

# An investigation into Consultants' NHS and private incomes in England

Stephen Morris<sup>a,\*</sup>, Bob Elliott<sup>b</sup>, Ada Ma<sup>b</sup>, Alex McConnachie<sup>c</sup>, Nigel Rice<sup>d</sup>, Diane Skatun<sup>b</sup>, Matt Sutton<sup>b</sup>.

<sup>a</sup> *Health Economics Research Group, Brunel University*

<sup>b</sup> *Health Economics Research Unit, University of Aberdeen*

<sup>c</sup> *Robertson Centre for Biostatistics, University of Glasgow*

<sup>d</sup> *Centre for Health Economics, University of York*

## Summary

In this paper we investigate the magnitude and determinants of Consultants' NHS and private income in England using a unique dataset derived from individual tax records for 24,407 Consultants (91.7% of the total) for the financial year 2003/4. The mean total income across all Consultants was £110,773. The mean NHS income was £76,628 and the mean private income was £34,144. We find that the total, NHS and private incomes vary by age group, contractual status, specialty, and SHA of place of work. We compute the conditional mean incomes earned by Consultants in each age group, type of contract, specialty and SHA, and find that the variation in total income across consultants appears to be due mainly to variations in private income across specialties (which ranges from £5,144 [Paediatric neurology] to £142,723 [Plastic Surgery]). We also find evidence of a positive association between mean private income and NHS waiting lists across specialties.

## Acknowledgements

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\* *Correspondence to [stephen.morris@brunel.ac.uk](mailto:stephen.morris@brunel.ac.uk)*

## Background

Up until April 2004 hospital consultants working in the NHS in England were paid an NHS salary, with bonus payments in the form of distinction awards being used to reward excellence in clinical practice, research, teaching, contributions to health policy, and management. Consultants with a whole time NHS contract were allowed to undertake limited private practice, allowing them to earn a private income no higher than 10% of their NHS income – the so-called ‘10% rule’. Those employed on a part-time contract, including the ‘maximum part-time’ contract where Consultants receive 10/11ths of a full time salary, were allowed to undertake unlimited private practice.

Concerns were expressed with this system by the House of Commons Health Select Committee in terms of: (1) the complexity of and lack of transparency in the contractual arrangements; (2) the wide variation in the amount of NHS work undertaken by Consultants; (3) the inadequate use of job plans and the lack of a rigorous appraisal system; (4) the large number of NHS work commitments not being met; (5) the lack of accurate and independent data on Consultants’ NHS and private activity; and, (6) the potential for conflicts of interest arising from private practice. (Parliamentary Select Committee on Health, 2000)

With respect to the last item, the Health Select Committee identified three potential problems. First, that “lucrative private practice can tempt consultants away from their NHS work to the extent where they fail to meet their contractual obligations to the NHS”. Second, that “NHS Consultants who work in the private sector have perverse incentives to keep their NHS waiting times high in order that that demand for private work is stimulated.” Third, that the system is inequitable because “patients able to pay for their treatment privately can queue-jump patients on the NHS, irrespective of their comparative clinical needs.” (Parliamentary Select Committee on Health, *op cit.*)

The Health Select Committee’s recommendations with respect to private practice included *inter alia* systematic collection of activity data for Consultants working in the NHS and the private sector, more rigorous monitoring of the 10% rule for whole timers, and a “long term objective that Consultants in the NHS should not undertake private practice.” (Parliamentary Select Committee on Health, *op cit.*)

After prolonged and difficult negotiations a new Consultant contract was introduced in England in September 2003 and was implemented with effect from April 2004. In some cases it could be backdated to April 2003. The new contract applies to all new Consultants and to existing Consultants who chose to accept it. Under the new contract there is no restriction on private income, but undertaking private practice at the expense of NHS work can affect pay progression. Additionally, underpinning the new contract is a code of conduct on private practice which sets out standards of best practice in managing private and NHS work (Department of Health, 2003). The purpose of the code is to encourage openness and transparency with respect to private sector commitments, and Consultants are required to disclose details of their private practice.

In view of the concerns expressed about potential conflicts of interest between NHS work and private practice in this paper we investigate Consultants' NHS and private activity. Since direct measures of activity, e.g., hours, are not available (Parliamentary Select Committee on Health, *op cit.*), we focus instead on NHS and private incomes; the aim of the paper is to examine the magnitude and determinants of these. The analysis is undertaken using a unique and rich dataset on Consultants' income derived from individual tax records held at Her Majesty's Revenue and Customs. Our analysis has four components. First, we calculate the total income earned by Consultants in England and disaggregate this into NHS income and private income. Second we calculate the ratio of private income to NHS income, with respect to the 10% rule. Third we investigate the determinants of NHS and private income and see how these vary by age, contractual status, specialty and region of place of work. Fourth, we examine the association between private income and NHS waiting lists.

## **Data and variables**

Our main source of data is a dataset of Consultants' income based on anonymised individual level tax records for the financial year 2003/04 held by Her Majesty's Revenue and Customs (HMRC). These data were linked to the 2003 NHS Medical and Dental Workforce Census by National Insurance number and Unique Taxpayer Reference number on the Self-Assessment Database to produce a dataset containing the following individual level variables:

- Total Schedule E income (defined as the total amount of Schedule E income from all sources for a doctor, comprising pay plus expenses plus benefits plus taxable lump sums minus expenses)
- Total Schedule D income (defined as the total amount of Schedule D income from all sources for a doctor, comprising net business profits for tax purposes)
- Total income (defined as Total Schedule E income plus Total Schedule D income)
- Age band (Under 40 years, 40-44 years, 45-49 years, 50-54 years, 55-59 years, 60 years or over)
- Contractual status (Whole time, Part-time<sup>1</sup>, Maximum part-time<sup>2</sup>)
- Pay scale
- Specialty description
- Specialty Group number and description
- Government Office Region code and name of place of work
- Strategic Health Authority (SHA) code and name of place of work

Access to the data was granted by HMRC at the request of the Department of Health. The dataset was held by HMRC and was analysed in their offices. The researchers were not allowed to take away the data or any results that would have identified individual Consultants. Also, access was restricted so that the researchers are unable to return to the dataset, with the result that further interrogations of the data are not possible.

The assembled dataset contains data for 24,407 Consultants in England. According to the 2003 NHS Medical and Dental Workforce Census there were 28,750 Consultants employed in England at 30 September 2003 (Department of Health, 2004). Excluding those employed on honorary contracts (2,139) gives a total of 26,611; our sample comprises 91.7% of this total. There are missing observations because: 1,131 (4.3%) Consultants were in the 2003 NHS Medical and Dental Workforce Census but were not traceable in the Self-Assessment Database; 671 (2.5%) did not have a self-assessment tax return for 2003/04; 132 (0.5%) reported earning some Schedule D income but no Schedule E income; 92 (0.3%) reported earning Schedule D income where the accounting period was not equal to 12 months; 16

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<sup>1</sup> Usually defined as being contracted for up to 9/11ths of whole time plus allowed to do unlimited private practice.

<sup>2</sup> Usually defined as being contracted for 10/11ths of whole time plus allowed to do unlimited private practice.

(0.1%) reported earning Schedule D income where the accounting period ended before or after the financial year 2003/04; and, 162 (0.6%) had major inconsistencies in the data supplied and, according to HMRC protocol, their data were not to be believed.

All Consultants in the dataset were linked to the 2003 NHS Medical and Dental Workforce Census, and were therefore employed by the NHS. We therefore defined Schedule E (i.e., employed) income as ‘NHS income’ and Schedule D (i.e., self-employed) income as ‘private income’.

Data on waiting lists by specialty and by SHA were taken from Provider-based hospital waiting lists in England in 2003/04 quarter 4, obtained from the KH07 quarterly return submitted by NHS Trusts.<sup>3</sup> These data include those waiting to be admitted to NHS hospitals in England either as a day case or as an ordinary admission, and the figures we used were for the number of patients waiting for three or more months.

## Methods

We compute the conditional mean income earned by Consultants in each age group, type of contract, specialty and SHA. For each of the three types of income (total income, NHS income, private income) we run separately the following regression model

$$Y_i = \beta_0 + \beta_1 A_i + \beta_2 C_i + \beta_3 S_i + \beta_4 R_i + e_i \quad [1]$$

where  $Y$  is income,  $A$  is age group,  $C$  is contractual status,  $S$  is specialty,  $R$  is SHA of place of work,  $e$  is an error term,  $i$  indexes individuals and the  $\beta$ s are coefficients.

All of the independent variables in the regression models are categorical variables. We calculate the conditional mean income in each category by fixing the values of the other variables in the model at their sample means and then computing the linear prediction of income. For example, suppose there are three age groups 0, 1 and 2, and 0 is the omitted category. The conditional mean income in each age group is

$$\bar{Y}^0 = \hat{\beta}_0 + \hat{\beta}_2 \bar{C} + \hat{\beta}_3 \bar{S} + \hat{\beta}_4 \bar{R} \quad [2]$$

$$\bar{Y}^1 = \hat{\beta}_0 + \hat{\beta}_1 + \hat{\beta}_2 \bar{C} + \hat{\beta}_3 \bar{S} + \hat{\beta}_4 \bar{R} \quad [3]$$

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<sup>3</sup> <http://www.performance.doh.gov.uk/waitingtimes/2004/q3/index.html>

$$\bar{Y}^2 = \hat{\beta}_0 + \hat{\beta}_1^2 + \hat{\beta}_2 \bar{C} + \hat{\beta}_3 \bar{S} + \hat{\beta}_4 \bar{R} \quad [4]$$

where the superscripts denote age group and the same fixed mean values of  $C$ ,  $S$  and  $R$  are used for each age group. This gives the mean income in each age group conditional on the other variables in the model. We used a similar procedure for the other variables, and for each type of income, and then for every category we computed the ratio of private income to NHS income.

We relate income to waiting lists by plotting the number of patients waiting three or more months against private income for each specialty and for each SHA. The relationship is quantified using a simple linear regression of patients waiting for three or more months against total income, weighted by the number of Consultants in each specialty/SHA.

## Results

The mean total income across all Consultants in England in 2003/04 was £110,773. The mean NHS income was £76,628 and the mean private income was £34,144. The ratio of mean private income to mean NHS income was 0.45. Summary statistics for all the variables in the dataset are in Table A1 in the Appendix.

The regression results used to compute conditional mean income are in Table A2 in the Appendix. Total, NHS and private incomes vary by age group, contractual status, specialty and SHA of place of work. The explanatory variables explain 24%-27% of the variation in the income measures.

Conditional mean income by age group is in Table 1. Consistent with economic theory, the relationship between age and income is inverse U-shaped, with the highest total income earned in the 50-54 years group (£120,548), the highest NHS income earned in the 55-59 years group (£85,003), and the highest private income earned in the 45-49 years group (£38,200). Private income is a larger proportion of total income at younger ages, which may reflect an age effect and/or a cohort effect.

Table 2 shows conditional mean income by contractual status. Unsurprisingly, NHS income is highest among those contracted to work Whole time. Maximum part-timers earn the

highest total income and the highest private income. The ratio of mean private income to NHS income was 0.26 for Whole-timers, which is higher than the level stipulated by the 10% rule. Relative to Whole timers, those working Maximum part-time have significantly higher total and private income and significantly lower NHS income. The total income of Part-timers is not significantly different from that earned by Whole timers, but this is due to significantly lower NHS income compensated by significantly higher private income.

Conditional mean incomes by specialty are in Table 3. Mean total income ranges from £70,554 (Community Health Service Dental) to £217,727 (Plastic Surgery), a difference of £147,173. Mean NHS income ranges from £57,843 (Community Health Service Dental) to £94,760 (Cardio-thoracic surgery). Plastic surgery is the specialty with the highest private income (£142,723) and the highest ratio of private income to NHS income (1.90); the specialty with the lowest values is Paediatric neurology (£5,144; 0.07). Other specialties in which private income is greater than or equal to NHS income are Trauma and orthopaedic surgery (1.40) and Neurosurgery (1.00). The range of private income across specialties is £137,579, which is 3.7 times the range of NHS income (£36,917).

Table 4 shows conditional mean incomes by SHA of place of work. Conditional on the other variables in the regression model, total income is highest in Essex (£132,226) and lowest in South West London (£98,580). NHS income is highest in Trent (£81,995) and lowest in Northumberland, Tyne and Wear (£70,302). Private income is highest in Essex (£56,221) and lowest in South Yorkshire (£20,178). The range of private income across SHAs is 3.1 times the range of NHS income (£36,044 versus £11,692).

The figures plot the number of patients waiting three or more months in each specialty (Figure 1) and SHA (Figure 2) by conditional mean private income. The linear regression indicates a statistically significant and positive relationship between waiting lists and private income across specialties (t-value on the coefficient on private income = 8.42), with private income accounting for 58% of the variation in waiting lists across specialties. Across SHAs the relationship is not statistically significant (t-value = -0.62), and private income accounts for 2% of the variation in waiting lists across SHAs.

## **Concluding remarks**

In this study we found that the average Consultant in England earned a total income of £110,773 in 2003/04. Sixty nine percent of this (£76,628) was NHS income and 31% (£34,144) was private income. The ratio of private income to NHS income across all Consultants was 0.45, while for those employed on a Whole time contract it was 0.26. While the latter indicates private incomes that exceeds the 10% rule, this may be due to the new Consultant contract having been backdated for some Consultants into the study period.

We find that total, NHS and private incomes vary by age group, contractual status, specialty and SHA of place of work, and that the considerable variation in total income appears to be due mainly to variations in private income across specialties. We acknowledge that while it contains rich data on Consultants' income, the dataset contains only a limited number of explanatory variables. Additional variables that might also affect income include gender (in 2003 25% of Consultants were female [Department of Health, 2004]), country of qualification (35% qualified outside the UK) and ethnic group (47% were from non-White ethnic groups).

We found a positive association between mean private income and waiting lists across specialties. This provides some evidence for the concerns raised by the Health Select Committee in terms of the conflicts of interest introduced by private practice. It is worth bearing in mind, however, that the scatterplots and linear regressions of waiting lists against mean private income provide a measure of the *association* between these two variables; causality cannot be inferred due to endogeneity. On the one hand it may be the case that private income has a positive impact on waiting lists because private practice is undertaken at the expense of NHS work, or because Consultants have incentives to keep NHS waiting times high to maintain demand for their private sector work. On the other hand causality may run in the opposite direction because the existence of NHS waiting lists for exogenous reasons may encourage patients to buy private health care. In addition to reverse causality, there may be omitted variable bias because our bivariate analysis does not include other variables that may be correlated with both waiting lists and private income.

We also point out that our analysis is based on HMRC data for the financial year 2003/04, which was the last year before the new contract was introduced. Our results provide a



baseline to assess the impact of the new Consultant contract on future NHS versus private incomes of Consultants in England.

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**Table 1. Conditional mean income by age group.**

Age group	Total income	NHS income	Private income	Ratio <sup>1</sup>	<i>n</i>
Under 40 years	93,770	65,944	27,826	0.42	4,754
40-44 years	108,921	73,860	35,060	0.47	5,823
45-49 years	117,391	79,191	38,200	0.48	5,365
50-54 years	120,548	82,497	38,051	0.46	4,058
55-59 years	118,187	85,003	33,184	0.39	3,074
60 years or over	106,002	79,329	26,674	0.34	1,333
Minimum	93,770	65,944	26,674	0.34	
Maximum	120,548	85,003	38,200	0.48	
Range	26,778	19,059	11,527		

<sup>1</sup>Ratio of Private income to NHS income.

**Table 2. Conditional mean income by Contractual status.**

Contractual status	Total income	NHS income	Private income	Ratio <sup>1</sup>	<i>n</i>
Whole time	101,986	80,718	21,268	0.26	14,754
Part-time	102,014	59,535	42,478	0.71	3,849
Maximum part-time	138,918	77,567	61,351	0.79	5,804
Minimum	101,986	59,535	21,268	0.26	
Maximum	138,918	80,718	61,351	0.79	
Range	36,932	21,182	40,083		

<sup>1</sup>Ratio of Private income to NHS income.

**Table 3. Conditional mean income by Specialty, sorted by Ratio of Private income to NHS income.**

Specialty	Total income	NHS income	Private income	Ratio <sup>1</sup>	<i>n</i>
Plastic surgery	217,727	75,004	142,723	1.90	179
Trauma and orthopaedic surgery	177,915	74,157	103,759	1.40	1,253
Neurosurgery	158,093	78,893	79,199	1.00	136
Otolaryngology	153,378	77,286	76,091	0.98	438
Cardiology	143,227	78,726	64,501	0.82	543
Ophthalmology	137,964	78,904	59,060	0.75	676
Dermatology	126,733	72,787	53,946	0.74	353
Medical oncology	128,805	75,676	53,128	0.70	121
Clinical oncology	124,496	74,359	50,137	0.67	302
General surgery	128,541	79,486	49,055	0.62	1,338
Gastroenterology	123,290	76,878	46,411	0.60	527
Urology	125,664	79,901	45,763	0.57	425
Cardio-thoracic surgery	142,435	94,760	47,675	0.50	187
Neurology	114,077	76,165	37,912	0.50	277
Obstetrics and Gynaecology	110,517	74,376	36,142	0.49	1,161
Oral and maxillo-facial surgery	114,993	78,474	36,519	0.47	215
Clinical radiology	113,450	78,606	34,844	0.44	1,626
Orthodontics	101,995	71,570	30,425	0.43	150
Clinical neurophysiology	101,717	71,407	30,310	0.42	69
Oral Surgery	85,089	60,450	24,639	0.41	12
Restorative dentistry	96,717	69,088	27,629	0.40	47
Additional dental specialties	98,454	70,840	27,614	0.39	22
Dental Public Health	80,668	58,231	22,437	0.39	37
Respiratory medicine	104,962	76,732	28,229	0.37	475
Histopathology	105,993	78,399	27,593	0.35	846
Medical ophthalmology	88,327	65,413	22,914	0.35	6
Anaesthetics	104,277	77,756	26,520	0.34	3,748
Rheumatology	99,195	74,747	24,448	0.33	369
Accident & emergency medicine	101,113	77,137	23,976	0.31	517
Community Health Service Medicine	76,178	59,562	16,615	0.28	144
General (internal) medicine	87,952	68,933	19,019	0.28	19
Allergy	83,493	66,119	17,374	0.26	10
Rehabilitation medicine	86,502	68,932	17,570	0.25	105
Public health medicine	81,201	64,808	16,393	0.25	54
Forensic psychiatry	109,109	87,890	21,219	0.24	191
Renal medicine	100,149	81,011	19,138	0.24	237
Paediatric cardiology	109,323	88,574	20,749	0.23	44
Infectious diseases	97,808	79,300	18,507	0.23	39
Community Health Service Dental	70,554	57,843	12,711	0.22	16
Public Health Medicine	80,593	66,623	13,970	0.21	446
Clinical pharmacology and therapeutics	94,990	78,628	16,362	0.21	20
Endocrinology and diabetes mellitus	92,673	76,782	15,891	0.21	388
Geriatric medicine	90,405	75,139	15,266	0.20	803
Paediatric dentistry	81,716	67,970	13,746	0.20	10
Haematology	93,242	77,815	15,427	0.20	456
General psychiatry	94,774	79,299	15,475	0.20	1,497
Other	78,858	65,996	12,862	0.19	68
Chemical pathology	88,607	75,027	13,581	0.18	128
Immunology	89,937	76,173	13,763	0.18	35
Nuclear medicine	86,938	73,830	13,108	0.18	35

Paediatric surgery	93,770	79,706	14,063	0.18	86
Child and adolescent psychiatry	85,039	73,294	11,745	0.16	433
Paediatrics	84,464	72,819	11,645	0.16	1,441
Intensive care medicine	98,445	85,038	13,407	0.16	53
Occupational medicine	76,838	66,411	10,427	0.16	67
Med microbiology & virology	87,334	75,642	11,693	0.15	337
Audiological medicine	80,697	69,947	10,751	0.15	36
Old age psychiatry	93,920	81,697	12,222	0.15	369
Psychiatry of learning disabilities	94,816	82,477	12,339	0.15	181
Palliative medicine	79,896	69,852	10,044	0.14	138
Psychotherapy	80,698	70,720	9,978	0.14	92
Genito-urinary medicine	81,823	74,111	7,712	0.10	254
Clinical genetics	76,652	70,088	6,564	0.09	77
Paediatric neurology	76,074	70,930	5,144	0.07	30
Minimum	70,554	57,843	5,144	0.07	
Maximum	217,727	94,760	142,723	1.90	
Range	147,173	36,917	137,579		

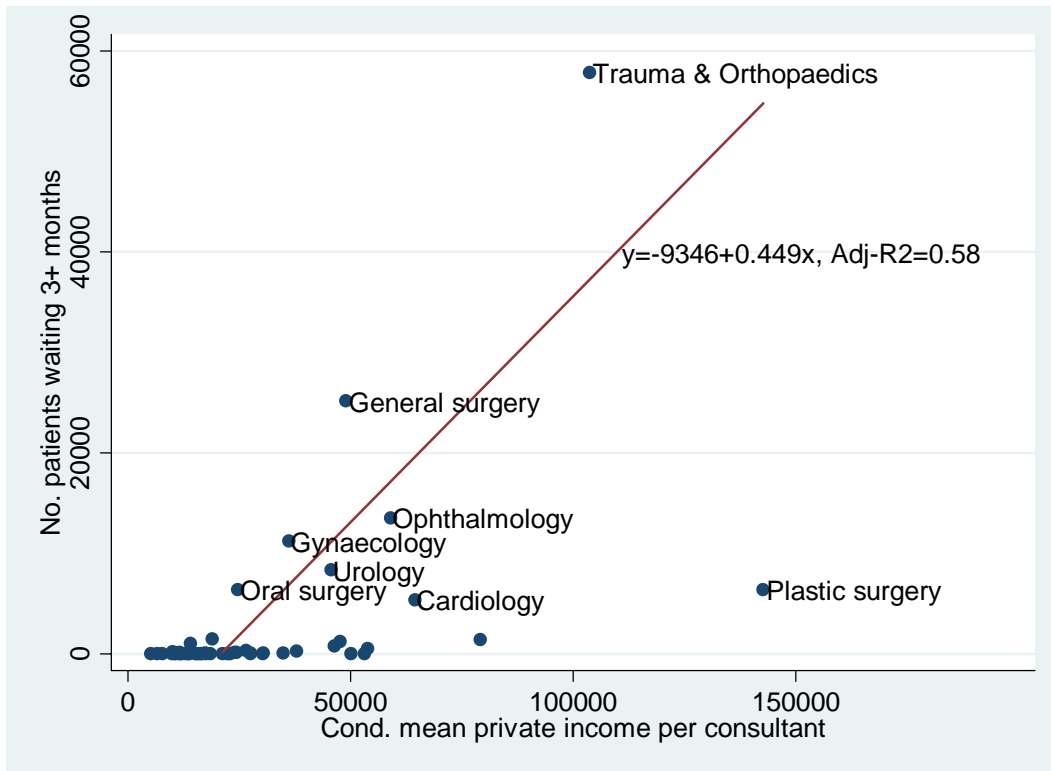
<sup>1</sup>Ratio of Private income to NHS income.

**Table 4. Conditional mean income by SHA of place of work, sorted by Ratio of Private income to NHS income.**

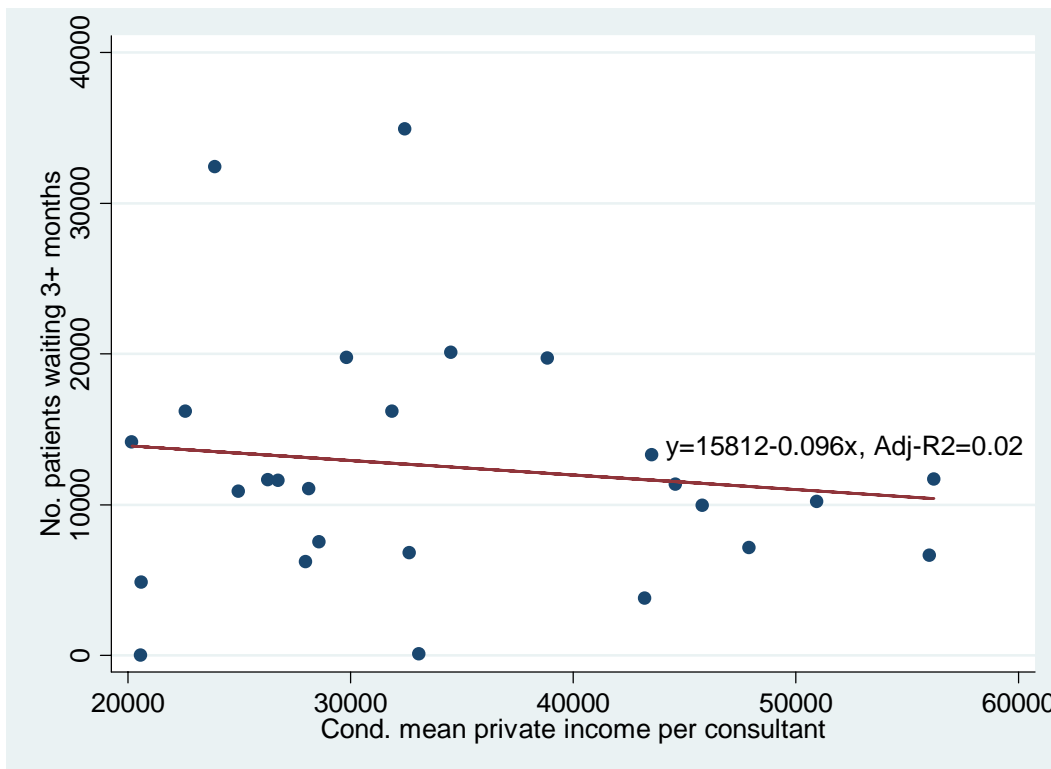
SHA	Total income	NHS income	Private income	Ratio <sup>1</sup>	<i>n</i>
Cheshire & Merseyside	131,659	75,630	56,030	0.74	1,028
Essex	132,226	76,005	56,221	0.74	704
County Durham & Tees Valley	124,735	73,772	50,963	0.69	1,044
Shropshire & Staffordshire	119,290	71,384	47,907	0.67	1,172
North West London	118,843	73,021	45,822	0.63	953
Birmingham & The Black Country	116,901	72,290	44,611	0.62	552
Bedfordshire & Hertfordshire	118,096	74,880	43,216	0.58	545
Cumbria & Lancashire	119,013	75,464	43,549	0.58	711
Northumberland, Tyne & Wear	109,788	70,302	39,486	0.56	583
Dorset & Somerset	114,396	75,543	38,853	0.51	995
North and East Yorkshire and Northern Lancs	110,445	75,929	34,517	0.45	818
Thames Valley	106,075	72,987	33,087	0.45	617
Avon, Gloucestershire & Wiltshire	106,641	74,195	32,446	0.44	1,093
South East London	106,266	74,400	31,866	0.43	964
Leicestershire, Northamptonshire & Rutland	110,989	78,331	32,658	0.42	1,156
South West Peninsula	102,429	73,827	28,602	0.39	505
North East London	111,569	81,749	29,820	0.36	1,297
West Midlands South	105,396	77,413	27,984	0.36	1,308
North Central London	106,003	77,863	28,140	0.36	1,468
Surrey & Sussex	103,711	77,426	26,285	0.34	1,082
Kent & Medway	106,769	80,011	26,758	0.33	637
West Yorkshire	102,263	77,290	24,974	0.32	680
South West London	98,580	74,665	23,915	0.32	757
Trent	104,590	81,995	22,596	0.28	610
Hampshire & Isle of Wight	102,154	81,050	21,104	0.26	614
Greater Manchester	102,399	81,801	20,598	0.25	912
Norfolk, Suffolk & Cambridgeshire	102,254	81,694	20,560	0.25	793
South Yorkshire	101,578	81,400	20,178	0.25	809
Minimum	98,580	70,302	20,178	0.25	
Maximum	132,226	81,995	56,221	0.74	
Range	33,646	11,692	36,044		

<sup>1</sup>Ratio of Private income to NHS income.

**Figure 1. Scatterplot of number of patients waiting three or more months in each specialty by conditional mean private income in each specialty.**



**Figure 2. Scatterplot of number of patients waiting three or more months in each SHA by conditional mean private income in each SHA.**



## Appendix

**Table A1. Summary statistics ( $n = 24,407$ ).**

	Mean	Std.Dev.
<b>Income</b>		
Total income	110,773	71,695
NHS income	76,628	22,210
Private income	34,144	68,659
	Number	%
<b>Age group</b>		
Under 40 years	4,754	19.48
40-44 years	5,823	23.86
45-49 years	5,365	21.98
50-54 years	4,058	16.63
55-59 years	3,074	12.59
60 years or over	1,333	5.46
<b>Contractual status</b>		
Whole time	14,754	60.45
Part-time	3,849	15.77
Maximum part-time	5,804	23.78
<b>Specialty</b>		
Accident & emergency medicine	517	2.12
Additional dental specialties	22	0.09
Allergy	10	0.04
Anaesthetics	3,748	15.36
Audiological medicine	36	0.15
Cardio-thoracic surgery	187	0.77
Cardiology	543	2.22
Chemical pathology	128	0.52
Child and adolescent psychiatry	433	1.77
Clinical genetics	77	0.32
Clinical neurophysiology	69	0.28
Clinical oncology	302	1.24
Clinical pharmacology and therapeutics	20	0.08
Clinical radiology	1,626	6.66
Community Health Service Dental	16	0.07
Community Health Service Medicine	144	0.59
Dental Public Health	37	0.15
Dermatology	353	1.45
Endocrinology and diabetes mellitus	388	1.59
Forensic psychiatry	191	0.78
Gastroenterology	527	2.16
General (internal) medicine	19	0.08
General psychiatry	1,497	6.13
General surgery	1,338	5.48
Genito-urinary medicine	254	1.04
Geriatric medicine	803	3.29
Haematology	456	1.87
Histopathology	846	3.47
Immunology	35	0.14
Infectious diseases	39	0.16
Intensive care medicine	53	0.22
Med microbiology & virology	337	1.38
Medical oncology	121	0.50

Medical ophthalmology	6	0.02
Neurology	277	1.13
Neurosurgery	136	0.56
Nuclear medicine	35	0.14
Obstetrics and Gynaecology	1,161	4.76
Occupational medicine	67	0.27
Old age psychiatry	369	1.51
Ophthalmology	676	2.77
Oral Surgery	12	0.05
Oral and maxillo-facial surgery	215	0.88
Orthodontics	150	0.61
Other	68	0.28
Otolaryngology	438	1.79
Paediatric cardiology	44	0.18
Paediatric dentistry	10	0.04
Paediatric neurology	30	0.12
Paediatric surgery	86	0.35
Paediatrics	1,441	5.90
Palliative medicine	138	0.57
Plastic surgery	179	0.73
Psychiatry of learning disabilities	181	0.74
Psychotherapy	92	0.38
Public Health Medicine	446	1.83
Public health medicine	54	0.22
Rehabilitation medicine	105	0.43
Renal medicine	237	0.97
Respiratory medicine	475	1.95
Restorative dentistry	47	0.19
Rheumatology	369	1.51
Trauma and orthopaedic surgery	1,253	5.13
Urology	425	1.74
<b>SHA</b>		
Avon, Gloucestershire & Wiltshire	1,093	4.48
Bedfordshire & Hertfordshire	545	2.23
Birmingham & The Black Country	552	2.26
Cheshire & Merseyside	1,028	4.21
County Durham & Tees Valley	1,044	4.28
Cumbria & Lancashire	711	2.91
Dorset & Somerset	995	4.08
Essex	704	2.88
Greater Manchester	912	3.74
Hampshire & Isle of Wight	614	2.52
Kent & Medway	637	2.61
Leicestershire, Northamptonshire & Rutland	1,156	4.74
Norfolk, Suffolk & Cambridgeshire	793	3.25
North Central London	1,468	6.01
North East London	1,297	5.31
North West London	953	3.90
North and East Yorkshire and Northern Lancs	818	3.35
Northumberland, Tyne & Wear	583	2.39
Shropshire & Staffordshire	1,172	4.80
South East London	964	3.95
South West London	757	3.10
South West Peninsula	505	2.07



South Yorkshire	809	3.31
Surrey & Sussex	1,082	4.43
Thames Valley	617	2.53
Trent	610	2.50
West Midlands South	1,308	5.36
West Yorkshire	680	2.79

**Table A2. Regression results.**

	Total income		NHS income		Private income	
	Coef.	t	Coef.	t	Coef.	t
<b>Age group<sup>1</sup></b>						
40-44 years	15,150.42	12.34	7,916.31	20.62	7,234.11	6.21
45-49 years	23,620.68	18.52	13,246.69	33.20	10,373.99	8.57
50-54 years	26,777.53	19.45	16,553.21	38.44	10,224.32	7.82
55-59 years	24,416.76	16.41	19,058.63	40.94	5,358.13	3.79
60 years or over	12,232.11	6.23	13,384.89	21.78	-1,152.78	-0.62
<b>Contractual status<sup>2</sup></b>						
Part-time	28.38	0.02	-21,182.49	-57.74	21,210.87	19.05
Maximum part-time	36,932.21	33.57	-3,151.05	-9.16	40,083.26	38.37
<b>Specialty<sup>3</sup></b>						
Additional dental specialties	-2,658.49	-0.20	-6,296.41	-1.49	3,637.92	0.28
Allergy	-17,619.99	-0.89	-11,017.85	-1.78	-6,602.15	-0.35
Anaesthetics	3,164.17	1.08	619.52	0.68	2,544.65	0.92
Audiological medicine	-20,415.60	-1.91	-7,190.30	-2.15	-13,225.31	-1.30
Cardio-thoracic surgery	41,322.59	7.80	17,623.42	10.64	23,699.16	4.71
Cardiology	42,113.98	11.03	1,588.83	1.33	40,525.15	11.17
Chemical pathology	-12,505.16	-2.05	-2,110.16	-1.10	-10,395.01	-1.79
Child and adolescent psychiatry	-16,074.07	-3.98	-3,842.91	-3.04	-12,231.16	-3.19
Clinical genetics	-24,460.94	-3.23	-7,048.75	-2.98	-17,412.19	-2.42
Clinical neurophysiology	604.64	0.08	-5,729.56	-2.31	6,334.20	0.84
Clinical oncology	23,382.95	5.21	-2,778.25	-1.98	26,161.20	6.13
Clinical pharmacology and therapeutics	-6,122.91	-0.43	1,491.12	0.34	-7,614.03	-0.57
Clinical radiology	12,337.33	3.92	1,469.49	1.49	10,867.84	3.63
Community Health Service Dental	-30,558.37	-1.94	-19,294.03	-3.92	-11,264.33	-0.75
Community Health Service Medicine	-24,934.73	-4.25	-17,574.32	-9.58	-7,360.41	-1.32
Dental Public Health	-20,445.11	-1.94	-18,906.27	-5.73	-1,538.84	-0.15
Dermatology	25,620.33	5.97	-4,349.47	-3.24	29,969.80	7.35
Endocrinology and diabetes mellitus	-8,439.54	-2.03	-355.08	-0.27	-8,084.46	-2.05
Forensic psychiatry	7,995.96	1.52	10,752.91	6.54	-2,756.95	-0.55
Gastroenterology	22,177.00	5.76	-258.58	-0.21	22,435.58	6.14
General (internal) medicine	-13,160.98	-0.91	-8,204.24	-1.81	-4,956.73	-0.36
General psychiatry	-6,339.11	-2.01	2,161.80	2.19	-8,500.91	-2.83
General surgery	27,428.32	8.49	2,349.45	2.33	25,078.87	8.18
Genito-urinary medicine	-19,290.06	-4.06	-3,026.11	-2.04	-16,263.95	-3.61
Geriatric medicine	-10,707.82	-3.07	-1,998.25	-1.83	-8,709.57	-2.63
Haematology	-7,870.99	-1.98	677.75	0.54	-8,548.74	-2.26
Histopathology	4,879.98	1.41	1,262.33	1.17	3,617.65	1.10
Immunology	-11,175.87	-1.03	-963.32	-0.28	-10,212.55	-1.00
Infectious diseases	-3,305.05	-0.32	2,163.39	0.67	-5,468.44	-0.56
Intensive care medicine	-2,667.29	-0.30	7,901.26	2.83	-10,568.55	-1.25
Med microbiology & virology	-13,778.22	-3.18	-1,495.26	-1.10	-12,282.95	-2.99
Medical oncology	27,692.14	4.42	-1,460.49	-0.75	29,152.63	4.90

Medical ophthalmology	-12,785.29	-0.50	-11,723.75	-1.47	-1,061.55	-0.04
Neurology	12,964.32	2.81	-972.27	-0.67	13,936.58	3.18
Neurosurgery	56,980.19	9.54	1,756.58	0.94	55,223.61	9.74
Nuclear medicine	-14,174.19	-1.31	-3,306.77	-0.98	-10,867.41	-1.06
Obstetrics and Gynaecology	9,404.73	2.86	-2,761.00	-2.68	12,165.73	3.89
Occupational medicine	-24,274.67	-3.02	-10,725.64	-4.26	-13,549.03	-1.77
Old age psychiatry	-7,193.13	-1.70	4,560.20	3.45	-11,753.32	-2.93
Ophthalmology	36,851.57	10.11	1,767.13	1.55	35,084.45	10.14
Oral Surgery	-16,023.54	-0.89	-16,686.96	-2.95	663.42	0.04
Oral and maxillo-facial surgery	13,880.15	2.76	1,337.06	0.85	12,543.09	2.62
Orthodontics	882.56	0.15	-5,566.56	-3.10	6,449.12	1.18
Other	-22,254.91	-2.78	-11,140.78	-4.45	-11,114.14	-1.46
Otolaryngology	52,265.07	12.92	149.67	0.12	52,115.40	13.57
Paediatric cardiology	8,210.38	0.84	11,437.40	3.76	-3,227.02	-0.35
Paediatric dentistry	-19,396.71	-0.98	-9,167.16	-1.48	-10,229.55	-0.55
Paediatric neurology	-25,038.29	-2.15	-6,206.56	-1.71	-18,831.72	-1.70
Paediatric surgery	-7,343.12	-1.02	2,569.40	1.14	-9,912.52	-1.45
Paediatrics	-16,648.14	-5.24	-4,317.49	-4.35	-12,330.65	-4.09
Palliative medicine	-21,216.85	-3.57	-7,284.64	-3.92	-13,932.21	-2.47
Plastic surgery	116,614.40	21.67	-2,132.51	-1.27	118,746.90	23.24
Psychiatry of learning disabilities	-6,297.12	-1.18	5,339.70	3.19	-11,636.82	-2.29
Psychotherapy	-20,414.45	-2.91	-6,416.79	-2.92	-13,997.66	-2.10
Public Health Medicine	-20,519.30	-5.12	-10,513.81	-8.38	-10,005.50	-2.63
Public health medicine	-19,911.82	-2.25	-12,328.64	-4.44	-7,583.18	-0.90
Rehabilitation medicine	-14,610.96	-2.20	-8,204.66	-3.96	-6,406.30	-1.02
Renal medicine	-963.58	-0.20	3,874.23	2.55	-4,837.81	-1.05
Respiratory medicine	3,848.88	0.98	-404.31	-0.33	4,253.19	1.14
Restorative dentistry	-4,395.69	-0.47	-8,048.40	-2.72	3,652.71	0.41
Rheumatology	-1,917.66	-0.45	-2,389.78	-1.80	472.13	0.12
Trauma and orthopaedic surgery	76,802.51	23.55	-2,980.31	-2.92	79,782.82	25.76
Urology	24,551.20	6.02	2,763.95	2.17	21,787.25	5.63
<b>SHA<sup>4</sup></b>						
Bedfordshire & Hertfordshire	11,454.44	3.53	684.53	0.67	10,769.91	3.49
Birmingham & The Black Country	10,259.45	3.17	-1,905.50	-1.88	12,164.95	3.96
Cheshire & Merseyside	25,018.07	9.27	1,434.37	1.70	23,583.70	9.20
County Durham & Tees Valley	18,093.56	6.71	-423.13	-0.50	18,516.69	7.23
Cumbria & Lancashire	12,371.94	4.14	1,268.63	1.36	11,103.30	3.92
Dorset & Somerset	7,754.77	2.85	1,347.56	1.58	6,407.21	2.48
Essex	25,584.71	8.54	1,809.19	1.93	23,775.52	8.36
Greater Manchester	-4,241.94	-1.52	7,605.82	8.71	-11,847.75	-4.47
Hampshire & Isle of Wight	-4,487.59	-1.43	6,854.55	6.99	-11,342.14	-3.81
Kent & Medway	127.98	0.04	5,815.63	6.02	-5,687.65	-1.94
Leicestershire, Northamptonshire & Rutland	4,348.08	1.66	4,135.53	5.06	212.55	0.09
Norfolk, Suffolk & Cambridgeshire	-4,387.55	-1.52	7,498.53	8.29	-11,886.08	-4.33
North Central London	-638.38	-0.26	3,667.58	4.73	-4,305.96	-1.83
North East London	4,927.51	1.94	7,553.30	9.48	-2,625.80	-1.09
North West London	12,201.97	4.44	-1,174.25	-1.37	13,376.22	5.13
North and East Yorks and Northern Lancs	3,803.96	1.33	1,733.23	1.93	2,070.72	0.76
Northumberland, Tyne & Wear	3,147.14	0.99	-3,893.11	-3.92	7,040.25	2.33
Shropshire & Staffordshire	12,649.25	4.85	-2,811.39	-3.45	15,460.64	6.25
South East London	-375.23	-0.14	204.19	0.24	-579.42	-0.22
South West London	-8,061.01	-2.75	470.05	0.51	-8,531.06	-3.07
South West Peninsula	-4,212.03	-1.26	-368.57	-0.35	-3,843.46	-1.21
South Yorkshire	-5,063.25	-1.76	7,204.83	8.00	-12,268.08	-4.49

Surrey & Sussex	-2,930.33	-1.10	3,230.66	3.88	-6,160.99	-2.44
Thames Valley	-566.68	-0.18	-1,207.91	-1.24	641.23	0.22
Trent	-2,050.95	-0.66	7,799.37	7.97	-9,850.32	-3.31
West Midlands South	-1,245.03	-0.49	3,217.32	4.05	-4,462.35	-1.85
West Yorkshire	-4,377.74	-1.45	3,094.21	3.27	-7,471.96	-2.60
Constant	71,192.20	21.05	68,109.74	64.38	3,082.46	0.96
<i>n</i>	24,407		24,407		24,407	
Adjusted $R^2$	0.2560		0.2412		0.2686	

<sup>1</sup> The omitted category is Under 40 years.

<sup>2</sup> The omitted category is Whole time.

<sup>3</sup> The omitted category is Accident & emergency medicine.

<sup>4</sup> The omitted category is Avon, Gloucestershire & Wiltshire.