

Article

What are the vacancy trends in the public sector?

Exploring the trends in vacancy rates for different services across the public sector.

Contact:
Tanzila Rahman
efficiencymeasurementunit@ons.
gov.uk
+44 (0)1633 451519

Release date:
6 August 2019

Next release:
To be announced

Table of contents

1. [Main points](#)
2. [Introduction](#)
3. [How are vacancy rates measured?](#)
4. [The NHS had the highest vacancy rates in 2018 compared with other public sector occupations.](#)
5. [How have vacancy rates changed over time?](#)
6. [NHS staff numbers have been increasing while the vacancy rate has decreased slightly but remains high.](#)
7. [Adult social care employee numbers and vacancy rates have both increased since 2013](#)
8. [Children's social care staff numbers increased while the vacancy rate has generally declined](#)
9. [Increase in both classroom teacher numbers and the vacancy rate since 2010](#)
10. [Methodology](#)

1 . Main points

- Vacancy rates in the NHS and adult social care are high relative to rates in other public services and, with a growing ageing population pushing up demand for labour, rates may increase further.
- Trends in staff numbers and vacancy rates differ across the public sector.
- Adult social care has seen increases in both staff numbers and vacancy rates, indicating some success in filling vacancies but a continued increase in demand for staff.
- Classroom teachers have seen increases in staff numbers but little change in vacancy rates.
- Children’s social care and the NHS have seen increases in staff numbers and related declines in vacancy rates.
- Different public services use different methods to measure vacancy rates, which makes comparability difficult; methods for measuring vacancy rates should be made more consistent to improve comparability.

2 . Introduction

Vacancy rates help us to understand the demand and supply for labour. High vacancy rates could indicate overstretched workers as current staff have a larger workload to cope with staff shortages. High vacancy rates may be caused by low retention or challenges in recruiting new staff¹. Recruiting challenges could be because of wage competition, or from simply not wanting to work in the public sector.

On the other hand, a very low vacancy rate may suggest that there are few new staff and so occupations are missing out on new skills and ideas, which could limit workforce capacity building. However, having a low vacancy rate could also mean that the industry is very effective at filling vacancies.

So, what are the vacancy rates for different public sector services? How have rates changed over time? And what is the relationship between vacancies and staff numbers?

Notes for: Introduction

1. For more information on retention rates, see [Is staff retention an issue in the public sector?](#)

3 . How are vacancy rates measured?

The vacancy rate measures the proportion of total posts that are vacant, however, definitions and methods used across the public sector differ. The main differences are:

- definitions: “vacancy” is defined differently for different industries with some including vacancies only if there is active recruitment taking place; others include any non-permanently filled job compared with workforce plans, which would generally lead to a higher number of vacancies being estimated
- methods: some industries include vacancies and filled posts in the denominator when calculating the vacancy rate while others just include filled jobs, leading to a higher rate.
- coverage: some of the data in this article are for the UK while some are for England only
- time periods: the time periods used by different industries to calculate their vacancy rate are not consistent ¹

There is a specific comparability issue with classroom teacher vacancies. Vacancy data are collected as part of the school workforce census date in November, when most vacancies have been filled in time for the start of the new school year. Consequently, vacancy rates for classroom teachers do not accurately reflect the recruitment challenges faced by schools (vacant posts are advertised from Easter to July)². Therefore, vacancy rates for classroom teachers cannot be directly compared with other industries³.

The varying definitions and methods across the public sector make direct comparisons between parts of the public sector difficult, so we need to be careful when comparing results. The sensitivity analysis we have undertaken, which takes into account some of the methodology differences, suggests that the relative levels and trends are broadly unchanged. However, having a single unified approach to measuring vacancies would allow for a more accurate comparison between different industries.

For full detail of the different sources and the sensitivity analysis undertaken please see Section 10: Methodology.

Notes for: How are vacancy rates measured?

1. NHS data cover financial year quarters, adult social care data cover financial years, children’s social care data is the position on 30 September each year whilst data for classroom teachers are for November each year. Data for “All industries”, public admin and defence and education cover calendar years.
2. [Department for Education: Training new teachers \(PDF, 585KB\)](#) and [House of Commons Education Committee: Recruitment and retention of teachers \(PDF, 580KB\)](#)
3. See methodology for more information.

4 . The NHS had the highest vacancy rates in 2018 compared with other public sector occupations

Figure 1 compares the vacancy rate across different areas of public sector services ¹.

In 2018², the National Health Service (NHS) had the highest vacancy rate ³ (8.5%, which equates to 100,500 vacancies, including for doctors and nurses).

Adult social care the workforce, responsible for caring for some of the most vulnerable members of society, had the second-highest vacancy rate (8.0%, equating to 110,000 vacancies).

Children’s social care services had a vacancy rate of 4.7%, which was higher than the UK average of “all industries”⁴ of 2.8%⁵.

Public admin and defence⁶, and education had the lowest vacancy rates within public sector services at 1.6% and 1.9% respectively.

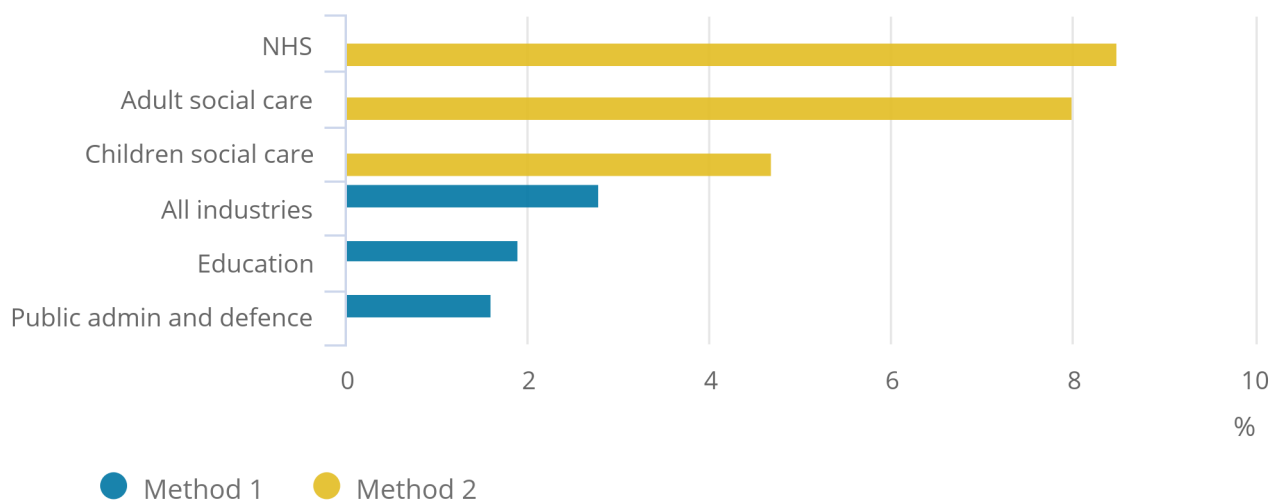
“Education”, which includes public and private provision, is included when making comparisons across services given the comparability issues with data for classroom teachers explained previously. We will look at classroom teachers separately in more detail in Section 9 given this covers public provision only.

Figure 1: The NHS had the highest vacancy rates in 2018 compared with other public sector occupations

Vacancy rates for services across the public sector in England and UK, 2018

Figure 1: The NHS had the highest vacancy rates in 2018 compared with other public sector occupations

Vacancy rates for services across the public sector in England and UK, 2018



Source: Office for National Statistics – Vacancy Survey, UK, “All industries” “education” and “public admin and defence”

Notes:

1. See Table 1 for full details on sources and details on methods and coverage.
2. Due to data availability there are differences in the geographical coverage – all industries, education and public admin and defence cover the UK whilst the other services only include England. See Table 1 in Section 10: Methodology.

Notes for: The NHS had the highest vacancy rates in 2018 compared with other public sector occupations

1. See Table 1 in Section 10: Methodology for a definition of all the public services considered and details of the data sources used in the article. Due to data availability there are differences in the geographical coverage – all industries, education and public admin and defence cover the UK whilst the other services only include England. For details on Method 1 and 2 see Table 1 in Section 10: Methodology.
2. The time period 2018 differs for each public sector service. For the NHS this refers to October to December 2018 (Quarter 3 financial year). Adult social care refers to the financial year ending March 2018. Children’s social care refers to the end of September 2018 whilst classroom teachers refers to November 2018. “All industries”, public admin and defence, and education refers to the 2018 calendar year.
3. Due to data availability there are differences in the geographical coverage – all industries, education and public admin and defence cover the UK whilst the other services only include England. See Table 1 in Section 10: Methodology.
4. More information on [what industries are used in “all industries”](#).
5. Children’s social care vacancy has been calculated using existing DfE data but excludes agency workers. Please see the calculation of vacancy rate excluding agency workers in Table 1 in Section 10: Methodology.
6. Public admin and defence industry refers to the Standard Industrial Classification grouping. This includes the civil service, armed force, police officers and fire fighters, and so on.

5 . How have vacancy rates changed over time?

The vacancy rate for “all industries” in the UK increased between 2010 and 2018 from 1.8% to 2.8% (see Figure 2). Following this trend, the adult social care, and public admin and defence vacancy rate also increased over time.

Adult social care vacancy rates increased from 5.5% in 2013 to 8.0% in 2018. This suggests that the adult social care sector may be struggling to keep up with demand as the population ages¹. Vacancy rates for public admin and defence increased over time from 0.9% in 2010 to 1.6% in 2018.

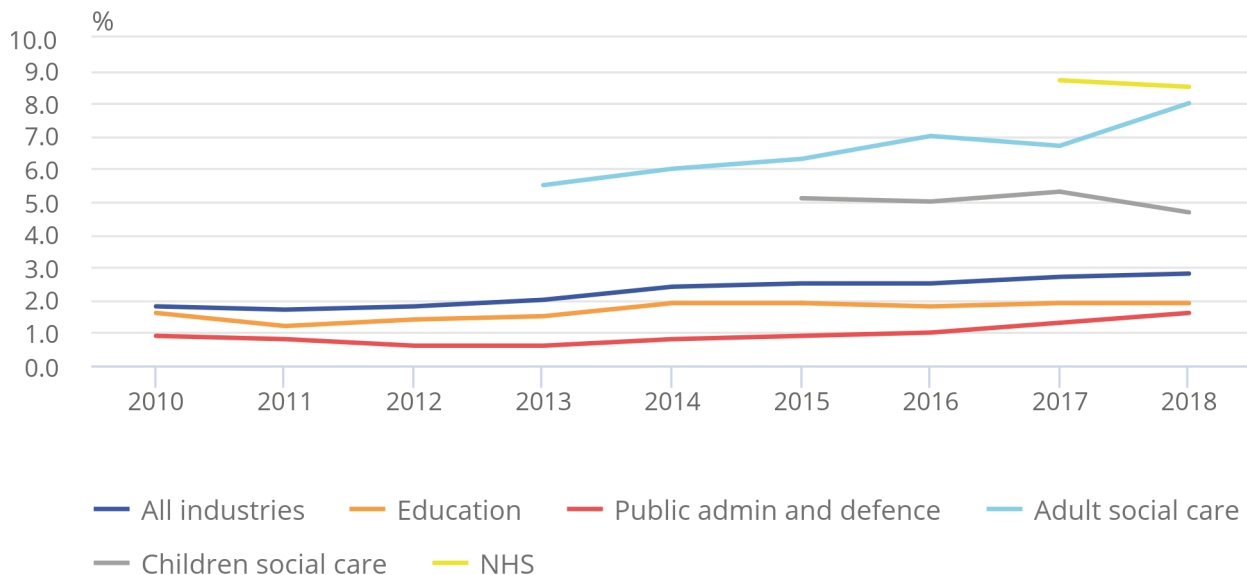
In contrast, children’s social care vacancy rates decreased from 5.3% in 2017 to 4.7% in 2018. The NHS vacancy rates also decreased from an average of 8.7% in 2017 to 8.5% in 2018². Vacancy rates for education have remained relatively unchanged for the time series observed.

Figure 2: How have vacancy rates changed over time?

Vacancy rates for selected public services in England and UK, seasonally adjusted, 2010 to 2018

Figure 2: How have vacancy rates changed over time?

Vacancy rates for selected public services in England and UK, seasonally adjusted, 2010 to 2018



Source: Office for National Statistics – Vacancy Survey, UK, “All industries” “education” and “public admin and defence”

Notes:

1. See Table 1 for full details on sources and details on methods and coverage.
2. "All industries," "education" and "public admin and defence", UK, 2018 calendar year.
3. NHS, England, October to December 2018.
4. Adult social care, England, financial year ending March 2018.
5. Children’s social care, England, end-September 2018.

Notes for: How have vacancy rates changed over time?

1. [Skills for care: The state of the adult social care sector and workforce in England, September 2018 \(PDF, 2.13MB\)](#)
2. Only a short series of data is available for the NHS (from Oct to Dec 2017). For comparability across services, it is best to use a point in time series data for the NHS (we have used Oct to Dec in each year). For comparability within the NHS, quarterly data gives more of a trend.

6 . NHS staff numbers have been increasing while the vacancy rate has decreased slightly but remains high

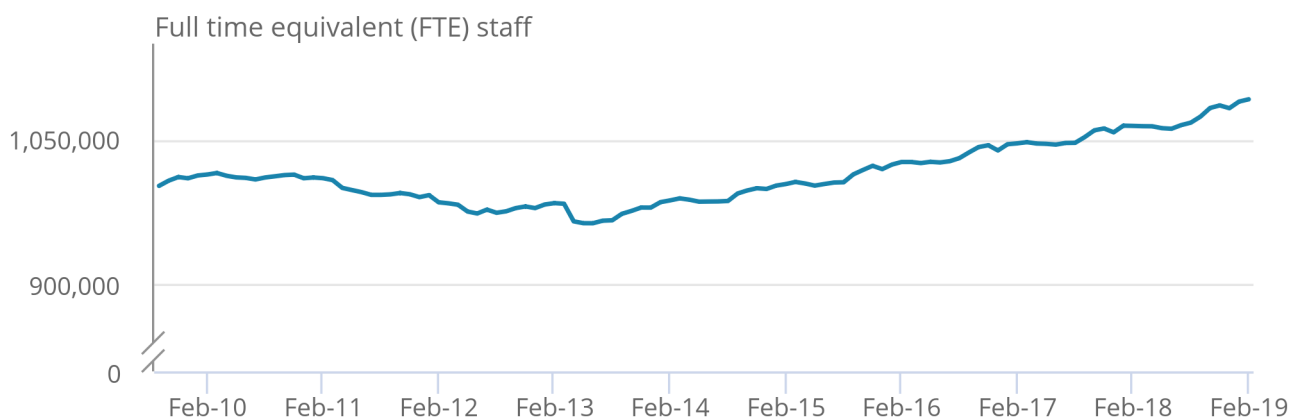
Over 1 million full-time equivalent (FTE) staff, including nurses, midwives, physios and paramedics, were employed in the NHS in England in January 2019¹. Numbers of FTE staff in the NHS have increased steadily since the middle of 2013 (see Figure 3).

Figure 3: NHS staff numbers have been increasing since 2013

NHS staff numbers (full-time equivalent), England, September 2009 to February 2019

Figure 3: NHS staff numbers have been increasing since 2013

NHS staff numbers (full-time equivalent), England, September 2009 to February 2019



Source: NHS Digital, England – NHS workforce statistics

Due to limited data availability for the NHS we have provided detailed quarterly data². The NHS vacancy rate dropped by 1.3 percentage points from 9.4% in April to June 2018 to 8.1% in January to March 2019 (see Figure 4). Continuing recruitment aligned with new graduates joining has meant that vacancy numbers have decreased 9.0% from July to September in 2018 (105,838) to January to March in 2019 (96,348).

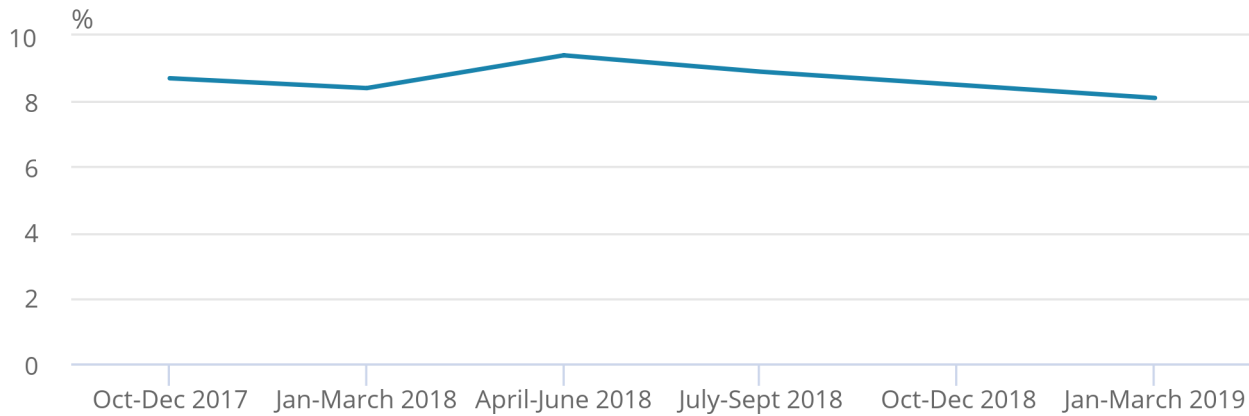
Despite consistently increasing staff numbers, the current number of vacancies (100,500) remains high and continues to be a challenge for the NHS. This is particularly the case in the nursing workforce. The NHS is therefore supporting providers to improve staff retention and sharing best practice to reduce temporary staffing.

Figure 4: NHS vacancy rate has decreased slightly but remains high

NHS workforce vacancy rate, England, 2017 to 2019

Figure 4: NHS vacancy rate has decreased slightly but remains high

NHS workforce vacancy rate, England, 2017 to 2019



Source: NHS Improvement – Quarterly performance of the NHS provider sector: Quarter 4 2018/19

Notes:

1. Vacancy rates are presented by NHS Improvement in financial year quarters, so Jan to Mar 2019 is Quarter 4, financial year ending 2019.

Notes for: NHS staff numbers have been increasing while the vacancy rate has decreased slightly but remains high

1. There was a break in series in April 2013 due to the restructure of the NHS.
2. For comparability across services it is best to use a point in time series data for NHS. For comparability within the NHS quarterly data gives more of a trend.

7 . Adult social care employee numbers and vacancy rates have both increased since 2013

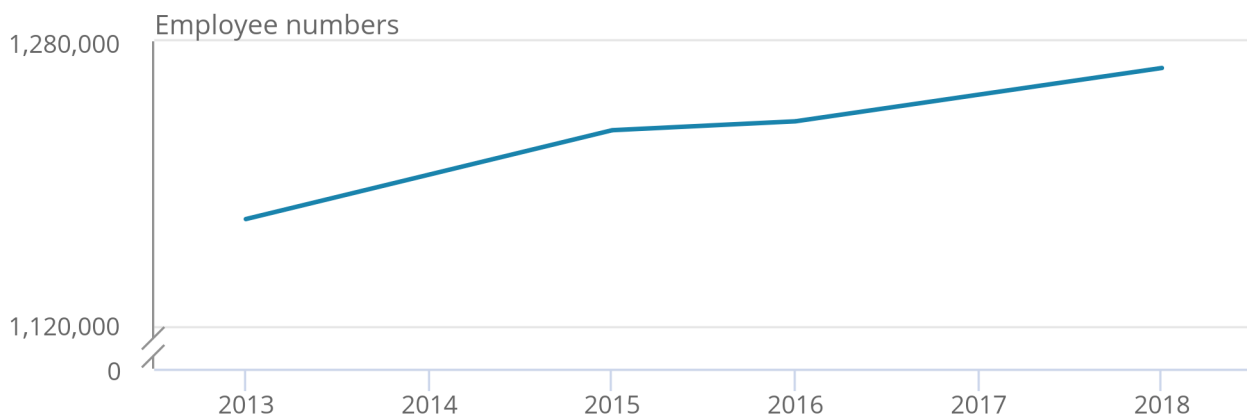
The number of people working in adult social care¹, in roles including direct care, registered nurses, care workers, support and outreach, has increased steadily since 2013². By 2018, there were 1,265,000 employees working within occupations in this sector, a growth of 7.2% between the financial year ending March 2013 and the financial year ending March 2018. This may be linked to growing demand for these services from an increasing ageing population – a trend that is likely to continue.

Figure 5: Adult social care employee numbers have increased since 2013

Adult social care employee numbers, England, financial year ending 2013 to 2018

Figure 5: Adult social care employee numbers have increased since 2013

Adult social care employee numbers, England, financial year ending 2013 to 2018



Source: Skills for Care, England – Adult social care workforce estimates

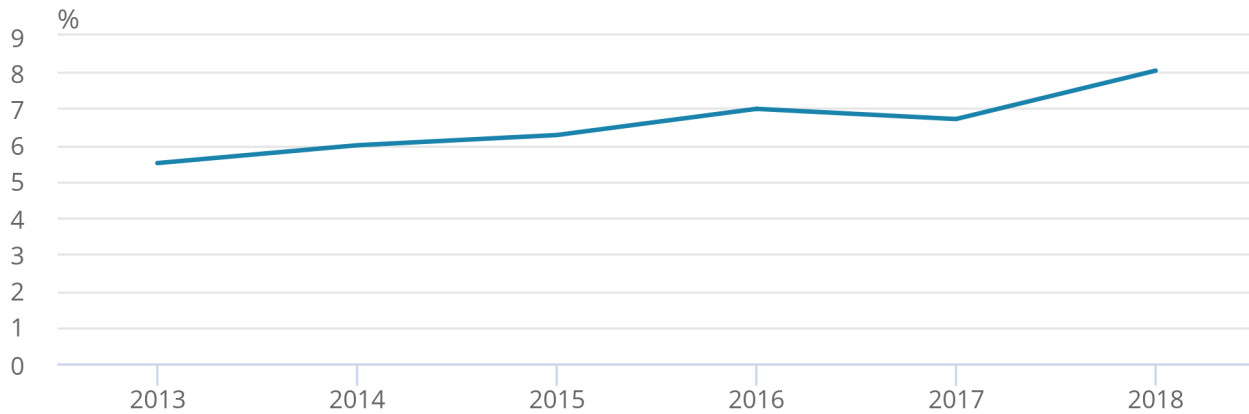
At the same time as this increase in staffing, the adult social care vacancy rate has also risen (see Figure 6). So, while the data suggest some successful recruitment is taking place, the demand for labour is continuing to increase. This has resulted in increasing vacancy rates and suggests potential difficulties in recruitment.

Figure 6: Adult social care vacancy rates have increased since 2013

Adult social care vacancy rate, England, financial year ending 2013 to financial year ending 2018

Figure 6: Adult social care vacancy rates have increased since 2013

Adult social care vacancy rate, England, financial year ending 2013 to financial year ending 2018



Source: Skills for Care, England – Adult social care workforce estimates

Notes for: Adult social care employee numbers and vacancy rates have both increased since 2013

1. Adult social care refers to the local authority sector and the independent sectors only. It does not include those working in the NHS.
2. This refers to the financial year ending March 2013.

8 . Children’s social care staff numbers increased while the vacancy rate has generally declined

The number of staff working in children’s social care has been increasing since 2013: between 2013 and 2018, there was a growth of 28.6% in full-time equivalent (FTE) staff numbers, from 22,910 to 29,470 (see Figure 7) ¹.

Year-on-year comparisons for children's social care workers should be treated with caution as the data collection method changed between 2016 and 2017. Before 2017, data returns were made at an aggregate level, whereas for the past two years all local authorities have completed an individual social worker-level data return. The individual-level data collection is relatively new and therefore the increase in the number of children and family social workers may be due to improved data quality and better interpretation of the Department for Education's guidance.

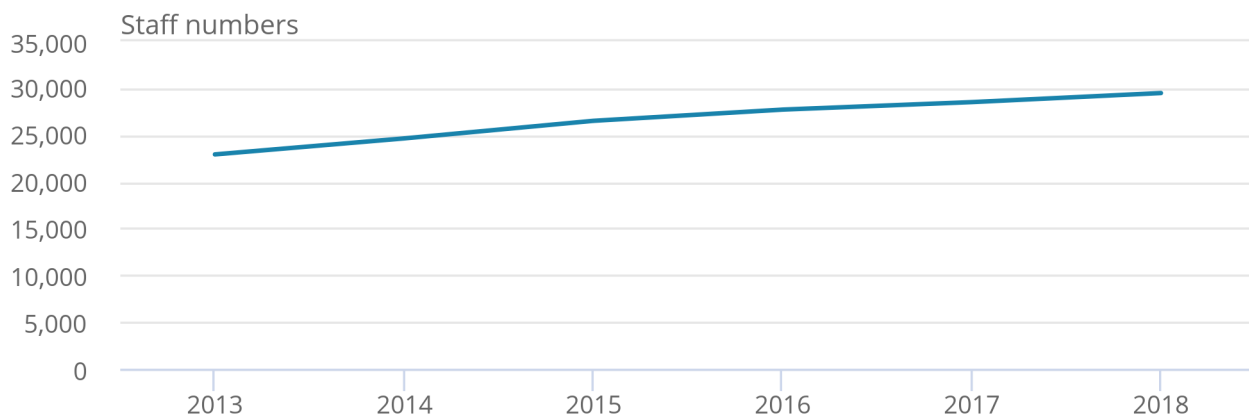
The data show a drop in the vacancy rate for children's social care (from 5.3% in 2017 to 4.7% in 2018, see Figure 8). The increase in staff numbers may have contributed to the decline in the vacancy rate, as more job vacancies are being filled. This indicates that, unlike in adult social care, vacancy rate and staff numbers have opposite trends in children's social care.

Figure 7: Children's social care staff numbers have increased

Number of children's social care full-time equivalent staff, England, 2013 to 2018

Figure 7: Children's social care staff numbers have increased

Number of children's social care full-time equivalent staff, England, 2013 to 2018



Source: Department for Education – Children's social work workforce (data from September of each year)

Notes:

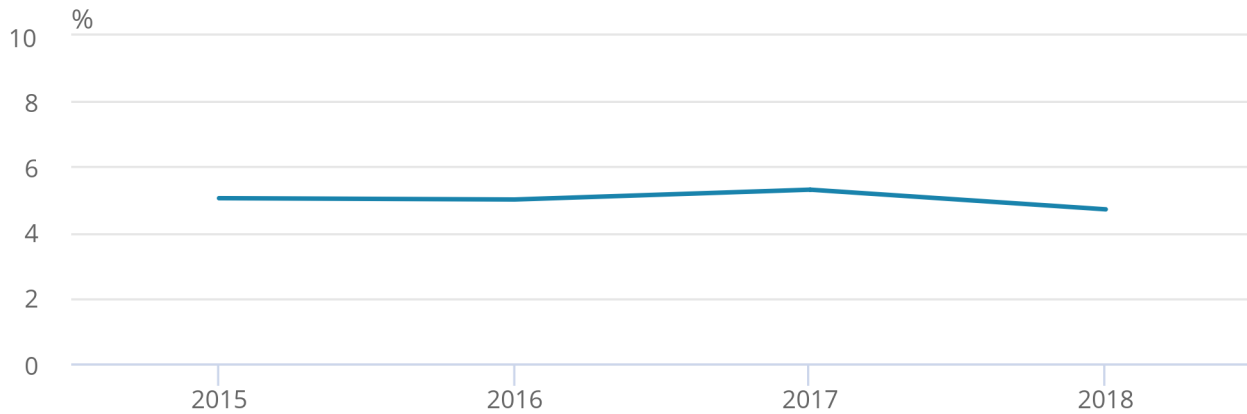
1. The data collection method changed between 2016 and 2017 which may have impacted on the trend.

Figure 8: Children’s social care vacancy rate has generally declined

Children’s social care vacancy rate, England, 2015 to 2018

Figure 8: Children’s social care vacancy rate has generally declined

Children’s social care vacancy rate, England, 2015 to 2018



Source: Department for Education – Children’s social work workforce (data from September of each year)

Notes for: Children’s social care staff numbers increased while the vacancy rate has generally declined

1. Data are for the end of September of each year shown.

9 . Increase in both classroom teacher numbers and the vacancy rate since 2010

There was a general increase in the number of classroom teachers between 2011 and 2016, with a drop in 2017 (see Figure 9). In 2018, classroom teachers had a low vacancy rate (0.3%) although the vacancy rate has risen since 2010 (see Figure 10).

As explained previously, the reason for such a low vacancy rate in comparison with other industries is, in part, because of the way classroom teachers’ vacancies are recorded in November of each year when teacher vacancies are likely to be low at the start of the school year, which affects their comparability.

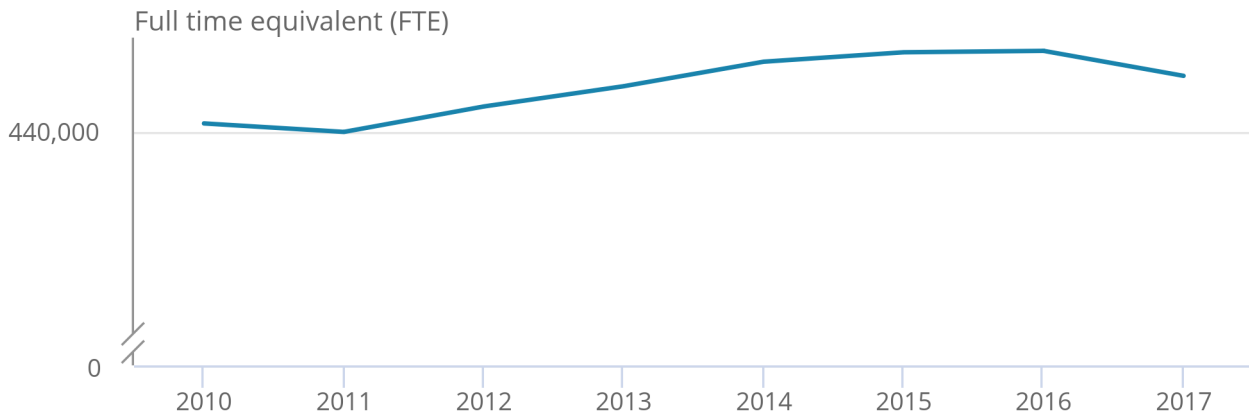
As staff numbers have been increasing so have the vacancy rates¹. While this is similar to the trend observed for adult social care, the increase in the vacancy rate for classroom teachers has been small.

Figure 9: Increase in classroom teacher numbers since 2010

Number of classroom teachers (full-time equivalent), England, 2010 to 2017

Figure 9: Increase in classroom teacher numbers since 2010

Number of classroom teachers (full-time equivalent), England, 2010 to 2017



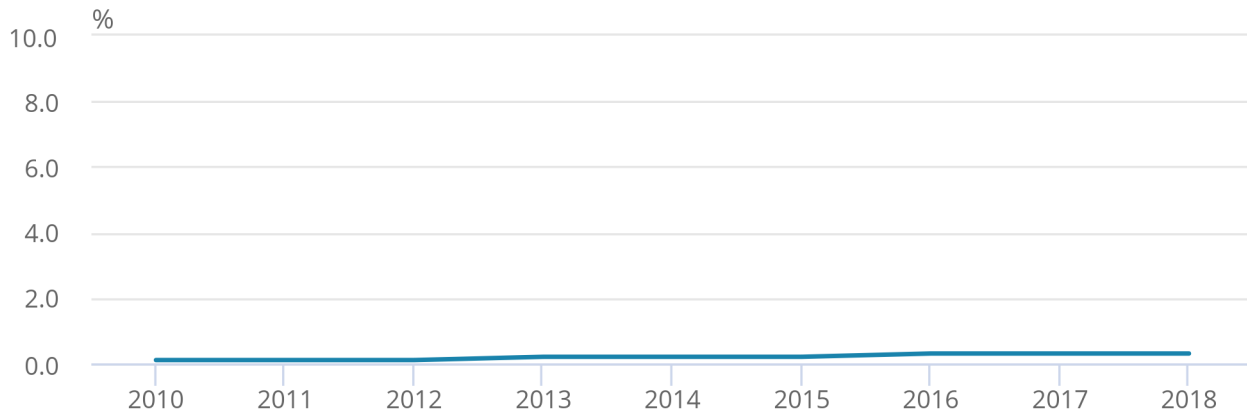
Source: Department for Education – School Workforce Survey Census (SWFC) (data from November of each year)

Figure 10: Small increases in classroom teachers' vacancy rate since 2010

Classroom teachers' vacancy rate, England, 2010 to 2018

Figure 10: Small increases in classroom teachers' vacancy rate since 2010

Classroom teachers' vacancy rate, England, 2010 to 2018



Source: Department for Education – School Workforce Survey Census (SWFC) (data from November of each year)

Notes for: Increase in both classroom teacher numbers and the vacancy rate since 2010

1. Classroom teachers changed its methodology in 2015. The denominator since 2015 is teacher head count plus vacancy numbers. Prior to 2016 the denominator was the number of full-time qualified teachers in service (this did not include part-time in the denominator).

10 . Methodology

Definitions of a vacancy and coverage

The ONS Vacancy Survey

How many job vacancies a business has, for which they are actively seeking recruits from outside the organisation.

NHS Improvement (NHSI)

The variance between the reported full-time equivalent (FTE) staff in post against planned workforce levels. A vacancy is a post that is unfilled by a permanent or fixed-term staff (agency or temporary staff may also fill some vacant posts). Trusts may not be actively recruiting.

Adult social care

A vacancy is where the job is unfilled – providers are asked how many vacancies they have for each job role on the day they are completing the National Minimum Data Set for Social Care (NMDS-SC). Each job that is vacant is classed as one vacancy regardless of the hours required (that is, a vacancy for a part-time role is still one vacancy, not a proportion of a vacancy).

Classroom teachers

The number of advertised teaching posts that were either vacant or temporarily filled at the school workforce census date in November.

Children's social care

Any FTE post unfilled within a local authority's organisational structure, including vacant posts not being actively recruited for.

Coverage

There are some important differences in the coverage. "All industries," "education" and "public admin and defence" cover the UK whilst the other services cover England only. There may be differences in the rates for those outside England.

Methods for vacancy rate calculation

There are different methods for the vacancy rate calculation:

$$\text{Method 1} = \frac{\text{No of vacancies}}{\text{No of jobs filled}} \times 100$$

For "all industries", "education" and "public admin and defence".

$$\text{Method 2} = \frac{\text{No of vacancies}}{\text{No of jobs filled} + \text{vacancies}} \times 100$$

For "NHS", "adult social care", "children's social care"¹ and "classroom teachers".

The first calculation method shows a higher rate than the second method, because "vacancies" is not included in the denominator, however, the differences between the two calculations were very small and are unlikely to make a material difference to the levels (see Figures 11 and 12).

There is a difference in the types of staff used in the vacancy rates calculation. Children's social care and the NHS use full-time equivalent (FTE) staff while the other industries and services use headcount. The vacancy rates using FTE will show a lower figure than if headcount was used. However, as the vacancy rates are being calculated as rates, the differences will be small and again will make little material difference.

Table 1: Data sources, coverage and vacancy calculation

	Service or industry	Source	Coverage	Vacancy rate calculation	Further information
1	All industries	ONS Vacancy Survey	UK	Vacancies/jobs filled *100. The vacancy ratio is an estimate of the number of vacancies per 100 jobs, using employee jobs estimates from the Short-Term Employment Surveys (STES).	This is a Standard Industry Classification (SIC). This is the overall vacancy rates for all industries (public and private sector).
2	Education	ONS Vacancy Survey	UK	Vacancies/jobs filled *100. The no. of vacancies per 100 employed jobs (Headcount)	This is a Standard Industry Classification (SIC). This includes higher education institutions such as Universities as well as Sports and recreation education, Cultural education and Driving school activities. This also includes the private sector.
3	Public admin and defence; compulsory social security	ONS Vacancy Survey	UK	Vacancies/jobs filled *100. The no. of vacancies per 100 employed jobs (Headcount)	This is a Standard Industry Classification (SIC). This includes the civil service, armed force, police officers and fire fighters etc.
4	Adult social care	Skills for Care	England	Sum of directly employed vacancies or sum of directly employed staff + sum of directly employed vacancies	Adult Social Care vacancy includes those who are employed by local authority and independently
5	Children's social care	'Children's Social work Workforce,' Department for Education	England	This excludes agency workers. $100 * ((\text{Number of FTE vacancies} - \text{number of FTE agency workers covering vacancies}) / (\text{Number of FTE vacancies} - \text{number of FTE agency workers covering vacancies}) + (\text{Number of FTE social workers} + \text{number of FTE agency workers}))$	Children's and family social workers include those who have registered with the Health and Care Professionals Council and either work in a local authority in a children's services department or (if working in an authority where the services are joined up) work exclusively on children and families work.
6	Classroom teachers	'School Workforce Survey Census,' Department for Education	England	Vacancies /Teacher head count + vacancies. The denominator since 2015 is teacher head count plus vacancy numbers. Prior to 2016 the denominator was the number of full-time qualified teachers in service. (This did not include part-time in the denominator).	This includes Classroom teachers in state schools for nursery, primary and secondary. A teacher vacancy refers to a full-time or part-time appointment of at least one term's duration that, on the census date, had been advertised but not filled. Vacancies include those filled on a temporary basis unless filled by someone with a fixed term contract of one term or more.

7	NHS	'Quarterly performance of the NHS provider sector: quarter 3 financial year ending 2019'	England	Total number of FTE vacancies/ total funded or budgeted establishment comprised of the number of staff in post and the number of vacant posts x 100	Whole-time equivalent (WTE) is the ratio of the total number of paid hours during a period (part-time, full-time, contracted) by the number of working hours in the period. One WTE is equivalent to one employee working full-time.
---	-----	--	---------	---	--

Source: "All industries," "education" and "public admin and defence" - Vacancy Survey, UK, Office for National Statistics

Note:
 Please see the links for all the data source used in this article:
["All industries," "education", and "public admin and defence"](#)
[Adult social care](#)
[Children social care](#)
[Classroom teachers](#)
[NHS](#)

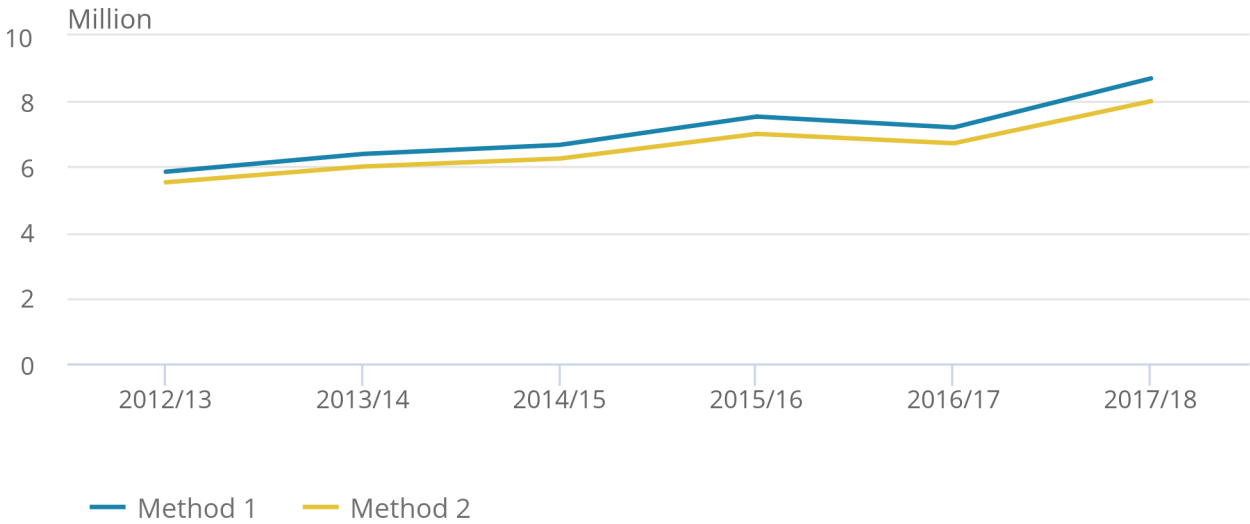
Figure 11 shows the difference between the vacancy rate of Methods 1 and 2 using actual adult social care data. Method 2 is the vacancy rate as calculated by Adult Skills for Care, whilst Method 1 uses the same adult social care data for Method 2 but excludes vacancies in the denominator.

Figure 11: Small difference between Method 1 and 2

Modelled vacancy rates for adult social care, England, using Method 1 and 2

Figure 11: Small difference between Method 1 and 2

Modelled vacancy rates for adult social care, England, using Method 1 and 2



Source: Skills for Care, England – Adult social care workforce estimates

$$\text{Method 1} = \frac{\text{No of vacancies}}{\text{No of jobs filled}} \times 100$$

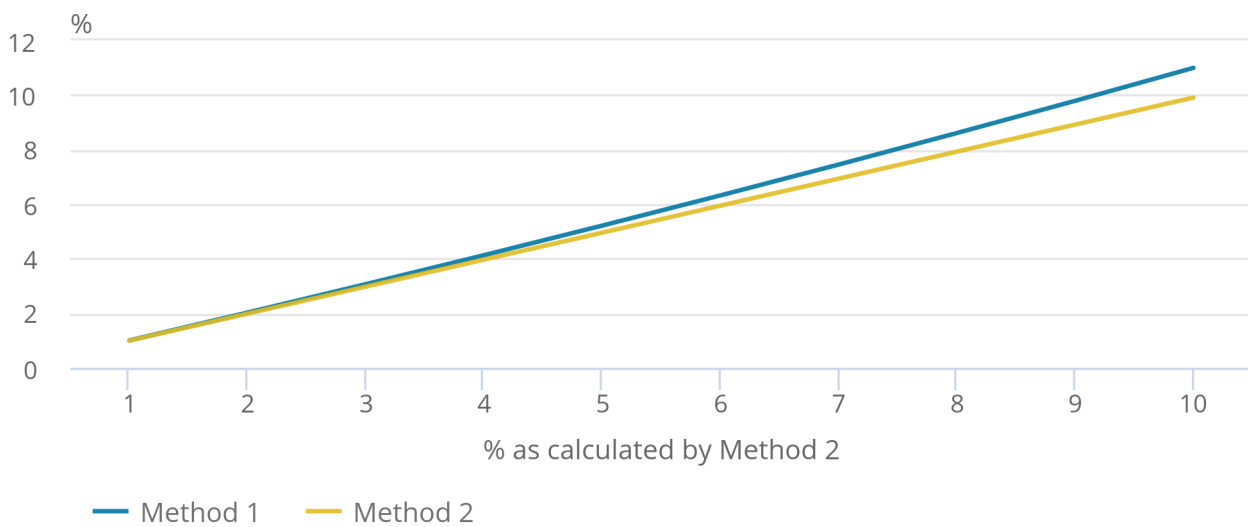
$$\text{Method 2} = \frac{\text{No of vacancies}}{\text{No of jobs filled} + \text{vacancies}} \times 100$$

Figure 12: Modelled calculation shows small difference between Method 1 and 2

Vacancy rate Method 1 and 2 modelled calculation

Figure 12: Modelled calculation shows small difference between Method 1 and 2

Vacancy rate Method 1 and 2 modelled calculation



Source: Office for National Statistics

$$\text{Method 1} = \frac{\text{No of vacancies}}{\text{No of jobs filled}} \times 100$$

$$\text{Method 2} = \frac{\text{No of vacancies}}{\text{No of jobs filled} + \text{vacancies}} \times 100$$

This is a modelled calculation of the two different methods for vacancy rates that are used by different services in this article. Figure 12 shows that using method 1 will result in a slightly higher vacancy rate, however, the difference between the two methods is very small. That is, it could be up to a 1 percentage point difference if the vacancy rate was 10% as calculated by Method 2. (The highest the vacancy rate reported in the article is 8.5% for NHS).

As the differences between these two methods are small it still allows us to make comparisons between figures that use different methods (see Table 2 for the data used to calculate the vacancy rates for Figure 12).

Table 2: Data used in model for Figure 12

No of vacancies	No of jobs filled	Method 1 (%)	Method 2 (%)
100	10,000	1	0.99
200	9,900	2.02	1.98
300	9,800	3.061	2.97
400	9,700	4.124	3.96
500	9,600	5.208	4.95
600	9,500	6.316	5.941
700	9,400	7.447	6.931
800	9,300	8.602	7.921
900	9,200	9.783	8.911
1000	9,100	10.99	9.901

Source: Office for National Statistics

Notes for: Methodology

1. The vacancy rate for children social care excludes agency workers.