

Article

# Trends in patient-to-staff numbers at GP practices in England: 2022

How the number of patients per doctor and nurse at GP practices in England has changed over time, and how it differs across age, region and deprivation.

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## Table of contents

1. [Main points](#)
2. [National trends in England](#)
3. [Characteristics of registered patients](#)
4. [Level of income deprivation](#)
5. [Population in GP practice locality](#)
6. [Region](#)
7. [Trends in patient-to-staff numbers at GP practices in England data](#)
8. [Glossary](#)
9. [Data sources and quality](#)
10. [Future developments](#)
11. [Related links](#)
12. [Cite this article](#)

# 1 . Main points

- This article includes new analysis of data about doctors and nurses employed at GP practices and the number of registered patients.
- This analysis focuses on doctors and nurses and does not include direct patient care staff, such as pharmacists, physiotherapists and counsellors.
- In England, the number of patients per doctor (trainee and fully-qualified) at GP practices was 1,700 in October 2022.
- Since 2018, the number of patients per doctor has fallen, but the number of patients per fully-qualified doctor has risen; this suggests that there are more trainee doctors and fewer fully-qualified GPs now than in 2018.
- There are fewer patients per doctor in GP practices with a higher proportion of people aged 65 years and over, and more patients per doctor at GP practices with lower proportions of female patients.
- There are fewer patients per doctor in GP practices that serve areas with lower levels of income deprivation.
- The proportion of people aged 65 years and over and the proportions of females at a GP practice appear to have more of an influence on the patient-to-staff numbers at a practice than levels of income deprivation and population size.

These are Experimental Statistics. The analysis has been produced by the Office for National Statistics (ONS) for the first time and has been carried out to bring together different data sources to allow for easier understanding. We advise caution when using the data.

## 2 . National trends in England

In October 2022, the number of patients per doctor (whether a trainee or fully-qualified GP) at GP practices was 1,700 in England. This varied considerably, with some GP practices having several thousands of patients per doctor, and some having hundreds.

The term "doctor" throughout this article refers to trainee and fully-qualified GPs. It also includes locum GPs, if they were employed on 1 October 2022, whether trainee or fully-qualified. We also consider the number of patients to nurses in this article; it should be noted that there are fewer nurses who work in GP practices compared with doctors, so there are higher numbers of patients per nurse at most practices.

Factors that will influence the number of patients per doctor or nurse include:

- funding available to GP practices (this is determined by comparative practice workload, complexity and the relative costs of service delivery based on the demographics of the patient list; more information on how a GP practice is funded is available in [NHS England's Primary Medical Care Policy and Guidance Manual](#))
- other clinical staff who work at the GP practice or in community care (for example, physiotherapists, pharmacists, counsellors)
- clinical needs of the local population (for example, a higher proportion of elderly patients)
- changes in the local population (for example, a new housing development, population increases)

It is likely that a combination of these factors will influence the number of patients per staff member. For example, the average age of patients tends to be linked to the type of area they live in - there is evidence that suggests elderly people are more likely to live in affluent, rural areas, compared with younger people who are more likely to live in areas of higher deprivation and population levels.

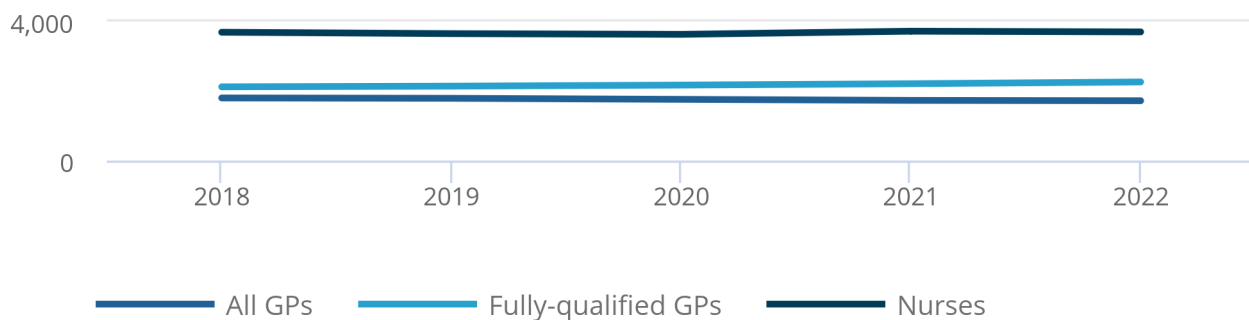
Across England, the number of patients per fully-qualified GP has risen over recent years, from 2,100 to 2,300 between October 2018 and October 2022, while over the same period there has been a slight decrease in the number of patients per doctor overall (1,800 to 1,700). This suggests that there are more trainee doctors and fewer fully-qualified GPs now than in 2018. The number of patients per nurse at GP practices in England has remained stable between October 2018 and October 2022, at around 3,700 patients per nurse.

**Figure 1: The number of patients per fully-qualified GP at GP practices in England has risen over time**

Number of patients per full-time equivalent staff member, England, October 2018 to October 2022

### Figure 1: The number of patients per fully-qualified GP at GP practices in England has risen over time

Number of patients per full-time equivalent staff member, England, October 2018 to October 2022



**Source: Office for National Statistics – Trends in patient-to-staff numbers at GP practices in England**

**Notes:**

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.

In addition to GPs and nurses, a range of practice services are provided by direct patient care staff as part of a multidisciplinary team. Some examples of direct patient care staff include:

- pharmacists
- paramedics
- healthcare assistants
- specialist nurses
- physiotherapists
- counsellors

There are approximately 15,800 full-time equivalent (FTE) direct patient care staff employed by GP practices ([General Practice Workforce, 30 September 2022](#)) and approximately 12,300 employed by Primary Care Networks (PCNs) ([Primary Care Network Workforce, 30 September 2022](#)). PCNs were set up in 2019 to provide multidisciplinary teams who deliver additional and specialist services at a local level, that cannot reasonably be delivered at a practice level. For example, a physiotherapist or counsellor may work a day a week in different GP practices where there would not be enough of a need for a practice to employ a specific member of staff to offer the service. The aim of multidisciplinary teams is to ensure that patients get the right care when they need it, while reducing the burden on GPs and incorporating a wider range of services into primary care.

The number of direct patient care staff has rapidly increased since PCNs were launched in 2019. We have not included direct patient care staff in our analysis as the GP practice-level data used do not include the direct patient staff employed by PCNs. However, they form an important part of the GP workforce and future analysis to include direct patient care staff will be considered.

### 3 . Characteristics of registered patients

The funding of GP practices is complex and depends on various factors, including the expected clinical need and characteristics of the patient population. Two characteristics that are known to influence GP practice funding are sex and age of patients. In this section, at each GP practice we focus on the proportion of patients who are female, and the proportion of patients are aged 65 years and over.

We group the practices by the proportion of people in the specific category and label them as the:

- highest proportion of patients in characteristic group
- high proportion of patients in characteristic group
- low proportion of patients in characteristic group
- lowest proportion of patients in characteristic group

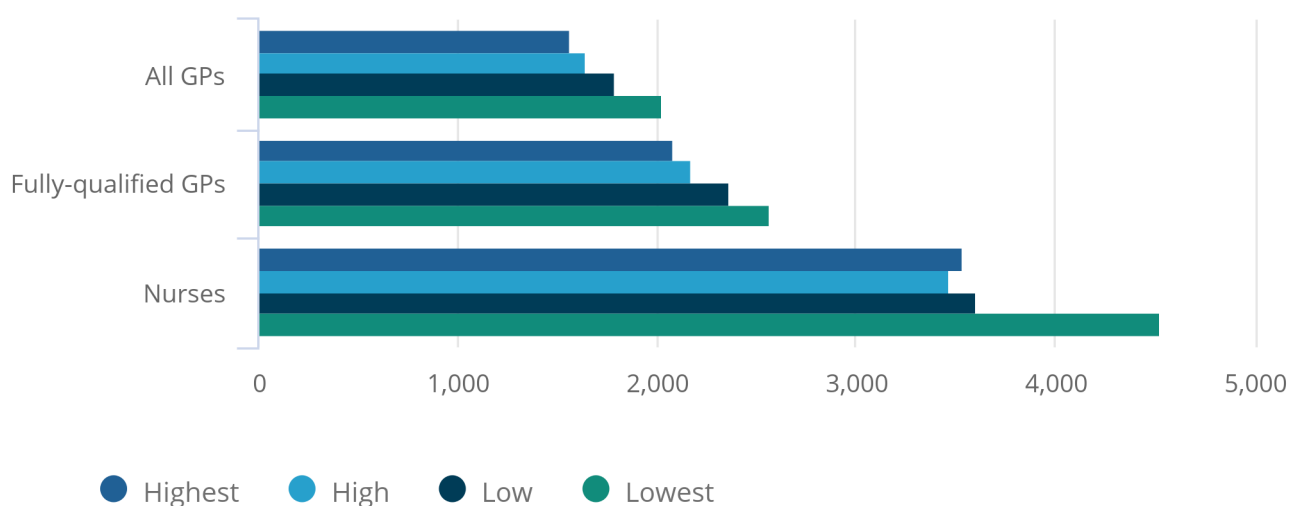
There are more patients per doctor in the practices with lower proportions of females; this is the case for all GPs and fully-qualified GPs. GP practices with the lowest proportions of females have a higher number of patients per nurse, 4,500, compared with approximately 3,500 for practices with the highest proportions of females.

**Figure 2: There were higher numbers of patients per staff member at GP practices with a lower proportion of females**

Number of patients per full-time equivalent staff member by proportion of females, England, October 2022

## Figure 2: There were higher numbers of patients per staff member at GP practices with a lower proportion of females

Number of patients per full-time equivalent staff member by proportion of females, England, October 2022



Source: Office for National Statistics – Trends in patient-to-staff numbers at GP practices in England

### Notes:

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.

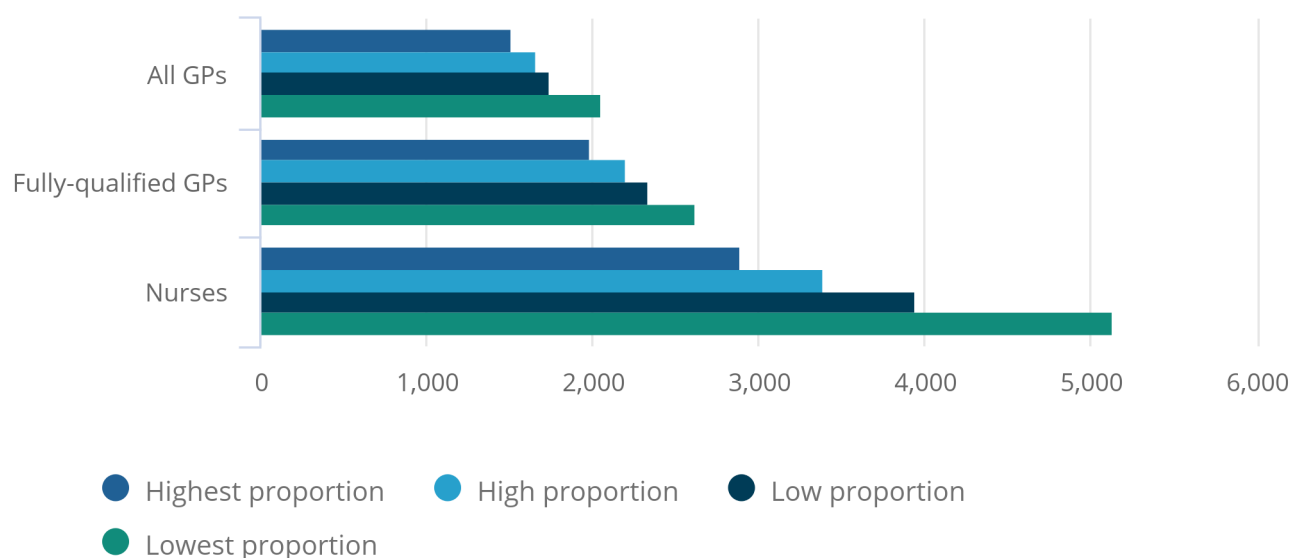
GP practices with a high proportion of people aged 65 years and over tend to have fewer patients per staff member. In GP practices with the highest proportions of people aged 65 years and over, the number of patients per qualified GP was 2,000. This compares with 2,600 patients per qualified GP in the areas with the lowest proportion of people aged 65 years and over. There are considerably more patients per nurse in GP practices with the lowest proportion of people aged 65 years and over, compared with GP practices with the highest proportion: 5,100 and 3,000 patients per nurse, respectively.

**Figure 3: There were higher numbers of patients per staff member at GP practices with a lower proportion of people aged 65 years and over**

Number of patients per full-time equivalent staff member by proportion of people aged 65 years and over, England, October 2022

Figure 3: There were higher numbers of patients per staff member at GP practices with a lower proportion of people aged 65 years and over

Number of patients per full-time equivalent staff member by proportion of people aged 65 years and over, England, October 2022



Source: Office for National Statistics – Trends in patient-to-staff numbers at GP practices in England

**Notes:**

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.

The number of patients per fully-qualified GP has risen between 2018 and 2022, regardless of the proportion of people aged 65 years and over a practice has. For further information, please see [Section 7: Trends in patient-to-staff numbers at GP practices in England data](#).

## 4 . Level of income deprivation

GP practices serving patients in less deprived areas tended to have fewer patients per GP than those in more deprived areas.

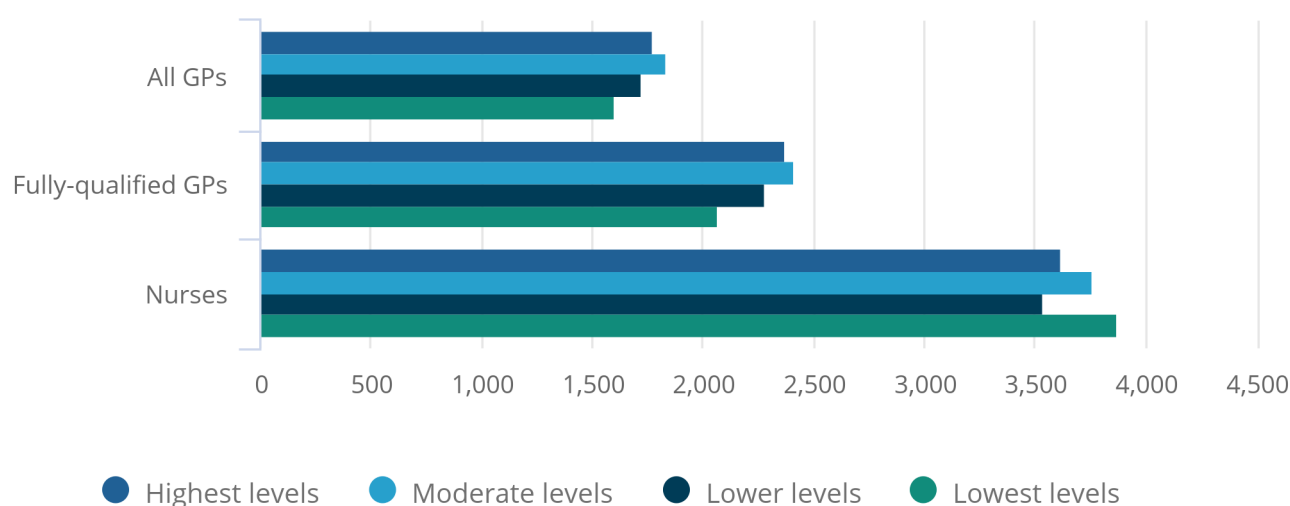
GP practices in the most deprived areas had 2,400 patients per fully-qualified doctor, compared with 2,100 patients per fully-qualified doctor in the least deprived areas. However, there is no clear trend with deprivation for the number of patients per nurse. We found the number of patients per nurse to be slightly higher for the group with the lowest levels of deprivation, at 3,900 patients per nurse.

**Figure 4: GP practices that serve patients from areas of higher income deprivation tend to have higher numbers of patients per doctor**

Number of patients per full-time equivalent staff member by level of income deprivation, England, October 2022

Figure 4: GP practices that serve patients from areas of higher income deprivation tend to have higher numbers of patients per doctor

Number of patients per full-time equivalent staff member by level of income deprivation, England, October 2022



Source: Office for National Statistics – Trends in patient-to-staff numbers at GP practices in England

**Notes:**

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.

Over time, the number of patients per fully-qualified doctor increases across practices regardless of the level of deprivation. However, the patient numbers per qualified doctor have increased more slowly in areas with the lowest levels of income deprivation.

**Figure 5: The number of patients per fully-qualified GP has increased more slowly in GP practices serving less deprived communities**

Change in number of patients per fully-qualified GP by income deprivation levels, England, October 2018 to October 2022

**Notes:**

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.

**Download the data**

[.xlsx](#)



## 5 . Population in GP practice locality

Less populated areas tend to have fewer patients per GP compared with more urban areas. GP practices were classified based on the population size of the area they serve. The "cities" group did not include London, as London is included in the regional section. For more details on how these groups are defined, see [Section 9: Data sources and quality](#).

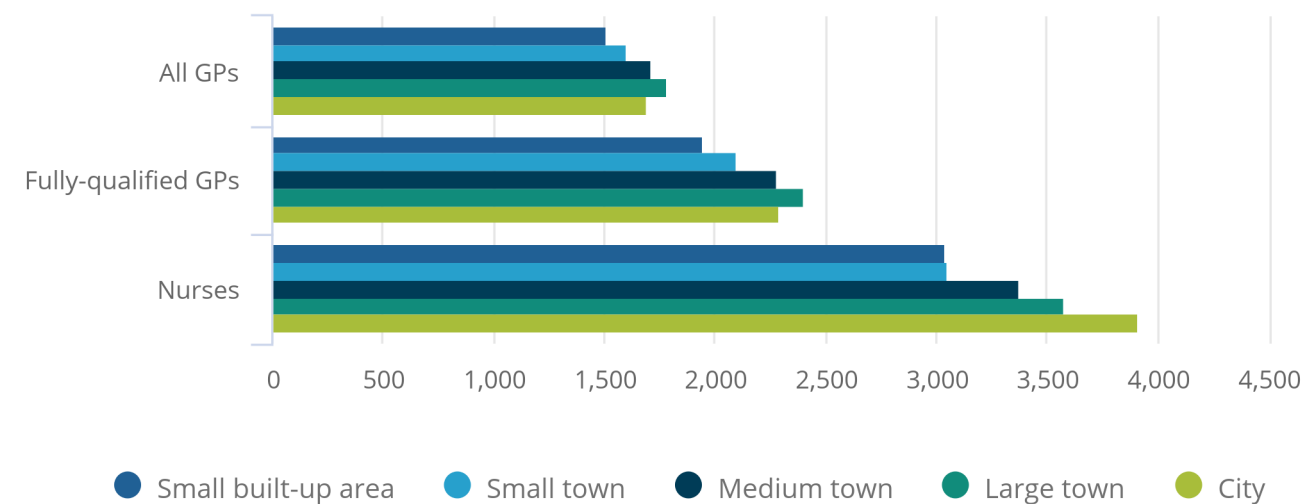
Large towns have a higher number of patients per GP compared with cities; large towns have 1,800 patients per GP, while cities (population of 225,000 or over, excluding London) have 1,700 patients per GP. In comparison, small built-up areas (less than 5,000 people) have 1,500 patients per GP. GP practices in areas of higher population generally have more patients per nurse.

**Figure 6: There is a higher number of patients per doctor in large towns, compared with cities (excluding London) and smaller areas**

Number of patients per full-time equivalent staff member by population of area, England, October 2022

Figure 6: There is a higher number of patients per doctor in large towns, compared with cities (excluding London) and smaller areas

Number of patients per full-time equivalent staff member by population of area, England, October 2022



Source: Office for National Statistics – Trends in patient-to-staff numbers at GP practices in England

**Notes:**

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.
2. Cities does not include London. London is included in the regional section.

## 6 . Region

Across English regions, the number of patients per full-time equivalent staff member (GP, fully-qualified GP or nurse) was highest in London and the South East. London had the highest number of patients per staff member, with:

- 2,000 patients per doctor
- 2,400 patients per fully-qualified doctor
- 6,700 patients per nurse

The number of patients per nurse is much higher in London (6,700) than any other region; the second region, South East, has 4,000 patients per nurse. Demographics of patients, population size of areas and recruitment challenges could be a factor in why this is the case. The lowest number of patients per nurse are in the North East and South West (both 2,800). To put that into context, there are more than double the number of patients per nurse in London, compared with the North East and South West.

### **Figure 7: London has twice as many patients per nurse compared with the North East and South West and slightly more patients per doctor, compared with other regions**

Number of patients per full-time equivalent staff member by region, England, October 2022

#### **Notes:**

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.

#### **Download the data**

[.xlsx](#)

There has been a steady rise in the number of patients per qualified GP in all regions of England, although the increase was smallest in the South West where it remains less than 2,000 patients per fully-qualified doctor. While in some regions the number of patients per nurse has remained stable or has decreased, it has increased by 800 patients per nurse in London between 2018 and 2022 (from 5,900 to 6,700 patients per nurse).

### **Figure 8: London has seen a large increase in the number of patients per nurse between 2018 and 2022**

Change in number of patients per full-time equivalent nurse by region, England, October 2018 to October 2022

#### **Notes:**

1. Data in the chart are rounded to the nearest 10 patients, but data in the commentary are rounded to the nearest 100 patients for clarity.

#### **Download the data**

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## 7 . Trends in patient-to-staff numbers at GP practices in England data

[Trends in patient-to-staff numbers at GP practices in England](#)

Dataset | Released 9 December 2022

How the number of patients per doctor and nurse at GP practices in England has changed over time, and how it differs across age, region and deprivation.

## 8 . Glossary

### Doctor

A doctor referred to in this article is someone who has gone through the necessary medical training and is registered as a General Practitioner (GP), or someone who is currently on a training scheme to become a registered GP.

### Full-time equivalent

Full-time equivalent (FTE) is a way of measuring the workload of an employed person. It means we can discuss the workload of doctors and nurses as the equivalent of full-time staff. As an example, 1.0 FTE equates to full-time work of 37.5 hours per week and an FTE of 0.5 would equate to 18.75 hours per week.

### GP practice

GP practices are local centres that offer a range of primary healthcare, including GP appointments, blood tests and immunisations, among other things. They have a range of clinical staff available for appointments, such as doctors (trainee and fully-qualified GPs) and nurses. They do not provide emergency care.

### Nurse

Nurses refer to clinical nurses who are registered with the Royal College of Nurses and are employed by a GP practice.

### Patient

A patient refers to somebody who is registered at a GP practice and if they needed primary care, that is the GP practice they would attend. A patient does not need to have been seen by a doctor recently to be classed as a patient. The majority of people in England are registered with a GP practice.

### Staff member

In this article, a staff member means either a fully-qualified GP, a trainee GP or a clinical nurse who work at a GP practice.

## 9 . Data sources and quality

## Calculating the number of patients per full-time equivalent staff member

The number of patients per full-time equivalent staff member (GP, nurse, fully-qualified GP) was calculated by aggregating the number of patients in a certain category (using practice-level data) and the full-time equivalent of staff members in that same category (for example, practices based in London). The number of patients was divided by the number of staff to produce the number of patients per full-time equivalent staff member in that category.

Data were not available for every GP practice. In those cases we have excluded the practices and their associated patient and workforce numbers from our analysis; this is approximately 2% and 3% of practices in analysis of doctors and nurses, respectively. NHS-Digital take a different approach; they estimate the values for missing practices and include them in the overall figures. The impact of this difference in approach is that our calculations of the patient-to-staff numbers for England may differ slightly.

In the published data, some trainee GPs are missing practice location data, so the practice they work at is unknown. NHS-Digital include the trainee GPs in their national estimates, as it can be assumed they are working at a practice in England. Our analysis uses practice-level data and aggregates to different sub-category totals, so these trainee doctors will not be included as they are not assigned a GP practice. The estimates of patients per fully-qualified GP and patients per nurse are not affected by this.

The data we have published for patient-to-staff numbers are rounded to the nearest 100 patients in the commentary and the nearest 10 patients in charts and data tables.

Alongside contextual data, this analysis was produced using the following publicly available data sources:

- [Patients Registered at a GP Practice](#) (NHS Digital), 1 October 2018 to 2022
- [General Practice Workforce](#) (NHS Digital), 30 September 2018 to 2022
- [GP and GP practice related data](#) (NHS Digital), as of 1 November 2022

## GP workforce data

GP workforce data are collected and published monthly by NHS-Digital. It is collected on the last day of each month. Time-series data are available for the different job groups back to September 2015. Methodological changes have been made over time. Where this has led to data revisions, we have used the latest revised data, for consistency, in our analysis. For further details and notes relating to the GP workforce collection, see the latest workforce data, in NHS Digital's General Practice Workforce.

## GP registrations data

GP registrations data are collected and published monthly by NHS-Digital. The data are extracted each month as a snapshot in time from the Primary Care Registration database within the National Health Application and Infrastructure Services (NHAIS) system. Data for each month are representative of patients registered on the first day of the month. There are a number of quality issues that any users of the GP registrations data should be aware of. These include, but are not limited to:

- under coverage of certain parts of the population, for example, members of the armed forces or recent migrants to the UK are less likely to be registered with a GP
- over coverage of the population: this is where patients who will no longer need to access GP services remain registered, for example people who emigrate overseas
- internal migration within the UK can also lead to over-coverage in some areas and under-coverage in others
- registration lags: people who move house may take some time to register with a new GP, while groups such as mothers with young children or people with existing health concerns are more likely to register quickly
- accuracy in patient registrations varies across local authorities in England; areas that are more densely populated, such as cities, tend to be less accurate

The impact of these different effects will vary by geography, age and sex.

In addition to the quality issues, the coronavirus (COVID-19) pandemic has also had an impact on the data within the GP registrations collection, which need to be considered when looking at changes over time.

For more details on the GP registrations data and quality considerations, see our [Patient Register: quality assurance of administrative data used in population statistics, Dec 2016](#) methodology, and NHS Digital's Patients Registered at a GP Practice series.

## English Indices of Deprivation 2019

Deprivation analysis was carried out using the English Indices of Deprivation, last updated in 2019. We calculated an overall income deprivation score for the patient population of each GP practice. Then, GP practices were grouped by their overall score and the number of patients per full-time equivalent staff member was considered. The groups of GP practices by deprivation level are:

- highest levels of income deprivation
- moderate levels of income deprivation
- lower levels of income deprivation
- lowest levels of income deprivation

## Definition of towns and cities

To analyse the link between population and patient-to-staff numbers, we used town and city population data from the 2011 Census. Population data from the 2011 Census was the most recent available, as the data for towns and cities from the 2021 Census have not yet been made available.

The definition of "towns" and "cities" that we have used follows on from previous Office for National Statistics (ONS) publications using built-up area subdivision (BUASD) boundaries (or built-up area boundaries where no subdivisions exist). Built-up areas (BUA) and BUASD were created as part of the 2011 Census outputs and refer to urban areas defined as "irreversibly urban in character". To be classified as a town, the 2011 Census population of the BUASD (or BUA) had to be between 5,000 and 225,000 (see Table 1). For more information see our [2011 Built-up Areas - Methodology and Guidance \(PDF, 379.62 KB\)](#), and our [Understanding towns in England and Wales: an introduction article](#).

Table 1: Town and city definitions used in the analysis, England, 2011

Settlement Type	Population
Smaller built-up area	Less than 5,000
Small town	5,000 to 20,000
Medium town	20,000 to 75,000
Large town	75,000 to 225,000
City	More than 225,000

Source: Office for National Statistics – Census 2011

## 10 . Future developments

This article is an initial piece of work to look at the trends in patient-to-staff ratios at GP practices in England. There are a number of future pieces of work that could follow this, including but not limited to:

- analysing direct patient care staff (for example, pharmacists and counsellors) who are often employed by or work at GP practices
- analysing the links between different characteristics of patients and the area characteristics of GP practices
- local area analysis
- patient experience at their GP practice
- other local contextual factors that might influence this

We do not have any future work plans or dates for this workstream at time of writing.

## 11 . Related links

### [Health in England: 2015 to 2020](#)

Bulletin | Released 9 November 2022

Insights into England's health in the earlier stages of the coronavirus (COVID-19) pandemic at national, regional and local authority level, using the Health Index.

### [NHS70: Marking 70 years of the National Health Service](#)

Digital article | Released 2 July 2018

The National Health Service was launched seven decades ago with lofty ambitions to look after people "from the cradle to the grave". What's changed in the last 70 years?

### [Living longer: trends in subnational ageing across the UK](#)

Article | Released 20 July 2020

Current and projected trends in population ageing for local authorities, regions and countries across the UK based on 2019 estimates and 2018-based subnational population projections.

## 12 . Cite this article

Office for National Statistics (ONS), released 9 December 2022, ONS website, article, [Trends in patient-to-staff numbers at GP practices in England: 2022](#)