

# **The Amputee Statistical Database for the United Kingdom**

**2001/02**

Information & Statistics Division  
NHSScotland

on behalf of  
National Amputee Statistical Database  
(NASDAB)

Edinburgh 2003

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Information & Statistics Division is the database manager for the National Amputee Statistical Database (NASDAB)

Information & Statistics Division  
NHSScotland  
Trinity Park House  
South Trinity Road  
Edinburgh EH5 3SQ

Tel 0131-551 8899  
Fax 0131-551 1392

Publication enquiries and orders :

Jane James  
Business Manager  
Trinity Park House  
Edinburgh EH5 3SQ

Tel 0131-551 8655  
email jane.james@isd.csa.scot.nhs.uk

National Amputee Statistical Database (NASDAB)  
Dr Robin Luff  
Kings College Hospitals Rehabilitation Centre  
Bowley Close  
Farquhar Road  
London  
SE19 1SZ

Tel 0207 346 5232  
email robin.luff@kingsch.nhs.uk

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Internet address ó [www.nasdab.co.uk](http://www.nasdab.co.uk)

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## Foreword

I am pleased to introduce to you this Annual Report, the fifth in the annual series published by the Steering Group for National Amputee Statistical Database (NASDAB). This is our second Report in the space of twelve months, representing our intention to shorten as much as possible the interval between signing off of the data set for the year and publication. The reason we have been able to begin to catch up with our schedule represents the considerable efforts of two groups of people. The first group comprises all those staff at the forty four amputee care centres who collect, check and submit data. The quality of data submitted continues to improve, allowing for instance the removal from the Annual Report of the table describing cases where no amputation level was provided. The individual centres are also the source of the recurrent funding for the Amputee Database; the Steering Group for NASDAB wish to express their thanks for this continuing support.

The other group deserving of our thanks are the colleagues from the Information and Statistics Division (ISD) within the Common Services Agency of NHSScotland. They have been our Database Managers from the early days of NASDAB and their work is essential to the production of each and every Annual NASDAB Report. They are responsible for data collection and an extensive quality checking procedure applied to the data from each centre. Once the Steering Group has agreed each annual data set, the Database Managers produce the data tables and comments from which the Steering Group issue the Annual Report. A considerable element of their time is devoted to maintaining the financial probity of NASDAB. This entails financial planning and agreeing with the Steering Group the level of contributions from each centre. ISD then issue invoices to each centre and ensure payment of the annual fee. It is pleasing to note that most centres support NASDAB very willingly. A small number of centres take up a disproportionate amount of Database Manager time in dealing with financial matters.

I indicated in the last Report that it may be possible to produce a good estimate of the prevalence of limb loss in the U.K. by extrapolation from the data held by NHS Scotland. With the help of ISD, the Steering Group has examined the model and has identified some quite unexpected anomalies which require further work before the model is usable. We noted during our examination of data that the definition of case load varies between centres. We shall attempt to derive a common definition allowing refinement of the centre data. The total case load data has been removed from this Report as it is now out of date. Revised figures will be available in the 2002-2003 Report.

With five years' data, it has been possible to publish trend data. This Annual Report contains the aggregated data and shows year on year trends. I am delighted to tell each centre that the facility to compare its individual data with national trend data will be made available on the NASDAB website ([www.nasdab.co.uk](http://www.nasdab.co.uk)) later this year. This will clearly become an increasingly powerful tool as each year of data is added.

Work on the prescription database continues and extraction of the necessary data set from available databases seems increasingly feasible. This substantial piece of new work will of course require additional funding. We are seeking sources of funding other than the hard pressed centres, to which we have had discussions with the Department of Health. A number of possible avenues for support have been identified.

Use of the NASDAB web site was mentioned above. As the publishing costs of the Report are considerable, we have considered whether electronic publication might be better use of NASDAB resources. We would be grateful for the views of those who read and use these Reports. If opinion indicates that a hard copy version is preferable, we will continue the current publication policy.

Some turnover in the Steering Group is inevitable. I was delighted at the beginning of this year to be able to invite Dr. Richard Scorgie to join us. It is with great sadness that I have to report that he died unexpectedly before being able to lend his considerable data handling expertise to the Steering Group. I hope that this Report can be in some way dedicated to his memory.

Finally, I must thank my Steering Group colleagues whose names are given at the beginning of the Report. The entire membership apart from ISD colleagues attend the Steering in a voluntary fashion, being supported by their various employers. Thanks extend of course to their employers for making them available to the Steering Group as without the varied input from my colleagues, NASDAB would not exist in its current form, if at all!



**Robin Luff FRCS FRCP**  
**Chairman**  
**NASDAB Steering Group**

## Current membership of the NASDAB steering group

---

Dr Robin Luff, Kings Prosthetics Service Centre (Chairperson)

Mr Angus Berthinussen, RSL Steeper

Mrs Joan Forrest, ISD Scotland

Mr Robert Graham, NHS Purchasing and Supply Agency

Mrs Jane James, ISD Scotland (Secretariat)

Mr Simon Keymer, Addenbrookes Prosthetics Service Centre

Ms Elaine Lewis, Cardiff Prosthetics Service Centre

Dr Jeff Lindsay, West Midlands Regional Rehabilitation Centre

Mr Mike Muirhead, ISD Scotland

Ms Sue Walker, Stanmore Disablement Services Centre

Mr Simon Webster, British Healthcare Trades Association

Professor Alastair Weir, West of Scotland Mobility and Rehabilitation Centre

## Introduction

This is the fifth in a series of Annual Reports based on the data provided from prosthetics service centres in the United Kingdom for the year ending 31<sup>st</sup> March 2002. The information contained in this 2001/02 Annual Report is derived from details supplied by centres in England, Northern Ireland, Scotland and Wales.

Trend data has been included within the annual report for the first time and this can provide a useful picture of what's been happening to activity over a longer period. Within this publication trend information is only presented at a national level.

## Points of Interest

- There was total of 5726 new referrals to prosthetics service centres in the United Kingdom for the year ending 31<sup>st</sup> March 2002. This is very similar to 2000/01 (5767). The gender breakdown is identical to last year with females making up one third of all new referrals.
- Males present at prosthetic clinics at an earlier age than women. The overall median ages of referrals for males and females is similar to last year (66 for males and 71 for females).
- One quarter of males and two fifths of females are aged 75 or over at the time of referral.
- Lower limb amputations accounted for ninety-two per cent of the total amputations. Upper limb amputations accounted for around five per cent and congenital absence cases accounted for three per cent.
- The most common level of amputation remains at a trans-tibial level accounting for fifty per cent of all referrals although the difference between trans-tibial and trans-femoral has been reducing in recent years. Only very rarely are patients referred with both an upper and lower limb amputation (7 cases in 2001/02).
- The most common cause of upper limb amputation remains trauma at fifty nine per cent. For lower limbs, dysvascularity was the reported cause in seventy per cent of cases.
- Almost half of all new referrals to prosthetics service centres were referred within two weeks of their amputation.



UK Prosthetics Services  
**NEW REFERRALS**

## Referrals to UK Prosthetics Services

### New referrals

The table below shows the total number of referrals to each of the UK's prosthetics service centres for the four quarters ending 31<sup>st</sup> March 2002. The number of amputees referred to prosthetic centres (5,726) across the UK is similar to last year.

The quarterly analysis does not support the existence of seasonal variation in the incidence of referral after amputation.

The number of new referrals for prosthetic services seen by centres varies enormously, probably reflecting the size of their catchment population. For example, 378 amputees were referred to the centre in Birmingham compared to 29 in Inverness. This has implications for the size of service required and costs required to run these centres.

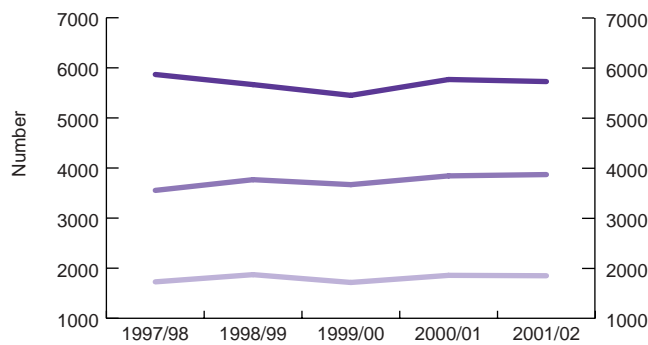
**Table 1** New referrals to prosthetics service centres : 2001/02

Prosthetics Service Centre	Quarter ending				Total
	30 Jun '01	30 Sep '01	31 Dec '01	31 Mar '02	
Aberdeen	12	8	6	10	36
Belfast	27	32	17	13	89
Birmingham	91	85	108	94	378
Bristol	35	37	42	34	148
Cambridge	30	37	36	30	133
Cardiff	38	39	51	40	168
Carlisle	16	9	7	8	40
Cleveland	34	30	29	43	136
Derby <sup>1</sup>	12	11	16	9	48
Dundee	33	20	27	31	111
Edinburgh	15	20	20	9	64
Exeter	29	34	47	48	158
Gillingham	48	50	47	37	182
Glasgow (Strathclyde University)	7	5	6	8	26
Glasgow (Westmarc)	53	69	49	54	225
Hull	20	26	31	35	112
Inverness	10	9	6	4	29
Isle of Wight <sup>2</sup>	3	7	3	2	15
Leeds	8	42	33	45	128
Leicester	17	7	14	9	47
Liverpool (Fazakerley)	41	34	31	40	146
London (Charing Cross) <sup>2</sup>	12	13	24	23	72
London (Harold Wood)	56	55	61	67	239
London (Kings)	23	30	20	26	99
London (Roehampton)	33	28	28	22	111
London (Stanmore)	53	39	52	40	184
Luton & Dunstable	16	20	25	20	81
Manchester	61	68	74	90	293
Newcastle	44	49	60	36	189
Northampton	13	18	14	19	64
Norwich	28	21	32	25	106
Nottingham	29	42	37	46	154
Oxford <sup>1</sup>	37	42	36	47	162
Plymouth	33	33	28	36	130
Portsmouth	45	43	31	16	135
Preston	69	53	56	54	232
Ringwood	27	18	26	15	86
Sheffield	71	65	70	72	278
Stoke	31	35	42	33	141
Sussex	28	24	21	22	95
Swansea	41	33	23	31	128
Wirral	21	27	27	24	99
Wolverhampton	50	45	41	27	163
Wrexham	15	16	22	13	66
<b>All centres</b>	<b>1 415</b>	<b>1 428</b>	<b>1 476</b>	<b>1 407</b>	<b>5 726</b>

<sup>1</sup> 1999/00 data.

<sup>2</sup> 2000/01 data.

**Chart 1a** Number of new referrals per year by gender April 1997 to March 2002

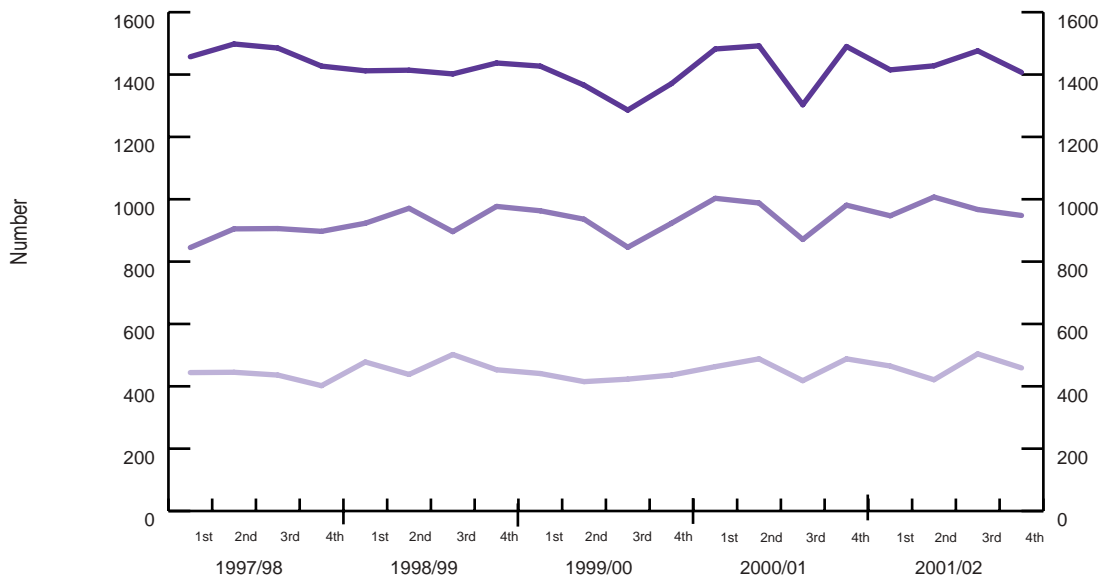


Female	1727	1871	1751	1857	1849
Male	3553	3767	3668	3843	3869
All	5867	5665	5450	5767	5726

There has been a fairly level trend over the past five years in new referrals to prosthetic centres. (1997/98 was the first year of NASDAB data collection and the apparent decrease between that year and 1998/99 may reflect data quality issues in this 1<sup>st</sup> year of data collection).

The gender split between patients is constant over time with approximately one-third of all new referrals being female.

**Chart 1b** Number of new referrals per quarter by gender April 1997 to March 2002



Male	444	445	436	402	478	438	502	453	441	415	423	436	463	488	418	488	465	421	504	459
Female	845	905	906	897	923	971	896	977	963	936	846	923	1003	988	871	981	947	1007	967	948
All	1457	1498	1485	1427	1412	1414	1402	1437	1427	1366	1286	1371	1482	1492	1303	1490	1415	1428	1476	1407

There is no consistent trend within year. Although a fall in referrals in quarter 3 (September to December) has been experienced in 1999/00 and 2000/01, this has not been replicated in 2001/02.

## Gender and age

There is a marked gender difference in median age at presentation, with males tending to present at a younger age. The median for males is 66 and for females it is 71 years of age. There are local variations for the median age. Stanmore had a relatively young patient group with half their patients aged 55 or less. This is because of the specialist nature of the orthopaedic work carried out at the Royal National Orthopaedic Hospital. The new referrals at Exeter, by way of contrast, had a median age of 72.

Table 2 Gender and age ; by prosthetics service centre : 2001/02

Prosthetics Service Centre	Males					All ages	Median Age
	less than 16	16-54	55-64	65-74	75 and over		
Aberdeen	-	4	6	9	7	<b>26</b>	68
Belfast	5	10	15	15	11	<b>56</b>	63
Birmingham	13	69	50	60	65	<b>257</b>	64
Bristol	3	23	24	22	26	<b>98</b>	64
Cambridge	4	14	16	25	23	<b>82</b>	67
Cardiff	3	17	24	34	36	<b>114</b>	69
Carlisle	2	3	5	10	6	<b>26</b>	70
Cleveland	3	22	19	27	26	<b>97</b>	66
Derby <sup>1</sup>	3	10	3	10	4	<b>30</b>	61
Dundee	1	5	14	24	23	<b>67</b>	71
Edinburgh	-	7	12	15	11	<b>45</b>	68
Exeter	-	29	15	21	32	<b>97</b>	67
Gillingham	4	35	25	30	36	<b>130</b>	65
Glasgow (Strathclyde University)	6	6	1	5	2	<b>20</b>	33
Glasgow (Westmarc)	1	31	40	55	28	<b>155</b>	65
Hull	-	15	12	22	17	<b>66</b>	68
Inverness	-	5	1	7	2	<b>15</b>	68
Isle of Wight <sup>2</sup>	-	2	3	5	2	<b>12</b>	66
Leeds	1	27	25	23	18	<b>94</b>	63
Leicester	1	8	7	8	6	<b>30</b>	64
Liverpool (Fazakerley)	1	20	26	26	26	<b>99</b>	65
London (Charing Cross) <sup>2</sup>	-	20	10	8	9	<b>47</b>	58
London (Harold Wood)	4	42	27	47	38	<b>158</b>	66
London (Kings)	5	28	11	16	9	<b>69</b>	56
London (Roehampton)	5	17	12	14	23	<b>71</b>	67
London (Stanmore)	10	54	13	19	26	<b>122</b>	54
Luton & Dunstable	-	9	7	22	15	<b>53</b>	70
Manchester	5	42	52	59	37	<b>195</b>	64
Newcastle	1	33	25	41	30	<b>130</b>	66
Northampton	-	8	14	12	10	<b>44</b>	64
Norwich	2	16	15	21	19	<b>73</b>	69
Nottingham	4	32	20	35	30	<b>121</b>	67
Oxford <sup>1</sup>	7	21	22	28	34	<b>112</b>	68
Plymouth	1	17	18	14	30	<b>80</b>	66
Portsmouth	3	27	19	28	28	<b>105</b>	66
Preston	-	41	42	37	46	<b>166</b>	65
Ringwood	2	9	9	16	19	<b>55</b>	72
Sheffield	2	57	31	56	45	<b>191</b>	65
Stoke	-	18	14	25	31	<b>88</b>	69
Sussex	2	11	9	20	21	<b>63</b>	69
Swansea	1	13	14	29	25	<b>82</b>	69
Wirral	1	15	13	22	18	<b>69</b>	66
Wolverhampton	1	20	28	39	29	<b>117</b>	67
Wrexham	-	7	11	14	10	<b>42</b>	67
<b>All centres</b>	<b>107</b>	<b>919</b>	<b>779</b>	<b>1 075</b>	<b>989</b>	<b>3 869</b>	<b>66</b>

1 1999/00 data.

2 2000/01 data.

One quarter of males and almost two fifths of females were aged 75 or over at time of referral. This table also highlights the relatively small number of patients aged under 16 years (about 3% of all new referrals). However, the need for support from the centres for these patients will extend over a much longer time frame than for the other patients. More than half of these young patients are referred as a result of congenital absence (see table 14).

less than 16	Females					All ages	Median Age	Gender unspecified	Total	Median Age	Prosthetics Service Centre
	16-54	55-64	65-74	75 and over							
-	3	2	4	1	<b>10</b>	66	-	<b>36</b>	68	Aberdeen	
4	3	1	15	10	<b>33</b>	70	-	<b>89</b>	68	Belfast	
7	24	11	23	56	<b>121</b>	73	-	<b>378</b>	67	Birmingham	
3	10	8	9	20	<b>50</b>	71	-	<b>148</b>	66	Bristol	
3	13	6	11	18	<b>51</b>	69	-	<b>133</b>	68	Cambridge	
2	9	11	9	23	<b>54</b>	70	-	<b>168</b>	69	Cardiff	
-	2	2	3	7	<b>14</b>	75	-	<b>40</b>	71	Carlisle	
-	8	7	14	10	<b>39</b>	67	-	<b>136</b>	67	Cleveland	
-	5	1	3	2	<b>11</b>	58	7	<b>48</b>	58	Derby <sup>1</sup>	
-	8	3	10	23	<b>44</b>	75	-	<b>111</b>	73	Dundee	
-	9	1	4	5	<b>19</b>	60	-	<b>64</b>	68	Edinburgh	
-	4	6	15	36	<b>61</b>	76	-	<b>158</b>	72	Exeter	
4	9	7	12	20	<b>52</b>	71	-	<b>182</b>	67	Gillingham	
-	3	1	-	2	<b>6</b>	54	-	<b>26</b>	39	Glasgow (Strathclyde University)	
-	13	10	23	24	<b>70</b>	70	-	<b>225</b>	66	Glasgow (Westmarc)	
1	8	10	13	14	<b>46</b>	69	-	<b>112</b>	68	Hull	
-	5	2	4	3	<b>14</b>	64	-	<b>29</b>	67	Inverness	
-	1	-	-	2	<b>3</b>	76	-	<b>15</b>	66	Isle of Wight <sup>2</sup>	
3	9	3	8	11	<b>34</b>	68	-	<b>128</b>	63	Leeds	
3	5	3	3	3	<b>17</b>	57	-	<b>47</b>	62	Leicester	
-	14	3	9	21	<b>47</b>	73	-	<b>146</b>	66	Liverpool (Fazakerley)	
-	7	2	8	8	<b>25</b>	70	-	<b>72</b>	63	London (Charing Cross) <sup>2</sup>	
7	11	10	22	31	<b>81</b>	71	-	<b>239</b>	68	London (Harold Wood)	
3	12	5	7	3	<b>30</b>	53	-	<b>99</b>	55	London (Kings)	
2	8	5	7	18	<b>40</b>	70	-	<b>111</b>	68	London (Roehampton)	
10	18	6	13	15	<b>62</b>	60	-	<b>184</b>	55	London (Stanmore)	
1	5	1	9	12	<b>28</b>	74	-	<b>81</b>	71	Luton & Dunstable	
8	8	15	25	42	<b>98</b>	73	-	<b>293</b>	66	Manchester	
3	16	9	8	22	<b>58</b>	65	1	<b>189</b>	66	Newcastle	
-	6	2	4	8	<b>20</b>	71	-	<b>64</b>	65	Northampton	
2	6	5	11	9	<b>33</b>	70	-	<b>106</b>	69	Norwich	
3	3	6	8	13	<b>33</b>	70	-	<b>154</b>	67	Nottingham	
9	13	7	7	14	<b>50</b>	58	-	<b>162</b>	67	Oxford <sup>1</sup>	
1	6	6	13	24	<b>50</b>	74	-	<b>130</b>	70	Plymouth	
1	5	3	8	13	<b>30</b>	72	-	<b>135</b>	67	Portsmouth	
1	16	7	16	26	<b>66</b>	72	-	<b>232</b>	66	Preston	
-	2	5	8	16	<b>31</b>	77	-	<b>86</b>	73	Ringwood	
5	17	7	24	34	<b>87</b>	71	-	<b>278</b>	67	Sheffield	
1	4	6	9	33	<b>53</b>	77	-	<b>141</b>	72	Stoke	
-	7	4	6	15	<b>32</b>	74	-	<b>95</b>	71	Sussex	
1	7	8	14	16	<b>46</b>	71	-	<b>128</b>	70	Swansea	
3	9	9	6	3	<b>30</b>	59	-	<b>99</b>	64	Wirral	
-	7	6	12	21	<b>46</b>	72	-	<b>163</b>	68	Wolverhampton	
-	1	5	7	11	<b>24</b>	74	-	<b>66</b>	70	Wrexham	
<b>91</b>	<b>359</b>	<b>237</b>	<b>444</b>	<b>718</b>	<b>1 849</b>	<b>71</b>	<b>8</b>	<b>5 726</b>	<b>67</b>	<b>All centres</b>	

Chart 2a Age : 2001/02

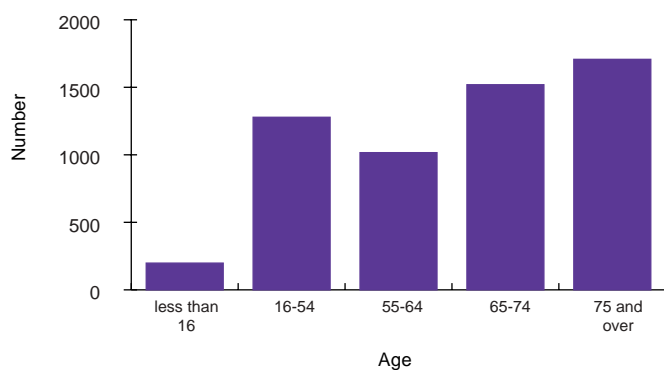


Chart 2b Age and gender : 2001/02

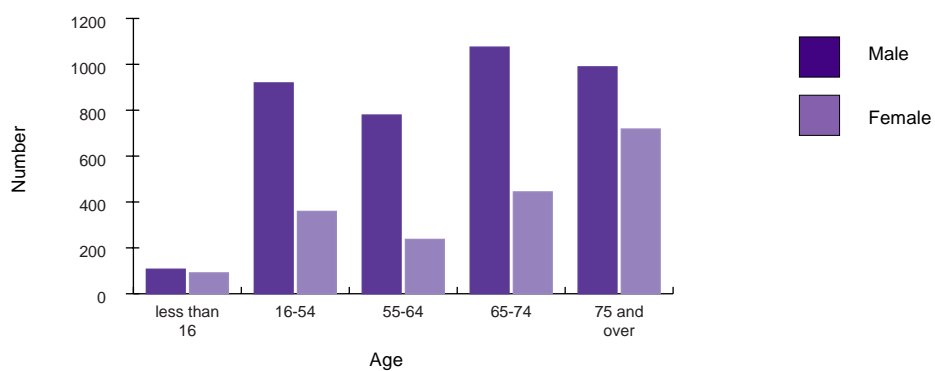
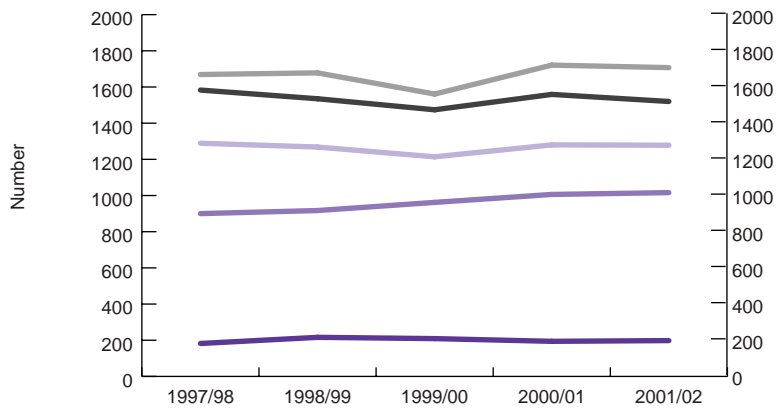


Chart 2c Number of new referrals by age group and year



LT 16	182	216	209	194	198
16-54	1289	1268	1214	1280	1278
55-64	900	917	962	1006	1016
65-74	1583	1535	1474	1559	1520
75+	1669	1678	1561	1721	1707

There is a fairly consistent pattern between the age groups with the oldest age groups accounting for most of the referrals.

## Level of amputation

The completeness in the recording of the level of amputation at centres continues to be very good at over 99 per cent. Of the 5708 patients whose amputation level was recorded, the great majority (92%) were referred following a lower limb amputation. Upper limb deficiency accounts for around 5 per cent and congenital absence accounts for 3 per cent of referrals.

When comparing the data in Table 3 with UK hospital activity analysis of upper and lower primary amputations (Appendix 1) it is clear that only a small proportion of foot and hand amputations are referred to prosthetics centres. A great majority of upper limb digit amputations are never referred and the majority of partial foot amputations are probably seen through district orthotic services.

**Table 3** Level of amputation and congenital absence; by prosthetics service centre : 2001/02

Prosthetics Service Centre	Upper Limb Amputations <sup>1</sup>									Total
	Fore-quarter	Shoulder disarticulation	Trans-humeral	Elbow disarticulation	Trans-radial	Wrist disarticulation	Partial hand	Digits	Double upper amp.	
Aberdeen	-	-	-	-	1	-	-	1	-	2
Belfast	-	-	2	-	-	-	1	-	-	3
Birmingham	4	-	5	-	7	2	8	10	-	36
Bristol	-	1	1	-	-	-	-	-	-	2
Cambridge	1	-	1	-	2	-	4	-	-	8
Cardiff	1	-	1	-	-	-	1	-	-	3
Carlisle	-	1	1	-	1	-	-	-	-	3
Cleveland	-	-	-	-	1	-	2	-	-	3
Derby <sup>4</sup>	-	-	-	-	-	-	-	-	-	-
Dundee	-	-	-	-	-	-	-	-	-	-
Edinburgh	-	-	-	1	-	-	-	-	-	1
Exeter	-	-	1	1	1	-	-	2	-	5
Gillingham	-	-	-	-	4	1	2	-	-	7
Glasgow (Strathclyde University)	-	-	1	-	-	-	1	2	-	4
Glasgow (Westmarc)	-	-	2	1	2	1	-	-	-	6
Hull	-	-	-	-	2	-	-	7	-	9
Inverness	-	-	1	-	-	-	-	-	-	1
Isle of Wight <sup>5</sup>	-	-	-	-	-	-	-	-	-	-
Leeds	-	-	-	-	2	-	2	-	-	4
Leicester	-	-	-	-	3	-	-	-	1	4
Liverpool (Fazakerley)	1	1	4	-	2	-	-	-	-	8
London (Charing Cross) <sup>5</sup>	-	-	-	-	-	-	-	-	-	-
London (Harold Wood)	-	-	1	-	1	1	2	-	1	6
London (Kings)	-	1	4	-	1	-	15	-	3	24
London (Roehampton)	1	2	-	-	4	-	-	1	2	10
London (Stanmore)	4	1	4	-	2	-	1	3	2	17
Luton & Dunstable	-	-	-	-	-	-	-	-	-	-
Manchester	1	1	2	-	1	-	1	5	-	11
Newcastle	1	-	6	-	-	-	4	-	1	12
Northampton	-	-	-	-	2	-	1	-	-	3
Norwich	1	-	-	-	-	-	1	-	-	2
Nottingham	1	-	1	-	6	-	-	9	-	17
Oxford <sup>4</sup>	-	1	-	-	1	-	4	-	-	6
Plymouth	1	-	1	-	1	-	-	3	-	6
Portsmouth	-	-	2	-	1	-	-	-	-	3
Preston	1	-	4	-	1	-	4	-	2	12
Ringwood	-	-	2	-	-	-	-	-	-	2
Sheffield	1	-	3	-	-	-	1	-	1	6
Stoke	-	-	-	-	1	-	1	-	-	2
Sussex	-	-	-	-	-	-	-	-	-	-
Swansea	-	-	3	-	1	-	-	2	1	7
Wirral	-	-	-	-	1	-	1	-	-	2
Wolverhampton	-	-	-	-	-	-	-	-	-	-
Wrexham	-	-	1	-	1	1	2	-	-	5
<b>All centres</b>	19	9	54	3	53	6	59	45	14	262

1 See also the Upper Limb Amputation tables on pages 18-22 for additional details.

2 See also the Lower Limb Amputation tables on pages 24-29 for additional details.

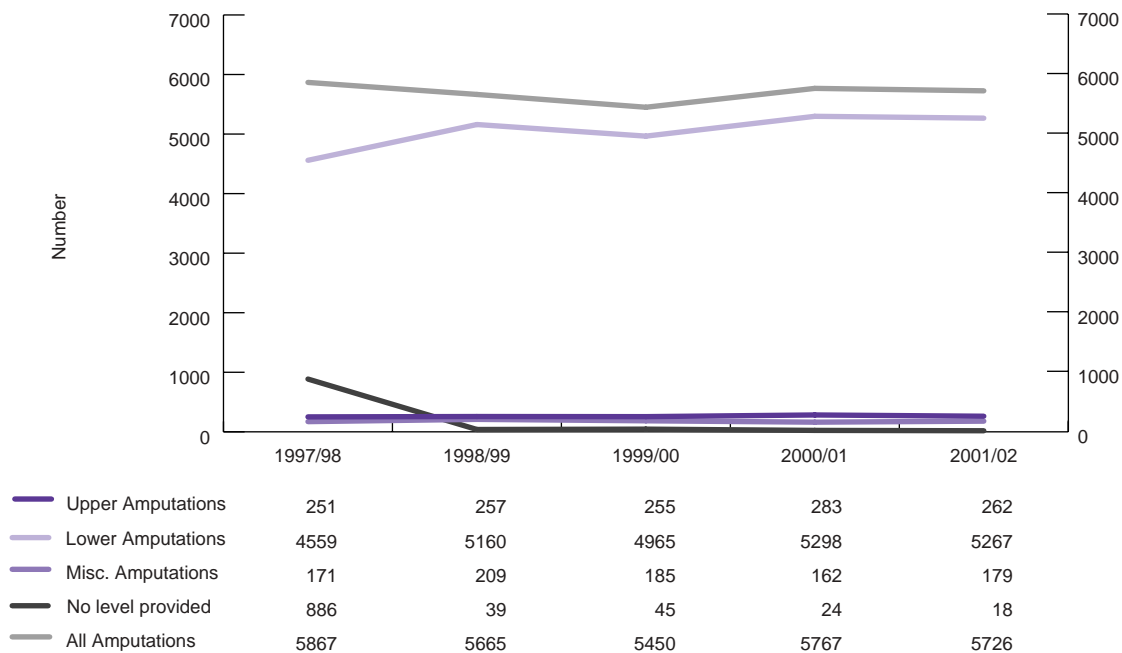
3 See also the Miscellaneous Group of Amputation tables on pages 32-34 for additional details on complex amputations and congenital absence.

4 1999/00 data.

5 2000/01 data.

Lower Limb Amputations <sup>2</sup>										Miscellaneous Amputations <sup>3</sup>					Total		Prosthetics Service Centre
Hemi pelvec-tomy	Hip disartic-ulation	Trans-femoral	Knee disartic-ulation	Trans-tibial	Ankle disartic-ulation	Partial foot	Digits	Double lower amp.	Total	Cross-site amp.	Triple amp.	Quad-ruple amp.	Con-genital absence	No level	Total		
-	-	13	2	17	-	-	-	2	34	-	-	-	-	-	-	36	Aberdeen
-	-	37	-	37	1	-	-	3	78	-	-	-	8	-	8	89	Belfast
-	-	147	7	150	3	2	10	13	332	1	-	-	8	1	10	378	Birmingham
-	1	49	5	80	-	-	-	6	141	-	1	-	4	-	5	148	Bristol
-	1	39	1	66	-	3	-	5	115	-	-	-	10	-	10	133	Cambridge
1	1	70	-	81	-	1	-	7	161	-	-	-	4	-	4	168	Cardiff
-	-	17	-	18	-	-	-	2	37	-	-	-	-	-	-	40	Carlisle
-	1	49	-	71	-	-	1	9	131	-	-	-	2	-	2	136	Cleveland
-	-	13	10	10	2	-	-	-	35	-	-	-	4	9	13	48	Derby <sup>4</sup>
-	-	47	1	58	1	-	-	3	110	-	-	-	1	-	1	111	Dundee
-	1	20	-	34	-	-	-	7	62	-	-	-	1	-	1	64	Edinburgh
1	-	51	8	84	-	-	1	8	153	-	-	-	-	-	-	158	Exeter
2	-	68	4	83	1	2	1	5	166	-	-	-	9	-	9	182	Gillingham
-	-	4	-	9	-	-	-	2	15	-	-	-	7	-	7	26	Glasgow <small>(Strathclyde University)</small>
-	3	58	-	121	-	-	-	36	218	-	-	-	1	-	1	225	Glasgow <small>(Westmarc)</small>
1	-	43	2	51	1	2	-	3	103	-	-	-	-	-	-	112	Hull
-	-	5	2	19	-	1	-	1	28	-	-	-	-	-	-	29	Inverness
-	-	6	-	9	-	-	-	-	15	-	-	-	-	-	-	15	Isle of Wight <sup>5</sup>
1	-	61	-	54	-	1	-	3	120	-	-	-	4	-	4	128	Leeds
-	-	18	-	21	-	-	-	-	39	-	-	-	4	-	4	47	Leicester
1	-	52	4	71	-	1	-	4	133	-	-	-	5	-	5	146	Liverpool <small>(Fazakerley)</small>
-	1	25	3	38	2	1	-	1	71	-	-	-	-	1	1	72	London <small>(Charing Cross)</small> <sup>5</sup>
-	3	91	1	112	-	4	-	12	223	-	-	-	10	-	10	239	London <small>(Harold Wood)</small>
5	-	32	1	30	1	-	-	3	72	-	-	-	3	-	3	99	London <small>(Kings)</small>
-	1	46	1	41	1	-	-	6	96	-	-	-	5	-	5	111	London <small>(Roehampton)</small>
2	4	56	3	66	2	5	1	7	146	-	-	1	20	-	21	184	London <small>(Stanmore)</small>
-	-	1	25	2	50	-	-	2	80	-	-	-	1	-	1	81	Luton & Dunstable
-	-	116	1	131	1	3	1	17	270	-	-	-	6	6	12	293	Manchester
2	1	63	1	96	2	-	-	5	170	-	-	-	7	-	7	189	Newcastle
-	-	23	2	31	-	1	-	4	61	-	-	-	-	-	-	64	Northampton
-	1	31	-	60	-	1	-	7	100	-	-	-	4	-	4	106	Norwich
1	-	41	3	76	-	4	-	5	130	1	-	-	6	-	7	154	Nottingham
1	-	51	5	77	3	-	1	2	140	-	1	1	13	1	16	162	Oxford <sup>4</sup>
1	3	50	3	63	-	1	-	3	124	-	-	-	-	-	-	130	Plymouth
-	1	29	2	89	-	-	-	6	127	-	-	-	5	-	5	135	Portsmouth
-	2	105	2	90	-	4	-	14	217	1	-	-	2	-	3	232	Preston
1	1	44	2	27	-	2	-	4	81	-	-	-	3	-	3	86	Ringwood
-	4	105	13	102	2	29	-	11	266	-	-	-	6	-	6	278	Sheffield
-	-	59	1	61	1	1	-	15	138	-	-	-	1	-	1	141	Stoke
-	-	40	1	47	-	1	-	6	95	-	-	-	-	-	-	95	Sussex
-	1	43	2	61	-	2	-	11	120	-	-	-	1	-	1	128	Swansea
-	1	41	1	40	-	3	-	7	93	-	-	-	4	-	4	99	Wirral
1	-	89	1	65	-	-	-	5	161	-	-	-	2	-	2	163	Wolverhampton
-	-	27	-	27	-	1	-	5	60	-	-	-	1	-	1	66	Wrexham
21	33	2 099	97	2 624	24	76	16	277	5 267	3	2	2	172	18	197	5 726	All centres

**Chart 3** Number of upper, lower and miscellaneous amputations by year



Again a consistent trend with lower limb amputees accounting for more than 90% of all new referrals.

The quality of data continues to improve with the number of cases for which the level of amputation is not recorded continuing to fall.

Region of residence

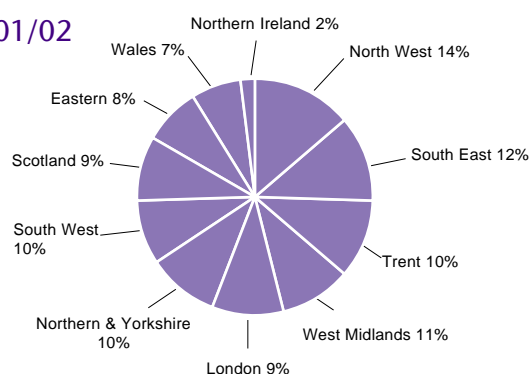
This table presents the referral patterns from each region to the prosthetics service centres and demonstrates that centres primarily care for local populations. The distribution of centres within regions reflects the population base and geographical factors; centre activity reflects the size and general health of its catchment population.

**Table 4** Region of residence ; by prosthetics service centre : 2001/02

Prosthetics Service Centre	Region											Total	
	Northern & Yorkshire	Trent Midlands	West Midlands	North West	Eastern	London	South East	South West	Northern Ireland	Scotland	Wales		Invalid/Blank
Aberdeen	-	-	-	-	-	-	-	-	-	36	-	-	36
Belfast	-	-	-	-	-	-	-	89	-	-	-	-	89
Birmingham	1	6	357	2	-	1	1	2	-	-	4	4	378
Bristol	-	-	-	-	-	-	-	148	-	-	-	-	148
Cambridge	-	11	-	-	121	-	1	-	-	-	-	-	133
Cardiff	-	-	-	-	-	-	-	-	-	-	168	-	168
Carlisle	-	-	-	-	-	-	-	-	-	-	-	40	40
Cleveland	136	-	-	-	-	-	-	-	-	-	-	-	136
Derby <sup>1</sup>	-	48	-	-	-	-	-	-	-	-	-	-	48
Dundee	-	-	-	-	-	-	-	-	-	111	-	-	111
Edinburgh	-	-	-	-	-	-	-	-	-	64	-	-	64
Exeter	-	-	-	-	-	-	-	158	-	-	-	-	158
Gillingham	-	-	-	-	-	16	162	-	-	-	-	4	182
Glasgow (Strathclyde University)	-	-	-	-	-	-	-	-	-	26	-	-	26
Glasgow (Westmarc)	-	-	-	-	-	-	-	-	-	225	-	-	225
Hull	79	33	-	-	-	-	-	-	-	-	-	-	112
Inverness	-	-	-	-	-	-	-	-	-	29	-	-	29
Isle of Wight <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	15	15
Leeds	127	1	-	-	-	-	-	-	-	-	-	-	128
Leicester	-	46	-	-	-	-	1	-	-	-	-	-	47
Liverpool (Fazakerley)	-	-	-	146	-	-	-	-	-	-	-	-	146
London (Charing Cross) <sup>2</sup>	-	-	-	-	-	68	4	-	-	-	-	-	72
London (Harold Wood)	-	-	-	-	113	124	1	-	-	-	-	1	239
London (Kings)	-	-	-	-	-	87	12	-	-	-	-	-	99
London (Roehampton)	-	-	-	-	-	51	51	1	-	-	-	8	111
London (Stanmore)	-	-	-	-	36	136	8	3	-	-	-	1	184
Luton & Dunstable	-	-	-	-	81	-	-	-	-	-	-	-	81
Manchester <sup>3</sup>	-	4	1	287	-	-	-	-	-	-	1	-	293
Newcastle	189	-	-	-	-	-	-	-	-	-	-	-	189
Northampton	-	-	-	-	-	-	64	-	-	-	-	-	64
Norwich	-	4	-	-	96	-	-	-	-	-	-	6	106
Nottingham	-	154	-	-	-	-	-	-	-	-	-	-	154
Oxford <sup>1</sup>	-	-	-	-	3	-	136	23	-	-	-	-	162
Plymouth	-	-	-	-	-	-	-	130	-	-	-	-	130
Portsmouth <sup>3</sup>	-	-	-	-	-	-	135	-	-	-	-	-	135
Preston	-	-	-	227	-	-	-	-	-	-	-	5	232
Ringwood	-	-	-	-	-	-	4	81	-	-	-	1	86
Sheffield	4	272	-	-	-	-	-	-	-	-	1	1	278
Stoke	-	8	120	10	-	-	-	-	-	-	3	-	141
Sussex	-	-	-	-	-	-	95	-	-	-	-	-	95
Swansea	-	-	-	-	-	-	-	-	-	-	128	-	128
Wirral	-	-	-	99	-	-	-	-	-	-	-	-	99
Wolverhampton	-	-	163	-	-	-	-	-	-	-	-	-	163
Wrexham	-	-	1	1	-	-	-	-	-	-	64	-	66
<b>Total</b>	<b>536</b>	<b>587</b>	<b>642</b>	<b>772</b>	<b>450</b>	<b>483</b>	<b>675</b>	<b>546</b>	<b>89</b>	<b>491</b>	<b>369</b>	<b>86</b>	<b>5 726</b>

1 1999/00 data.  
 2 2000/01 data.  
 3 Area of residence based on 2000/01 distribution.

**Chart 4** Region : 2001/02





UK Prosthetics Services

# UPPER LIMB AMPUTATIONS

## Upper Limb Amputations

### Level of amputation by centre

In this table the number of referrals to each centre is expressed as a percentage according to level of amputation. More than half the upper limb referrals in 2001/02 were to just 8 centres and only two of these had more than twenty referrals. As in the previous year Birmingham received the most new referrals (36) and Kings had the next highest number (24). It is important to note that for many centres the total number of upper limb amputee referrals is very small and comparisons between centres requires careful examination of the data. Four out of five centres received less than 10 new upper limb referrals in 2001/02.

Forty-four per cent of all upper limb referrals are either trans-humeral or partial hand amputations. One in five were trans-radial.

The more unusual levels of upper limb amputation tend to be referred to centres with special interests.

**Table 5** Level of amputation<sup>1</sup> as a percentage of total number; by prosthetics service centre : 2001/02

Prosthetics Service Centre	Level of amputation									Total no. of referrals
	Fore-quarter	Shoulder disarticulation	Trans-humeral	Elbow disarticulation	Trans-radial	Wrist disarticulation	Partial hand	Digits	Double upper amp.	
	Row percentages <sup>2</sup>									
Aberdeen	0	0	0	0	50	0	0	50	0	2
Belfast	0	0	67	0	0	0	33	0	0	3
Birmingham	11	0	14	0	19	6	22	28	0	36
Bristol	0	50	50	0	0	0	0	0	0	2
Cambridge	13	0	13	0	25	0	50	0	0	8
Cardiff	33	0	33	0	0	0	33	0	0	3
Carlisle	0	33	33	0	33	0	0	0	0	3
Cleveland	0	0	0	0	33	0	67	0	0	3
Edinburgh	0	0	0	100	0	0	0	0	0	1
Exeter	0	0	20	20	20	0	0	40	0	5
Gillingham	0	0	0	0	57	14	29	0	0	7
Glasgow (Strathclyde University)	0	0	25	0	0	0	25	50	0	4
Glasgow (Westmarc)	0	0	33	17	33	17	0	0	0	6
Hull	0	0	0	0	22	0	0	78	0	9
Inverness	0	0	100	0	0	0	0	0	0	1
Leeds	0	0	0	0	50	0	50	0	0	4
Leicester	0	0	0	0	75	0	0	0	25	4
Liverpool (Fazakerley)	13	13	50	0	25	0	0	0	0	8
London (Harold Wood)	0	0	17	0	17	17	33	0	17	6
London (Kings)	0	4	17	0	4	0	63	0	13	24
London (Roehampton)	10	20	0	0	40	0	0	10	20	10
London (Stanmore)	24	6	24	0	12	0	6	18	12	17
Manchester	9	9	18	0	9	0	9	45	0	11
Newcastle	8	0	50	0	0	0	33	0	8	12
Northampton	0	0	0	0	67	0	33	0	0	3
Norwich	50	0	0	0	0	0	50	0	0	2
Nottingham	6	0	6	0	35	0	0	53	0	17
Oxford <sup>3</sup>	0	17	0	0	17	0	67	0	0	6
Plymouth	17	0	17	0	17	0	0	50	0	6
Portsmouth	0	0	67	0	33	0	0	0	0	3
Preston	8	0	33	0	8	0	33	0	17	12
Ringwood	0	0	100	0	0	0	0	0	0	2
Sheffield	17	0	50	0	0	0	17	0	17	6
Stoke	0	0	0	0	50	0	50	0	0	2
Swansea	0	0	43	0	14	0	0	29	14	7
Wirral	0	0	0	0	50	0	50	0	0	2
Wrexham	0	0	20	0	20	20	40	0	0	5
<b>All centres: %</b>	<b>7</b>	<b>3</b>	<b>21</b>	<b>1</b>	<b>20</b>	<b>2</b>	<b>23</b>	<b>17</b>	<b>5</b>	
<b>All centres: number</b>	<b>19</b>	<b>9</b>	<b>54</b>	<b>3</b>	<b>53</b>	<b>6</b>	<b>59</b>	<b>45</b>	<b>14</b>	<b>262</b>

1 Excludes congenital absence cases.

2 Due to rounding row percentages may not add up to 100%.

3 1999/00 data.

## Level of amputation by gender and age

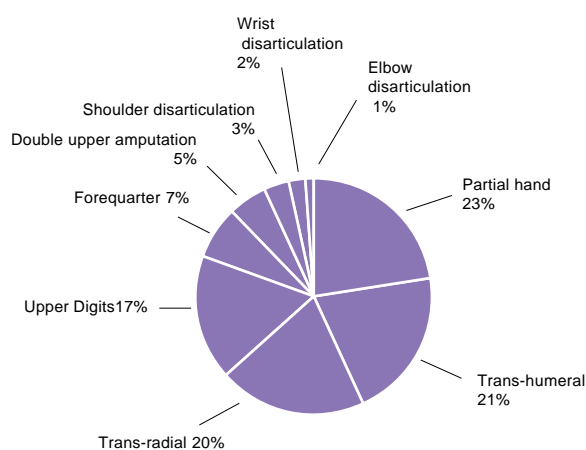
As with lower limb referrals the majority of upper limb referrals are male (63%). However, unlike lower limb referrals, upper limb referrals tend to be in the younger age groups. Sixty per cent of new referrals in 2001/02 were aged between 16 and 54. Proportionately speaking, there was a greater level of referrals for upper digits amongst females (23%) compared with males (13%).

**Table 6** Level of amputation<sup>1</sup> ; by gender and age : 2001/02

Level of amputation	Males					All ages	Females					All ages	Total
	less than 16	16-54	55-64	65-74	75 and over		less than 16	16-54	55-64	65-74	75 and over		
Forequarter	-	7	2	1	2	12	-	1	2	1	3	7	19
Shoulder disarticulation	-	5	-	2	-	7	1	-	-	1	-	2	9
Trans-humeral	3	22	4	3	2	34	1	9	1	3	6	20	54
Elbow disarticulation	-	1	1	-	-	2	-	-	-	1	-	1	3
Trans-radial	4	20	2	5	3	34	1	9	3	1	5	19	53
Wrist disarticulation	1	2	1	-	-	4	1	1	-	-	-	2	6
Partial hand	2	24	8	1	1	36	4	14	2	2	1	23	59
Upper Digits	3	14	4	1	-	22	2	15	3	3	-	23	45
Double upper amputation	-	11	1	1	-	13	-	1	-	-	-	1	14
<b>All upper limb amputations<sup>1</sup></b>	<b>13</b>	<b>106</b>	<b>23</b>	<b>14</b>	<b>8</b>	<b>164</b>	<b>10</b>	<b>50</b>	<b>11</b>	<b>12</b>	<b>15</b>	<b>98</b>	<b>262</b>

1 Excludes congenital absence cases.

**Chart 6** Level of amputation : 2001/02



## Upper Limb Amputations

### Cause and level

Of the 241 referrals (92% of the total) where a cause of upper limb loss was reported, trauma accounted for 59 per cent, neoplasia for 11 per cent and dysvasculature for 7 per cent.

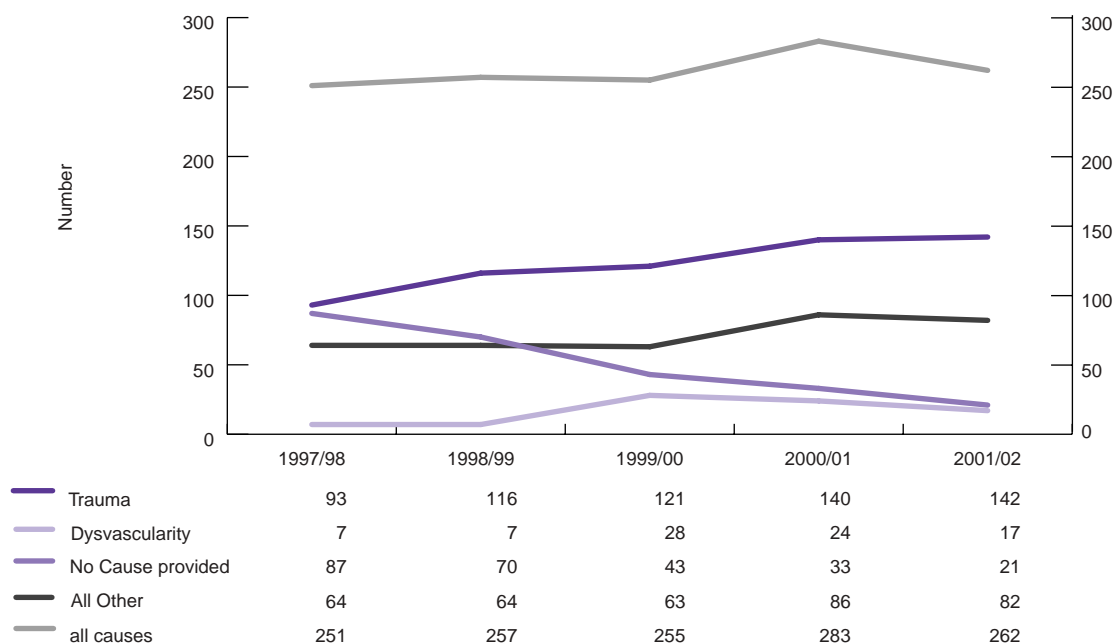
There continues to be an improvement in the quality of the data being collected. The number of records where the cause of amputation is given continues to rise. In 1997/98 only two-thirds of records provided a cause of amputation; in 2001/02 this figure has risen to 92% and also represents a 4% improvement over the previous year.

**Table 7 Level of amputation <sup>1</sup> ; by cause of amputation : 2001/02**

Cause of amputation	Level of amputation									Total
	Fore-quarter	Shoulder disarticulation	Trans-humeral	Elbow disarticulation	Trans-radial	Wrist disarticulation	Partial hand	Digits	Double upper amp.	
Trauma	1	5	22	3	27	3	38	34	9	<b>142</b>
No Additional Detail	-	1	9	2	14	2	13	13	2	<b>56</b>
Mechanical	1	3	12	1	9	-	17	19	3	<b>65</b>
Electrical	-	1	1	-	2	1	7	1	2	<b>15</b>
Thermal	-	-	-	-	1	-	1	1	1	<b>4</b>
Chemical	-	-	-	-	1	-	-	-	1	<b>2</b>
Dysvasculature	1	-	7	-	5	1	1	2	-	<b>17</b>
No Additional Detail	-	-	2	-	1	-	-	1	-	<b>4</b>
Diabetes Mellitus	-	-	-	-	1	-	-	-	-	<b>1</b>
Non-diabetic Arteriosclerosis	1	-	1	-	-	-	1	-	-	<b>3</b>
Embolism	-	-	3	-	1	-	-	-	-	<b>4</b>
Vasospastic Conditions (inc. Raynauds)	-	-	-	-	1	-	-	-	-	<b>1</b>
Latrogenic Vascular Trauma	-	-	-	-	-	1	-	-	-	<b>1</b>
Arteritis (inc. Rheumatoid Arthritis, Autoi)	-	-	-	-	1	-	-	1	-	<b>2</b>
Venous Disease	-	-	1	-	-	-	-	-	-	<b>1</b>
Infection	1	-	1	-	2	-	1	1	-	<b>6</b>
No Additional Detail	-	-	-	-	2	-	-	1	-	<b>3</b>
Acute	1	-	1	-	-	-	-	-	-	<b>2</b>
Chronic	-	-	-	-	-	-	1	-	-	<b>1</b>
Neurological Disorder	-	-	2	-	1	-	-	-	-	<b>3</b>
No Additional Detail	-	-	-	-	1	-	-	-	-	<b>1</b>
Infective (inc. Leprosy, Madura Foot)	-	-	1	-	-	-	-	-	-	<b>1</b>
Peripheral Nerve Injury	-	-	1	-	-	-	-	-	-	<b>1</b>
Neoplasia	13	3	7	-	8	-	1	1	-	<b>33</b>
No Additional Detail	2	-	-	-	1	-	-	-	-	<b>3</b>
Malignant - Primary	10	1	6	-	6	-	1	1	-	<b>25</b>
Malignant - Secondary	1	2	1	-	1	-	-	-	-	<b>5</b>
Other - No Additional Detail	1	-	11	-	7	-	15	1	5	<b>40</b>
No Cause Provided	2	1	4	-	3	2	3	6	-	<b>21</b>
All causes <sup>1</sup>	19	9	54	3	53	6	59	45	14	<b>262</b>

<sup>1</sup> Excludes congenital absence cases.

**Chart 7** Level of upper amputation by cause and year



There has been a constant number of new referrals to prosthetic centres following upper level amputations with a slight upward blip in 2000/01.

The increasing trend in some causes may in part be due to improved coding of data.

## Cause and age

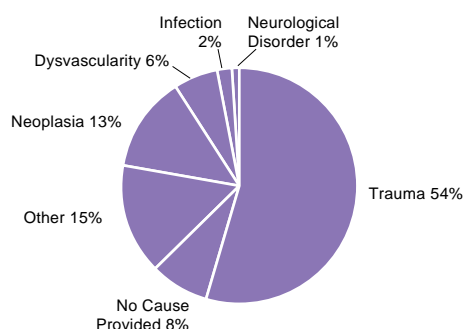
As in the previous year trauma was the most common cause of upper limb loss in all age groups apart from 75 and over, for which it was neoplasia.

**Table 8 Cause of amputation <sup>1</sup>; by age : 2001/02**

Cause of amputation	Age Group					Total
	less than 16	16-54	55-64	65-74	75 and over	
<b>Trauma</b>	<b>11</b>	<b>102</b>	<b>20</b>	<b>7</b>	<b>2</b>	<b>142</b>
No Additional Detail	3	42	8	3	-	56
Mechanical	6	45	10	3	1	65
Electrical	1	10	2	1	1	15
Thermal	-	4	-	-	-	4
Chemical	1	1	-	-	-	2
<b>Dysvascularity</b>	<b>-</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>17</b>
No Additional Detail	-	1	2	1	-	4
Diabetes Mellitus	-	-	-	1	-	1
Non-diabetic Arteriosclerosis	-	-	1	2	-	3
Embolism	-	2	1	-	1	4
Vasospastic Conditions (inc. Raynauds)	-	1	-	-	-	1
Latrogenic Vascular Trauma	-	1	-	-	-	1
Arteritis (inc. Rheumatoid Arthritis, Autoi)	-	1	-	1	-	2
Venous Disease	-	1	-	-	-	1
<b>Infection</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>6</b>
No Additional Detail	1	-	1	-	1	3
Acute	-	1	-	1	-	2
Chronic	1	-	-	-	-	1
<b>Neurological Disorder</b>	<b>-</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>3</b>
No Additional Detail	-	1	-	-	-	1
Infective (inc. Leprosy, Madura Foot)	-	1	-	-	-	1
Peripheral Nerve Injury	-	-	1	-	-	1
<b>Neoplasia</b>	<b>1</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>12</b>	<b>33</b>
No Additional Detail	-	1	-	-	2	3
Malignant - Primary	-	7	3	6	9	25
Malignant - secondary	1	1	1	1	1	5
<b>Other</b>	<b>6</b>	<b>25</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>40</b>
<b>No Cause Provided</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>21</b>
<b>Total</b>	<b>23</b>	<b>156</b>	<b>34</b>	<b>26</b>	<b>23</b>	<b>262</b>

<sup>1</sup> Excludes congenital absence cases.

**Chart 8 Cause of amputation : 2000/01 including 'No cause provided'**



UK Prosthetics Services

# LOWER LIMB AMPUTATIONS

## Lower Limb Amputations

### Level of amputation by centre

The number of referrals to each centre is expressed as a percentage according to the level of lower limb amputations. Nine out of ten lower limb amputations are either trans-tibial (50%) or trans-femoral (40%), this is similar to the previous year. There is substantial local variation in the percentage of patients referred following trans-tibial and trans-femoral amputations.

- Leeds (120 cases) trans-tibial 45%, trans-femoral 51%
- Portsmouth (127 cases) trans-tibial 70%, trans-femoral 23%
- Bristol (141 cases) trans-tibial 57%, trans-femoral 35%

All other amputation levels were uncommon.

**Table 9** Level of amputation<sup>1</sup> as a percentage of total number; by prosthetics service centre : 2001/02

Prosthetics Service Centre	Level of amputation									Total no. of referrals
	Hemi pelve-tomy	Hip disarticulation	Trans-femoral	Knee disarticulation	Trans-tibial	Ankle disarticulation	Partial foot	Digits	Double lower amp.	
	Percentages <sup>2</sup>									
Aberdeen	0	0	38	6	50	0	0	0	6	34
Belfast	0	0	47	0	47	1	0	0	4	78
Birmingham	0	0	44	2	45	1	1	3	4	332
Bristol	0	1	35	4	57	0	0	0	4	141
Cambridge	0	1	34	1	57	0	3	0	4	115
Cardiff	1	1	43	0	50	0	1	0	4	161
Carlisle	0	0	46	0	49	0	0	0	5	37
Cleveland	0	1	37	0	54	0	0	1	7	131
Derby <sup>3</sup>	0	0	37	29	29	6	0	0	0	35
Dundee	0	0	43	1	53	1	0	0	3	110
Edinburgh	0	2	32	0	55	0	0	0	11	62
Exeter	1	0	33	5	55	0	0	1	5	153
Gillingham	1	0	41	2	50	1	1	1	3	166
Glasgow (Strathclyde University)	0	0	27	0	60	0	0	0	13	15
Glasgow (Westmarc)	0	1	27	0	56	0	0	0	17	218
Hull	1	0	42	2	50	1	2	0	3	103
Inverness	0	0	18	7	68	0	4	0	4	28
Isle of Wight <sup>4</sup>	0	0	40	0	60	0	0	0	0	15
Leeds	1	0	51	0	45	0	1	0	3	120
Leicester	0	0	46	0	54	0	0	0	0	39
Liverpool (Fazakerley)	1	0	39	3	53	0	1	0	3	133
London (Charing Cross) <sup>4</sup>	0	1	35	4	54	3	1	0	1	71
London (Harold Wood)	0	1	41	0	50	0	2	0	5	223
London (Kings)	7	0	44	1	42	1	0	0	1	72
London (Roehampton)	0	1	48	1	43	1	0	0	6	96
London (Stanmore)	1	3	38	2	45	1	3	1	5	146
Luton & Dunstable	0	1	31	3	63	0	0	0	3	80
Manchester	0	0	43	0	49	0	1	0	6	270
Newcastle	1	1	37	1	56	1	0	0	3	170
Northampton	0	0	38	3	51	0	2	0	7	61
Norwich	0	1	31	0	60	0	1	0	7	100
Nottingham	1	0	32	2	58	0	3	0	4	130
Oxford <sup>3</sup>	1	0	36	4	55	2	0	1	1	140
Plymouth	1	2	40	2	51	0	1	0	2	124
Portsmouth	0	1	23	2	70	0	0	0	5	127
Preston	0	1	48	1	41	0	2	0	6	217
Ringwood	1	1	54	2	33	0	2	0	5	81
Sheffield	0	2	39	5	38	1	11	0	4	266
Stoke	0	0	43	1	44	1	1	0	11	138
Sussex	0	0	42	1	49	0	1	0	6	95
Swansea	0	1	36	2	51	0	2	0	9	120
Wirral	0	1	44	1	43	0	3	0	8	93
Wolverhampton	1	0	55	1	40	0	0	0	3	161
Wrexham	0	0	45	0	45	0	2	0	8	60
All centres: %	0	1	40	2	50	0	1	0	5	
All centres: total no.	21	33	2099	97	2624	24	76	16	277	5267

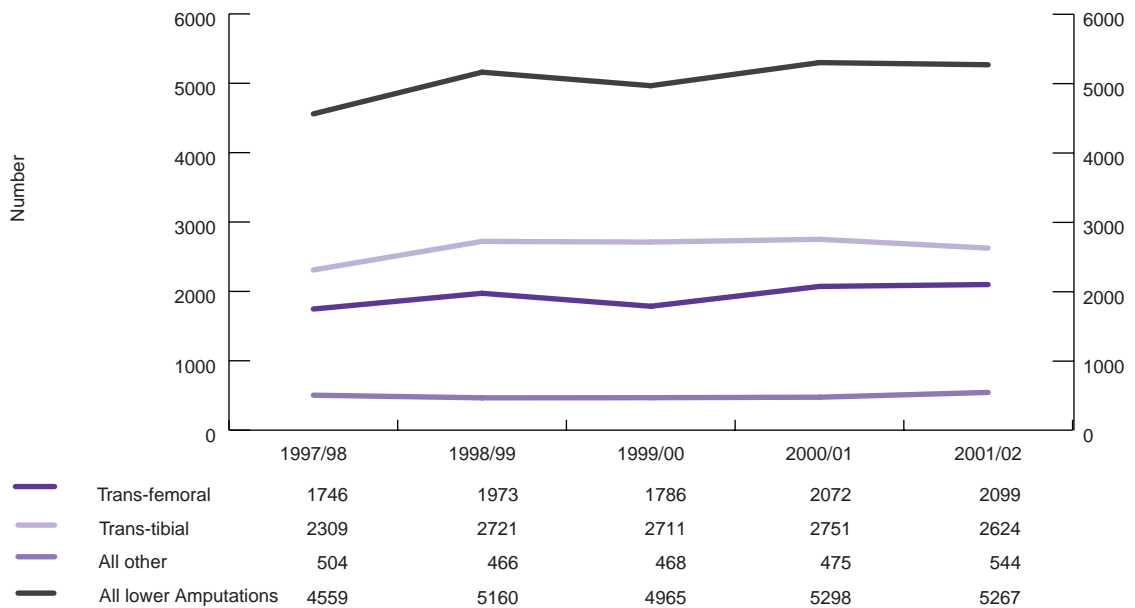
1 Excludes congenital absence cases.

2 Due to rounding percentages may not add up to 100.

3 1999/00 data.

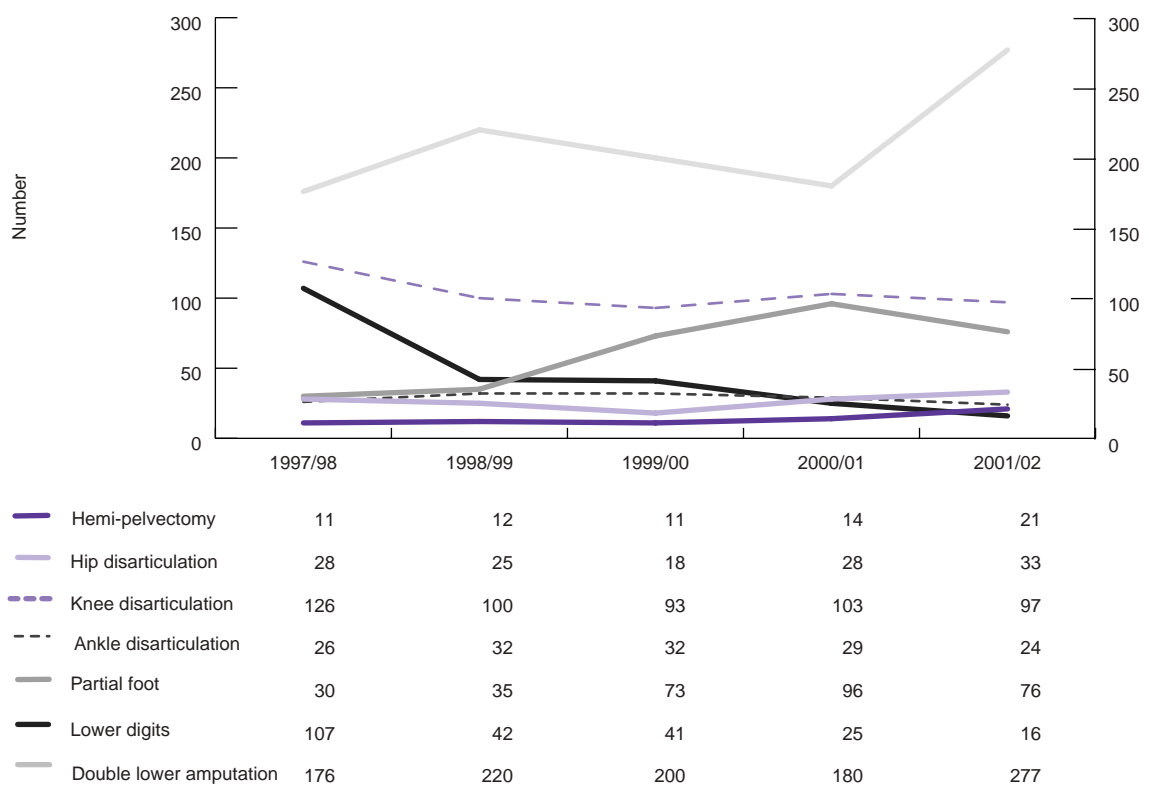
4 2000/01 data.

**Chart 9a** Number of lower level amputations by level and year



In the past three years the difference between those patients referred following trans-tibial and trans-femoral amputations has been reducing.

**Chart 9b** Number of lower level amputations by level and year excluding trans-femoral and trans-tibial



There has been an increase in the referrals following double lower amputations, however given the relatively small numbers involved it is not possible to detect any clear trend.

## Lower Limb Amputations

### Level of amputation by gender and age

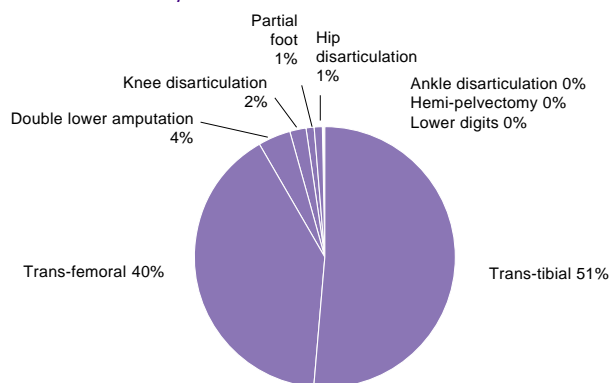
More than two thirds of lower limb amputees referred in 2001/02 were male (69%). Just over half of all amputations in males were at the trans-tibial level (53%) with a slightly lower proportion in females (44%): the great majority of the remaining amputations were at the trans-femoral level (38% in males and 45% in females).

**Table 10** Level of amputation<sup>1</sup> ; by gender and age : 2001/02

Level of amputation	Males						Females						Not Specified	Total
	less than 16	16-54	55-64	65-74	75 and over	All ages	less than 16	16-54	55-64	65-74	75 and over	All ages		
Hemi-pelvectomy	-	5	6	2	-	13	2	2	2	1	1	8	-	21
Hip disarticulation	2	6	3	6	2	19	-	10	2	2	-	14	-	33
Trans-femoral	6	271	288	401	391	1 357	7	82	92	203	357	741	1	2 099
Knee disarticulation	1	13	12	15	21	62	1	4	5	7	17	34	1	97
Trans-tibial	16	432	395	561	498	1 902	6	138	99	179	298	720	2	2 624
Ankle disarticulation	2	11	1	1	1	16	2	-	-	5	1	8	-	24
Partial foot	4	19	8	8	10	49	4	11	4	4	4	27	-	76
Lower digits	-	3	4	3	1	11	-	3	-	1	1	5	-	16
Double lower amputation	5	31	33	59	55	183	2	28	17	26	21	94	-	277
All lower limb amputations <sup>1</sup>	36	791	750	1 056	979	3 612	24	278	221	428	700	1 651	4	5 267

1 Excludes cases of congenital absence.

**Chart 10** Level of amputation : 2001/02



## Cause and level

The preponderance of dysvascularity as a cause of amputation is clearly evident (70% of all lower limb amputations). It is important to note the reported incidence of lower limb amputation arising from dysvascularity has increased from 56 per cent in 1998/99 to 70 per cent this year. The most common level of amputation among neoplasia cases is at a trans-femoral level accounting for almost half of all neoplasia.

Although the aim is to collect the cause of lower limb amputation at a more detailed level, only the most basic level (No Additional Detail) was provided for nearly half of the trauma cases in 2001/02. This is consistent with previous years.

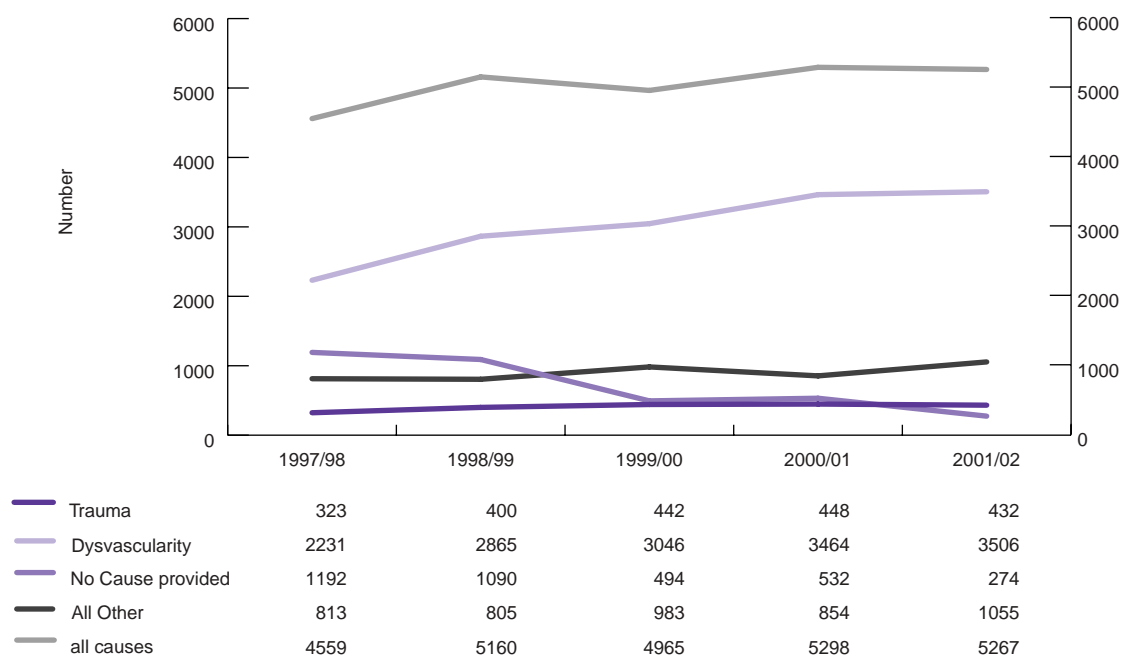
Overall there has been an improvement in the specificity of the coding. The percentage of records with "No Cause Provided" has fallen from 10% in 2000/01 to 5% in 2001/02.

**Table 11** Level of amputation<sup>1</sup> ; by cause of amputation : 2001/02

Cause of amputation	Level of amputation									Total
	Hemi pelvectomy	Hip disarticulation	Trans-femoral	Knee disarticulation	Trans-tibial	Ankle disarticulation	Partial foot	Digits	Double lower amp.	
<b>Trauma</b>	4	5	145	8	216	9	24	3	18	432
No Additional Detail	1	2	67	6	96	2	13	-	5	192
Mechanical	1	2	62	2	96	6	9	3	9	190
Electrical	2	1	12	-	18	-	1	-	2	36
Thermal	-	-	1	-	1	-	1	-	2	5
Chemical	-	-	3	-	5	1	-	-	-	9
<b>Dysvascularity</b>	4	6	1 411	53	1 793	2	30	5	202	3 506
No Additional Detail	1	4	427	21	431	1	12	1	54	952
Diabetes Mellitus	1	-	288	15	829	1	12	4	95	1 245
Non-diabetic Arteriosclerosis	2	1	598	14	456	-	5	-	44	1 120
Embolism	-	-	39	1	17	-	-	-	1	58
Vasospastic Conditions	-	-	4	1	5	-	-	-	2	12
Disseminated Intravascular Coagulation	-	-	1	-	2	-	-	-	2	5
Endovascular Chemical Trauma	-	-	2	-	1	-	-	-	-	4
Buerger's Disease	-	-	4	-	13	-	-	-	1	18
Buerger's Disease	-	-	1	-	5	-	-	-	-	6
Ischaemic Vasculopathy	-	-	17	-	15	-	-	-	1	33
Arteritis	-	-	30	1	19	-	1	-	2	53
Venous Disease	1	3	104	6	136	1	5	1	16	273
<b>Infection</b>	1	3	104	6	136	1	5	1	16	273
No Additional Detail	1	40	3	43	1	1	1	7	98	
Acute	-	-	13	2	17	-	1	-	8	41
Chronic	-	2	51	1	76	-	3	-	1	134
<b>Neurological Disorder</b>	-	-	11	-	50	1	2	2	2	68
No Additional Detail	-	-	1	-	16	-	-	-	-	17
Diabetic Neuropathy	-	-	2	-	21	-	2	2	1	28
Infective	-	-	1	-	4	-	-	-	-	5
Spina Bifida	-	-	7	-	5	1	-	-	1	14
Poliomyelitis	-	-	-	-	2	-	-	-	-	2
Peripheral Nerve Injury	-	-	-	-	2	-	-	-	-	2
<b>Neoplasia</b>	8	13	60	1	46	1	2	-	-	131
No Additional Detail	-	2	10	1	8	-	-	-	-	21
Benign	1	-	2	-	2	1	-	-	-	6
Malignant - Primary	7	9	44	-	34	-	2	-	-	96
Malignant - Secondary	-	2	4	-	2	-	-	-	-	8
<b>Other</b>	4	6	241	14	271	4	12	-	31	583
<b>No Cause Provided</b>	-	-	127	15	112	6	1	5	8	274
<b>All causes<sup>1</sup></b>	21	33	2 099	97	2 624	24	76	16	277	5 267

<sup>1</sup> Excludes congenital absence cases.

**Chart 11** Number of lower limb amputations by cause and year



The increase in dysvascularity may in part be due to improved data recording. There has been a significant decrease in the number of cases with “no cause provided”.

## Cause and age

Dysvascularity is the most common cause of lower limb amputation amongst all age groups with the exception of those aged under 16, where trauma is more common.

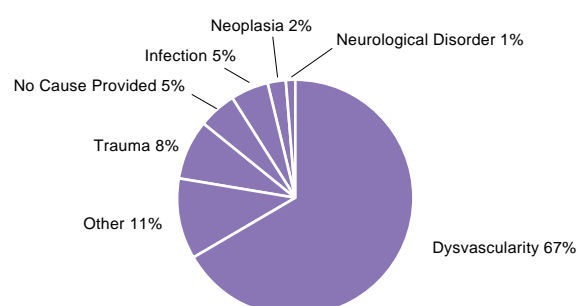
There is a strong association between age and cause of amputation. Thirty-nine per cent of new referrals aged 16-54 were as a result of dysvascularity compared with 74% in those aged over 75. Trauma, on the other hand, mainly occurred in the younger age groups with 71% of all lower limb referrals aged under 55 years resulting from this.

**Table 12** Cause of amputation<sup>1</sup>; by age : 2001/02

Cause of amputation	Age Group						Total
	less than 16	16-54	55-64	65-74	75 and over	No age given	
<b>Trauma</b>	<b>16</b>	<b>292</b>	<b>48</b>	<b>27</b>	<b>49</b>	-	<b>432</b>
No Additional Detail	7	123	24	16	22	-	192
Mechanical	6	133	20	7	24	-	190
Electrical	1	29	2	1	3	-	36
Thermal	2	1	1	1	-	-	5
Chemical	-	6	1	2	-	-	9
<b>Dysvascularity</b>	<b>13</b>	<b>412</b>	<b>693</b>	<b>1 136</b>	<b>1 250</b>	<b>2</b>	<b>3 506</b>
No Additional Detail	1	111	171	320	349	-	952
Diabetes Mellitus	3	154	281	433	373	1	1 245
Non-diabetic Arteriosclerosis	3	99	209	334	474	1	1 120
Embolism	1	13	11	13	20	-	58
Vasospastic Conditions	1	2	1	4	4	-	12
Disseminated Intravascular Coagulation	4	1	-	-	-	-	5
Endovascular Chemical Trauma	-	4	-	-	-	-	4
Buerger's Disease	-	12	2	3	1	-	18
Iatrogenic Vascular Trauma	-	1	-	3	2	-	6
Arteritis	-	7	7	8	11	-	33
Venous Disease	-	8	11	18	16	-	53
<b>Infection</b>	<b>3</b>	<b>90</b>	<b>38</b>	<b>69</b>	<b>73</b>	-	<b>273</b>
No Additional Detail	-	31	12	28	27	-	98
Acute	3	15	4	7	12	-	41
Chronic	-	44	22	34	34	-	134
<b>Neurological Disorder</b>	<b>3</b>	<b>34</b>	<b>16</b>	<b>9</b>	<b>6</b>	-	<b>68</b>
No Additional Detail	-	7	3	4	3	-	17
Diabetic Neuropathy	-	12	12	4	-	-	28
Infective	2	1	1	-	1	-	5
Spina Bifida	1	13	-	-	-	-	14
Poliomyelitis	-	1	-	1	-	-	2
Peripheral Nerve Injury	-	-	-	-	2	-	2
<b>Neoplasia</b>	<b>9</b>	<b>49</b>	<b>19</b>	<b>26</b>	<b>28</b>	-	<b>131</b>
No Additional Detail	1	9	1	6	4	-	21
Benign	1	2	1	1	1	-	6
Malignant - Primary	7	35	14	19	21	-	96
Malignant- Secondary	-	3	3	-	2	-	8
<b>Other</b>	<b>13</b>	<b>131</b>	<b>111</b>	<b>146</b>	<b>182</b>	-	<b>583</b>
<b>No Cause Provided</b>	<b>3</b>	<b>61</b>	<b>46</b>	<b>72</b>	<b>91</b>	<b>1</b>	<b>274</b>
<b>All causes<sup>1</sup></b>	<b>60</b>	<b>1 069</b>	<b>971</b>	<b>1 485</b>	<b>1 679</b>	<b>3</b>	<b>5 267</b>

1 Excludes congenital absence cases.

**Chart 12** Cause of amputation : 2001/02 including 'No cause provided'





UK Prosthetics Services  
**MISCELLANEOUS**

## Multiple amputations

The number of multiple amputations are small but this subgroup is important to identify since the care costs for each case can be substantial.

**Table 13** Multiple amputation<sup>1</sup> ; cause of amputation<sup>2</sup>, gender and age : 2001/02

Cause of amputation	Males				Total	Females				Total	
	less than	16-54	55-64	65-74		less than	16-54	55-64	65-74		
	16					16					
<b>Cross site amputation</b>	-	-	1	-	1	-	2	-	-	2	3
Trauma - Mechanical	-	-	-	-	-	-	1	-	-	1	1
Trauma - No Additional Detail	-	-	1	-	1	-	-	-	-	-	1
Other - No Additional Detail	-	-	-	-	-	-	1	-	-	1	1
<b>Triple amputation</b>	-	-	-	-	-	1	1	-	-	2	2
Infection - Acute	-	-	-	-	-	1	-	-	-	1	1
Infection - Acute <sup>3</sup>	-	-	-	-	-	-	1	-	-	1	1
<b>Quadruple amputation</b>	-	-	-	-	-	-	2	-	-	2	2
Infection - Acute	-	-	-	-	-	-	1	-	-	1	1
Infection - Acute <sup>3</sup>	-	-	-	-	-	-	1	-	-	1	1
<b>Total</b>	-	-	-	-	1	1	5	-	-	6	7

1 Bilateral upper limb & bilateral lower limb amputations appear in previous tables.

2 Excludes congenital absence cases.

3 1999/00 data.

## Congenital absence

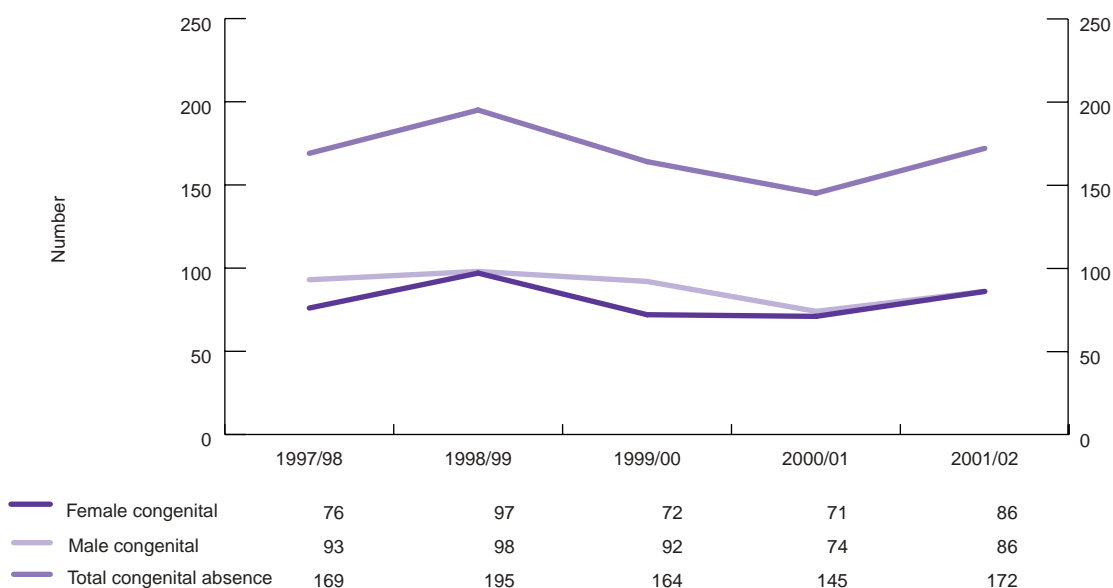
There is an even split in the sex of patients with congenital absence. Although patients with congenital limb loss may typically be referred at a young age a significant number (36%) presented after the age of 15. Patients with upper limb congenital absence tend to be referred at a younger age than those with lower limb absence. Three-quarters of all such upper limb referrals were aged under 16 whereas only half of the lower limbs were in this age range.

**Table 14** Congenital absence ; by prosthetics service centre, gender and age : 2001/02

Prosthetics Service Centre	Males					Females					Total		
	less than 16	16-54	55-64	65-74	75 and over	All ages	less than 16	16-54	55-64	65-74		75 and over	All ages
<b>Upper limb</b>													
Belfast	2	-	-	-	-	2	2	-	-	1	-	3	5
Birmingham	2	-	-	-	-	2	1	-	-	-	-	1	3
Bristol	2	-	-	-	-	2	-	-	-	-	-	-	2
Cambridge	1	-	-	-	-	1	2	1	-	-	-	3	4
Cardiff	1	-	-	-	-	1	-	-	-	-	-	-	1
Derby <sup>1</sup>	1	-	-	-	-	1	-	-	-	-	-	-	1
Edinburgh	-	-	-	-	-	-	-	-	-	-	1	1	1
Gillingham	1	-	-	-	-	1	4	-	-	-	-	4	5
Glasgow (Strathclyde University)	4	2	-	-	-	6	-	-	-	-	-	-	6
Glasgow (Westmarc)	-	-	1	-	-	1	-	-	-	-	-	-	1
Leeds	-	-	-	-	-	-	3	-	-	-	-	3	3
Leicester	-	-	-	-	-	-	1	1	-	-	-	2	2
Liverpool (Fazakerley)	-	2	-	-	-	2	-	-	-	-	-	-	2
London (Harold Wood)	3	-	-	-	-	3	4	1	-	-	-	5	8
London (Kings)	1	-	-	-	-	1	-	-	-	-	-	-	1
London (Roehampton)	1	-	-	-	-	1	2	-	-	-	-	2	3
London (Stanmore)	5	-	-	-	-	5	4	1	1	-	-	6	11
Manchester	1	-	-	-	-	1	2	-	-	-	-	2	3
Newcastle	-	1	-	1	-	2	2	1	-	-	-	3	5
Norwich	2	-	-	-	-	2	1	-	-	-	-	1	3
Nottingham	1	1	-	-	-	2	3	-	-	-	-	3	5
Oxford <sup>1</sup>	1	1	-	-	-	2	3	-	2	-	-	5	7
Portsmouth	-	1	-	-	-	1	-	-	-	-	-	-	1
Preston	-	2	-	-	-	2	-	-	-	-	-	-	2
Ringwood	2	-	-	-	-	2	-	-	-	-	-	-	2
Sheffield	1	-	-	-	-	1	1	-	-	-	-	1	2
Wirral	-	-	-	-	-	-	2	-	-	-	-	2	2
<b>Total</b>	<b>32</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>44</b>	<b>37</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>47</b>	<b>91</b>
<b>Lower limb</b>													
Belfast	-	-	-	1	-	1	1	1	-	-	-	2	3
Birmingham	2	-	-	-	-	2	2	-	-	-	1	3	5
Bristol	-	1	-	-	-	1	-	1	-	-	-	1	2
Cambridge	2	1	-	-	-	3	-	2	1	-	-	3	6
Cleveland	-	-	-	-	-	-	-	2	-	-	-	2	2
Cardiff	1	-	-	-	-	1	2	-	-	-	-	2	3
Derby <sup>1</sup>	2	-	-	-	-	2	-	-	-	1	-	1	3
Dundee	1	-	-	-	-	1	-	-	-	-	-	-	1
Gillingham	-	2	1	-	1	4	-	-	-	-	-	-	4
Glasgow (Strathclyde University)	1	-	-	-	-	1	-	-	-	-	-	-	1
Leeds	-	1	-	-	-	1	-	-	-	-	-	-	1
Leicester	1	1	-	-	-	2	-	-	-	-	-	-	2
Liverpool (Fazakerley)	1	-	-	-	-	1	-	2	-	-	-	2	3
London (Harold Wood)	-	-	-	-	-	-	2	-	-	-	-	2	2
London (Kings)	1	-	-	-	-	1	-	-	-	1	-	1	2
London (Roehampton)	1	-	1	-	-	2	-	-	-	-	-	-	2
London (Stanmore)	4	2	-	-	-	6	2	1	-	-	-	3	9
Luton & Dunstable	-	-	-	-	-	-	1	-	-	-	-	1	1
Manchester	-	-	-	-	-	-	3	-	-	-	-	3	3
Newcastle	-	-	1	-	-	1	-	1	-	-	-	1	2
Norwich	-	1	-	-	-	1	-	-	-	-	-	-	1
Nottingham	1	-	-	-	-	1	-	-	-	-	-	-	1
Oxford <sup>1</sup>	2	-	-	-	-	2	2	1	1	-	-	4	6
Portsmouth	1	1	-	-	1	3	1	-	-	-	-	1	4
Ringwood	-	-	1	-	-	1	-	-	-	-	-	-	1
Sheffield	1	-	-	-	-	1	-	3	-	-	-	3	4
Stoke	-	-	-	-	-	-	1	-	-	-	-	1	1
Swansea	-	-	-	-	-	-	1	-	-	-	-	1	1
Wirral	1	-	-	-	-	1	-	1	-	-	-	1	2
Wolverhampton	1	-	-	-	-	1	-	1	-	-	-	1	2
Wrexham	-	1	-	-	-	1	-	-	-	-	-	-	1
<b>Total</b>	<b>24</b>	<b>11</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>42</b>	<b>18</b>	<b>16</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>39</b>	<b>81</b>
<b>All congenital absence</b>	<b>56</b>	<b>21</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>86</b>	<b>55</b>	<b>21</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>86</b>	<b>172</b>

1 1999/00 data.

**Chart 14a** Number of congenital absences by gender and year



The number of cases referred with a congenital absence fluctuates year on year although the gender split is remains fairly even.

**Chart 14b** Number of congenital absences by level and year



The number of referrals with a congenital absence of upper limbs tends to be more stable over time than the number with a lower limb congenital absence

## Time interval

Table 15 illustrates the variation from centre to centre in the time interval between date of amputation and referral to a prosthetics centre. The table contains valuable information but require careful interpretation. The variation is mainly accounted for by differences in surgical and physiotherapy practice and in the operational policies of centres.

Almost half of all referrals to prosthetics centres are carried out within 2 weeks of amputation. There is clearly a very wide variation in practices between centres: practice is a composite of referring hospital and individual centres practice. The intervals recorded will also be affected by intercurrent disease episodes.

**Table 15** Time interval between date of amputation and referral ;  
by prosthetics service centre : 2001/02 (cumulative percentage)

Prosthetics Service Centre	Time interval <sup>1</sup>						Total no. (= 100 %)	No Wait Calculated	Total
	2 weeks or less	4 weeks or less	8 weeks or less	12 weeks or less	16 weeks or less	Over 16 weeks			
	Cumulative percentages <sup>2</sup>								
Aberdeen	52.8	69.4	77.8	94.4	97.2	100.0	36	-	36
Belfast	62.5	77.3	92.0	92.0	93.2	100.0	88	1	89
Birmingham	55.3	75.7	85.2	88.1	91.0	100.0	378	-	378
Bristol	33.8	64.2	82.4	92.6	95.3	100.0	148	-	148
Cambridge	62.4	79.7	90.2	93.2	94.7	100.0	133	-	133
Cardiff	69.0	84.5	92.9	97.0	97.0	100.0	168	-	168
Carlisle	72.5	87.5	95.0	95.0	100.0	100.0	40	-	40
Cleveland	48.5	68.4	80.9	87.5	90.4	100.0	136	-	136
Derby <sup>3</sup>	-	-	-	-	-	-	39	9	48
Dundee	74.8	81.1	85.6	91.0	97.3	100.0	111	-	111
Edinburgh	15.6	56.3	87.5	96.9	96.9	100.0	64	-	64
Exeter	60.8	83.5	93.7	96.8	97.5	100.0	158	-	158
Gillingham	59.9	79.7	94.0	96.2	97.3	100.0	182	-	182
Glasgow (Strathclyde University)	47.8	60.9	82.6	87.0	91.3	100.0	23	3	26
Glasgow (Westmarc)	19.6	53.1	78.1	89.7	94.2	100.0	224	1	225
Hull	61.1	76.9	83.3	88.9	90.7	100.0	108	4	112
Inverness	6.9	31.0	82.8	100.0	100.0	100.0	29	-	29
Isle of Wight <sup>4</sup>	53.8	76.9	92.3	100.0	100.0	100.0	13	2	15
Leeds	2.3	10.9	49.2	80.5	90.6	100.0	128	-	128
Leicester	42.6	51.1	61.7	63.8	72.3	100.0	47	-	47
Liverpool (Fazackerley)	58.2	80.1	92.5	95.9	97.9	100.0	146	-	146
London (Charing Cross) <sup>4</sup>	22.2	41.7	61.1	75.0	83.3	100.0	72	-	72
London (Harold Wood)	31.4	54.0	78.2	88.7	91.6	100.0	239	-	239
London (Kings)	28.3	53.5	76.8	83.8	85.9	100.0	99	-	99
London (Roehampton)	34.6	59.6	81.7	86.5	91.3	100.0	104	7	111
London (Stanmore)	58.9	72.0	89.1	92.0	94.9	100.0	175	9	184
Luton & Dunstable	35.8	75.3	88.9	92.6	97.5	100.0	81	-	81
Manchester	42.3	73.4	91.8	95.2	96.9	100.0	293	-	293
Newcastle	16.9	32.8	68.3	82.0	87.8	100.0	189	-	189
Northampton	37.5	65.6	79.7	90.6	93.8	100.0	64	-	64
Norwich	27.4	37.7	66.0	74.5	81.1	100.0	106	-	106
Nottingham	40.0	66.4	84.3	90.0	96.4	100.0	140	14	154
Oxford <sup>5</sup>	25.3	46.9	66.0	79.0	81.5	100.0	162	-	162
Plymouth	84.6	93.8	96.9	97.7	99.2	100.0	130	-	130
Portsmouth	33.3	49.6	77.8	85.9	87.4	100.0	135	-	135
Preston	44.4	63.4	81.5	91.8	93.1	100.0	232	-	232
Ringwood	64.0	81.4	91.9	96.5	97.7	100.0	86	-	86
Sheffield	76.0	88.0	96.4	97.8	97.8	100.0	275	3	278
Stoke	66.0	81.6	92.2	94.3	96.5	100.0	141	-	141
Sussex	12.6	41.1	74.7	88.4	97.9	100.0	95	-	95
Swansea	68.8	87.5	98.4	98.4	99.2	100.0	128	-	128
Wirral	59.6	80.8	89.9	93.9	98.0	100.0	99	-	99
Wolverhampton	33.7	49.7	79.1	90.8	95.1	100.0	163	-	163
Wrexham	27.3	50.0	71.2	77.3	86.4	100.0	66	-	66
All centres (percentage)	<b>45.9</b>	<b>65.9</b>	<b>83.1</b>	<b>89.8</b>	<b>92.9</b>	<b>100.0</b>			
All centres (number)	2 603	1 137	975	381	173	404	5 673	53	5 726

1 2 weeks or less equals 0-14 days, 4 weeks or less equals 15-28 days.

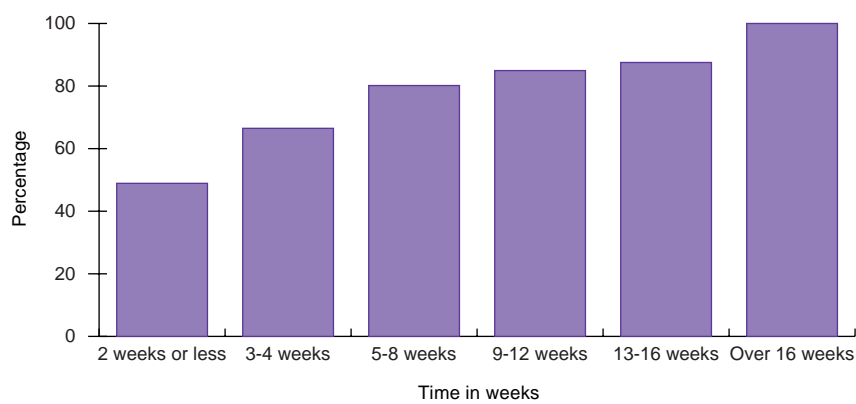
2 The cumulative percentage has been calculated excluding cases where no date of amputation has been supplied.

3 No Derby data available.

4 2000/01 data.

5 1999/00 data.

**Chart 15** Percentage (cumulative) of time taken from amputation to date of referral : 2001/02



# APPENDICES

## Appendix 1

### Hospital Activity Analysis: UK Upper and Lower Primary Amputations 2001/02

OPCS Code	Operation	England	Scotland	Wales <sup>1</sup>	Northern Ireland <sup>1</sup>	Total
<b>Total</b>		<b>13,959</b>	<b>1846</b>	<b>947</b>	<b>478</b>	<b>17,230</b>
X07	Amputation of Arm	116	15	5	1	137
X08	Amputation of Hand	3,081	368	258	188	3,895
X09	Amputation of Leg	5,415	796	350	141	6,702
X10	Amputation of Foot	569	76	33	14	692
X11	Amputation of Toe	4,778	591	301	134	5,804

1 2000/01 data.

Source: England - DOH - Hospital Episodes, Northern Ireland - Hospital Inpatient Systems, Scotland - ISD Scotland SMR01, Wales - WAREHOUSEDB - Discharges.

- X07 includes forequarter amputation, disarticulation of shoulder, amputation of arm above elbow, amputation of arm through elbow, amputation of arm through forearm and other amputation of arm.
- X08 includes amputation of hand at wrist, amputation of thumb, amputation of phalanx of finger, amputation of finger (nec) and other amputation of hand.
- X09 includes hindquarter amputation, disarticulation of hip, amputation of left above knee, amputation of leg through knee, amputation of leg below knee and other amputation of knee.
- X10 includes amputation of foot through ankle, disarticulation of tarsal bones, disarticulation of metatarsal bones, amputation through metatarsal bones and other amputation of foot.
- X11 includes amputation of great toe, amputation of phalanx of toe and other amputation of toe.

## Appendix 2

### Minimum Dataset Fields

#### Field Name

Patient Number  
Date of Birth  
Purchaser Code  
Centre Code  
Gender  
Is this a New Amputee  
Ethnic Origin

#### Left Upper Limb Amputation Details

Date of Referral following a Left Upper Amputation  
Date of Amputation  
Level of Amputation  
Cause of Amputation (Aetiology)

#### Right Upper Limb Amputation Details

Date of Referral following a Right Upper Amputation  
Date of Amputation  
Level of Amputation  
Cause of Amputation (Aetiology)

#### Left Lower Limb Amputation Details

Date of Referral following a Left Lower Amputation  
Date of Amputation  
Level of Amputation  
Cause of Amputation (Aetiology)

#### Right Lower Limb Amputation

Date of Referral following a Right Lower Amputation  
Date of Amputation  
Level of Amputation  
Cause of Amputation (Aetiology)

## Appendix 3

### List of Level and Cause of Amputation Codes

#### Level of Amputation ó Codes used in the Minimum Dataset

##### Upper Limb

01	Forequarter
02	Shoulder Disarticulation
03	Trans-humeral
04	Elbow Disarticulation
05	Trans-radial
06	Wrist Disarticulation
07	Partial Hand
08	Digits

##### Lower Limb

09	Hemi-pelvectomy
10	Hip Disarticulation
11	Trans-femoral
12	Knee Disarticulation
13	Trans-tibial
14	Ankle Disarticulation (Syme)
15	Partial Foot
16	Digits

#### Cause of Amputation (Aetiology) — Codes used in the Minimum Dataset

##### Trauma

1.0	No Additional Detail
1.1	Mechanical
1.2	Electrical
1.3	Thermal
1.4	Chemical

##### Dysvascularity

2.0	No Additional Detail
2.1	Diabetes Mellitus
2.2	Non-diabetic Arteriosclerosis
2.3	Embolism
2.4	Vasospastic Conditions (inc. Raynaud's)
2.5	Disseminated Intravascular Coagulation
2.6	Endovascular Chemical Trauma (= Substance Abuse)
2.7	Buerger's Disease
2.8	Iatrogenic Vascular Trauma
2.9	Arteritis (inc. Rheumatoid Arthritis, Autoimmune Disease)
2.A	Venous Disease

##### Infection

3.0	No Additional Detail
3.1	Acute
3.2	Chronic

##### Neurological Disorder

4.0	No Additional Detail
4.1	Diabetic Neuropathy
4.2	Infective (inc. Leprosy, Madura Foot)
4.3	Spina Bifida
4.4	Poliomyelitis
4.5	Peripheral Nerve Injury

##### Neoplasia

5.0	No Additional Detail
5.1	Benign
5.2	Malignant - Primary
5.3	Malignant - Secondary

##### Congenital Absence

6.0	No Additional Detail
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##### Other

7.0	No Additional Detail
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## Appendix 4

### List of Prosthetics Service Centres Submitting Data

Location	Centre Name
Aberdeen	Grampian Primary Care NHS Trust
Belfast	Belfast Disablement Services Centre
Birmingham	West Midlands Regional Rehabilitation Centre
Bristol	Disablement Services Centre
Cambridge	Addenbrookes Disablement Services Centre
Cardiff	Rookwood Artificial Limb and Appliance Centre
Carlisle	Carlisle Disablement Services Centre
Cleveland	Cleveland Disablement Services Centre
Derby	Derby Limb Centre
Dundee	Dundee Limb Fitting Centre
Edinburgh	Rehabilitation Engineering Services
Exeter	Exeter Mobility Centre
Gillingham	Gillingham Disablement Services Centre
Glasgow (Strathclyde University)	University of Strathclyde
Glasgow (Westmarc)	Westmarc
Hull	Hull & East Yorkshire Artificial Limb Unit
Inverness	Orthotics and Limb Fitting Services
Isle of Wight	The Prosthetics, Orthotics and Podiatry Department
Leeds	Leeds Disablement Services Centre
Leicester	Leicestershire Disablement Services Centre
Liverpool (Fazakerley)	The Donald Tod Rehabilitation Centre
London (Charing Cross)	Holderness Limb Fitting Centre
London (Harold Wood)	Harold Wood Disablement Services Centre
London (Kings)	Kings College Hospital NHS Trust Rehabilitation Centre
London (Roehampton)	Roehampton Rehabilitation Centre
London (Stanmore)	Stanmore Disablement Services Centre
Luton & Dunstable	Luton & Dunstable Disablement Services Centre
Manchester	Manchester Disablement Services Centre
Newcastle	Newcastle Disablement Services Centre
Northampton	Northampton Artificial Limb Service
Norwich	Norwich Disablement Services Centre
Nottingham	Nottingham Mobility Centre
Oxford	Oxford Centre for Enablement
Plymouth	Plymouth Disablement Services Centre
Portsmouth	Portsmouth Disablement Services Centre
Preston	Preston Disablement Services Centre
Ringwood*	Dorset Prosthetic Centre
Sheffield	Sheffield Mobility and Specialised Rehabilitation Centre
Stoke	North Midlands Limb Fitting Centre
Sussex	Sussex Rehabilitation Centre
Swansea	Swansea Artificial Limb and Appliance Service
Wirral	Wirral Limb Centre
Wolverhampton	Maltings Mobility Centre
Wrexham	North Wales Artificial Limb and Appliance Centre

\* Now based in Bournemouth