



Announcement of methodological changes to General Practice Workforce Statistics

1. Background

This document describes the changes implemented in the February 2019 publication.

General Practice (GP) Workforce statistics are relatively new and we are keen to ensure that they are as useful and relevant as possible for our users. We are therefore continually working to improve the quality of the data and analysis. Changes can include improving the coverage, completeness or accuracy of the data or revising elements of the methodology and are made in consultation with our colleagues in DHSC and NHS England. We welcome feedback from all our users and you can get in touch with us at gp-data@nhs.net

General Practice Workforce statistics are now produced on a quarterly basis. The series goes back to September 2015 when the Primary Care Web Tool was introduced enabling practices to provide data directly into the workforce Minimum Data Set (wMDS). This was upgraded to the National Workforce Reporting System with the addition of a workforce reporting module and upgrades to the data entry.

Improvements developed and implemented in the December 2018 publication are:

- Changing the data source for GP registrars
- Including figures for infrequent locums within the publication
- Improving how we estimate data when returns from practices are missing or incomplete

These are described in more detail below. Because of changes it is not always possible to compare figures over time. Where this is the case, this is made clear in the publication and associated supporting material. Sometimes we may advise that comparisons may be made with caution knowing that the impact of these changes is small. We will always aim to give guidance on how to interpret any changes in the series. Where possible the impact of these changes is assessed or estimated and included within our publications and methodological change notices.

In addition to the changes described below, the completion rate of wMDS data has been gradually improving over the last three years meaning that the data are more complete and less reliant on estimation. Estimates are calculated at a CCG level for those practices that do not provide fully valid records and for those who do not provide any records.

When comparing GP workforce statistics, we would always advise that a comparison is made across a full year since quarterly data is impacted by seasonality. For example, September typically has a higher number of registrars than other quarters due to the main trainee intake taking place in August.

We will produce historical figures dating back to September 2015 under the new methodologies and where possible we aim to retrospectively apply the methodological changes to provide comparable figures. We will endeavour to provide as much disaggregation of the revised outputs as possible, but this may not be possible or advisable for all disaggregations. This may result in previously published figures changing slightly.

2. Description of changes

2.1. Initially implemented as part of the December 2018 publication

2.1.1. Change to data source for GP Registrars

In September 2018, we have started using Health Education England's (HEE) Trainee Information System (TIS) as the source of our figures on GP registrars (foundation and specialty registrar trainees on placements in General Practice), which has improved the quality of our data in this area.

The first time we used this source for publication data was September 2018, and we have also updated the June 2018 data in the time series to reflect the new data source. We have included the June data in Table 1 below to demonstrate the approximate impact of moving to this new data source.

Prior to this the sources for the GP registrar data were the extracts taken from the National Workforce Reporting System (NWRS) and four HEE Regions which provided a separate return, and an extract of medical trainees delivering primary care services who were being paid through the Electronic Staff Record (ESR). The ESR data was incorporated due to notable concerns about the completion of registrar data from the other sources. However, this data was available more than six weeks later than the NWRS/HEE data and therefore for each provisional publication the previous quarter's ESR data was used. This added to seasonality issues and created difficulties in being able to assign registrars to correct localities. Final data as at 30 June 2018 (published in November 2018) was the last publication to use registrar data sourced from ESR.

Investigative work has established that TIS is the source of input data for ESR, and ESR recording of trainees is reliant on Lead Employer Trusts, whose usage of ESR varies by region. TIS is the overall HEE trainee management system and encompasses all current trainees, therefore registrar estimations are no longer required. As a result, TIS data is timelier and more complete.

As TIS data uses an FTE measure of 40 hours per week (as per the Junior Doctors contract) compared to NHS Digital's FTE measure of 37.5 hours per week, NHS Digital has calculated for this publication a registrar working full time hours as providing an FTE of 1.06.

Table 1: Comparison of June 2018 figures using old and new registrar data sources, Headcount (HC) and Full-Time Equivalent (FTE), and percentage difference

	June 2018							
	Previous registrar data ¹		New registrar data ²		Difference		Difference, as %	
Job Role Groupings	HC	FTE	HC	FTE	HC	FTE	HC	FTE
All GPs	43,103	33,428	43,414	33,850	+ 311	+ 422	+ 0.7%	+ 1.3%
All Fully Qualified GPs (excludes Registrars)	38,267	28,819	38,286	28,833	+ 19	+ 14	+ 0.0%	+ 0.0%
All Qualified Permanent GPs (excludes Registrars & Locums)	34,179	27,556	34,197	27,570	+ 18	+ 14	+ 0.1%	+ 0.1%
GP Partners	22,082	19,539	22,095	19,550	+ 13	+ 10	+ 0.1%	+ 0.1%
Salaried GPs	11,992	7,903	11,997	7,906	+ 5	+ 4	+ 0.0%	+ 0.0%
GP Retainers	295	114	295	114	+ 0	- 0	+ 0.0%	- 0.0%
GP Registrars	4,844	4,609	5,136	5,017	+ 292	+ 408	+ 6.0%	+ 8.8%
GP Locums	5,015	1,263	5,016	1,264	+ 1	+ 0	+ 0.0%	+ 0.0%

Source: NHS Digital

1 The previous method for collection of registrars included data from the NWRS and HEE tools, and was supplemented by data collection from Electronic Staff Records (ESR) system which was completed by lead employer trusts to records trainee doctors working in General Practices and being paid through ESR.

2 From and including June 2018, registrar data is now taken solely from the HEE national Trainee Information System (TIS) which contains information of all doctors in training.

We have estimated that the move to the new data source for GP registrars adds around 6.0% Headcount and 8.8% Full-Time Equivalent (FTE) to GP registrar totals, and 0.7% Headcount and 1.3% FTE to All GP totals. This is due to the greater completeness of TIS data, compared to that of the earlier data sources. There is also a very small increase to the figures for some other GP job roles (circa 0.05% or less), due to the impact on the estimations methodology of removing all GP registrars from the data received from the other collection tools.

At the lowest job role level, the new estimated records in the previous quarters have been assigned to the job roles that most closely bring the final data in line with the numbers and ratios calculated under the new methodology.

The change in data source required a break in the data series between March 2018 and June 2018 to reflect the fact that the figures before and after this change in methodology cannot be directly compared. Estimates have been provided based on comparing numbers from the two data sources in June 2018, see Table 1, and applying the changes to the December 2017 figure to enable an estimated change for all impacted GP job roles, mainly registrars. For future publications we intend to provide similar retrospective estimates for registrars back to September 2015.

Impact

Comparison work was carried out for June 2018, as in table 1, using both the old (ESR) and new (TIS) methodologies.

The introduction of TIS data results in an increase in final GP registrars when compared to the final figures from the original methodology, for both Headcount (HC) and Full Time Equivalent (FTE). This is shown in Table 1 above.

Due to the delay in receiving the latest quarter's ESR data under the original methodology, the previous quarter's data was used for provisional figures and the change from provisional to final figures was often significant. As final TIS data is available at the same time as the rest of the General Practice workforce data, this delay and discrepancy will no longer apply.

2.2. Implemented as part of the February 2019 publication

2.2.1. New schedule for reporting of final data

Changes – GP Workforce publication will release final data only, to be published within two months of the extraction.

Reasoning

Up to the provisional September 2018 data which was published in November 2018, final data has been published for the previous report period alongside provisional data for the current period.

Use of TIS data means publication of high-level final data can now be brought forward to the current provisional publication timeframe, i.e. within two months of the extraction period. This is the proposed reporting schedule from the December 2018 publication onwards.

Impact

Final data will be available less than two months following extraction date, a significant reduction from, for example, final March 2018 data which was published five months after its extraction in August 2018.

2.2.2. Infrequent and long-term locums

NHS Digital carried out a survey of GP practices to gain a better understanding of how and when regular or long-term and infrequent locums are used within practices. Following the initial findings from this survey, data on infrequent locums is now being incorporated into the publication.

Changes

- i. Infrequent locum data to be published in main Headcount and FTE tables.
- ii. Investigations are ongoing to identify where all locum information can be retrospectively estimated, where not available, back to September 2015 to remove or reduce the breaks in the time series.

Reasoning

Following feedback received expressing concern about the completeness of GP locum reporting, and discussions with practices which confirmed that not all instances of GP locums working in practices at each extraction date were being recorded, a new GP category of Infrequent Locum was added to the workforce Minimum Dataset (wMDS) for the September 2017 extraction. Infrequent locums are defined as GP locums who not regularly work at a practice and are typically employed on a more ad hoc basis.

Information on infrequent locum data was introduced as a supplementary information table in the August 2018 publication for March 2018 final data, whilst a review of the data was undertaken. Following data and feedback received from practices, the infrequent locum information is now incorporated within this publication release and is counted within the 'GP Locums' job category in the publication tables. These figures should be treated with some caution, as completion of infrequent locum data is believed to be lower than that for long-term locum data, according to a survey of GP practices undertaken January and February 2019.

Impact

The inclusion of the infrequent locums in the publication improves the quality and completeness of the data in the GP Locums and All GPs categories, providing a more complete picture of work being undertaken in General Practice.

The introduction of the infrequent locum data will affect historical comparability of the locums figures, as in effect new additional data is being included from September 2017 onwards. Work is currently ongoing to identify the effect of this change, and to determine whether historical locum figures can be retrospectively estimated, alongside a review of the impact of other earlier developments in locum recording.

Comparison work was carried out for December 2018, comparing the Headcount (HC) and Full Time Equivalent (FTE) figures with and without infrequent locums. This is in table 2.

Table 2: December 2018, comparison of data with and without infrequent locums, Headcount (HC) and Full-Time Equivalent (FTE), and percentage difference

Job Role Groupings	Final figures, not including infrequent locums		Final figures, including infrequent locums		Percentage difference, from not including to including infrequent locums	
	HC	FTE	HC	FTE	HC	FTE
All GPs	42,299	34,222	44,396	34,510	+ 5.0%	+ 0.8%
All Fully Qualified GPs (excludes Registrars)	36,283	28,309	38,383	28,596	+ 5.8%	+ 1.0%
GP Locums	2,376	922	4,995	1,210	+ 110.2%	+ 31.2%
Long-term locums only	2,376	922	2,376	922	0.0%	0.0%
Infrequent locums only	n/a	n/a	2,909	288	n/a	n/a

Source: NHS Digital

2.2.3. Estimations

Changes

- i. Estimate at an individual level for any staff with missing contracted and working hours. Retain all good quality data at a practice where only some records have poor quality. Continuing to estimate at a CCG level where there is no valid data for an entire staff group at a practice.
- ii. Produce estimates back to September 2015 using the new estimation method.

Reasoning

Under the previous methodology, if a practice submitted a record with no contracted or working hours, or without a job role, all valid records for that staff group were also removed and replaced with estimated figures. For example, if a practice had five GPs of which four had valid information and one invalid data, all five records were excluded and replaced with estimated measures. This process removed otherwise valid data at the practices affected, replacing them with estimates.

Following investigate work to identify the impact of retaining these other good quality records, the methodology has changed and where a practice submits a record with no contracted or working hours, the working hours are estimated and populated with the national average for that job role. For other invalid data items such as missing job roles, only the record with invalid data is removed, and all other staff group records at the practice are retained. This increases the amount of valid data retained for publication purposes, requiring estimations only where good data is not otherwise available.

The process for practices providing no valid data for a staff group, remains to estimate for these practices at a CCG level.

Impact

Comparison work was carried out for December 2018, using both the existing and proposed Estimation methods. This change in estimation percentages is presented in table 3 below, and the comparison between the figures in table 4.

Revised figures for December 2017 and September 2018 have also been calculated for this publication, and the remaining revised historical figures from September 2015 to current will be published 25 April 2019.

Table 3: December 2018, estimations required for practices not providing valid data and so estimated for:

Staff Group	Previous methodology	New methodology
GPs	5.8%	1.8%
Nurses	5.4%	3.2%
Direct Patient Care	23.0%	20.4%
Admin/non-Clinical	11.7%	2.0%

Source: NHS Digital

Table 4: December 2018, comparison of current and proposed methodologies, Headcount (HC) and Full-Time Equivalent (FTE), and percentage difference

Job Role Groupings	Figures based on previous methodology		Figures based on new methodology		Difference, previous to new	
	HC	FTE	HC	FTE	HC	FTE
All Practice Staff	178,791	128,296	181,518	130,528	+ 1.5%	+ 1.7%
GPs	44,267	34,155	44,396	34,510	+ 0.3%	+ 1.0%
Nurses	23,195	16,123	23,511	16,384	+ 1.4%	+ 1.6%
Direct Patient Care	18,505	12,436	19,110	12,858	+ 3.3%	+ 3.4%
Admin/non-Clinical	93,145	65,583	94,893	66,776	+ 1.9%	+ 1.8%

Source: NHS Digital

2.2.4. Revised content and layout of tables

Changes

- i. For all information (where possible) retrospectively provide estimates back to September 2015.
- ii. Modification of job role categories, to improve usability.
- iii. Phased implementation of the order in which the historically data will be re-calculated.

Reasoning

Currently the General Practice Workforce statistics have numerous breaks in time series which mean information is not comparable across the wMDS time series. Re-working the estimates and providing retrospective information for those areas where no or incomplete data was available at the start of the wMDS collection will enable users to compare information from Sept 2015 onwards.

Previously the GP tables provided job role groupings which were either not used or potentially misleading. These groupings were 'All Practitioners', 'Practitioners (excluding Locums)', 'Practitioners (excluding Registrars & Locums)' and 'Practitioners (excluding Registrars, Retainers & Locums)'.

These groupings have been updated to:

- All GPs
- All Fully Qualified GPs (excludes Registrars)
- All Qualified Permanent GPs (excludes Registrars & Locums)

The GP Workforce Statistics is a quarterly publication which provides information at England, NHS England region, CCG, STP and HEE region levels, with in excess of 150 different tables. There are key time periods and areas which NHS Digital will prioritise for producing the historical information, specifically England level figures, then STP and CCG figures for key time periods.

Impact

Given the estimation methodology and the data source for registrars have changed, and the infrequent locums are being included in the main tables, information for all time periods will change. The coverage will increase across all time periods since practices will not be excluded for having a single invalid record out of the many valid ones. The revised historical figures from September 2015 to current will be completed in the publication of 25 April 2019.

3. Feedback

Questions and feedback on the publication are welcomed and should be sent to enquiries@nhsdigital.nhs.uk or alternatively call 0300 303 5678.

4. Next steps

The next publication of General Practice Workforce data is 25 April 2019, and our aim is to provide fully revised figures from September 2015.