Exploring the Earnings of General Practitioners in England

# Rationale

General practice funding is distributed unequally across practices in different socioeconomic groups. GPs are calling for an increase in funding for primary care. However, it is unlikely that the government will increase funding for primary care without safeguards to ensure any increase in funding improves patient care.

Most GP surgeries operate as independent businesses that are contracted by the NHS to deliver primary care. Practices are usually owned by a group of partners who use income from the NHS to deliver services, such as funding staff and premises. They also draw up this income for their own salary which is decided between the partnership. This means that that they have a substantial conflict of interest in deciding how much to invest in core services and how much to take as salary.

# Definitions

GP Partner: A GP partner (a.k.a. contractor) is a self-employed person who owns part of the practice from which they operate.

General Medical Services (GMS): A GMS practice is one that has a standard, nationally negotiated contract. Within this, there is some local flexibility for GPs to 'opt out' of certain services or 'opt in' to the provision of other services.

Personal Medical Services (PMS): Local alternative to the national GMS contract, which are voluntary, locally negotiated contracts between Primary Care Organisations (PCOs) and the PMS Provider, enabling, for example, flexible provision of services in accordance with specific local circumstances.

GPMS results are combined results for GPs working in either a General Medical Services (GMS) or a Personal Medical Services (PMS) practice.

# Aim

To describe the changes over time and variation in GP earnings data and explore its relationship with NHS payments to GP Practices and workforce (FTE and HC).

# Methods

## Data Sources

[GP Earnings and Expenses Estimates](https://digital.nhs.uk/data-and-information/publications/statistical/gp-earnings-and-expenses-estimates) *(GPEE) from 2018-2022*

NHS Digital publish GP earnings data to inform renumeration negotiations and the Review Body for Doctors' and Dentists' Renumeration.

Earnings and expenses information are based on a sample from HM Revenue and Customs' (HMRC's) tax Self Assessment database, weighted up to the GP population.

Figures are based on both NHS and private work (undertaken by then individual, regardless of whether it’s part of the practice services or external), and include earnings and expenses for both full-time and part-time GPs.

GPs who work solely as locums or freelancers are not included.

The analysis is limited to 2018-2022 because disaggregated data for most variables are not available prior to this date.

Average gross earnings, expenses, and income before tax by contract type and practice type for contractor GPs available from 2003.

However, breakdowns by all other categories listed above are only available from 2018.

As such, we will focus our analysis on years in which disaggregated data is available for all variables.

Average income before taxes, expenses, and gross earnings data are available for the following disaggregated categories:

* Employment type
  + Salaried, Partner
* Contract type
  + GPMS, GMS, PMS
* Practice type
  + Dispensing, non-dispensing, all
* Age by sex
  + <40, >=40<50, >=50<60, >=60
* Rurality
* Region
  + East of England
  + London
  + Midlands
  + North East and Yorkshire
  + North West
  + South East of England
  + South West of England
* Number of registered patients
  + Fewer than 5,000,
  + 5,000 to fewer than 10,000
  + 10,000 to fewer than 15,000
  + 15,000 to fewer than 20,000
  + 20,000 and over

To show distribution, the following estimates are also available:

* Total income before tax range, median, deciles (salaried and partners)
* Total expenses range, median, deciles (partners)
  + Office & General Business
  + Premises
  + Employee
  + Car and Travel
  + Interest Depreciation/Loss Profit on Sale
  + Other
  + Net Capital Allowance
* Gross earnings range, median, deciles (partners)

The collated annual data is available [here](https://qmulprod-my.sharepoint.com/:x:/r/personal/wpw260_qmul_ac_uk/Documents/Cam/Final/GP_earn_exp/GP_earn_exp.csv?d=wb8f7e84db7754824b02777b117072014&csf=1&web=1&e=GTVsO6)

*[NHS Payments to Practices](https://digital.nhs.uk/data-and-information/publications/statistical/nhs-payments-to-general-practice) from 2018-2022*

NHS Digital publish annual information on NHS payments across many categories to individual providers of general practices in England

This data has already been collated and is available at the practice level.

We will aggregate the data upwards to match the applicable categories of the GP Earnings and Expenses data (Contract type, Practice type, Rurality, Size, Region)

We are interested in Total payments (minus deductions), Global Sum, and prescribing payments.

* Global sum payments are the main payment to practices, based upon each practice’s registered patient list which is adjusted according to the Carr-Hill Formula
* Prescribing payments come in the form of 3 categories, depending on the practice type (dispensing/non-dispensing):
* Dispensing Fee Payments; Fees for items dispensed by dispensing doctor practices
* Prescribing Fee Payments; Practices that are not dispensing practices are still entitled to fees for items personally administered by the practice
* Reimbursement of Drugs; Non-dispensing practices do not receive additional dispensing payments because community pharmacies deliver the dispensing service instead.
  + Dispensing practices have two distinct roles, for which they receive appropriate payments on both the clinical and dispensing elements of their services to patients. This needs to be taken into account when comparing them with practices that rely on community pharmacies to provide dispensing services to their patients.

We will only include GMS (~4,742 in 2022) and PMS (~1,655 in 2022) practices. AMPS (~235 in 2022) practices will be excluded because data is not available.

[*General practice workforce*](https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services) *2018-2022*

NHS Digital publishes data on full-time equivalent (FTE) and headcount figures by four staff groups, (GPs, Nurses, Direct Patient Care (DPC) and administrative staff),

* We are interested in the head count and FTE of GPs (salaried, partners, locums) Nurses, and DPC staff funded by general practices.
  + For partners, we sum GP Senior Partner and GP Partner/Provider
* We will not include PCN workforce data as this is reimbursed through the Additional Roles Reimbursement Scheme.

## Analysis Plan

Scope of analysis:

* England
* 2018-2022

**Phase 1**

First, download publicly available annual CSVs, then write a script in R to merge the GP earnings data one dataset using practice code, accounting for inconsistent reporting.

Second, produce national and, where possible regional, descriptive statistics of GP earnings:

* Average gross earnings, expenses, and income before tax from 2018 to 2022 for
  + Employment type (N/A for payments)
  + Contract type
  + Practice type
  + Age for both sexes and split by males and females (N/A for payments)
  + Rurality
  + Region
  + Size
* Variation between highest and lowest earners
  + 2016/2017 is for all of UK (not England)

Then produce national and, where possible regional, descriptive statistics of NHS payments:

* Average total payments from 2018 to 2022 for:
  + Contract type
  + Practice type – dispensing and non-dispensing
  + Rurality
  + Region – by aggregating practices to ICBs and regions
  + Size
* Percent of total payments that are [global sum and prescribing payments](#_Data_Sources)

Finally, produce national descriptive statistics for workforce data.

* Average number (head count) of GPs (salaried, partners), Nurses, and DPC staff from 2018 to 2022:
  + Contract type
  + Practice type– dispensing and non-dispensing
  + Rurality
  + Region – by aggregating practices to ICBs and regions
  + Size
* The merged dataset will also allow us to calculate the total payments per partner
  + We expect that there should be some relationship between total payments per partner and total partner earnings (before expenses)

Then produce charts:

* Time series of income before tax (2018-22), with and without retrospectively adjusting for inflation (GDP or RPI)
  + RPI adjusts for a ‘basket of goods’ for consumers; yields larger differences between real and adjusted figures
  + GDP is more comprehensive, including capital goods and government spending
* Chart comparing dispensing/non-dispensing GP expenses and different type of prescribing payments for dispensing/non-dispensing GPs
* Bar charts showing differences between income before tax of salaried GPs and partners across each dimension listed above
  + Line chart more appropriate
* Bar charts showing differences between average payments from NHS between categories of dimensions listed above
* Bar charts showing differences between average number of staff between categories of dimensions listed above
* We will also calculate the percentage year on year change for the above data
* Choropleth of regional values (workforce, income, expenses etc.)

**Phase 2**

We will extend the analysis beyond descriptive statistics by cross-referencing total expenses and earnings data from GPEE with NHS Digital payments and workforce data, in order to identify disparities between various categories.

We will merge the workforce data with the GP Payments data using practice code

* We will identify GMS and PMS practices with at least 5000 patients, in order to exclude small practices.
* We will inspect the characteristics of these practices to identify atypical practices which may reflect poor reporting for exclusion, by producing:
  + Identify practices with payments but no workforce/patients
    - Count how many; decide what to do with them
  + Histograms of size (registered patients)
    - Exclude practices with implausible values (<10 patients, >100,000 patients
  + Histograms of number of doctors (GPs, salaried, partner, FTE and HC)
    - Identify practices with large ratios of partners to salaried GPs
  + Doctors per 10,000 patients
    - Exclude practices with <1 doctor per 10,000 patients
  + Histograms of total payments
    - Exclude practices <3SD from the mean
  + Line charts showing time series of payments and workforce (HC, FTE)
    - Calculate percentage change
    - Identify practices where annual change >10%
  + Bar charts of payment totals by category
    - Identify practices where prescribing payments constitute a large percentage of payments (>10%)
    - Identify proportion of which are dispensing/rural practices

For these practices, we will identify the head count and FTE of partner employees, as well as the total NHS payments in global sum and prescribing payments. We will then calculate the NHS payments per partner for each practice.

We will then calculate average NHS payment in global sum and prescribing payments per partner across the following categories between 2018-2022:

* Practice type (dispensing and non-dispensing)
* Contract type
* Rurality
* Region
* Size
  + Number of registered patients is available in the payments data
  + We will categorise the practices into the same categories for which earnings data is available (Fewer than 5,000; 5,000 to fewer than 10,000; 10,000 to fewer than 15,000; 15,000 to fewer than 20,000; 20,000 and over)

We will then create visualisations to compare the average NHS payment per partner with average total gross earnings, expenses for partners and income before tax for partners and salaried GPs across the preceding categories, acknowledging that practices may have other income streams than NHS (e.g. training and research income).

By doing so, we aim to be able to address the following questions:

* At a national level, to what extent do GP earnings, payments, and workforce differ across the following categories:
  + Practice type (dispensing/non-dispending)
  + Rurality
  + Region
  + Contract type (PMS/GMS)
* Across these categories, are the inequalities in NHS payments to GP practices associated with inequalities in partner profits?
* At a national level, what is the relationship between GP partner income and practice workforce?

## Core Team

Cam A

John F

Helena P

Jatinder H

## Extended team

Michael Naughton, QMUL

Becks Fisher, Health Foundation

## Timeline (Jan 22 start)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 22 Jan | 29 Jan | 5 Feb | 12 Feb | 19 Feb | 26 Feb | 4 Mar | 11 Mar | 18 Mar | 25 Mar |
| Draft protocol and circulate |  |  |  |  |  |  |  |  |  |  |
| Collate feedback from rest of team |  |  |  |  |  |  |  |  |  |  |
| Merge annual datasets |  |  |  |  |  |  |  |  |  |  |
| Produce charts for GPEE, payments and workforce |  |  |  |  |  |  |  |  |  |  |
| Meet with team to discuss Phase 1 findings |  |  |  |  |  |  |  |  |  |  |
| Merge GPEE, payments and workforce data |  |  |  |  |  |  |  |  |  |  |
| Exclude atypical practices |  |  |  |  |  |  |  |  |  |  |
| Estimate payments per partner |  |  |  |  |  |  |  |  |  |  |
| Create visualisation |  |  |  |  |  |  |  |  |  |  |
| Meet with team to discuss Phase 2 findings |  |  |  |  |  |  |  |  |  |  |
| Agree main findings and obtain feedback from others |  |  |  |  |  |  |  |  |  |  |
| Write up as an article |  |  |  |  |  |  |  |  |  |  |
| Obtain feedback from others on article |  |  |  |  |  |  |  |  |  |  |
| Publish |  |  |  |  |  |  |  |  |  |  |