

# End of Life Care Strategy

Promoting high quality care for all adults at the end of life.



*Survey of expenditure by primary care trusts  
on hospice/specialist palliative care services  
for the year 2006/07*

July 2008



# Survey of expenditure by primary care trusts on hospice/specialist palliative care services for the year 2006/07

## Analysis and report on returns received by Department of Health

### Introduction

The questionnaire was circulated by the Department to all Primary Care Trusts (PCTs) on 7 February 2008. The analysis which follows is of those 151 returns that were received out of a possible total of 152.

A copy of the questionnaire is attached as Appendix 1.

### Interpretation of the questionnaire

It is clear from the returns that many PCTs do not find it easy to differentiate hospice/specialist palliative care services from end of life care or general palliative care services. The reference in the Department's letter (that accompanied the questionnaire) to the PCT baseline reviews of end of life care services and to questions 10.1 and 10.2 in particular was intended to be helpful in avoidance of such difficulties. However, that did not always occur.

The overriding problem for the analysis has been to decide to what extent data in respect of some services should be weeded out and excluded from the survey returns. Given the multitude of variations in local nomenclature of services, it has not been possible to provide a perfect solution to the problem. In the end a decision has been taken to include in the analysis expenditure on all services that appeared to be specifically in respect of palliative care even though it is clear that not all these services would comply with the definition of specialist services as set out in the NICE Guidance on Supportive and Palliative Care. Exclusion of data has been in respect of expenditure on generic services where palliative care is merely one element of such services, eg district nursing.

In order that some understanding is achieved about how in practice these exclusions and inclusions have been decided, a list of notes to 32 of the entries on Table 1 have been provided at the end of the Table.

### Availability of data

In general PCTs have been able to provide robust data on what they expend on voluntary hospice services. Ready availability of data on what they expend on NHS-managed services is variable. The most significant problem is in respect of expenditure on specialist palliative care support teams in hospitals. This difficulty arises because this expenditure by acute trusts is non-tariff and consequently not identifiable. The net result for this survey is that some PCTs have

provided estimates of this expenditure but most have not. It also needs to be recognised that even when such estimates have been entered on the questionnaire, no data has been provided about the proportions of such estimates that should be allocated to specific PCTs.

### **Effect of definitional and data availability constraints on survey reliability**

**It needs to be recognised that the difficulties described above do have an effect on the reliability of the survey.** However, it is considered that such effects are likely to be somewhat marginal in most cases. Evidently, more comprehensive and more relevant and less irrelevant data would increase the overall reliability and would, as far as individual PCTs are concerned, result in them moving a few places up or down the national ranking. It is not, however, thought that the general conclusions that follow are likely to be materially affected.

### **Survey results**

The raw data has been inserted on a spreadsheet containing data for all individual PCTs on population, annual incidence of mortality analysed by principal causes of death and indices of comparative resource need per head of population. This spreadsheet is attached at Appendix 2. The data from the survey together with analysis of it is to be found in columns AQ to BK.

The data from the spreadsheet has been extracted and inserted into Table 1 which is to be found later in this report. This records the individual expenditure for each responding PCT analysed by expenditure on voluntary adult services, NHS adult services and children's services. Also included is a rate of spend per head of population for adult services. Summary figures are provided by Strategic Health Authority (SHA) and for England as a whole.

Tables 2 and 3 provide estimates of additional expenditure (if any) that each PCT would need to incur in four different scenarios.

There are 10 further tables, one for each SHA. These provide information about individual PCT expenditure related to differential population need.

#### ***Results from Table 1***

Total expenditure on adult services for the 151 responding PCTs is around £245 million of which £133 million is expended on voluntary services and £112 million on NHS services. This is to be compared with the estimate produced by DH in 2006 of £211 to £233 million for a somewhat narrower definition of services.

Although not specifically requested, 27 out of 152 PCTs provided information on children's hospices and specialist palliative care services. Total expenditure on children's services from these 27 PCTs in 2006/07 is around £1.9 million. The Department of Health (DH) report in 2006 estimated expenditure at £1 million across England.

The rate of expenditure per head of population varies from £13.39 in Isle of Wight down to £1.71 in Kirklees. This variation bears detailed examination to ascertain whether there are any key factors to explain the difference. The individual returns show that on the Isle of Wight almost all the expenditure would be classified as on specialist services. In Kirklees there appears to be only one omission and that is in respect of hospital support services. However, even if data was available for that, the variation would still remain very wide.

The average rate of spend for the 151 PCTs is £4.88. 73 PCTs have rates above that and 78 below.

The averages for the PCTs in each SHA vary from £5.66 down to £3.75 i.e. about 16% above to about 23% below the average.

### **General conclusions from Table 1**

There appears to be a genuinely wide variation in expenditure per head of population. It is unlikely to be narrowed by very much even if more comprehensive data became available for individual PCTs.

There is a pressing need for PCTs to be able to provide readily available data about expenditure on specialist services in the NHS. Despite the requirements of the end of life care baseline review, it does not yet appear that many PCTs can do that.

TABLE 1	PCTs	Population mid 2005	PCT expenditure 2006/07				
	North East		On voluntary adult services	On NHS adult services	On all adult services	£ Per head of population	On children's services
1	County Durham	499,759	1,360,247	722,497	2,082,744	4.17	
2	Darlington	99,177	382,497	0	382,497	3.86	
3	Gateshead	191,479	474,782	195,518	670,300	3.50	
4	Hartlepool	90,012	380,116	665,493	1,045,609	11.62	
5	Middlesborough	137,571	437,293	448,746	886,039	6.44	117,312
6	Newcastle	276,377	1,198,249	529,384	1,727,633	6.25	
7	North Tees Teaching	186,681	514,053	431,238	945,291	5.06	
8	North Tyneside	192,319	473,498	986,722	1,460,220	7.59	
9	Northumberland Care	311,329	549,496	969,861	1,519,357	4.88	87,871
10	Redcar & Cleveland	138,599	276,491	405,863	682,354	4.92	
11	South Tyneside	151,316	418,949	174,984	593,933	3.93	
12	Sunderland Teaching	283,689	0	2,059,328	2,059,328	7.26	
	<b>Totals</b>	<b>2,558,308</b>	<b>6,465,671</b>	<b>7,589,634</b>	<b>14,055,305</b>	<b>5.49</b>	<b>205,183</b>

TABLE 1	PCTs	Population mid 2005	PCT expenditure 2006/07				
	North West		On voluntary adult services	On NHS adult services	On all adult services	£ Per head of population	On children's services
13	Ashton Leigh & Wigan	306,680	1,217,635	86,557	1,304,192	4.25	118,000
14	Blackburn with Darwen	140,228	0	941,177	941,177	6.71	
15	Blackpool	142,915	896,687	109,565	1,006,252	7.04	
16	Bolton	265,372	1,031,674	258,354	1,290,028	4.86	
17	Bury	183,486	292,659	210,282	502,941	2.74	
18	Central & Eastern Cheshire	447,389	1,128,000	906,000	2,034,000	4.55	
19	Central Lancashire	450,256	1,445,791	650,894	2,096,685	4.66	
20	Cumbria Teaching	498,870	1,216,343	1,844,309	3,060,652	6.14	
21	East Lancashire Teaching	381,519	764,368	1,002,582	1,766,950	4.63	
22	Halton & St Helens	295,027	794,705	1,000,868	1,795,573	6.09	
23	Heywood Middleton & Rochdale						
24	Knowsley	149,383	339,678	449,042	788,720	5.28	
25	Liverpool	447,457	2,292,047	1,526,392	3,818,439	8.53	
26	Manchester	441,184	798,497	1,379,341	2,177,838	4.94	
27	North Lancashire Teaching	324,348	2,031,250	101,719	2,132,969	6.58	
28	Oldham	219,178	519,337	362,652	881,989	4.02	
29	Salford	216,428	1,105,778	262,000	1,367,778	6.32	
30	Sefton	280,942	770,205	921,446	1,691,651	6.02	
31	Stockport	281,628	714,755	408,880	1,123,635	3.99	
32	Tameside & Glossop	247,338	451,451	348,693	800,144	3.23	
33	Trafford	213,196	946,100	768,200	1,714,300	8.04	
34	Warrington	194,711	554,000	498,833	1,052,833	5.41	
35	Western Cheshire	232,468	532,000	421,000	953,000	4.10	
36	Wirral	313,079	1,151,576	437,585	1,589,161	5.08	
	<b>Totals</b>	<b>6,673,082</b>	<b>20,994,536</b>	<b>14,896,371</b>	<b>35,890,907</b>	<b>5.38</b>	<b>118,000</b>

TABLE 1	PCTs	Population mid 2005	PCT expenditure 2006/07				
	Yorkshire & Humber		On voluntary adult services	On NHS adult services	On all adult services	£ Per head of population	On children's services
37	Barnsley	222,120	831,900	734,000	1,565,900	7.05	
38	Bradford & Airedale	485,015	1,946,904	366,431	2,313,335	4.77	
39	Calderdale	195,291	358,431	541,388	899,769	4.61	
40	Doncaster	289,602	0	1,538,613	1,538,613	5.31	
41	East Riding of Yorkshire	327,378	256,450	372,522	628,972	1.92	19,354
42	Hull Teaching	249,047	550,324	420,320	970,644	3.90	
43	Kirklees	394,557	675,794	0	675,794	1.71	
44	Leeds	723,088	3,672,222	930,000	4,602,222	6.36	147,333
45	North East Lincolnshire Care	158,777	421,000	830,000	1,251,000	7.88	
46	North Lincolnshire	153,416	550,595	205,915	756,510	4.93	
47	North Yorkshire & York	768,721	2,068,581	1,149,688	3,218,269	4.19	10,068
48	Rotherham	253,214	1,046,183	144,364	1,190,547	4.70	
49	Sheffield	520,679	2,241,000	2,457,500	4,698,500	9.02	117,000
50	Wakefield District	320,628	1,047,615	301,928	1,349,543	4.21	10,896
	<b>Totals</b>	<b>5,061,583</b>	<b>15,666,999</b>	<b>9,992,619</b>	<b>25,659,618</b>	<b>5.07</b>	<b>304,651</b>
	<b>East Midlands</b>						
51	Bassetlaw	110,716	22,724	1,038,512	1,061,236	9.59	
52	Derby City	233,748	232,004	1,130,000	1,362,004	5.83	
53	Derbyshire County	714,284	2,255,910	838,000	3,093,910	4.33	15,000
54	Leicester City	288,016	745,909	383,010	1,128,919	3.92	
55	Leicestershire County & Rutland	665,154	1,755,381	1,312,860	3,068,241	4.61	
56	Lincolnshire	681,056	2,023,700	882,200	2,905,900	4.27	
57	Northamptonshire	651,824	116,783	3,405,773	3,522,556	5.40	
58	Nottingham City	278,693	78,000	1,034,000	1,112,000	3.99	6,000
59	Nottinghamshire County Teaching	651,971	1,028,302	2,748,846	3,777,148	5.79	
	<b>Totals</b>	<b>4,275,462</b>	<b>8,258,713</b>	<b>12,773,201</b>	<b>21,031,914</b>	<b>4.92</b>	<b>21,000</b>

TABLE 1	PCTs	Population mid 2005	PCT expenditure 2006/07				
	West Midlands		On voluntary adult services	On NHS adult services	On all adult services	£ Per head of population	On children's services
60	Birmingham East & North	396,780	915,199	1,801,199	2,716,398	6.85	
61	Coventry Teaching	304,236	1,215,188	568,527	1,783,715	5.86	
62	Dudley	305,620	742,509	1,376,702	2,119,211	6.93	
63	Heart of Birmingham Teaching	266,619	475,917	349,174	825,091	3.09	
64	Herefordshire	178,763	458,981	294,627	753,608	4.21	
65	North Staffordshire	210,199	728,953	106,784	835,737	3.98	
66	Sandwell	286,305	953,510	451,353	1,404,863	4.91	
67	Shropshire County	289,021	1,137,926	535,399	1,673,325	5.79	
68	Solihull Care	200,886	617,364	276,366	893,730	4.45	52,000
69	South Birmingham	337,786	919,415	184,177	1,103,592	3.27	64,408
70	South Staffordshire	598,630	1,631,209	137,915	1,769,124	2.96	
71	Stoke on Trent	246,150	1,139,155	124,054	1,263,209	5.13	
72	Telford & Wrekin	161,599	499,213	103,490	602,703	3.73	27,950
73	Walsall Teaching	253,463	475,792	1,513,389	1,989,181	7.85	28,797
74	Warwickshire	533,939	977,843	995,621	1,973,464	3.70	27,717
75	Wolverhampton City	239,610	709,484	0	709,484	2.96	
76	Worcestershire	555,832	861,987	1,677,000	2,538,987	4.57	
	<b>Totals</b>	<b>5,345,438</b>	<b>14,459,645</b>	<b>10,495,777</b>	<b>24,955,422</b>	<b>4.65</b>	<b>200,872</b>
	<b>East of England</b>						
77	Bedfordshire	397,717	964,211	751,509	1,715,720	4.31	50,775
78	Cambridgeshire	588,886	0	2,080,000	2,080,000	3.53	195,000
79	East & North Hertfordshire	518,416	2,166,060	0	2,166,060	4.18	
80	Great Yarmouth & Waveney	207,222	85,177	456,856	542,033	2.62	
81	Luton	184,895	469,920	217,121	687,041	3.72	78,528
82	Mid Essex	357,222	1,209,767	914,081	2,123,848	5.95	
83	Norfolk	731,721	190,696	2,713,300	2,903,996	3.97	
84	North East Essex	305,174	2,276,953	0	2,276,953	7.46	
85	Peterborough	159,706	756,423	768,295	1,524,718	9.55	
86	South East Essex	325,814	468,532	589,724	1,058,256	3.25	12,344
87	South West Essex	384,494	993,076	140,754	1,133,830	2.95	33,783



TABLE 1	PCTs	Population mid 2005	PCT expenditure 2006/07				
	East of England (continued)		On voluntary adult services	On NHS adult services	On all adult services	£ Per head of population	On children's services
88	Suffolk	577,378	2,217,345	107,000	2,324,345	4.02	
89	West Essex	273,220	674,725	747,930	1,422,655	5.21	
90	West Hertfordshire	529,771	1,684,410	691,428	2,375,838	4.48	
	<b>Totals</b>	<b>5,541,636</b>	<b>14,157,295</b>	<b>10,177,998</b>	<b>24,335,293</b>	<b>4.39</b>	<b>370,430</b>
	<b>London</b>						
91	Barking & Dagenham	164,521	429,045	393,838	822,883	5.00	
92	Barnet	329,861	958,000	0	958,000	2.90	
93	Bexley Care	220,310	875,551	0	875,551	3.97	
94	Brent Teaching	270,084	681,760	1,282,161	1,963,921	7.27	
95	Bromley	301,926	2,186,000	518,800	2,704,800	8.96	
96	Camden	226,102	771,438	966,911	1,738,349	7.69	
97	City & Hackney Teaching	216,927	1,738,349	381,994	2,120,343	9.77	58,000
98	Croydon	342,697	1,358,262	374,290	1,732,552	5.06	
99	Ealing	301,783	11,000	1,749,000	1,760,000	5.83	
100	Enfield	280,540	349,000	528,890	877,890	3.13	
101	Greenwich Teaching	228,145	500,875	940,082	1,440,957	6.32	
102	Hammersmith & Fulham	179,850	155,172	778,220	933,392	5.19	
103	Haringey Teaching	224,477	457,644	559,701	1,017,345	4.53	
104	Harrow	213,961	525,547	577,029	1,102,576	5.15	
105	Havering	226,209	546,213	626,192	1,172,405	5.18	29,561
106	Hillingdon	252,404	221,006	320,314	541,320	2.14	
107	Hounslow	212,508	0	1,767,701	1,767,701	8.32	
108	Islington	182,637	492,874	1,196,473	1,689,347	9.25	
109	Kensington & Chelsea	196,232	255,552	704,861	960,233	4.89	
110	Kingston	153,027	395,178	366,569	761,747	4.98	
111	Lambeth	269,127	1,124,107	362,180	1,486,287	5.52	
112	Lewisham	247,463	1,123,556	201,000	1,324,556	5.35	
113	Newham	246,230	742,800	489,900	1,232,700	5.01	156,300
114	Redbridge	251,502	283,526	346,260	629,786	2.50	66,970
115	Richmond & Twickenham	186,265	253,000	204,674	457,674	2.46	

TABLE 1	PCTs	Population mid 2005	PCT expenditure 2006/07				
	London (continued)		On voluntary adult services	On NHS adult services	On all adult services	£ Per head of population	On children's services
116	Southwark	257,675	811,038	827,000	1,638,038	6.36	
117	Sutton & Merton	372,439	1,346,206	295,500	1,641,706	4.41	
118	Tower Hamlets	213,178	622,740	546,800	1,169,540	5.49	
119	Waltham Forest	224,067	347,911	483,588	831,499	3.71	
120	Wandsworth	281,394	840,392	286,220	1,126,612	4.00	
121	Westminster	244,365	1,186,500	345,718	1,532,218	6.27	
	<b>Totals</b>	<b>7,517,906</b>	<b>21,590,242</b>	<b>18,421,686</b>	<b>40,011,928</b>	<b>5.32</b>	<b>310,831</b>
	<b>South East Coast</b>						
122	Brighton & Hove City	255,022	1,901,588	1,482,000	2,573,558	10.09	
123	East Sussex Downs & Weald	324,996	446,767	182,147	628,914	1.94	
124	Eastern & Coastal Kent	714,214	1,448,414	663,607	2,112,021	2.96	
125	Hastings & Rother	172,911	751,237	262,079	1,013,316	5.86	
126	Medway	251,072	0	1,432,000	1,432,000	5.70	
127	Surrey	1,063,943	3,080,030	1,598,188	4,678,218	4.40	
128	West Kent	655,725	1,612,743	110,000	1,722,743	2.63	372,000
129	West Sussex	764,435	1,014,000	2,496,000	3,510,000	4.59	
	<b>Totals</b>	<b>4,202,318</b>	<b>9,444,749</b>	<b>8,226,021</b>	<b>17,670,770</b>	<b>4.21</b>	<b>372,000</b>
	<b>South Central</b>						
130	Berkshire East	378,884	949,538	851,773	1,801,311	4.75	
131	Berkshire West	445,017	625,000	3,399,000	4,024,000	9.04	
132	Buckinghamshire	494,946	716,108	1,353,089	2,069,197	4.18	
133	Hampshire	1,259,474	2,380,000	5,034,000	7,414,000	5.89	
134	Isle of Wight	140,015	1,440,000	434,168	1,874,168	13.39	
135	Milton Keynes	223,904	842,592	0	842,592	3.76	
136	Oxfordshire	602,383	1,031,083	1,141,219	2,172,302	3.61	16,484
137	Portsmouth City Teaching	189,599	217,992	696,673	914,665	4.82	
138	Southampton City	221,969	0	1,286,640	1,286,640	5.80	
	<b>Totals</b>	<b>3,956,191</b>	<b>8,202,313</b>	<b>14,196,562</b>	<b>22,398,875</b>	<b>5.66</b>	<b>16,484</b>

TABLE 1	PCTs	Population mid 2005	PCT expenditure 2006/07				
	South West		On voluntary adult services	On NHS adult services	On all adult services	£ Per head of population	On children's services
139	Bath & North East Somerset	173,708	480,830	741,588	1,222,418	7.04	
140	Bournemouth & Poole Teaching	300,655	245,463	395,296	640,759	2.13	
141	Bristol	398,726	1,112,089	851,781	1,963,870	4.93	
142	Cornwall & Isles of Scilly	519,446	862,755	666,259	1,529,014	2.94	
143	Devon	730,978	1,874,000	0	1,874,000	2.56	
144	Dorset	401,145	1,053,981	336,982	1,390,963	3.47	
145	Gloucestershire	575,225	961,000	149,000	1,110,000	1.93	
146	North Somerset	195,104	337,752	231,695	569,447	2.92	
147	Plymouth Teaching	246,130	807,844	247,000	1,054,844	4.29	
148	Somerset	515,617	1,983,701	0	1,983,701	3.85	
149	South Gloucestershire	248,091	96,608	1,059,073	1,155,681	4.66	
150	Swindon	189,714	877,088	450,747	1,327,835	7.00	23,000
151	Torbay Care	132,804	1,379,000	0	1,379,000	10.38	
152	Wiltshire	446,616	1,819,945	0	1,819,945	4.07	
	<b>Totals</b>	<b>5,073,509</b>	<b>13,892,056</b>	<b>5,129,421</b>	<b>19,021,477</b>	<b>3.75</b>	<b>23,000</b>
	<b>England</b>	<b>50,225,433</b>	<b>133,132,219</b>	<b>111,899,290</b>	<b>245,031,509</b>	<b>4.88</b>	<b>1,942,451</b>

### Notes on the entries for specific PCTs

4. Hartlepool: Entry includes £117,928 on palliative care funded through continuing care.
18. Central & E Cheshire: Entry includes £140,000 on Crossroads.
25. Liverpool: £2,093,934 on district nursing is excluded from expenditure.
28. Oldham: Entry includes £149,000 on palliative care funded through continuing care.
33. Trafford: Entry includes £43,900 on palliative care in nursing homes.
34. Warrington: Entry includes £196,489 on palliative care in care homes.

### Notes on the entries for specific PCTs (continued)

39. Calderdale: Entry excludes £163,800 on district nursing.
40. Doncaster: Entry includes £117,907 on 'cancer connections in the community'.
41. East Riding: Entry excludes £200,000 on palliative radiotherapy/chemotherapy/surgery.
42. Hull: Entry excludes £3,468,201 on district nursing. Includes £164,000 on continuing care.
44. Leeds: Entry excludes £2,967,079 on district nursing and £1,386,439 on night nursing.
45. NE Lincolnshire: Entry includes £261,000 on continuing care.
62. Dudley: Entry excludes £490,973 on community heart failure and £101,850 on social services.
67. Shropshire: Entry excludes 'PbR related hospital activity' at £1,618,426.
71. Stoke on Trent: Entry includes £86,410 on palliative care funded through continuing care.
72. Telford & Wrekin: Entry excludes 'PbR related hospital activity' at £663,246.
73. Walsall: Entry includes £498,575 on nursing home and home care packages.
80. Great Yarmouth: Entry excludes £1,234,899 on community nursing.
84. North East Essex: Entry includes £509,717 on palliative care provided to various care homes.
85. Peterborough: Entry includes £460,000 on continuing care.
95. Bromley: Entry includes £500,800 on 'palliative care in the community (nursing agencies)'.
98. Croydon: Entry excludes £4,222,548 on district nursing and £4,228,785 on continuing care at home and in care homes.
99. Ealing: Entry includes £648,000 on palliative care provided to care homes.
103. Haringey: Entry excludes £280,216 on palliative care provided by 'private sector'.
105. Havering: Entry excludes £1,088,121 on district and night nursing services.
107. Hounslow: Entry includes £374,932 on continuing care and 'social worker & nurse recharge'.
116. Southwark: Entry includes £827,000 on palliative home care packages.

127. Surrey: Entry excludes £33,601 for research and advanced communications training in cancer.
133. Hampshire: Entry includes £2,252,000 on palliative care provided through continuing care.
138. Southampton: Entry includes £431,000 on palliative care provided through continuing care.
140. Bournemouth: Return provides no data about the in-patient centres at Christchurch and Poole and expenditure may be understated.
150. Swindon: Entry excludes £206,422 on oncology nursing.

TABLE 2	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7
PCT	Rank	Expenditure per head of population in £	Death rate per 100,000	Rank of death rate	Expenditure per annual death in £	Additional expenditure required to match average of £504	Additional expenditure required to match differential need
Isle of Wight	1	13.39	1227	8	1,091	0	0
Hartlepool	2	11.62	1147	20	1,013	0	0
Torbay	3	10.38	1400	3	742	0	0
Brighton & Hove	4	10.09	996	75	1,013	0	0
City & Hackney	5	9.77	581	148	1,684	0	0
Bassetlaw	6	9.59	1049	48	914	0	0
Peterborough	7	9.55	904	104	1056	0	0
Islington	8	9.25	667	140	1,387	0	0
Berkshire West	9	9.04	720	137	1,256	0	0
Sheffield	10	9.02	1025	61	880	0	0
Bromley	11	8.96	921	98	972	0	0
Liverpool	12	8.53	1090	35	783	0	0
Hounslow	13	8.32	760	133	1095	0	0
Trafford	14	8.04	977	81	823	0	0
North East Lincolnshire	15	7.88	1070	40	736	0	0
Walsall	16	7.85	991	76	792	0	0
Camden	17	7.69	610	146	1259	0	0
North Tyneside	18	7.59	1151	17	659	0	0
North East Essex	19	7.46	1169	15	638	0	0
Brent	20	7.27	619	145	1175	0	0
Sunderland	21	7.26	1047	51	693	0	0
Barnsley	22	7.05	1119	26	630	0	0
Blackpool	23	7.04	1410	2	500	9,262	472,407

TABLE 2 (continued)	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7
PCT	Rank	Expenditure per head of population in £	Death rate per 100,000	Rank of death rate	Expenditure per annual death in £	Additional expenditure required to match average of £504	Additional expenditure required to match differential need
Bath & NE Somerset	23	7.04	969	86	726	0	0
Swindon	25	7.00	833	116	840	0	0
Dudley	26	6.93	1050	46	661	0	0
Birmingham East & North	27	6.85	1008	70	679	0	0
Blackburn	28	6.71	957	88	701	0	0
North Lancashire	29	6.58	1236	5	532	0	446,912
Middlesborough	30	6.44	1050	46	613	0	0
Leeds	31	6.36	929	94	685	0	0
Southwark	32	6.36	646	142	983	0	0
Salford	33	6.32	1174	14	538	0	185,557
Greenwich	33	6.32	856	114	738	0	0
Westminster	35	6.27	543	151	1,154	0	0
Newcastle	36	6.25	1021	62	613	0	0
Cumbria	37	6.14	1111	29	552	0	144,674
Halton & St Helens	38	6.09	1035	58	588	0	0
Sefton	39	6.02	1187	11	507	0	369,792
Mid Essex	40	5.95	878	110	677	0	0
Hampshire	41	5.89	920	99	640	0	0
Hastings & Rother	42	5.86	1458	1	402	257,295	899,955
Coventry	42	5.86	982	78	597	0	0
Derby City	44	5.83	962	87	606	0	0
Ealing	44	5.83	695	139	839	0	0
Southampton City	46	5.80	893	108	649	0	0
Nottinghamshire County	47	5.79	1010	68	573	0	0
Shropshire County	47	5.79	1069	42	541	0	47,610
Medway	49	5.70	863	112	677	0	0
Lambeth	50	5.52	621	144	889	0	0
Tower Hamlets	51	5.49	568	149	966	0	0
Warrington	52	5.41	928	95	583	0	0
Northamptonshire	53	5.40	883	109	612	0	0
Lewisham	54	5.35	780	129	686	0	0
Doncaster	55	5.31	1065	43	499	17,008	173,686

TABLE 2 (continued)	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7
PCT	Rank	Expenditure per head of population in £	Death rate per 100,000	Rank of death rate	Expenditure per annual death in £	Additional expenditure required to match average of £504	Additional expenditure required to match differential need
Knowsley	56	5.28	1039	55	508	0	51,421
West Essex	57	5.21	918	100	567	0	0
Hammersmith & Fulham	58	5.19	569	150	911	0	0
Havering	59	5.18	1037	56	500	9,645	93,309
Harrow	60	5.15	767	132	672	0	0
Stoke on Trent	61	5.13	1144	21	449	156,293	414,227
Wirral	62	5.08	1176	13	432	267,434	666,917
North Tees	63	5.06	943	89	537	0	0
Croydon	63	5.06	772	131	655	0	0
Newham	65	5.01	635	143	789	0	0
Barking & Dagenham	66	5.00	977	81	512	0	0
Kingston	67	4.98	785	128	634	0	0
Manchester	68	4.94	938	92	526	0	0
North Lincolnshire	69	4.93	1047	51	471	52,977	118,722
Bristol	69	4.93	924	97	534	0	0
Redcar & Cleveland	71	4.92	1083	38	455	74,198	163,882
Sandwell	72	4.91	1111	29	442	198,819	435,831
Kensington & Chelsea	73	4.89	469	152	1,043	0	0
Northumberland	74	4.88	1123	25	435	243,131	525,234
Bolton	75	4.86	1064	44	457	133,171	274,019
Portsmouth City	76	4.82	970	85	497	12,288	13,987
Bradford & Airedale	77	4.77	941	91	507	0	0
Berkshire East	78	4.75	750	134	634	0	0
Rotherham	79	4.70	1047	51	449	145,771	254,579
South Gloucestershire	80	4.66	785	127	594	0	0
Central Lancashire	80	4.66	987	77	472	144,572	189,427
East Lancashire	82	4.63	1048	50	442	247,946	413,584
Leicestershire County & Rutland	83	4.61	915	101	504	988	0
Calderdale	83	4.61	1013	66	455	97,764	144,341
West Sussex	85	4.59	1182	12	388	1,048,471	2,060,211
Worcestershire	86	4.57	1006	72	454	280,523	391,755
Central & Eastern Cheshire	87	4.55	1005	73	453	231,960	317,960

TABLE 2 (continued)	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7
PCT	Rank	Expenditure per head of population in £	Death rate per 100,000	Rank of death rate	Expenditure per annual death in £	Additional expenditure required to match average of £504	Additional expenditure required to match differential need
Haringey	88	4.53	605	147	750	0	0
West Hertfordshire	89	4.48	904	104	496	39,180	0
Solihull	90	4.45	900	107	494	17,931	0
Sutton & Merton	91	4.41	794	125	555	0	0
Surrey	92	4.40	914	102	481	225,424	0
Derbyshire County	93	4.33	1074	39	403	775,228	1,200,775
Bedfordshire	94	4.31	835	115	517	0	0
Plymouth	95	4.29	1012	67	423	201,147	258,512
Lincolnshire	96	4.27	1096	32	389	855,855	1,351,771
Ashton Leigh Wigan	97	4.25	1027	60	414	282,854	378,743
Wakefield District	98	4.21	1017	64	414	294,975	378,879
Herefordshire	98	4.21	1089	36	387	227,961	350,820
N Yorkshire & York	100	4.19	1030	59	407	772,031	1,026,131
Buckinghamshire	101	4.18	830	119	504	1,155	0
East & North Hertfordshire	101	4.18	862	113	485	86,792	0
County Durham	103	4.17	1113	28	375	720,969	1,140,406
Western Cheshire	104	4.10	1019	63	402	241,317	304,333
Wiltshire	105	4.07	928	95	439	269,228	182,628
Oldham	106	4.02	1041	50	386	268,468	355,432
Suffolk	106	4.02	1000	74	403	586,751	683,301
Wandsworth	108	4.00	662	141	605	0	0
Nottingham City	109	3.99	936	93	426	202,808	159,078
Stockport	109	3.99	1008	70	396	307,966	367,586
North Staffordshire	111	3.98	1070	40	372	297,747	416,752
Norfolk	112	3.97	1101	31	361	1,156,549	1,713,398
Bexley	112	3.97	903	104	440	127,696	60,620
South Tyneside	114	3.93	1225	9	320	340,582	588,732
Leicester City	115	3.92	943	89	416	239,832	204,008
Hull	116	3.90	1049	48	371	347,357	458,371
Darlington	117	3.86	1132	23	340	183,657	279,768
Somerset	118	3.85	1092	33	352	854,294	1,217,183
Milton Keynes	119	3.76	709	138	531	0	0
Telford & Wrekin	120	3.73	821	121	454	65,960	0



TABLE 2 (continued)	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7
PCT	Rank	Expenditure per head of population in £	Death rate per 100,000	Rank of death rate	Expenditure per annual death in £	Additional expenditure required to match average of £504	Additional expenditure required to match differential need
Luton	121	3.72	811	123	458	79,175	0
Waltham Forest	122	3.71	778	130	477	47,728	0
Warwickshire	123	3.70	974	84	379	648,926	665,762
Oxfordshire	124	3.61	822	120	439	323,379	0
Cambridgeshire	125	3.53	833	116	424	394,003	49,821
Gateshead	126	3.50	1161	16	302	450,412	673,829
Dorset	127	3.47	1197	10	290	1,029,433	1,601,614
South Birmingham	128	3.27	1009	69	324	615,035	688,233
South East Essex	129	3.25	1116	27	291	774,980	1,055,432
Tameside & Glossop	130	3.23	1063	45	304	525,419	655,596
Enfield	131	3.13	831	118	376	297,942	131,990
Heart of Birmingham	132	3.09	728	135	425	153,957	0
South Staffordshire	133	2.96	980	80	302	1,187,849	1,223,900
Eastern & Coastal Kent	133	2.96	1136	22	260	1,977,932	2,687,326
Wolverhampton	133	2.96	1089	36	272	605,828	770,055
South West Essex	136	2.95	868	111	340	549,003	375,438
Cornwall & Isles of Scilly	137	2.94	1148	18	256	1,477,365	2,036,491
North Somerset	138	2.92	1127	24	259	538,662	720,205
Barnet	139	2.90	793	126	366	360,169	121,406
Bury	140	2.74	981	79	279	404,350	416,374
West Kent	141	2.63	912	103	288	1,292,207	1,117,871
Great Yarmouth & Waveney	142	2.62	1236	5	212	749,584	1,107,669
Devon	143	2.56	1147	19	224	2,353,080	3,134,994
Redbridge	144	2.50	815	122	307	403,037	239,343
Richmond & Twickenham	145	2.46	722	136	340	220,232	47,896
Hillingdon	146	2.14	801	124	268	478,563	303,139
Bournemouth & Poole	147	2.13	1234	7	173	1,229,616	1,743,550
East Sussex Downs & Weald	148	1.94	1253	4	154	1,424,129	2,028,700
Gloucestershire	149	1.93	1016	65	190	1,836,050	1,981,835
East Riding	150	1.92	1092	33	175	1,173,511	1,404,634
Kirklees	151	1.71	975	83	178	1,262,808	1,276,034
<b>Averages/Totals</b>		<b>4.88</b>			<b>504</b>	<b>£38,475,594</b>	<b>£50,606,163</b>

### **Notes to Table 2:**

Column 2 shows the actual expenditure of each responding PCT expressed as a rate per head of population.

Column 3 shows the ratio of deaths per 100,000 population for all causes of death. The data is extracted from column H of the spreadsheet.

Column 4 shows the rank of the death rate for each of the 152 PCTs, e.g. Isle of Wight has the 8th highest rate, Hartlepool the 20th, etc.

Column 5 shows the expenditure of each PCT expressed as a sum per annual death, e.g. Isle of Wight is spending £1,091 for each death. The range is from £1,684 in City & Hackney down to £154 in East Sussex Downs & Weald. The average spend is £504.

Column 6 shows the additional expenditure that each PCT would need to incur in order to at least match the average spend of £504 per annual death. Columns BF to BI on the spreadsheet show how this is calculated.

Column 7 shows the additional expenditure that each PCT would need to incur in order that total expenditure would reflect differential population need as measured by annual incidence of deaths per 100,000 population. It should be noted that this calculation is based on the current average spend of £504 per annual death. This may or may not be an appropriate level of expenditure.

### **Interpretation**

The total additional expenditure required to lift all 151 responding PCTs to at least the average of £504 per annual death is estimated at £38,475,594.

The total additional expenditure required to ensure that the total expenditure of each PCT reflected differential population need (as measured by differences in annual incidence of mortality) is estimated at £50,606,163.

The annual incidence of deaths is considered to be the most important factor affecting resource needs for palliative and end of life care. Accordingly, if PCT expenditure was to be based on this single factor, then the estimates in Column 7 should be recognised to be useful yardsticks that reflect differential population need at least to some degree. The estimates in Column 6 do not take into account any variations in resource need per head of population.

<b>TABLE 3</b>	<b>Col 1</b>	<b>Col 2</b>	<b>Col 3</b>	<b>Col 4</b>	<b>Col 5</b>	<b>Col 6</b>
<b>PCT</b>	<b>Rank</b>	<b>Expenditure per head of population in £</b>	<b>Index value based on deprivation modifier range from 1 to 2</b>	<b>Additional expenditure required to match differential need as measured by column 3</b>	<b>Index value based on deprivation modifier range from 1 to 1.5</b>	<b>Additional expenditure required to match differential need as measured by column 5</b>
Isle of Wight	1	13.39	116	0	100	0
Hartlepool	2	11.62	133	0	106	0
Torbay	3	10.38	133	0	115	0
Brighton & Hove	4	10.09	97	0	83	0
City & Hackney	5	9.77	71	0	55	0
Bassetlaw	6	9.59	104	0	88	0
Peterborough	7	9.55	88	0	75	0
Islington	8	9.25	80	0	63	0
Berkshire West	9	9.04	55	0	52	0
Sheffield	10	9.02	105	0	88	0
Bromley	11	8.96	75	0	69	0
Liverpool	12	8.53	143	0	109	0
Hounslow	13	8.32	73	0	62	0
Trafford	14	8.04	88	0	78	0
North East Lincolnshire	15	7.88	111	0	92	0
Walsall	16	7.85	103	0	86	0
Camden	17	7.69	67	0	54	0
North Tyneside	18	7.59	114	0	97	0
North East Essex	19	7.46	105	0	92	0
Brent	20	7.27	60	0	51	0
Sunderland	21	7.26	116	0	94	0
Barnsley	22	7.05	121	0	99	0
Blackpool	23	7.04	157	90,631	127	70,338
Bath & NE Somerset	23	7.04	76	0	71	0
Swindon	25	7.00	72	0	64	0
Dudley	26	6.93	100	0	86	0
Birmingham East & North	27	6.85	111	0	90	0
Blackburn	28	6.71	106	0	86	0
North Lancashire	29	6.58	110	0	97	0
Middlesbrough	30	6.44	127	0	99	0

TABLE 3 (continued)	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6
PCT	Rank	Expenditure per head of population in £	Index value based on deprivation modifier range from 1 to 2	Additional expenditure required to match differential need as measured by column 3	Index value based on deprivation modifier range from 1 to 1.5	Additional expenditure required to match differential need as measured by column 5
Leeds	31	6.36	93	0	78	0
Southwark	32	6.36	72	0	58	0
Salford	33	6.32	135	66,311	108	20,816
Greenwich	33	6.32	92	0	75	0
Westminster	35	6.27	57	0	47	0
Newcastle	36	6.25	113	0	91	0
Cumbria	37	6.14	102	0	89	0
Halton & St Helens	38	6.09	115	0	93	0
Sefton	39	6.02	118	0	100	0
Mid Essex	40	5.95	69	0	65	0
Hampshire	41	5.89	72	0	67	0
Hastings & Rother	42	5.86	141	180,125	120	225,125
Coventry	42	5.86	100	0	84	0
Derby City	44	5.83	99	0	82	0
Ealing	44	5.83	66	0	57	0
Southampton City	46	5.80	85	0	73	0
Nottinghamshire County	47	5.79	92	0	80	0
Shropshire County	47	5.79	91	0	82	0
Medway	49	5.70	74	0	66	0
Lambeth	50	5.52	67	0	55	0
Tower Hamlets	51	5.49	72	0	56	0
Warrington	52	5.41	87	0	75	0
Northamptonshire	53	5.40	75	0	68	0
Lewisham	54	5.35	80	0	67	0
Doncaster	55	5.31	114	77,796	93	71,824
Knowsley	56	5.28	137	211,820	104	135,129
West Essex	57	5.21	75	0	69	0
Hammersmith & Fulham	58	5.19	57	0	48	0
Havering	59	5.18	87	0	79	0
Harrow	60	5.15	62	0	57	0
Stoke on Trent	61	5.13	128	280,208	103	247,839

TABLE 3 (continued)	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6
PCT	Rank	Expenditure per head of population in £	Index value based on deprivation modifier range from 1 to 2	Additional expenditure required to match differential need as measured by column 3	Index value based on deprivation modifier range from 1 to 1.5	Additional expenditure required to match differential need as measured by column 5
Wirral	62	5.08	123	300,311	102	308,786
North Tees	63	5.06	95	0	80	0
Croydon	63	5.06	70	0	61	0
Newham	65	5.01	75	0	59	0
Barking & Dagenham	66	5.00	107	36,652	87	26,642
Kingston	67	4.98	61	0	58	0
Manchester	68	4.94	122	466,126	93	270,521
North Lincolnshire	69	4.93	97	0	84	13,330
Bristol	69	4.93	93	0	78	0
Redcar & Cleveland	71	4.92	116	102,901	95	100,341
Sandwell	72	4.91	124	330,020	100	296,910
Kensington & Chelsea	73	4.89	42	0	37	0
Northumberland	74	4.88	105	75,899	91	161,991
Bolton	75	4.86	111	150,971	92	160,379
Portsmouth City	76	4.82	96	0	81	0
Bradford & Airedale	77	4.77	101	92,453	83	78,143
Berkshire East	78	4.75	60	0	55	0
Rotherham	79	4.70	107	138,814	89	156,957
South Gloucestershire	80	4.66	61	0	58	0
Central Lancashire	80	4.66	92	0	80	40,942
East Lancashire	82	4.63	102	138,848	87	204,986
Leicestershire County & Rutland	83	4.61	71	0	67	0
Calderdale	83	4.61	98	37,459	84	72,678
West Sussex	85	4.59	94	23,014	88	478,876
Worcestershire	86	4.57	85	0	77	9,354
Central & Eastern Cheshire	87	4.55	82	0	76	0
Haringey	88	4.53	69	0	55	0
West Hertfordshire	89	4.48	69	0	66	0
Solihull	90	4.45	78	0	70	0
Sutton & Merton	91	4.41	65	0	60	0
Surrey	92	4.40	67	0	65	0

<b>TABLE 3 (continued)</b>	<b>Col 1</b>	<b>Col 2</b>	<b>Col 3</b>	<b>Col 4</b>	<b>Col 5</b>	<b>Col 6</b>
<b>PCT</b>	<b>Rank</b>	<b>Expenditure per head of population in £</b>	<b>Index value based on deprivation modifier range from 1 to 2</b>	<b>Additional expenditure required to match differential need as measured by column 3</b>	<b>Index value based on deprivation modifier range from 1 to 1.5</b>	<b>Additional expenditure required to match differential need as measured by column 5</b>
Derbyshire County	93	4.33	97	310,158	85	537,676
Bedfordshire	94	4.31	68	0	62	0
Plymouth	95	4.29	101	163,003	85	192,486
Lincolnshire	96	4.27	97	331,244	86	580,941
Ashton Leigh Wigan	97	4.25	107	305,157	89	314,683
Wakefield District	98	4.21	105	304,215	87	319,541
Herefordshire	98	4.21	94	68,718	84	142,664
N Yorkshire & York	100	4.19	85	0	78	330,811
East & North Herefordshire	101	4.18	67	0	63	0
Buckinghamshire	101	4.18	61	0	59	0
County Durham	103	4.17	114	707,334	95	745,022
Western Cheshire	104	4.10	88	51,589	79	139,978
Wiltshire	105	4.07	72	0	68	0
Oldham	106	4.02	109	291,428	90	295,662
Suffolk	106	4.02	82	0	75	254,329
Wandsworth	108	4.00	59	0	52	0
Nottingham City	109	3.99	114	441,793	89	362,961
Stockport	109	3.99	88	93,222	79	194,185
North Staffordshire	111	3.98	95	142,700	84	216,747
Norfolk	112	3.97	95	489,903	85	798,845
Bexley	112	3.97	77	0	70	35,467
South Tyneside	114	3.93	134	396,936	109	385,548
Leicester City	115	3.92	103	315,061	83	301,255
Hull	116	3.90	126	568,394	99	496,657
Darlington	117	3.86	111	156,275	94	173,572
Somerset	118	3.85	92	350,269	84	581,219
Milton Keynes	119	3.76	60	0	54	0
Telford & Wrekin	120	3.73	79	22,529	68	47,320
Luton	121	3.72	77	11,446	66	42,869
Waltham Forest	122	3.71	82	67,006	68	69,561
Warwickshire	123	3.70	81	140,428	74	370,651

TABLE 3 (continued)	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6
PCT	Rank	Expenditure per head of population in £	Index value based on deprivation modifier range from 1 to 2	Additional expenditure required to match differential need as measured by column 3	Index value based on deprivation modifier range from 1 to 1.5	Additional expenditure required to match differential need as measured by column 5
Oxfordshire	124	3.61	64	0	60	0
Cambridgeshire	125	3.53	66	0	62	84,651
Gateshead	126	3.50	126	517,050	103	503,763
Dorset	127	3.47	97	512,030	89	743,427
South Birmingham	128	3.27	108	688,233	89	679,260
South East Essex	129	3.25	95	457,798	86	603,680
Tameside & Glossop	130	3.23	109	520,083	91	537,465
Enfield	131	3.13	79	213,139	68	260,048
Heart of Birmingham	132	3.09	100	481,438	75	343,930
South Staffordshire	133	2.96	84	703,107	76	927,845
Eastern & Coastal Kent	133	2.96	102	1,463,322	90	1,712,870
Wolverhampton	133	2.96	119	684,407	97	668,667
South West Essex	136	2.95	78	333,086	69	437,407
Cornwall & Isles of Scilly	137	2.94	109	1,240,640	94	1,368,404
North Somerset	138	2.92	94	331,318	86	425,640
Barnet	139	2.90	67	119,078	60	229,095
Bury	140	2.74	93	337,512	80	374,260
West Kent	141	2.63	73	617,017	68	917,325
Great Yarmouth & Waveney	142	2.62	119	670,049	102	716,221
Devon	143	2.56	100	1,700,833	89	2,006,093
Redbridge	144	2.50	71	250,289	64	322,271
Richmond & Twickenham	145	2.46	54	35,920	52	116,224
Hillingdon	146	2.14	71	331,887	63	401,332
Bournemouth & Poole	147	2.13	110	981,500	97	1,100,646
East Sussex Downs & Weald	148	1.94	103	1,012,266	94	1,197,919
Gloucestershire	149	1.93	84	1,251,977	77	1,515,655
East Riding	150	1.92	93	867,659	84	1,008,730
Kirklees	151	1.71	96	1,186,764	82	1,239,022
<b>Sample Averages/Totals</b>		<b>4.88</b>		<b>£26,037,579</b>		<b>£31,544,407</b>

### **Notes to Table 3**

- 1 Columns 1 and 2 shows the expenditure per head of population in rank order of all responding PCTs.
- 2 Column 3 shows the modified Index Value of each PCT. The data has been extracted from Column P of the spreadsheet. This Value takes account of differential population need as measured by annual incidence of mortality and modified to take account of relative socio-economic deprivation as measured by IMD 2004. The calculation of that modifier can be found in Columns J to N of the spreadsheet. An underlying assumption is made that the resource need per head of population in the most deprived area of the country is twice that of the least deprived area. A note is set out below which describes the evidence that supports such an assumption.
- 3 Column 4 shows the estimated additional expenditure that each PCT would need to incur if its total expenditure was to reflect differential population need as measured by the Index Values in Column 3. Columns AY to AZ in the spreadsheet show how the calculations are made.
- 4 Column 5 shows a revised set of Index Values. These are based on the same criteria as those in Column 3 but with the maximum deprivation modifier being reduced to 1.5 rather than 2. It will be seen from the note below on the effect of deprivation on resource need, that while there is strong evidence that deprivation does have an effect, there is less strong evidence about how much effect it has. For that reason a lower maximum modifier has been introduced to illustrate the effect of such a change on the estimates. Columns BA to BB of the spreadsheet show how the calculation is made.
- 5 Column 6 shows the results of the application of the lower deprivation modifier. Columns BC to BD of the spreadsheet show the relevant calculations.

### **Note on effect of deprivation on resource need**

There is probably a consensus of professional opinion that caring for people in the most deprived areas does require more resources than in the most affluent areas. This is reflective of evidence published in 1999 in the Journal of Public Health Medicine that social factors are inversely correlated with home cancer deaths. It found that the higher the deprivation the smaller in general was the proportion dying at home and that home care in deprived areas may be especially difficult to achieve.

A further report for the London Regional Strategy Group for Palliative Care in 2000 found that areas with high levels of deprivation require more activity and referred to one study that compared the activity of home palliative care nurses in deprived and more affluent areas. This showed that to achieve similar levels of home death rates twice the resources were needed in the deprived areas.

In the light of this evidence, it is considered that, after the annual incidence of deaths, this is the most important factor affecting palliative care resource need in a population.



The references for the above are as follows:

Higginson, Jarman, Astin, Dolan. *Do social factors affect where patients die; an analysis of 10 years of cancer deaths in England*. Journal of Public Health Medicine 1999; Vol. 21, No.1, pp22–28

Higginson. *The Palliative Care for Londoners: Needs, Experience, Outcomes and Future Strategy*. London Regional Strategy Group for Palliative Care 2000

Clark. *Social deprivation increases workload in palliative care of terminally ill patients*. BMJ 1997; 314:1202

### **Interpretation**

- 1 There are comparatively few major differences in the estimates produced by the two different methods. There are just 2 PCTs where the estimates of additional expenditure are much lower using the 1.5 based deprivation modifier. They are Manchester (about £200,000 less) and Heart of Birmingham (about £120,000 less). They both have very high levels of deprivation and lower than average mortality. There are 14 PCTs where the estimates are much higher. The most striking example is that of West Sussex where deprivation is low and mortality very high. This results in an estimate £450,000 higher. The other examples range from £200,000 to £350,000 higher.
- 2 The total additional expenditure estimated in Column 4 is £26,037,579.
- 3 The total additional expenditure estimated in Column 6 is £31,544,407.
- 4 The balance of evidence on the effect of deprivation on resource need tends to suggest that the estimates in Column 4 may represent the best yardsticks.

### **Tables 4 to 13**

#### **Methodology**

- 1 The 10 Tables (one for each SHA) provide a way of showing how far current expenditure by individual PCTs reflects differential palliative and end of life care resource need per head of population. The method selected to demonstrate this is as follows.
- 2 Measurement of differential resource need is measured through use of the Table at Appendix 3. It is an updated version of the table originally contained in the National Council for Palliative Care publication *Population-based Needs Assessment for End of Life Care: A Compendium of data for Strategic Health Authorities and Primary Care Trusts: September 2006*
- 3 Each PCT is accorded an Index Value in the Table. These values are extracted from the spreadsheet at Appendix 2 to this report (see column P in the spreadsheet). In the notes to the Table at Appendix 3 it is stated that a PCT with an Index Value of 99 to 100 can be regarded as having average need.

- 4 For example, Newcastle has an Index Value of 112.5649. The average index value for a PCT is 99.5. Need as related to the average can then be calculated as follows:  $(112.5649/99.5)*100 = 113\%$ . The results of these calculations are to be found in Column AX of the spreadsheet and have been inserted in Column 4 of Tables 4 to 13.
- 5 The next step is to express the difference between a PCT's rate of expenditure per head of population and the England average rate as a percentage. For example Newcastle's rate is £6.25 which is 128% of the England average (see Column AW in the spreadsheet for all PCT results which are then entered in Column 3 of Tables 4 to 13).
- 6 The final step is to compare the two percentages. If the percentage in Column 3 is less than that in Column 4 then the PCT is spending less, as measured against current average PCT spend, than that indicated by population need. If it is more, then the PCT is spending more in relation to the current average than might be expected. However, it needs to be recognised that the current average is just that. There is no evidence that it is an appropriate level of expenditure.

### **Results from Tables 4 to 13**

- 1 Each Table shows the difference between the PCT's actual rate of expenditure and that which would reflect population need as measured in relation to the current average spend. The difference is expressed as that between the two percentages as described above.
- 2 There are 40 PCTs whose rate of expenditure per head of population is well below that indicated by population need as measured by the criteria in point 6 of the above methodology i.e. more than 15% below.
- 3 There are 44 PCTs whose rate of expenditure per head of population is to roughly match that indicated by population need as measured by the criteria in point 6 of the above methodology i.e. within 15% above and 15% below.
- 4 There are 67 PCTs whose rate of expenditure per head of population is well above that indicated by population need as measured by the criteria in point 6 of the above methodology i.e. more than 15% above.
- 5 These results are in line with the estimates of additional expenditure required to match differential population need as set out in Column 4 of Table 3, i.e. there are 66 PCTs whose rate of expenditure needs to be increased to meet resource need as measured in relation to the current average PCT spend. All 40 PCTs in the 'well below' category and 26 of those in the 'roughly match' category are identified as needing to increase rate of expenditure.

Table 4

## North East SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Hartlepool	£11.62	237%	134%	+103
North Tyneside	£7.59	155%	115%	+40
Sunderland	£7.26	148%	117%	+31
Middlesbrough	£6.44	131%	127%	+4
Newcastle	£6.25	128%	113%	+15
North Tees Teaching	£5.06	103%	95%	+8
Redcar & Cleveland	£4.92	100%	116%	-16
Northumberland Care	£4.88	100%	105%	-5
County Durham	£4.17	85%	114%	-29
South Tyneside	£3.93	80%	134%	-54
Darlington	£3.86	79%	111%	-32
Gateshead	£3.50	71%	127%	-56

*Interpretation:*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Hartlepool, Sunderland, and North Tyneside
- 2 Around the average in Newcastle, Middlesbrough, North Tees, and Northumberland
- 3 Well below in Redcar & Cleveland, South Tyneside, County Durham, Darlington, and Gateshead

Table 5

## North West SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Liverpool	£8.53	174%	144%	+30
Trafford	£8.04	164%	89%	+75
Blackpool	£7.04	144%	157%	-13
Blackburn	£6.71	137%	107%	+30
North Lancashire	£6.58	134%	110%	+24
Salford	£6.32	129%	136%	-7
Cumbria	£6.14	125%	103%	+22
Halton & St Helens	£6.09	124%	116%	+8
Sefton	£6.02	123%	119%	+4
Warrington	£5.41	110%	87%	+23
Knowsley	£5.28	108%	137%	-29
Wirral	£5.08	104%	124%	-20
Manchester	£4.94	101%	123%	-22
Bolton	£4.86	99%	111%	-12
Central Lancashire	£4.66	95%	92%	+3
East Lancashire	£4.63	95%	102%	-7
Central & Eastern Cheshire	£4.55	93%	82%	+11
Ashton Leigh & Wigan	£4.25	87%	108%	-21
Western Cheshire	£4.10	84%	89%	-5
Oldham	£4.02	82%	110%	-28
Stockport	£3.99	81%	89%	-8
Tameside & Glossop	£3.23	66%	109%	-43
Bury	£2.74	56%	94%	-38

*Interpretation:*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Liverpool, Trafford, Blackburn, North Lancashire, Cumbria, Warrington, Central Lancashire, Western Cheshire, Central & Eastern Cheshire, Bolton, and Stockport
- 2 Around the average in Blackpool, Salford, Halton & St. Helens, Sefton, and East Lancashire
- 3 Well below in Knowsley, Wirral, Manchester, Ashton Leigh & Wigan, Oldham, Tameside & Glossop, and Bury

Table 6

## Yorkshire &amp; Humber SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Sheffield	£9.02	184%	105%	+79
North East Lincolnshire	£7.88	161%	112%	+49
Barnsley	£7.05	144%	122%	+22
Leeds	£6.36	130%	94%	+36
Doncaster	£5.31	108%	114%	-6
North Lincolnshire	£4.93	101%	97%	+4
Bradford & Airedale	£4.77	97%	102%	-5
Rotherham	£4.70	96%	108%	-12
Calderdale	£4.61	94%	98%	-4
Wakefield District	£4.21	86%	106%	-20
N Yorkshire & York	£4.19	85%	85%	0
Hull Teaching	£3.90	80%	127%	-47
East Riding	£1.92	39%	94%	-55
Kirklees	£1.71	35%	97%	-62

*Interpretation:*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Sheffield, North East Lincolnshire, Barnsley, and Leeds
- 2 Around the average in Doncaster, North Lincolnshire, Bradford & Airedale, Rotherham, Calderdale, and North Yorkshire & York
- 3 Well below in Wakefield District, Hull, East Riding, and Kirklees

Table 7

## East Midlands SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Bassetlaw	£9.59	196%	104%	+92
Derby City	£5.83	119%	99%	+20
Nottinghamshire County	£5.79	118%	92%	+26
Northamptonshire	£5.40	110%	76%	+34
Leicestershire County & Rutland	£4.61	94%	72%	+22
Derbyshire County	£4.33	88%	98%	-10
Lincolnshire	£4.27	87%	97%	-10
Nottingham City	£3.99	81%	114%	-33
Leicester City	£3.92	80%	103%	-23

*Interpretation:*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Bassetlaw, Derby City, Nottinghamshire County, Northamptonshire, and Leicestershire County
- 2 Around the average in Derbyshire County, and Lincolnshire
- 3 Well below in Nottingham City, and Leicester City

Table 8

## West Midlands SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Walsall	£7.85	160%	104%	+56
Dudley	£6.93	142%	101%	+41
Birmingham East & North	£6.85	140%	112%	+28
Coventry	£5.86	120%	100%	+20
Shropshire County	£5.79	118%	91%	+27
Stoke on Trent	£5.13	105%	128%	-23
Sandwell	£4.91	100%	124%	-24
Worcestershire	£4.57	93%	86%	+7
Solihull	£4.45	91%	78%	+13
Herefordshire	£4.21	86%	94%	-8
North Staffordshire	£3.98	81%	95%	-14
Telford & Wrekin	£3.73	76%	79%	-3
Warwickshire	£3.70	75%	81%	-6
South Birmingham	£3.23	67%	109%	-42
Heart of Birmingham	£3.09	63%	100%	-37
Wolverhampton	£2.96	60%	119%	-59
South Staffordshire	£2.96	60%	85%	-25

*Interpretation*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Walsall, Dudley, Coventry, Birmingham East & North, and Shropshire County
- 2 Around the average in Worcestershire, Solihull, Herefordshire, North Staffordshire, Telford & Wrekin, and Warwickshire
- 3 Well below in Stoke on Trent, Sandwell, Heart of Birmingham, South Birmingham, Wolverhampton, and South Staffordshire

Table 9

## East of England SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Peterborough	£9.55	195%	88%	+107
North East Essex	£7.46	152%	105%	+47
Mid Essex	£5.95	121%	70%	+51
West Essex	£5.21	106%	75%	+31
West Hertfordshire	£4.48	91%	70%	+21
Bedfordshire	£4.31	88%	68%	+20
E & N Hertfordshire	£4.18	85%	68%	+17
Suffolk	£4.03	82%	82%	0
Norfolk	£3.97	81%	95%	-14
Luton	£3.72	76%	77%	-1
Cambridgeshire	£3.53	72%	67%	+5
South East Essex	£3.25	66%	95%	-29
South West Essex	£2.95	60%	78%	-18
Great Yarmouth & Waveney	£2.62	53%	120%	-67

*Interpretation*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Peterborough, NE Essex, Mid Essex, West Essex, West Hertfordshire, Bedfordshire, and E & N Hertfordshire.
- 2 Around the average in Suffolk, Norfolk, Luton, and Cambridgeshire
- 3 Well below in SE Essex, SW Essex, and Great Yarmouth & Waveney



Table 10

## London SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
City & Hackney	£9.77	199%	81%	+118
Islington	£9.25	189%	81%	+108
Bromley	£8.96	183%	75%	+108
Hounslow	£8.32	170%	73%	+97
Camden	£7.69	157%	67%	+90
Brent	£7.27	148%	61%	+87
Southwark	£6.36	130%	73%	+57
Greenwich	£6.32	129%	92%	+37
Westminster	£6.27	128%	57%	+71
Ealing	£5.83	119%	66%	+53
Lambeth	£5.52	113%	68%	+45
Tower Hamlets	£5.49	112%	73%	+39
Lewisham	£5.35	109%	81%	+28
Hammersmith & Fulham	£5.19	106%	57%	+49
Havering	£5.18	106%	88%	+18
Harrow	£5.15	105%	63%	+42
Croydon	£5.06	103%	70%	+33
Newham	£5.01	102%	76%	+26
Barking & Dagenham	£5.00	102%	107%	-5
Kingston	£4.98	102%	62%	+40
Kensington & Chelsea	£4.89	100%	42%	+58
Haringey	£4.53	92%	69%	+23
Sutton & Merton	£4.41	90%	66%	+24
Wandsworth	£4.00	81%	60%	+22
Bexley	£3.97	81%	77%	+4
Waltham Forest	£3.71	76%	82%	-8
Enfield	£3.13	64%	80%	-16
Barnet	£2.90	59%	67%	-8
Redbridge	£2.50	51%	72%	-21
Richmond & Twickenham	£2.46	50%	54%	-4
Hillingdon	£2.14	44%	71%	-27

**Table 10****London SHA (continued)***Interpretation*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Around the average in Barking & Dagenham, Bexley, Waltham Forest, Barnet, and Richmond & Twickenham
- 2 Well below average in Enfield, Redbridge, and Hillingdon
- 3 Well above average in all the remaining 23 PCTs

**Table 11****South East Coast SHA**

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Brighton & Hove	£10.09	206%	97%	+109
Hastings & Rother	£5.86	120%	141%	-21
Medway	£5.70	116%	74%	+42
West Sussex	£4.59	94%	95%	-1
Surrey	£4.40	90%	67%	+23
Eastern & Coastal Kent	£2.96	60%	103%	-43
West Kent	£2.63	54%	73%	-19
East Sussex Downs & Weald	£1.94	39%	103%	-64

*Interpretation*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Brighton & Hove, Medway, and Surrey
- 2 Around the average in West Sussex
- 3 Well below in Hastings & Rother, Eastern & Coastal Kent, West Kent, and East Sussex Downs & Weald

Table 12

## South Central SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Isle of Wight	£13.39	273%	116%	+157
Berkshire West	£9.04	184%	56%	+128
Hampshire	£5.89	120%	72%	+48
Southampton City	£5.80	118%	86%	+32
Portsmouth City	£4.82	98%	96%	+2
Berkshire East	£4.75	97%	60%	+37
Buckinghamshire	£4.18	85%	62%	+23
Milton Keynes	£3.76	77%	60%	+17
Oxfordshire	£3.61	74%	64%	+10

*Interpretation*

Expenditure as related to the England average as indicated by the Index of Need is:

- 1 Well above in Isle of Wight, Berkshire West, Hampshire, Southampton, Berkshire East, Buckinghamshire, and Milton Keynes
- 2 Around the average in Portsmouth, and Oxfordshire

Table 13

## South West SHA

PCT	Expenditure per head of population	Expenditure expressed as % of England average per head of population	Expenditure expressed as % of England average per head of population indicated by Index of Need	Difference between Column 3 and Column 4
Torbay	£10.38	212%	134%	+78
Bath & NE Somerset	£7.04	144%	77%	+67
Swindon	£7.00	143%	72%	+71
Bristol	£4.93	101%	93%	+8
South Gloucestershire	£4.66	95%	62%	+33
Plymouth	£4.29	87%	101%	-14
Wiltshire	£4.07	83%	73%	+10
Somerset	£3.85	79%	93%	-14
Dorset	£3.47	71%	97%	-26
Cornwall & Isles of Scilly	£2.94	60%	109%	-49
Bournemouth & Poole	£2.13	43%	111%	-68
North Somerset	£2.92	60%	95%	-35
Devon	£2.56	52%	100%	-48
Gloucestershire	£1.93	39%	84%	-45

*Interpretation*

Expenditure related to the England average as indicated by the Index of Need is:

- 1 Well above in Torbay, Bath & NE Somerset, Swindon, and South Gloucestershire
- 2 Around the average in Plymouth, Wiltshire, Somerset, and Bristol
- 3 Well below in Dorset, Cornwall, Bournemouth & Poole, North Somerset, Devon, and Gloucestershire









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