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>16</td>
</tr>
<tr>
<td>Combined diagnoses</td>
<td>Ischaemic Heart Disease</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>Combined V+VII Deficiency</td>
<td>Renal Failure</td>
<td>1</td>
</tr>
<tr>
<td>Acquired Haemophilia A</td>
<td>AIDS</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ARDS</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Carcinoma</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Cerebral haemorrhage</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>COAD</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Infection (Bacterial)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Intestinal Obstruction</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Ischaemic Heart Disease</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Liver Failure</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Senility/Alzheimer's disease</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>51</td>
</tr>
<tr>
<td>Acquired F.V deficiency</td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>Acquired F.XIII Deficiency</td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>Acquired von Willebrand Disease</td>
<td>Infection (Bacterial)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Lymphoproliferative Malignancy</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>3</td>
</tr>
<tr>
<td>Fibrinogen Deficiency</td>
<td>Unknown</td>
<td>3</td>
</tr>
<tr>
<td>Dysfibrinogenemia</td>
<td>Carcinoma</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Intestinal obstruction</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>3</td>
</tr>
<tr>
<td>Coagulation Defect</td>
<td>Cause of Death</td>
<td>Total</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Hypofibrinogenemia</td>
<td>Unknown</td>
<td>2</td>
</tr>
<tr>
<td>Carcinoma</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Ischaemic Heart Disease</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Liver Failure</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Stroke (Unknown)</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>Carcinoma</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cerebral Haemorrhage</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Unclassified</td>
<td>AIDS</td>
<td>1</td>
</tr>
<tr>
<td>ARDS</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Carcinoma</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Cerebral Haemorrhage</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Dissecting Aortic Aneurysm</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Haemorrhage (Misc)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Infection (Bacterial)</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Ischaemic Heart Disease</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>212</td>
</tr>
</tbody>
</table>
Figure 25  Cumulative incidence chart of deaths from hepatocellular carcinoma or liver failure in UK patients with bleeding disorders 1969 - 2015
Figure 26  Total number of patients with Haemophilia A, Haemophilia B or von Willebrand Disease treated by UK Haemophilia Centres
Figure 27  Total number of patients with severe Haemophilia A and Haemophilia B treated by UK Haemophilia Centres
### Appendix 2 Quarterly Returns - Participating Centres

<table>
<thead>
<tr>
<th>Centre Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>Leicester</td>
</tr>
<tr>
<td>Abergavenny</td>
<td>Lewisham</td>
</tr>
<tr>
<td>Bangor</td>
<td>Lincoln</td>
</tr>
<tr>
<td>Barnstaple</td>
<td>Liverpool (R.I.)</td>
</tr>
<tr>
<td>Belfast - Adult's</td>
<td>Liverpool Children's</td>
</tr>
<tr>
<td>Belfast - Children's</td>
<td>Manchester (Adults)</td>
</tr>
<tr>
<td>Birmingham (Queen Elizabeth)</td>
<td>Manchester Children's</td>
</tr>
<tr>
<td>Birmingham Children's</td>
<td>Newcastle upon Tyne</td>
</tr>
<tr>
<td>Bournemouth / Poole</td>
<td>North Hampshire (Basingstoke)</td>
</tr>
<tr>
<td>Bradford</td>
<td>North Staffordshire (Stoke on Trent)</td>
</tr>
<tr>
<td>Brighton</td>
<td>Norwich</td>
</tr>
<tr>
<td>Bristol (Infirmary &amp; Children's)</td>
<td>Nottingham</td>
</tr>
<tr>
<td>Cambridge</td>
<td>Oxford</td>
</tr>
<tr>
<td>Canterbury</td>
<td>Peterborough</td>
</tr>
<tr>
<td>Cardiff</td>
<td>Plymouth</td>
</tr>
<tr>
<td>Chichester</td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Coventry</td>
<td>Royal Free</td>
</tr>
<tr>
<td>Derby</td>
<td>Salisbury</td>
</tr>
<tr>
<td>Dundee</td>
<td>Sheffield (Children's)</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>Sheffield (Royal Hallamshire)</td>
</tr>
<tr>
<td>Exeter</td>
<td>Shrewsbury</td>
</tr>
<tr>
<td>Glasgow (R.H.S.C.)</td>
<td>Southampton</td>
</tr>
<tr>
<td>Glasgow (R.I.)</td>
<td>St George's Hospital, London</td>
</tr>
<tr>
<td>Great Ormond Street</td>
<td>St Thomas’ and Guy’s Hospital</td>
</tr>
<tr>
<td>Hammersmith Hospital, London</td>
<td>Swansea</td>
</tr>
<tr>
<td>Inverness</td>
<td>Taunton / Yeovil</td>
</tr>
<tr>
<td>Ipswich</td>
<td>The Royal London Hospital</td>
</tr>
<tr>
<td>Kettering</td>
<td>Torquay</td>
</tr>
<tr>
<td>Kingston upon Hull (Hull)</td>
<td>Truro</td>
</tr>
<tr>
<td>Lancaster</td>
<td>Wolverhampton</td>
</tr>
<tr>
<td>Leeds</td>
<td>York</td>
</tr>
</tbody>
</table>