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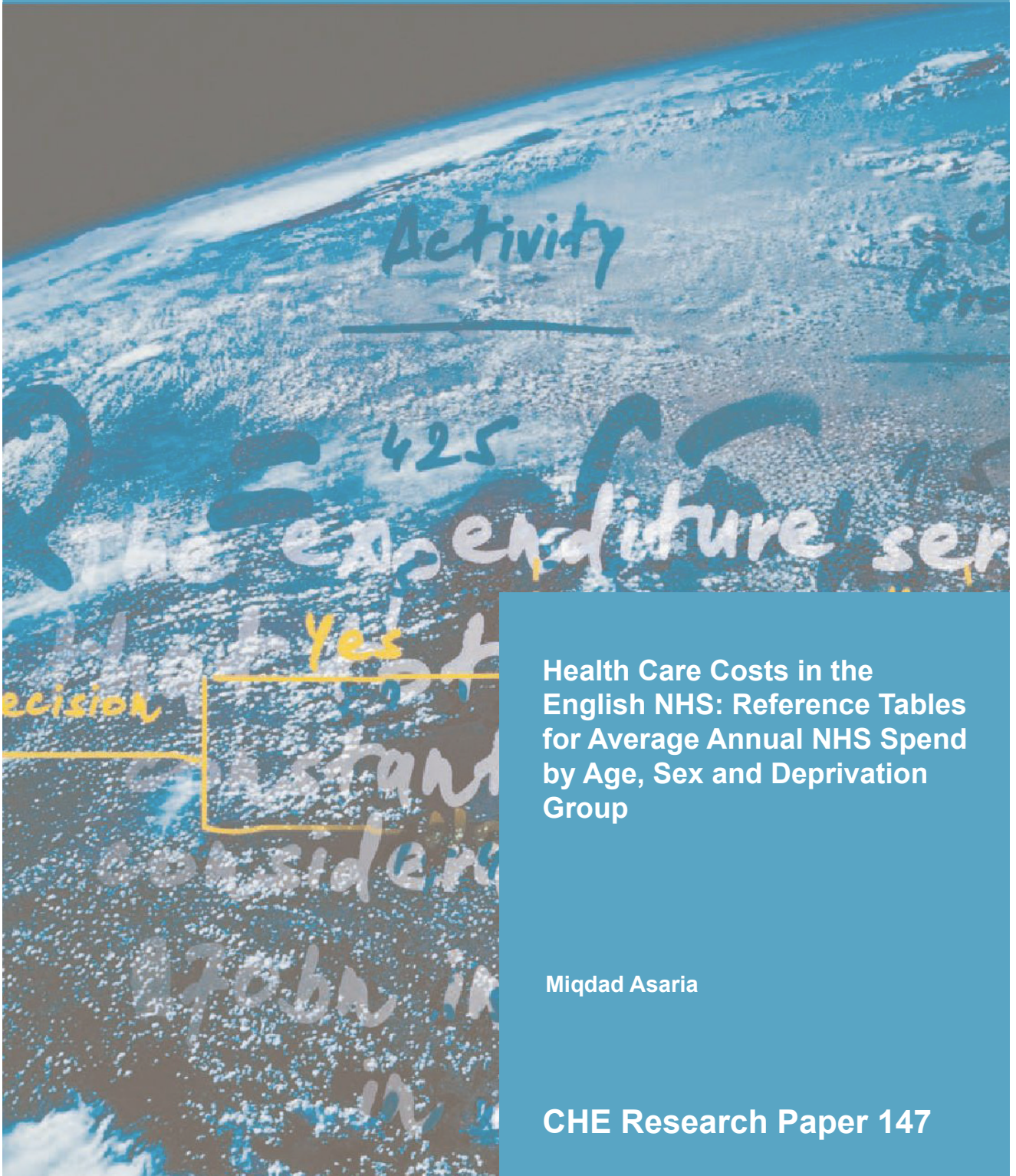
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Centre For Health Economics



**Health Care Costs in the English NHS: Reference Tables for Average Annual NHS Spend by Age, Sex and Deprivation Group**

Miqdad Asaria

**CHE Research Paper 147**



# Health care costs in the English NHS: reference tables for average annual NHS spend by age, sex and deprivation group

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**Abstract**

This paper describes how to calculate average health care costs broken down by age, sex and neighbourhood deprivation quintile group using the distribution of health care spending by the English NHS in the financial year 2011/12. The results presented here can be used by cost-effectiveness analysts to populate their extrapolation models when estimating future health care costs. The results will also be of interest to the broader community of health researchers as they illustrate how NHS spending is distributed across different subgroups within the population.



## 1. Introduction

Economic evaluation of health technologies is routinely applied in the English NHS to assess whether new technologies represent a cost-effective use of health care resources. The current health technology assessment (HTA) process as implemented by the National Institute for Health and Care Excellence (NICE) considers in its assessment all future health benefits following treatment, whether these benefits flow directly from the treatment of the condition targeted by the technology being assessed or are incidental to this treatment. NICE's most recent methodological guidance for HTA however, indicates that only future health care costs pertaining directly to the condition targeted should be considered in the economic evaluation of the technology rather than all future health care costs: [1]

*“Costs related to the condition of interest and incurred in additional years of life gained as a result of treatment should be included in the reference-case analysis. Costs that are considered to be unrelated to the condition or technology of interest should be excluded.”*

This uncomfortable asymmetry in the evaluation process has been recognised by the academic health economics community and recent literature suggests a consensus emerging amongst health economists that costs and health benefits be dealt with in a similar manner.[2] Put simply, in order to be coherent, economic evaluation should consider either all future costs and all future health benefits, or alternatively consider only disease specific future costs and disease specific future health benefits.[3] Furthermore, deciding and demarcating what should and should not count as unrelated is rarely straightforward, hence of the two options it would seem that considering all future costs and all future health benefits is to be preferred.

It is well recognised that health care costs vary across the life-course with greater health care use by the very young, women during their child-bearing years and all people towards the end of their lives.[4] There is also increasing evidence that health care use varies by deprivation, with people living in more deprived neighbourhoods making greater use of health care at any given age than those living in more affluent neighbourhoods.[5] Both of these are important factors to consider when estimating future health care costs for the purpose of economic evaluation.

This paper describes how to calculate average health care costs broken down by age, sex and neighbourhood deprivation quintile group using the distribution of health care spending by the English NHS in the financial year 2011/12. The results presented here can be used by cost-effectiveness analysts to populate their extrapolation models when estimating future health care costs. The results will also be of interest to the broader community of health researchers as they illustrate how NHS spending is distributed across different subgroups within the population.



## 2. Methods

### 2.1 Data

Hospital admissions in England are recorded in the Hospital Episode Statistics (HES) dataset used to reimburse hospitals for the care they provided to patients admitted to hospital. This dataset contains details on every episode of care, and a new finished consultant episode (FCE) record is created for every new hospital admission and every time responsibility for the care of a patient passes from one consultant to another. The HES FCE records data about the patient (age, sex, and place of residence) and their hospital stay (diagnoses, procedures, length of stay). Using this information the FCE is allocated to a healthcare resource group (HRG), which collates hospital stays that use similar levels of resources. Hospitals are reimbursed by the NHS through the payments by results (PbR) system based on the HRG, adjusted for the specifics of the case – e.g. more complicated cases with longer than usual lengths of stay attract additional reimbursement. The costs that are attached to each HRG for each year and the variations in payments for more complex cases are given in the NHS national reference costs.[6] Details of how to derive costs from HES data are available in the PbR documentation [7] and their use in health economic analysis is discussed in Asaria et al.[8] We used HES inpatient data for financial year 2011/12 and associated reference costs in this study.

Hospitals also provide a range of services to patients that do not require admission, these include visits to see specialists and various programmes of follow up care. These are collected in the HES outpatient dataset. Outpatient visits are not currently part of the PbR system and so cannot be as easily micro-costed in the way that inpatient admissions are. For the purpose of this analysis we therefore assume that there is no systematic variation in the costs of outpatient visits, and hence use the total NHS spend on outpatient care and the count of the total number of outpatient visits to calculate an average cost per outpatient visit. The total cost of outpatient visits was calculated using the Department of Health's reported budget for hospital and community health services from which total inpatient admissions costs were subtracted.[9]

The other key area of NHS spending is on primary care. We split primary care spending into two parts for the purpose of this analysis. The first part consisting of visits to general practitioners, prescriptions and pharmaceutical services. The second consisting of spending on dental and ophthalmology services. Detailed administrative data covering primary care are not currently collected in the same way that they are for secondary care. There are however various pieces of research looking at demographic patterns in visits to general practitioners and we used research by Q Research,[10] together with our analysis of outpatient hospital data to estimate the distribution of primary care use in the first part of the primary care budget. The second part of the primary care budget was assumed to be equally distributed across the population for the purposes of this analysis. Figures for total NHS spending on the various sub-categories of primary care were taken from the Department of Health's published accounts.[9]

The basic geographical unit of analysis used in this study was the lower layer super output area (LSOA). The country is divided into 32,482 LSOAs based on the 2001 census each containing on average 1,500 people (range 1,000 to 3,000). Population data for 2011/12 were taken from the ONS mid-year population estimates split by LSOA, sex and age (ages 0-84 in single year estimates and then 85+). Area deprivation for LSOAs is measured using the index of multiple deprivation (IMD) for 2010. We grouped LSOAs into deprivation quintiles based on their IMD overall rank ranging from Q1 (the most deprived fifth of LSOAs) to Q5 (the least deprived fifth of LSOAs).

## 2.2 Analysis

HES inpatient data was grouped into age, sex and IMD quintile categories. The total cost for each age, sex and IMD quintile group was calculated by combining the HRG associated with each admission with the relevant reference cost. This aggregated cost was then divided by the population in each age, sex and IMD quintile group using ONS population estimates to estimate average inpatient costs for each group:

$$average\_inpatient\_cost_{age,sex,imd} = \frac{\sum inpatient\_costs_{age,sex,imd}}{\sum population_{age,sex,imd}}$$

HES outpatient data was grouped into age, sex and IMD quintile categories. The total number of outpatient visits for each age, sex and IMD quintile group were counted. These counts were multiplied by the average cost of an outpatient visit and divided by the population in each age, sex and IMD quintile group using ONS population estimates to estimate average outpatient costs for each group:

$$average\_outpatient\_cost_{age,sex,imd} = \frac{\sum outpatient\_visits_{age,sex,imd}}{\sum population_{age,sex,imd}} \times \frac{total\_outpatient\_budget}{\sum outpatient\_visits}$$

Total numbers of visits to general practitioners were calculated by combining utilisation rates by age and sex with ONS population data. The deprivation gradient from outpatient visits was applied to these totals to get the age, sex and IMD group breakdown of GP visits and these were then divided through by the overall total number of GP visits to derive primary care weights which were applied to the budget for GP, prescription and pharmaceutical services to get total NHS spend on these categories by age, sex and deprivation group. This spend was then divided by the population in each age, sex and IMD quintile group using ONS population estimates to estimate average costs for each group:

$$average\_gp\_pharma\_cost_{age,sex,imd} = \frac{gp\_utilisation\_rate_{age,sex} \times population_{age,sex}}{\sum \sum gp\_utilisation\_rate_{age,sex} \times population_{age,sex}} \times \frac{\sum outpatient\_visits_{age,sex,imd}}{\sum outpatient\_visits_{age,sex}} \times \frac{total\_gp\_pharma\_budget}{\sum population_{age,sex,imd}}$$

The dental and ophthalmic services budget was assumed to be equally allocated to each subgroup and so just averaged across the total population:

$$average\_dental\_ophthalmic\_cost = \frac{total\_dental\_ophthalmic\_budget}{\sum population}$$

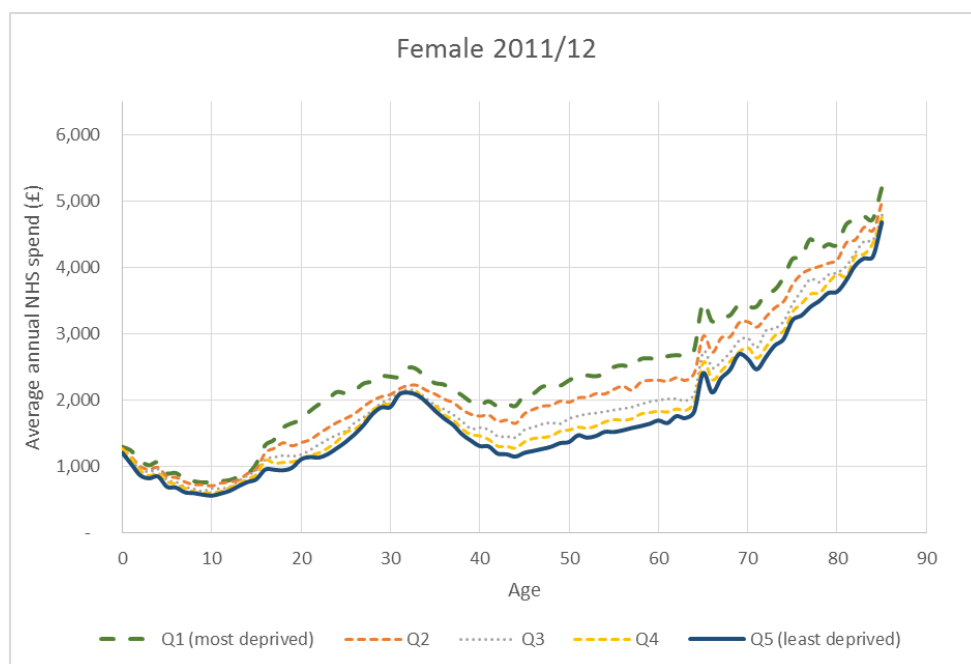
Finally total average NHS spend by age, sex and IMD quintile group was calculated as a sum of the averages of these subcategories of NHS spend:

$$average\_nhs\_cost_{age,sex,imd} = average\_inpatient\_cost_{age,sex,imd} + average\_outpatient\_cost_{age,sex,imd} + average\_gp\_pharma\_cost_{age,sex,imd} + average\_dental\_ophthalmic\_cost$$

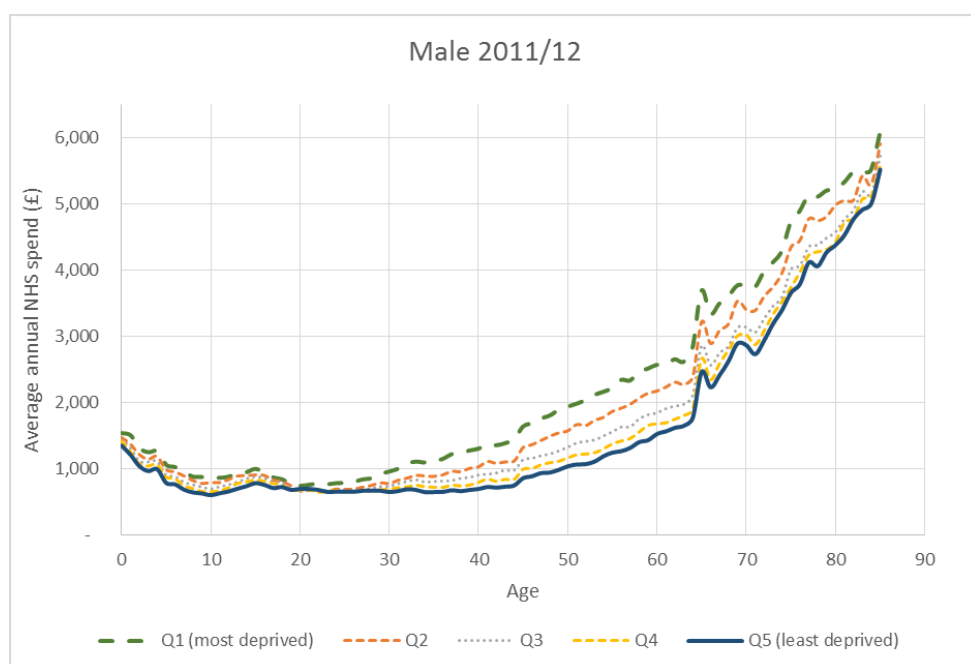
The analysis was performed using Oracle 11g, R 3.2.3 and MS Excel 2013 - the analysis code is available at [https://github.com/miqdadasaria/hospital\\_costs](https://github.com/miqdadasaria/hospital_costs)

### 3. Results

The breakdown of average annual NHS spend by age and deprivation quintile group is illustrated for females and males in figures 1 and 2 respectively. Both figures display a clear deprivation gradient in costs, with costs for people living in more deprived neighbourhoods being higher than for those living in more affluent neighbourhoods at any given age. It is also evident from the figures that costs rise steeply after the age of 60 and continue to rise with age beyond this point. Finally figure 1 shows a spike in health care costs for women of child bearing age, with this spike occurring at a younger age for those living in more deprived neighbourhoods. A full breakdown of these results in tabular format can be found in the appendices.



**Figure 1: Average annual NHS spend by age and neighbourhood deprivation quintile group for females in England 2011/12**



**Figure 2: Average annual NHS spend by age and neighbourhood deprivation quintile group for males in England 2011/12**

We also use these results to calculate the total cost borne by the NHS associated with inequality. This is calculated as the difference between actual costs observed and the costs that we would have observed if those living in more deprived neighbourhoods had similar average costs to those living in the most affluent fifth of neighbourhoods. This total cost associated with inequality for year 2011/12 was £12.52 billion.

## 4. Discussion

The analysis presented here indicates that health care costs at any given age are higher for those living in more deprived neighbourhoods than those living in more affluent neighbourhoods. Research looking at the social distribution of health has found that quality of life is also lower at any given age for those living in more deprived neighbourhoods than for those living in more affluent neighbourhoods.[11] Taken together these results when applied in health technology assessment mean that new technologies, even if equally effective across the deprivation gradient, will have less chance of being deemed cost-effective for those living in more deprived areas than for those living in more affluent areas when we take into consideration the variation in remaining lifetime health care cost and quality adjusted health gain. Health care provision is not just about maximising aggregate health in the population but also has the reduction of health inequalities as one of its key objectives and this is reflected in the high levels of health inequality aversion demonstrated by members of the public in England.[12] Standard cost-effectiveness analysis can be extended to account for these differential lifetime health care cost and quality of life trajectories as well as incorporating the notion of health inequality aversion by using novel methods such as distributional cost effectiveness analysis (DCEA).[13,14]

There are a number of limitations that should be considered when using the results presented here in the context of cost-effectiveness analysis. The first is that these estimates are based on data for financial year 2011/12 – when using these results to extrapolate costs for other years care must be taken to understand how best to adjust these costs to reflect how they will change over time. This is no different to other costs used in cost-effectiveness analysis and similar approaches can be applied to deal with the extrapolation of these costs. The second is what is to be assumed about neighbourhood deprivation over time – for example are people who currently live in the most deprived fifth of neighbourhoods likely to remain living in similarly deprived neighbourhoods throughout their lives?. If deprivation specific costs are to be used then a view needs to be taken on the degree of social mobility over time. Finally the costs presented here are average costs, to reflect the uncertainty in these average costs, for example for use in probabilistic sensitivity analysis of a cost-effectiveness model, some measure of their distribution would need to be calculated.

## References

- 1 NICE. *Guide to the methods of technology appraisal*. London: 2013. <https://www.nice.org.uk/process/pmg9>
- 2 Morton A, Adler AI, Bell D, et al. Unrelated Future Costs and Unrelated Future Benefits: Reflections on NICE Guide to the Methods of Technology Appraisal. *Health Economics* 2016;25:933–8. doi:10.1002/hec.3366.
- 3 van Baal P, Meltzer D, Brouwer W. Future Costs, Fixed Healthcare Budgets, and the Decision Rules of Cost-Effectiveness Analysis. *Health Economics* 2016;25:237–48. doi:10.1002/hec.3138.
- 4 Kelly E, Stoye G, Vera-Hernández M. Public hospital spending in England: evidence from National Health Service administrative records. *Fiscal Studies* 2016.
- 5 Asaria M, Doran T, Cookson R. The costs of inequality: whole-population modelling study of lifetime inpatient hospital costs in the English National Health Service by level of neighbourhood deprivation. *Journal of Epidemiology & Community Health* 2016;;jech-2016-207447. doi:10.1136/jech-2016-207447.
- 6 Department of Health. *NHS reference costs: financial year 2011 to 2012*. 2012. <https://www.gov.uk/government/publications/nhs-reference-costs-financial-year-2011-to-2012>
- 7 Department of Health Payment by Results team. *A simple guide to Payment by Results*. 2012. doi:10.1111/j.1478-5153.2009.00351\_5.x.
- 8 Asaria M, Grasic K, Walker S. Using Linked Electronic Health Records to Estimate Healthcare Costs: Key Challenges and Opportunities. *Pharmacoeconomics* 2015;1–6. doi:10.1007/s40273-015-0358-8.
- 9 Department of Health. *Department of Health Annual Report and Accounts 2011-12*. London: 2012. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/212977/23735\\_HC-66-DoH.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212977/23735_HC-66-DoH.pdf)
- 10 NHS Digital. *Trends in consultation rates in General Practice*. 2011. [https://data.gov.uk/dataset/trends\\_in\\_consultation\\_rates\\_in\\_general\\_practice](https://data.gov.uk/dataset/trends_in_consultation_rates_in_general_practice)
- 11 Love-Koh J, Asaria M, Cookson R, et al. The Social Distribution of Health: Estimating Quality-Adjusted Life Expectancy in England. *Value Health* 2015;18:655–62. doi:10.1016/j.jval.2015.03.1784
- 12 Robson M, Asaria M, Cookson R, et al. Eliciting the level of health inequality aversion in England. *Health Economics* 2016.
- 13 Asaria M, Griffin S, Cookson R, et al. Distributional Cost-Effectiveness Analysis of Health Care Programmes - A Methodological Case Study of the UK Bowel Cancer Screening Programme. *Health Economics* 2015;24:742–54. doi:10.1002/hec.3058.
- 14 Asaria M, Griffin S, Cookson R. Distributional Cost-Effectiveness Analysis: A Tutorial. *Medical Decision Making* 2016;36:8–19. doi:10.1177/0272989X15583266.

## Appendix

**Table 1: Average annual NHS spend for women broken down by age and deprivation quintile group 2011/12**

Age	Female					Overall Female
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	
0	1297	1,255	1,222	1,267	1,209	1,255
1	1,240	1,136	1,085	1,118	1,038	1,135
2	1,095	997	974	938	870	986
3	1,017	952	924	861	825	925
4	1,062	983	966	898	852	960
5	900	842	800	767	696	807
6	901	832	773	735	685	791
7	819	764	698	672	614	717
8	777	723	671	621	600	681
9	757	722	634	594	578	659
10	766	703	679	608	562	664
11	779	746	672	623	594	682
12	791	762	702	681	635	713
13	839	793	785	738	705	771
14	881	892	872	808	767	843
15	1,034	966	952	882	811	928
16	1,316	1,207	1,117	1,092	957	1,135
17	1,402	1,273	1,145	1,048	954	1,163
18	1,582	1,356	1,174	1,061	946	1,230
19	1,652	1,310	1,160	1,068	984	1,259
20	1,708	1,360	1,185	1,114	1,110	1,331
21	1,834	1,403	1,257	1,170	1,144	1,405
22	1,935	1,496	1,338	1,205	1,138	1,475
23	2,006	1,582	1,417	1,278	1,188	1,552

Age	Female					
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	Overall Female
24	2,123	1,663	1,484	1,377	1,278	1,651
25	2,108	1,725	1,544	1,513	1,373	1,714
26	2,145	1,798	1,669	1,563	1,489	1,790
27	2,252	1,906	1,749	1,676	1,628	1,895
28	2,286	1,996	1,859	1,846	1,794	1,996
29	2,365	2,053	1,964	1,929	1,895	2,075
30	2,358	2,086	2,028	1,953	1,900	2,093
31	2,354	2,173	2,125	2,066	2,092	2,176
32	2,491	2,222	2,166	2,124	2,117	2,238
33	2,468	2,223	2,131	2,118	2,080	2,215
34	2,342	2,148	2,030	1,955	1,980	2,100
35	2,261	2,091	1,931	1,913	1,843	2,016
36	2,238	2,015	1,869	1,777	1,728	1,930
37	2,164	1,962	1,787	1,703	1,632	1,850
38	2,080	1,858	1,684	1,567	1,492	1,733
39	1,979	1,785	1,574	1,479	1,394	1,638
40	1,923	1,759	1,593	1,461	1,311	1,602
41	1,986	1,774	1,560	1,405	1,305	1,597
42	1,914	1,679	1,461	1,304	1,197	1,500
43	1,953	1,698	1,460	1,302	1,187	1,505
44	1,912	1,650	1,443	1,278	1,151	1,470
45	2,071	1,799	1,561	1,372	1,209	1,578
46	2,098	1,862	1,598	1,422	1,238	1,618
47	2,203	1,909	1,646	1,436	1,268	1,661
48	2,217	1,923	1,664	1,461	1,301	1,683
49	2,219	1,985	1,651	1,534	1,356	1,722



Age	Female					
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	Overall Female
50	2,299	1,969	1,731	1,550	1,373	1,757
51	2,365	2,037	1,766	1,591	1,473	1,819
52	2,377	2,044	1,798	1,575	1,437	1,816
53	2,362	2,100	1,811	1,611	1,463	1,838
54	2,404	2,096	1,834	1,675	1,526	1,877
55	2,502	2,166	1,858	1,705	1,523	1,915
56	2,529	2,212	1,879	1,698	1,549	1,932
57	2,505	2,151	1,901	1,718	1,582	1,932
58	2,620	2,273	1,944	1,792	1,611	2,002
59	2,635	2,300	1,982	1,813	1,646	2,027
60	2,616	2,302	2,005	1,834	1,696	2,042
61	2,665	2,286	2,024	1,822	1,658	2,037
62	2,682	2,342	2,026	1,868	1,762	2,080
63	2,678	2,300	1,997	1,844	1,733	2,049
64	2,753	2,414	2,103	1,974	1,831	2,151
65	3,463	2,969	2,735	2,575	2,410	2,763
66	3,197	2,721	2,491	2,307	2,120	2,496
67	3,261	2,943	2,585	2,441	2,332	2,645
68	3,282	2,958	2,725	2,588	2,460	2,752
69	3,441	3,172	2,903	2,728	2,696	2,944
70	3,418	3,184	2,935	2,792	2,625	2,953
71	3,416	3,106	2,797	2,634	2,470	2,838
72	3,606	3,260	3,054	2,801	2,648	3,027
73	3,667	3,398	3,084	2,974	2,826	3,149
74	3,851	3,496	3,197	3,051	2,925	3,260
75	4,133	3,756	3,459	3,337	3,210	3,536

Age	Female					
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	Overall Female
76	4,159	3,910	3,655	3,460	3,281	3,654
77	4,434	3,980	3,831	3,603	3,411	3,807
78	4,289	4,023	3,780	3,620	3,500	3,807
79	4,359	4,071	3,894	3,776	3,620	3,914
80	4,353	4,127	3,926	3,901	3,640	3,963
81	4,653	4,382	4,025	3,870	3,807	4,108
82	4,724	4,426	4,226	4,174	4,032	4,289
83	4,780	4,617	4,401	4,207	4,142	4,403
84	4,736	4,568	4,419	4,377	4,169	4,435
85+	5,205	5,008	4,797	4,767	4,686	4,871

**Table 2: Average annual NHS spend for men broken down by age and deprivation quintile group 2011/12**

Age	Male					Overall Male
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	
0	1,530	1,464	1,431	1,409	1,347	1,448
1	1,495	1,367	1,315	1,252	1,210	1,345
2	1,300	1,208	1,111	1,068	1,037	1,160
3	1,240	1,133	1,097	1,032	962	1,105
4	1,256	1,179	1,109	1,056	991	1,128
5	1,048	978	902	868	784	924
6	1,014	943	878	841	762	894
7	939	882	792	737	682	811
8	870	814	752	691	639	756
9	864	768	716	647	624	727
10	855	783	688	643	599	714
11	853	781	722	659	627	728
12	871	827	752	702	654	760
13	922	880	794	769	696	811
14	939	887	842	792	733	837
15	989	898	873	822	778	870
16	929	890	852	804	754	844
17	860	822	802	771	706	791
18	828	798	784	737	720	774
19	756	734	705	682	678	713
20	732	657	655	665	692	681
21	749	662	665	673	692	689
22	764	667	659	634	679	684
23	755	649	663	649	649	677
24	772	683	668	663	649	693
25	777	681	668	644	648	692

Age	Male					
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	Overall Male
26	792	683	660	647	649	695
27	829	711	673	649	664	716
28	848	738	694	661	667	734
29	911	777	724	676	665	766
30	949	769	728	679	646	771
31	992	817	767	704	660	806
32	1,070	848	800	716	687	841
33	1,098	890	827	741	677	863
34	1,085	881	793	719	643	839
35	1,100	876	801	711	644	839
36	1,139	898	807	708	647	849
37	1,211	952	813	743	672	883
38	1,230	946	850	731	659	885
39	1,267	996	861	744	677	907
40	1,294	1,020	899	783	691	936
41	1,357	1,100	911	834	721	982
42	1,345	1,073	929	802	712	967
43	1,378	1,095	972	831	726	993
44	1,437	1,108	970	831	745	1,007
45	1,629	1,312	1,131	982	855	1,167
46	1,679	1,355	1,150	995	884	1,194
47	1,751	1,418	1,192	1,050	931	1,248
48	1,796	1,482	1,217	1,082	940	1,280
49	1,880	1,533	1,264	1,104	981	1,326
50	1,929	1,564	1,318	1,155	1,035	1,375
51	1,974	1,659	1,385	1,203	1,062	1,430
52	2,029	1,643	1,408	1,214	1,066	1,443

Age	Male					Overall Male
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	
53	2,107	1,722	1,429	1,232	1,105	1,486
54	2,154	1,768	1,490	1,292	1,186	1,544
55	2,211	1,858	1,553	1,366	1,241	1,612
56	2,333	1,907	1,626	1,411	1,263	1,668
57	2,326	1,966	1,630	1,450	1,312	1,696
58	2,459	2,060	1,749	1,547	1,399	1,799
59	2,505	2,133	1,811	1,646	1,429	1,859
60	2,562	2,166	1,840	1,671	1,523	1,904
61	2,570	2,226	1,904	1,687	1,562	1,939
62	2,645	2,300	1,943	1,740	1,616	1,989
63	2,608	2,264	1,971	1,798	1,646	1,999
64	2,820	2,377	2,103	1,893	1,765	2,121
65	3,680	3,214	2,854	2,657	2,460	2,892
66	3,330	2,885	2,561	2,338	2,227	2,590
67	3,486	3,080	2,747	2,583	2,409	2,784
68	3,595	3,182	2,848	2,788	2,621	2,943
69	3,760	3,525	3,126	3,000	2,887	3,204
70	3,761	3,397	3,136	3,017	2,864	3,189
71	3,737	3,383	3,059	2,869	2,727	3,099
72	3,970	3,598	3,265	3,079	2,935	3,310
73	4,109	3,741	3,455	3,329	3,188	3,514
74	4,281	3,950	3,595	3,520	3,394	3,697
75	4,712	4,340	4,012	3,736	3,655	4,028
76	4,882	4,442	4,070	3,962	3,786	4,165
77	5,116	4,769	4,352	4,226	4,112	4,452
78	5,102	4,740	4,383	4,274	4,058	4,450
79	5,195	4,806	4,490	4,311	4,268	4,555

Age	Male					
	Q1 (most deprived)		Q1 (most deprived)		Q1 (most deprived)	
80	5,223	4,979	4,579	4,423	4,376	4,661
81	5,320	5,049	4,776	4,723	4,527	4,835
82	5,472	5,052	4,909	4,778	4,769	4,954
83	5,485	5,417	5,194	5,072	4,911	5,182
84	5,503	5,290	5,140	5,117	5,004	5,184
85+	6,049	5,901	5,740	5,577	5,516	5,724

**Table 3: Average annual NHS spend overall broken down by age and deprivation quintile group 2011/12**

Age	Overall					Overall
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	
0	1,416	1,362	1,330	1,340	1,280	1,354
1	1,370	1,254	1,203	1,187	1,126	1,242
2	1,200	1,105	1,044	1,005	956	1,076
3	1,131	1,045	1,012	949	896	1,017
4	1,161	1,083	1,039	979	923	1,046
5	976	912	853	819	741	867
6	959	889	826	789	724	844
7	880	824	746	705	649	765
8	825	770	712	657	620	720
9	812	746	676	621	602	694
10	811	744	684	626	581	689
11	817	764	697	641	611	705
12	832	795	728	692	645	737
13	881	838	790	754	700	791
14	911	889	857	800	749	840
15	1,011	931	912	851	794	898
16	1,117	1,044	981	943	852	985
17	1,125	1,041	969	906	825	971
18	1,198	1,070	974	893	828	995
19	1,197	1,021	927	866	822	979
20	1,221	1,004	910	876	883	995
21	1,296	1,030	950	908	899	1,037
22	1,356	1,075	986	904	892	1,068
23	1,386	1,102	1,025	944	896	1,099
24	1,448	1,158	1,057	997	934	1,153
25	1,449	1,196	1,093	1,051	982	1,189

Age	Overall					
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	Overall
26	1,474	1,231	1,147	1,077	1,036	1,227
27	1,537	1,296	1,190	1,132	1,108	1,286
28	1,561	1,347	1,251	1,218	1,193	1,341
29	1,644	1,404	1,330	1,279	1,258	1,409
30	1,652	1,415	1,366	1,304	1,263	1,422
31	1,672	1,484	1,435	1,380	1,373	1,485
32	1,775	1,517	1,473	1,416	1,414	1,533
33	1,775	1,538	1,470	1,435	1,392	1,535
34	1,701	1,494	1,400	1,342	1,329	1,464
35	1,668	1,464	1,355	1,315	1,257	1,421
36	1,675	1,439	1,332	1,246	1,198	1,384
37	1,681	1,444	1,296	1,230	1,164	1,366
38	1,652	1,393	1,264	1,158	1,086	1,310
39	1,626	1,390	1,219	1,117	1,046	1,276
40	1,610	1,386	1,248	1,129	1,014	1,273
41	1,670	1,434	1,237	1,125	1,022	1,292
42	1,630	1,375	1,197	1,057	961	1,236
43	1,662	1,394	1,216	1,070	961	1,250
44	1,673	1,376	1,206	1,057	953	1,239
45	1,848	1,554	1,346	1,181	1,037	1,374
46	1,888	1,607	1,375	1,211	1,064	1,407
47	1,976	1,662	1,420	1,247	1,104	1,456
48	2,008	1,703	1,442	1,276	1,125	1,485
49	2,051	1,761	1,461	1,323	1,172	1,527
50	2,116	1,768	1,528	1,356	1,207	1,568
51	2,172	1,851	1,579	1,401	1,270	1,627
52	2,204	1,846	1,606	1,397	1,254	1,631



Age	Overall					
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	Overall
53	2,235	1,912	1,622	1,424	1,286	1,664
54	2,280	1,934	1,665	1,486	1,357	1,712
55	2,357	2,014	1,708	1,538	1,383	1,765
56	2,431	2,061	1,755	1,558	1,408	1,802
57	2,416	2,060	1,768	1,588	1,449	1,816
58	2,540	2,168	1,849	1,672	1,508	1,902
59	2,570	2,217	1,899	1,731	1,540	1,945
60	2,589	2,235	1,925	1,755	1,612	1,975
61	2,618	2,257	1,966	1,756	1,612	1,989
62	2,664	2,322	1,985	1,805	1,691	2,036
63	2,643	2,282	1,984	1,822	1,691	2,024
64	2,786	2,396	2,103	1,935	1,799	2,136
65	3,569	3,087	2,793	2,615	2,434	2,826
66	3,262	2,800	2,525	2,322	2,172	2,541
67	3,369	3,009	2,664	2,510	2,370	2,712
68	3,431	3,065	2,784	2,684	2,537	2,844
69	3,592	3,338	3,010	2,858	2,788	3,068
70	3,579	3,285	3,032	2,900	2,739	3,065
71	3,566	3,235	2,921	2,747	2,592	2,962
72	3,774	3,418	3,154	2,934	2,785	3,161
73	3,870	3,556	3,261	3,143	2,997	3,320
74	4,047	3,704	3,385	3,272	3,146	3,464
75	4,394	4,021	3,714	3,526	3,419	3,763
76	4,478	4,151	3,846	3,694	3,516	3,888
77	4,731	4,328	4,068	3,889	3,734	4,098
78	4,638	4,333	4,049	3,915	3,758	4,094
79	4,708	4,383	4,157	4,017	3,913	4,195

Age	Overall					
	Q1 (most deprived)	Q2	Q3	Q4	Q5 (least deprived)	Overall
80	4,709	4,482	4,206	4,132	3,966	4,263
81	4,921	4,654	4,342	4,230	4,121	4,413
82	5,015	4,676	4,509	4,428	4,346	4,563
83	5,051	4,929	4,723	4,564	4,468	4,718
84	5,025	4,844	4,704	4,678	4,511	4,732
85+	5,473	5,291	5,108	5,046	4,981	5,156