



Announcement of methodological changes to General Practice Workforce Statistics

1. Background

This document describes the changes implemented in the December 2018 General Practice Workforce publication and those proposed for implementation in the February 2019 publication. Also for completeness, other future known improvements are highlighted.

General Practice Workforce statistics obtained from the workforce Minimum Data Set (wMDS) are relatively new and as such we are continually looking to improve the quality of the data in the series to make them more useful for our users. These changes may be improving the coverage, completeness or accuracy of these data. We welcome feedback from all our users, which can be made via email 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. This was upgraded to the National Workforce Reporting System with the addition of a workforce reporting module and upgrades to the data entry.

An improvement to the data source for GP registrars is being implemented in the December 2018 publication.

Further improvements are planned in the February 2019 publication, to

- how we report locums and
- how we estimate data when returns from practices are 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 methodology change notices.

In addition to the changes described below, participation has been gradually improving over the last 3 years meaning that the data are more complete and less reliant on estimation. For example, from September 2015 to June 2018 the share of practices providing fully valid GP records increased from 84.5% to 95.0%. Estimates are calculated for those practices that do not provide fully valid records, at CCG level.

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.

Where possible, we aim to retrospectively apply any methodological changes to provide comparable figures back to September 2015. 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. Implemented as part of December 2018 publication

2.1.1. Change to data source for GP Registrars

We have recently 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. This system was introduced in June 2018.

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

Table 1: Comparison of June¹ ESR(Old) to June² TIS(New)

	Headcount			FTE		
	June Old ¹	June New ²	% Change	June Old ¹	June New ²	% Change
All Practitioners	41,205	41,407	0.49	33,043	33,351	0.93
Practitioners (excluding Locums)	39,326	39,546	0.56	32,251	32,559	0.95
Practitioners (excluding Registrars & Locums)	34,412	34,412	-	27,542	27,542	-
Practitioners (excluding Registrars, Retainers & Locums)	34,127	34,127	-	27,429	27,429	-
GP Providers	22,313	22,313	-	19,608	19,608	-
Salaried/Other GPs	11,957	11,957	-	7,820	7,820	-
GP Registrars	4,955	5,136	3.65	4,710	5,017	6.52
GP Retainers	293	293	-	113	113	-
GP Locums	2,099	2,099	-	792	792	-

¹ESR method for collection of registrars - Upto and including June 2018 Registrar data collected from the Electronic Staff Record(ESR) system which was completed by lead trusts to record trainee doctors working in General Practices

²TIS method for collection of registrars - From and including June 2018 Registrar data is taken from the HEE national Trainee Information System(TIS) which contains all information for all registrars in training.

We estimate that the move to the new data source for GP registrars adds about 3.65% Headcount and 6.52% FTE more registrars than we previously were able to include. The FTE is impacted more due to the registrar contract being 40 hours per week meaning that for every 100 GP registrars an additional 6 FTEs is included compared to just using 37.5 hours.

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 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 over 6 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 the use of Lead Employer Trusts, which vary by region. As such TIS data should be timelier and more complete. TIS is the overall HEE trainee management system and encompasses all current trainees, therefore Registrar estimations are no longer required.

Final data as at 30 September 2018 (and all future publications) will use registrar data sourced from HEE TIS. The June 2018 registrar data published in November contained ESR data this has been replaced with the June 2018 data from TIS for the December publication.

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 the December publication a registrar working full time hours as providing an FTE of 1.06.

The change in data source will lead to the requirement to add a break into the data series between March 2018 and June 2018 to reflect the fact that the time period 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 and applying the changes to September 2017 figure to enable an estimated annual change for key figures which contain registrars. For the February 2019 publication we are intending to provide retrospective estimates for registrars back to Sept 2015.

Impact

Comparison work was carried out for June 2018, 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.

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 shown in Table 2. 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.

Table 1: TIS figures compared to final figures from the original methodology

	Jun-18		Sep-18	
	HC	FTE	HC	FTE
Difference final to TIS ¹	+181	+307		
% difference	+4	+7		
Difference predicted final (based on last year's change) to TIS ¹			+357	+528
% difference			+6	+10

¹ In Registrars' contracts 1 FTE = 40 hours per week. The FTE in the above table used conversion to 1 FTE = 37.5 hours

Source: NHS Digital

Table 2: Provisional to Final changes when using the original methodology

	Jun-18		Sep-17		Sep-18	
	HC	FTE	HC	FTE	HC	FTE
Provisional	5,110	4,861	4,592	4,346	4,757	4,509
Final	4,955	4,710	5,412	5,135		
predicted final (based on last year's change)					5,606	5,328
Change Provisional to Final	-155	-151	+820	+789		
% change	-3	-3	+18	+18		
Change Provisional to predicted Final					+849	+819
% change					+18	+18

Source: NHS Digital

2.2. Proposed changes from February 2019 publication

2.2.1. New schedule for reporting of final data

Changes – GP Workforce publication will reduce to final data only published within 2 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 period has been published alongside provisional data for the current period with final data now published 3 months (previously up to 6 months after) following extraction which has historically led to a minimum three-month delay.

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 2 months of the extraction period. This will be the reporting schedule going forward from the December 2018 publication.

Impact

Final data will be available less than 2 months following extraction date, e.g. December 2018 information published February 2019. A significant reduction from final March 2018 data published 5 months following extraction in August 2018.

2.2.2. Regular and Infrequent Locums

Given the low response rate for both regular and infrequent locums (currently around 15% of practices for both) NHS Digital will carry out a small survey of practices to gain a better understanding on how and when regular and infrequent locums are used within practices. Subject to the results of this survey the following is planned.

Changes

- i. All locum information to be retrospectively estimated, where not available, back to September 2015 such that there are no breaks in time series.
- ii. Infrequent Locum data to be published in main Headcount and FTE tables.

Reasoning

Due to underreporting by practices and therefore undercounting, a new methodology for counting infrequent locums was introduced in 2017 which affected the reporting of regular locums (e.g. those covering maternity) in the main dataset, leading to an apparent decrease in the number of locums recorded in the main dataset. Whilst regular Locums should still be reported through the NWRS as they were previously, a new “Infrequent Locums” section was introduced to capture only minimal information about individuals undertaking such infrequent work (e.g. 1 week per quarterly reporting period) that previously practices may not have been recording them.

Infrequent Locums data was introduced as a supplementary information table in the August 2018 publication.

The infrequent locum data will be incorporated into the main publication tables as part of publication of final September 2018 data – potentially within the GP Locums category - and henceforth be included in all future publications.

Impact

This is likely to affect comparability of the Locums figures as in effect new additional data is being included, with the full impact to be confirmed - work is currently ongoing to identify the affect on the figures of this change, and whether the Infrequent Locums should be counted within the existing “GP Locums” category or separately.

Comparison work was carried out for June 2018, comparing the Headcount (HC) and Full Time Equivalent (FTE) figures with and without Infrequent Locums. This is in table 3.

Table 3: June 2018, comparison of data with and without Infrequent Locums

Current published figures			Proposed figures based on including Infrequent Locums ¹		Difference, published to proposed	
	HC	FTE	HC	FTE	HC	FTE
GP Locums	2,102	793	4,618	1,051	+ 119.7%	+ 32.5%
Original Locums only	2,102	793	2,057	790	- 2.1%	- 0.4%

Infrequent Locums only				2,807	261		
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¹ Due to improvements in data quality processing, there's been a small change to the Original Locums count between the published and proposed figures

Source: NHS Digital

This work was also carried out for September 2018, and this is in table 4.

Table 4: September 2018, comparison of data with and without Infrequent Locums.

Current published figures			Proposed figures based on including Infrequent Locums ¹		Difference, published to proposed	
	HC	FTE	HC	FTE	HC	FTE
GP Locums	2,049	768	4,745	1,040	+ 131.6%	+ 35.4%
Original Locums only	2,049	768	1,991	763	- 2.8%	- 0.7%
Infrequent Locums only			2,976	277		

¹ Due to improvements in data quality processing, there's been a small change

Source: NHS Digital

to the Original Locums count between the published and proposed figures

2.2.3. Estimations

Changes

- i. Estimate at an individual level for any staff with missing information and at practice level for a full practice non-submission.
- ii. Produce estimates back to September 2015 using the new estimation method.

Reasoning

New work is ongoing to investigate the viability of estimating at an individual level for any staff missing information or at practice level for a full practice non-submission.

Currently estimations are calculated at a CCG level, for any staff group within a practice that does not have any data submitted or does not have valid data for all staff group records submitted at the end of the data quality process.

The current CCG level estimation methodology excludes good data, such as where hours information is missing from only one record. In these cases, all other records within that staff group in that practice are excluded from the final data. For example, if a practice has 5 GPs of which 4 have valid information and 1 invalid, all 5 records are excluded and estimated for.

Investigative work has been done to identify the impact of retaining those other good quality records, and only estimating the hours for the partially-complete record. This

estimate would be based on the average hours for that job role at a national level.

The current process would remain for practices providing no data, which will continue to be estimated for at CCG level.

Impact

Comparison work was carried out for June 2018, using both the existing and proposed Estimation methods. This change in estimation percentages is presented in table 5 below, and the comparison between the figures in table 6 for Headcount (HC) and Full Time Equivalent (FTE).

Table 5: June 2018, percentage of practices not providing valid data and so estimated for:

Staff Group	Current methodology	Proposed methodology
GPs	5.0%	1.5%
Nurses	8.8%	5.0%
Direct Patient Care	24.0%	21.4%
Admin/non-Clinical	12.1%	2.2%

Source: NHS Digital

Table 6: June 2018, comparison of current and proposed methodologies

Current published figures			Proposed figures based on new estimates methodology		Difference, published to proposed	
	HC	FTE	HC	FTE	HC	FTE
All Practice Staff	174,744	125,863	178,754	127,889	+ 2.3%	+ 1.6%
GPs	41,205	33,012	42,737	33,213	+ 3.7%	+ 0.6%
Nurses	22,986	15,925	23,438	16,317	+ 2.0%	+ 2.5%
Direct Patient Care	18,063	11,980	18,640	12,367	+ 3.2%	+ 3.2%
Admin/non-Clinical	92,844	64,945	94,369	65,991	+ 1.6%	+ 1.6%

Source: NHS Digital

This work was also carried out for September 2018, using both the existing and proposed Estimation methods. This change in estimation percentages is presented in table 7 below, and the comparison between the figures in table 8.

Table 7: September 2018, estimations required for practices not providing valid data and so estimated for:

Staff Group	Current methodology	Proposed methodology
GPs	5.7%	2.8%
Nurses	7.5%	4.3%
Direct Patient Care	23.6%	21.0%
Admin/non-Clinical	12.1%	2.3%

Source: NHS Digital

Table 8: September 2018, comparison of current and proposed methodologies

Current published figures			Proposed figures based on new estimates methodology		Difference, published to proposed	
	HC	FTE	HC	FTE	HC	FTE
All Practice Staff	176,505	127,728	180,922	129,896	+ 2.5%	+ 1.7%
GPs	42,431	34,132	44,107	34,364	+ 3.9%	+ 0.7%
Nurses	23,135	16,040	23,610	16,423	+ 2.1%	+ 2.4%
Direct Patient Care	18,320	12,246	18,930	12,649	+ 3.3%	+ 3.3%
Admin/non-Clinical	92,959	65,309	94,688	66,461	+ 1.9%	+ 1.8%

Source: NHS Digital

2.2.4. Revised content and layout of tables

Changes

- For all information (where possible) retrospectively provide estimates back to September 2015.
- Layout modification to main tables
- Phased implementation of the order in which the historically data will be re-calculated.

Reasoning

Currently the GP workforce statistics have numerous breaks in time series which mean information is not comparable for All GPs from the start of the wMDS time series. By re-working the estimates and providing retrospective information for those areas where no data was available at the start of the wMDS collection will enable users to compare information from Sept 2015 onwards.

Currently the tables provide numerous comparisons which are either not used or are potentially misleading. The current groupings for GPS are

- All Practitioners
- Practitioners (excluding Locums)
- Practitioners (excluding Registrars & Locums)
- Practitioners (excluding Registrars, Retainers & Locums)

These groupings will change from February 2019 publication

The GP Workforce Statistics is a quarterly publication which provides information at England, NHS E region, CCG, STP and HEE region levels, with in excess of 150 different tables. There are key time periods and areas which NHS D will focus on producing the historical information for first. The plan is to produce in the following order:-

- England level – All time periods from Sept 2015 to latest publication
- September – all years – at various geographies.
- March – all years – at various geographies.

Impact

Given the estimation methodology is changing, the new data source for registrars and the inclusion of the infrequent locums in the main tables all of which will impact slightly on all figures produced, all information will change for all time periods slightly. The response rate will increase across all time periods since practices will not be excluded for having a single invalid record out of the many valid ones.

2.2.5. Leavers and joiners

NHS England are leading on work with NHS Digital on how best to calculate and present information on staff leavers and joiners. The work is understanding the options for including a larger sample of records by improving the Registration Number coverage, a revised data linkage approach, an estimation methodology at the individual level record and amendments to the NWRS Data Entry module to improve data quality. NHS England have recently presented their findings to NHS Digital for evaluation which is current ongoing.

2.2.6. Additional settings

Work to count doctors working in other settings beyond the traditional general practice has started.

New data on qualified GPs (defined as those GPs with General Practitioner status on the GMC register) working in other settings will be incorporated into the supplementary information tables accompanying the publication of final September 2018 data and will henceforth be included in future publications.

This information is only for those qualified GPs who are recorded on ESR or are working in the independent sector (Independent sector coverage is limited and thus contains gaps). Their headcount and FTE information are currently published by NHS Digital in either the Hospital and Community Health Services (HCHS) or Independent Sector publications, and they will continue to be published there.

The GP publication will provide details on these numbers, but will not incorporate them in the main GP tables as these are people qualified and registered to practice as GPs but this does not guarantee that they are currently working in GP roles. They occupy a variety of occupational, job role and location classifications and many or all may not be providing primary care services. It will be made clear that these individuals are counted elsewhere in the healthcare workforce and should not be added to the GP workforce main publication tables to create an overall total.

Impact

The overall Primary and Secondary Care and Independent workforce figures will remain unchanged. This work is not to reallocate these people, but to signpost the existence of qualified GPs in the Secondary Care and Independent workforce figures.

2.3. Future work which may impact on the GP Workforce publication

NHS Digital have been asked to present their plan for establishing data collections for GPs where no data is currently collected (e.g. where they work in CCG-commissioned

services). This builds on initial work done by NHS England to collect and analyse available data. Some of these staff may be present in the figures currently published and discussed above, but the majority (e.g. delivering out of hours or extended access) will not.

Further information will be provided on these developments within future publications.

3. Feedback on December and February changes

NHS Digital would welcome your feedback on the changes made to the December publication and those proposed for the February 2019 publication. Please provide feedback by the 20th January 2019 by emailing gp-data@nhs.net

4. Next steps

The next publication of GP Workforce is Feb 2018. Our aim is to incorporate the changes presented within this document, subject to feedback from you the users of the publication.

The publication will present final data for December 2018 for general practitioners and the wider workforce working in general practice in England as at 30 September 2018.

5. Further Information

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