

# GP Earnings and Expenses Estimates

## 2015/16 Methodology

Published 13 September 2017

The GP Earnings and Expenses Estimates series of reports provide a detailed study of the NHS and private earnings and expenses of both contractor and salaried GPs in the UK in the relevant financial year.

This methodology document is designed to accompany GP Earnings and Expenses Estimates, 2015/16, and each subsequent edition of the report.

# Contents

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<b>Introduction</b>	<b>4</b>
<b>Data sources</b>	<b>4</b>
<b>Deriving the GP Population for Analysis</b>	<b>5</b>
<b>HMRC analysis</b>	<b>5</b>
<b>Stratification of the Population and Weighting of the Results</b>	<b>7</b>
<b>Technical Adjustments for Pension Contributions</b>	<b>8</b>
Employer Superannuation Contributions for Contractor GPs	8
Employee Superannuation Contributions for Salaried GPs	10
<b>Cash and Real Terms</b>	<b>12</b>
<b>Means, Medians and Quartiles</b>	<b>12</b>
<b>Rurality</b>	<b>12</b>
<b>NHS England Regional Splits</b>	<b>13</b>

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This product may be of interest to remuneration boards, employers, stakeholders, policy officials, commissioners and members of the public. Interests will range from comparisons of the NHS workforce at local, regional and national levels to managing staffing and recruitment.

## Introduction

1. GP Earnings and Expenses reports provide a detailed study of the NHS and private earnings and expenses of both contractor and salaried GPs in the UK in the relevant financial year.
2. The report is produced by NHS Digital in consultation with the Technical Steering Committee (TSC), which is chaired by the NHS Digital and has representation from the UK Health Departments; NHS England; NHS Employers; the British Medical Association; the Secretariat for the Review Body on Doctors' and Dentists' Remuneration; and Her Majesty's Revenue and Customs (HMRC): Knowledge, Analysis and Intelligence Division.
3. This methodology document is designed to accompany GP Earnings and Expenses Estimates, 2015/16, and each subsequent edition of the report.

## Data sources

4. Data used to produce GP Earnings and Expenses are taken from several sources.
  - Information about GPs in England and Wales is received from the GP Workforce team in NHS Digital. The Wales data are sourced from the NHAIS GP Payments System and the information about England GPs from the workforce Minimum Data Set (wMDS).
  - Other GP information comes
    - from NHS National Services Scotland Information Services Division
    - the Northern Ireland Business Services Organisation
  - Earnings and expenses data come from self assessment tax returns held and analysed by HM Revenue and Customs statisticians.
5. Earnings and expenses results for contractor GPs are based on their medical income from self-employment sources. Income from employment sources is not included in averages for contractor GPs. For salaried GPs, estimates are based on all income from employment sources and medical income from self-employment sources.
6. GPs can perform both NHS and private work which can be done both inside and outside the practice, including the NHS Out of Hours services. GPs will usually submit a self assessment tax return which contains information on all of their self-employment earnings, including both NHS and private earnings while practising as a GP. Therefore, the estimates include earnings and expenses relating to both NHS and private work. It is not possible to distinguish between and disaggregate NHS and private earnings using this data source.
7. GP data are matched with anonymised data from self assessment tax returns to produce the figures underlying the tables and findings in the report. These earnings and expenses estimates are weighted up to the estimated GP population, and then sent to NHS Digital in the form of aggregate non-disclosive summary statistics for inclusion in the report.

8. The dataset, the process of merging the dataset with tax data, and the analyses performed by HMRC statisticians on behalf of NHS Digital are described in further detail in this document.

## Deriving the GP Population for Analysis

9. All full time and part time UK contractor and salaried GPs (working in the NHS under a General Medical Services (GMS) or Personal Medical Services (PMS) contract) for whom information is available, and who have an accounting year ending in the final quarter of the fiscal year (i.e. between 1 January and 5 April) are included in the sample. GPs who work solely as locums or freelancers are not included.
10. GPs who are solely Alternative Provider Medical Services (APMS) contracted are not included. However if a GP holds both a GMS/PMS contract and an APMS contract, their earnings and expenses from any contract may be included. GPs with both GMS and PMS contracts are removed unless their primary contract can be identified.
11. The dataset includes GPs working under a variety of GP type classifications, which denote their relationship to the contract held with a particular Primary Care Organisation (PCO)<sup>1</sup>. PCOs contract with GPs who deliver an agreed level of general practice services. A contractor GP is a practitioner who entered into a contract with a PCO, either as a single-hander or in partnership, to provide primary care services. A contractor GP may employ salaried GPs. A salaried GP could also be directly employed by the PCO. The cost of employing a salaried GP could form part of the employee expenses of contractor GPs. If the salaried GP was employed directly by a PCO then the contractor GP(s) within the practice in which the salaried GP practices will not have incurred the expense.
12. Results are presented by three GP types – contractor, salaried and combined. A GP listed in a dataset at least once as a contractor, regardless of any other arrangements under other contracts, is identified as a contractor. Figures for combined GPs are a weighted average based on employment and self-employment income for salaried GPs and self-employment income for contractor GPs.
13. The GP census information received is subject to validation tests and duplicate records are also removed. The information from the different countries is combined into a single file and sent to HMRC for processing.

## HMRC analysis

14. The Earnings and Expenses dataset is sent to the Knowledge, Analysis and Intelligence (KAI) division at HMRC, in order to produce weighted and aggregate non-disclosive summary statistics on earnings and expenses for GPs.
15. Analyses requested by NHS Digital and performed by HMRC statisticians are carried out on anonymised data from self assessment tax returns for GPs with

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<sup>1</sup> In England, contracts between GP practices and Primary Care Trusts (PCTs) were in place until April 2013.

accounting years ending in the fourth quarter of the relevant fiscal year (i.e. 1 January to 5 April). This period is used as it has been found to be representative. The tax data covers income from all NHS and private work.

16. During validation activity, HMRC statisticians apply exclusion criteria to the GP Earnings and Expenses dataset in order to derive the sample upon which to perform their earnings and expenses analyses:
  - GP not found or no Self-Assessment Tax Return when dataset created
  - GP with accounting period not 12 months or not in the relevant year
  - GP with inconsistent/incomplete earnings and expenses information
  - GP with non-medical income reported
  - GP with no accounting period in quarter four.
17. It should be noted that exclusions may not be exhaustive, and the sample used by HMRC statisticians could include a small number of GPs with, for example, non-medical income. While this would not affect high level results, analyses with low sample and population counts may be affected by any extreme values among those GPs. For contractor GPs, those GPs with employment income but no self-employment income are excluded from both the HMRC analyses and the GP population. For salaried GPs, those GPs with no employment income are excluded.
18. Population figures should not be considered as the definitive UK GP populations, and will not be the same as those populations published in the GP census across the four countries. This is due to GPs being excluded from the dataset for various reasons. For this reason the population figures have been rounded to the nearest 50.
19. In order to maintain taxpayer confidentiality, for any analyses that would produce results for sub-groups with low population numbers, HMRC statisticians have suppressed those results. Footnotes are provided in these cases. In addition, to acknowledge a degree of sampling error, earnings and expenses figures have been rounded to the nearest £100.
20. Previous earnings and expenses analyses have been conducted on self-assessment tax data extracted from HMRC systems as at end April in year of publication. For 2010/11 and future years HMRC will perform earnings and expenses analyses on tax data as at end March. Only a very small number of late submissions are received between end March and end April. Testing has been conducted and the impact of this is minimal.

## Stratification of the Population and Weighting of the Results

21. As this enquiry is based on a sample, stratification is used to enable weighting corrections within strata to account for GPs who are not part of the sample. This ensures that the effect of bias is minimised in the final findings.
22. The contractor GP population is allocated to one of 12 strata according to country, contract and dispensing/non-dispensing status. Table 1 shows the stratification variables.

**Table 1: Stratification variables for GP Earnings and Expenses, Contractor GPs**

<b>Dispensers</b>	<b>Non-Dispensers</b>
GMS, England	GMS, England
PMS, England	PMS, England
GMS, Scotland	GMS, Scotland
PMS, Scotland	PMS, Scotland
GMS, Wales	GMS, Wales
GMS, Northern Ireland	GMS, Northern Ireland

23. The salaried GP population is allocated to one of eight strata according to age and sex. Table 2 shows the stratification variables.

**Table 2: Stratification variables for GP Earnings and Expenses, Salaried GPs**

<b>Male</b>	<b>Female</b>
<35	<35
35-40	35-40
41-50	41-50
>50	>50

24. Earnings and expenses results are based on a sample and are weighted according to the contractor/salaried GP population. One set of weighting factors are derived, based on strata, and the same set of weights are applied throughout, for all analyses.
25. As results presented throughout the report are estimates based on samples that have been grossed up to the full contractor/salaried population as described above, these results are subject to sampling error. Differences between groups and sub-groups of GPs may not be statistically significant; neither may differences in results between years.
26. Results for combined GPs (contractor and salaried) are calculated by producing a weighted average based on employment and self-employment income for salaried GPs and self-employment income for contractor GPs.
27. It should also be noted that the Expenses to Earnings Ratio (EER) figures presented in report tables are calculated by dividing average expenses by average gross income for the grouping being considered. This is not the same as the weighted average EER for that grouping.

## Technical Adjustments for Pension Contributions

### Employer Superannuation Contributions for Contractor GPs

#### Background

28. Prior to the introduction of the new GMS contract (nGMS), PCOs paid the employer's superannuation contributions of GPs' pensions schemes directly to the NHS Pensions Agency. The money did not appear in the practice or individual tax returns and consequently did not form part of income before tax.
29. From April 2004 onwards, under the nGMS contract, for contractor GPs, the employer superannuation contribution to the GPs' pension scheme was included in the global sum payment made to practices and GPs became responsible for the payment of both their employee and employer superannuation contributions. Therefore, employer contributions should have been included in income reported on tax returns and tax relief claimed. This means an estimate has to be made of employer contributions, in order to remove this from the income before tax. This means figures can be compared with previous years (under the old contract) and be a more valid representation of the average gross earnings and average income before tax of GPs.
30. The procedure for the payment of GP pension contributions begins at the start of each financial year and involves GPs producing an estimate of their income before tax for the forthcoming year, and from this, an estimate of what their pension contributions for the year should be. This estimated pension contribution is then deducted from their global sum payment by their PCO, and at the end of the financial year the actual contributions due are calculated by the PCO on the basis of a certificate completed by the GP after they have submitted their tax return. The GP either receives a refund if contributions had been overestimated or has to pay shortfall contributions. The time lag involved means that a GP with a shortfall of contributions for 2013/14 did not pay these (and claim tax relief on payments) until at least tax year 2014/15 and possibly even 2015/16.

#### Methodology

31. In order to estimate the amount of employer superannuation contributions to be deducted, HMRC income before tax figures from previous years are compared with data on superannuable income from pensions agencies for all countries. Subsequently, estimates can be made on what proportion of income is NHS income, and therefore how much of the total income to adjust.
32. Due to the time lag in receiving pensions data, the two sets of data are not directly comparable. Therefore, an average percentage of NHS income is taken over the latest five years of pensions data available. This is also to take into account year-on-year fluctuations. In the event of not receiving the latest year of pensions data in time for the analysis to take place, an average of the latest four years of pensions data is taken.
33. The proportion of income estimated to be NHS income is then adjusted by the NHS pension employer contribution rate relevant to the reporting year, and to the country of the GP whose income before tax is being adjusted.

34. In 2015/16, those employer contribution rates were: 14.3% in England and Wales, 14.9% in Scotland and 16.3% in Northern Ireland. These are the percentages used for 'Employer contributions percentage' in the methodology below.

35. The methodology is:

$$\% \text{ NHS Income} = \frac{\text{Average NHS Superannuable Income per country}}{n_1} \times 100 =$$

Average EEQ Net Income Before Tax

(Average % NHS Income figure calculated over four or five years as described above).

The resultant percentage figure feeds into the equation below to give the final figure from which the employer's pension contribution should be deducted.

NHS superannuable income before tax for each individual GP ( $y_1$ ) =

$$\frac{n_1}{100} \times \text{GPs EEQ income before tax } (h_1)$$

Employer contributions to be deducted ( $e_1$ ) are:

$$\frac{\text{Employer contributions percentage}}{100} \times y_1 = e_1$$

Adjusted EEQ income before tax =  $h_1 - e_1$

36. The adjustment is applied to those GPs who declared an amount in the tax relief box 'payments to your employer's scheme which were not deducted from your pay before tax' on their tax return. Those that recorded an amount in this tax relief box are members of the NHS pension scheme (those with other personal pensions claim tax relief in other boxes on the form).
37. Pensions data is not used to determine membership as it is very out of date, and there is a risk that the latest information is not received in time for the analysis to take place. Also, the pensions data does not cover the entire NHS Pensions membership.
38. The methodology for adjusting for employer superannuation contributions changed for the 2009/10 analysis. The previous methodology is described in Annex B of previous editions of *GP Earnings and Expenses*.

## Employee Superannuation Contributions for Salaried GPs

39. In order to put the salaried results on the same basis as the contractor GP results, an adjustment is required to add the employee contributions (plus Additional Voluntary Contributions (AVCs)) to the employment income of salaried GPs.
40. The adjustment is made by adding a percentage to the income before tax for each GP for employee contributions. The percentage is based on the average income for salaried GPs from the previous year, to identify the corresponding employee contributions percentage (based on the tiered system of employee contributions).
41. In 2014/15, the average income before tax of salaried GPs in the UK was £56,600. This figure corresponded with tier 5 of the NHS pension scheme in 2015/16, as shown in the table below.

### NHS Pension employee contribution rates, 2015/16

Tier	Salary Up To	% Contribution	
		England, Wales and Northern Ireland	Scotland
1	£15,431.99	5	5.2
2	£21,477.99	5.6	5.8
3	£26,823.99	7.1	7.3
4	£47,845.99	9.3	9.5
<b>5</b>	<b>£70,630.99</b>	<b>12.5</b>	<b>12.7</b>
6	£111,376.99	13.5	13.7
7	£111,377+	14.5	14.7

42. Therefore, the percentage added to the employment income of salaried GPs for employee contributions for the 2015/16 report was 12.5% for England, Wales and Northern Ireland GPs and 12.7% for Scotland GPs.
43. In keeping with the practice of previous years, an additional 0.53% has continued to be added as an estimate for AVCs for salaried GPs in all four countries, based on information originally received from the West Yorkshire Central Services Agency.
44. Consequently, a total of 13.03% was added to the income before tax of salaried GPs in England, Wales and Northern Ireland, while a total of 13.23% was added for Scotland salaried GPs.
45. The following assumptions are made in order to make the adjustment:
- All salaried GPs (less than 60 years old) are part of the NHS Pension Scheme.

- All employment income before tax of salaried GPs is NHS income (and therefore pensionable).
  - The proportion of AVCs paid by salaried GPs in the West Yorkshire is representative of the UK.
46. Only self-employment income is considered for contractor GPs and therefore the issue does not apply. The issue also does not apply to self-employment income of salaried GPs.
47. Where a salaried GP earns both employment and self-employment income, the percentage is only added back to the employment income before an average of self-employment and employment income is calculated for the individual.

### Revised 2014/15 adjustments

48. The 'employer contributions percentage' used in the calculation of the adjustment factors for contractor GPs had for several years been 14% (and 7% for Northern Ireland). However, the rates for all countries have changed since the methodology was first agreed and from 2009/10 until 2014/15 the actual employer contribution rates:
- remained at 14% for England and Wales
  - decreased to 13.5% for Scotland
  - decreased to 13.3% for Northern Ireland.
49. Similarly, when the methodology was first agreed, the 'employee contributions percentage' used to adjust the taxable income of salaried GPs was 6.5% for all four countries. It was therefore agreed that NHS employment income be adjusted by a total of 7.03% (6.5% employee contributions plus 0.53% AVCs).
50. However, in 2012/13, the NHS pension tiered employee contribution rates changed and have continued to be revised annually. In 2014/15, the pension scheme tiered contribution rates which corresponded to the average income from the previous year was 12.5% for all four countries.
51. The income before tax (and therefore gross earnings and expenses to earnings ratio) estimates published in the GP Earnings and Expenses 2014/15 report were calculated using the unrevised employer and employee pension contribution rates which were in place when the methodology was devised.
52. For the 2015/16 report, 2014/15 estimates have been recalculated using the revised employer and employee contribution rates. All salaried and combined income before tax (and therefore gross earnings and expenses to earnings ratio) estimates have been recalculated, along with those of contractor GPs in Scotland and Northern Ireland.
53. Figures prior to 2014/15 presented in the accompanying [GP Earnings and Expenses Time Series](#) annex which were calculated using unrevised pension

contribution rates have been highlighted with time series breaks where comparisons with other years are not appropriate.

## Cash and Real Terms

54. Data are presented in both cash terms and real terms within the GP Earnings and Expenses report using the most recent Gross Domestic Product (GDP) deflators published by Her Majesty's (HM) Treasury; the GDP deflator data will be as at June of the current year (e.g. in the 2015/16 report the June 2017<sup>2</sup> deflators were used).
55. Since the year of the latest data is used as the base year, the cash and real terms amounts in that year are identical.

## Means, Medians and Quartiles

56. The mean is the average and can be defined as the sum of a list of values divided by the number of values in that list.
57. The median is the "middle" value in an ordered list of values, it is a point that splits the values in two, half above this point and half below.
58. Quartiles are points in an ordered list of values that has been split into four parts, each comprised of an equal number of values, the 1<sup>st</sup> quartile is the same as the 25<sup>th</sup> percentile, the 2<sup>nd</sup> quartile is the same as the median, etc. half of the values fall between the 1<sup>st</sup> and 3<sup>rd</sup> quartiles.
59. The position of the mean relative to the median can sometimes reveal information about the existence and/or extent of extreme values.

## Rurality

60. To add context to the analyses, earnings and expenses are broken down as to whether a practice is defined as being 'rural' or 'urban'; previously the distinction was based on rurality of patients determined by **home** postcode; if more than 50 per cent of patients belonging to a practice were classified as rural, the practice was categorised as rural. If 50 per cent or more of patients were classified as urban, the practice was categorised as urban.
61. Since 2008/09 the rural/urban classification is based solely on the postcode of the practice. Having compared the two methodologies the impact of this change is minimal.

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<sup>2</sup> June 2017 GDP deflators are available at: <https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-june-2017-quarterly-national-accounts-june-2017>

## NHS England Regional Splits

62. The structure of the NHS changed on 1 April 2013 and the 2013/14 reports onwards reflect this. The country and regional section that previously included Strategic Health Authorities (SHAs) now contains NHS England (Region, local office) (in place from April 2015 but used for reporting purposes from April 2013) and continues to include NHS England (Regions) - which have been called NHS England Commissioning Regions in previous years.
63. Table 3 sets out the mapping of the regions.

**Table 3: NHS England Area Team, NHS England (Region, local office and NHS England (Region) mapping**

<b>NHS England Area Team</b>	<b>NHS England (Region, local office)</b>	<b>NHS England (Region)</b>
North Yorkshire & Humber	NHS England North(Yorkshire & Humber)	
South Yorkshire & Bassetlaw		
West Yorkshire		
Greater Manchester	NHS England North(Lancashire & Greater Manchester)	North of England
Lancashire		
Cumbria, Northumberland, Tyne & Wear	NHS England North(Cumbria & North East)	
Durham, Darlington & Tees		
Cheshire, Warrington & Wirral	NHS England North(Cheshire & Merseyside)	
Merseyside		
Derbyshire & Nottinghamshire	NHS England Midlands and East (North Midlands)	
Staffordshire & Shropshire		
Birmingham, Solihull and the Black Country	NHS England Midlands and East (West Midlands)	Midlands & East
Arden, Herefordshire and Worcestershire		
Hertfordshire and South Midlands	NHS England Midlands and East (Central Midlands)	
Leicestershire and Lincolnshire		
East Anglia	NHS England Midlands and East (East)	
Essex		
Bristol, North Somerset, Somerset & South Gloucestershire	NHS England South (South West)	
Devon, Cornwall & Isles of Scilly		
Kent & Medway	NHS England South (South East)	South
Surrey & Sussex		
Bath, Gloucester, Swindon and Wiltshire	NHS England South (South Central)	
Thames Valley		
Wessex	NHS England South (Wessex)	
London	NHS England London	London

Note: breakdown by area team not in report

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