

Article

Coronavirus (COVID-19) cases and vaccination uptake among the school workforce, England: up to April 2022

Coronavirus (COVID-19) cases and vaccination uptake among the school workforce in state-funded primary, secondary, and special schools. Experimental statistics produced by linking the School Workforce Census (SWC) to NHS Test and Trace (T and T) and the National Immunisation Management Service (NIMS) data.

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1 . Main points

The following points relate to school staff working in state-funded primary and secondary schools in England.

- There was a higher percentage of primary school staff with a positive coronavirus (COVID-19) test than secondary school staff across both the autumn 2021 and spring 2022 terms; staff in both school types saw an increase in the percentage with a positive test in the spring 2022 term compared with autumn 2021.
- Changes to the testing guidance in the second half of the spring 2022 term mean that it is likely that a lower proportion of infections were recorded in the NHS Test and Trace data, underestimating the increase in infections between the two terms.
- Both primary and secondary school staff aged under 25 years or aged 60 years and over had lower percentages with a positive test compared with those of other ages in both the autumn 2021 and spring 2022 terms.
- COVID-19 vaccine uptake in school staff is higher than that seen in the wider adult population of the same age range; this applies to those who have received second or third doses of a vaccine.
- There was variation in vaccine uptake between ethnic groups; Chinese, Indian, and White British staff had the highest percentages of those who had received at least two or more doses.
- Staff who received a third dose of the vaccine before the start of the spring 2022 term were less likely to have a positive test, when compared with those who had two doses.

2 . Overview

The coronavirus (COVID-19) case data presented in this article are produced by linking the School Workforce Census (SWC) to NHS Test and Trace data and the National Immunisation Management Service (NIMS) dataset.

The linked data cover all school workforce staff working in state-funded schools in England only (including special schools). The data available from the SWC relate to the school workforce employed in the previous academic year, some of whom may no longer be employed in state-funded schools.

Using NHS Test and Trace data to monitor coronavirus (COVID-19) infection relies on infections being diagnosed and recorded. Testing behaviour and changes to testing guidance over time will affect the data. These figures cannot be used to estimate the true proportion of school staff that have had an infection and may not be representative of true infection patterns between different demographics.

This article focuses on the two most recent school terms; autumn 2021 (31 August to 22 December 2021, Delta dominant) and spring 2022 (3 January to 6 April 2022, Omicron dominant). It aims to understand how the proportions of staff testing positive for COVID-19, and the characteristics of these staff, changed over time.

Changes to the testing guidance in the second half of the spring 2022 term mean that it is likely that a lower proportion of infections were recorded in the NHS Test and Trace data. See [Section 16: Data sources and quality](#).

Data by term for the previous 2020 to 2021 academic year are also available in the [accompanying dataset](#).

3 . Coronavirus (COVID-19) cases by staff role

The overall proportions of staff with a positive coronavirus (COVID-19) polymerase chain reaction (PCR) or reported lateral flow device (LFD) test (Figure 1) were higher in spring 2022 compared with autumn 2021 for all staff types. This is consistent with data from the Office for National Statistics (ONS) [Coronavirus \(COVID-19\) Infection Survey](#) where higher rates of infection were recorded in the months aligned to the spring 2022 term.

The proportion of primary school staff with a positive test was higher than secondary school staff across all staff types for both the autumn 2021 and spring 2022 terms. Among classroom teachers, 19.8% in primary schools and 12.4% in secondary schools had a positive test in spring 2022.

Head and deputy head teachers in secondary schools had the lowest percentages with a positive test in both autumn 2021 (8.4%) and spring 2022 (9.0%) compared with staff in other roles. Primary teaching assistants had the highest percentage of staff with a positive test in the spring 2022 term (22.0%).

When adjusting for other demographic and geographic variables, secondary school staff were 29.3% less likely to report a positive test than primary school staff in spring 2022 (see Table 24 in the [accompanying dataset](#) for full details).

The higher proportion of primary staff with a positive test is consistent with the [school attendance data](#) published by the Department for Education (DfE). School absence data will be influenced by the prevalence of COVID-19 infection and the self-isolation guidance at the time.

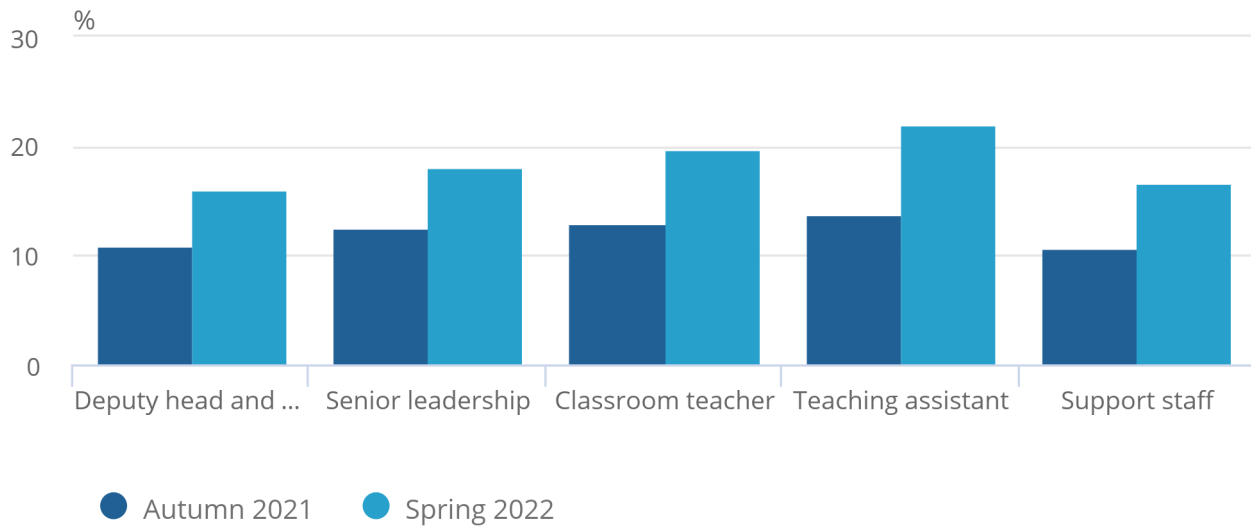
The higher percentage with a positive test among primary staff compared with secondary staff contrasts with the data seen in pupils in [Coronavirus \(COVID-19\) cases in school pupils, England: up to 6 April 2022](#). Primary-aged pupils were consistently less likely to have a positive test compared with secondary-aged pupils. The proportion with a positive test among secondary staff was lower than that seen in secondary pupils (12.6% compared with 27.0% respectively the spring 2022 term).

Figure 1a: Primary school staff had a higher proportion with a positive coronavirus (COVID-19) test compared with secondary school staff

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by school type and staff role, England, up to 6 April 2022

Figure 1a: Primary school staff had a higher proportion with a positive coronavirus (COVID-19) test compared with secondary school staff

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by school type and staff role, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

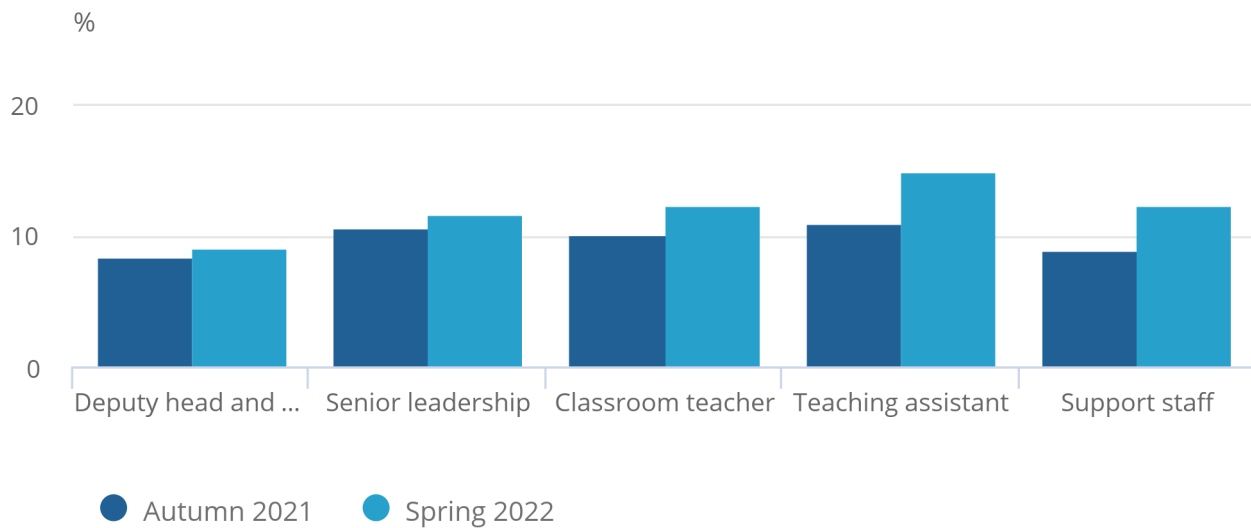
1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

Figure 1b: Primary school staff had a higher proportion with a positive coronavirus (COVID-19) test compared with secondary school staff

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by school type and staff role, England, up to 6 April 2022

Figure 1b: Primary school staff had a higher proportion with a positive coronavirus (COVID-19) test compared with secondary school staff

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by school type and staff role, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

4 . Coronavirus (COVID-19) cases by symptoms at the time of a positive test

Of those with a positive coronavirus (COVID-19) test, a lower proportion of staff in primary and secondary schools reported having COVID-19-related symptoms at the time of the test in spring 2022 than in each of the four preceding school terms (Figure 2). This is consistent with findings in the Office for National Statistics (ONS) Coronavirus Infection Survey for the population as a whole, where fewer people with Omicron reported symptoms.

Among primary school staff who had a positive test in spring 2022, 25.7% reported having symptoms at the time of the test compared with 53.7% in autumn 2021.

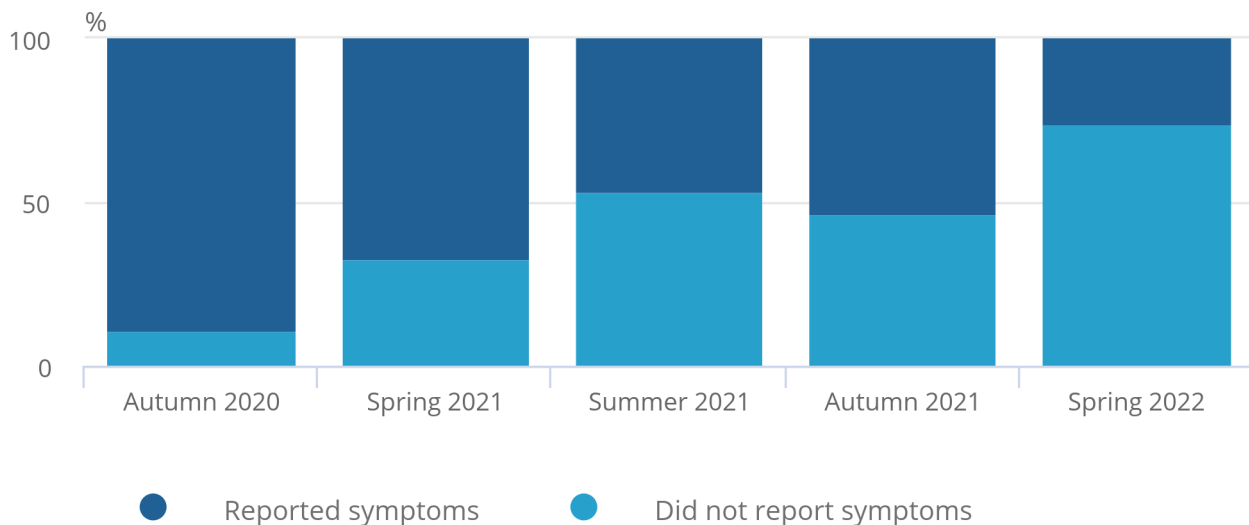
Among secondary school staff who had a positive test in spring 2022, 26.9% reported having symptoms at the time of the test compared with 56.5% in autumn 2021.

Figure 2a: Spring 2022 had the lowest proportion of school staff reporting symptoms at the time of a positive coronavirus (COVID-19) test

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by reported symptoms and school type, England, up to 6 April 2022

Figure 2a: Spring 2022 had the lowest proportion of school staff reporting symptoms at the time of a positive coronavirus (COVID-19) test

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by reported symptoms and school type, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

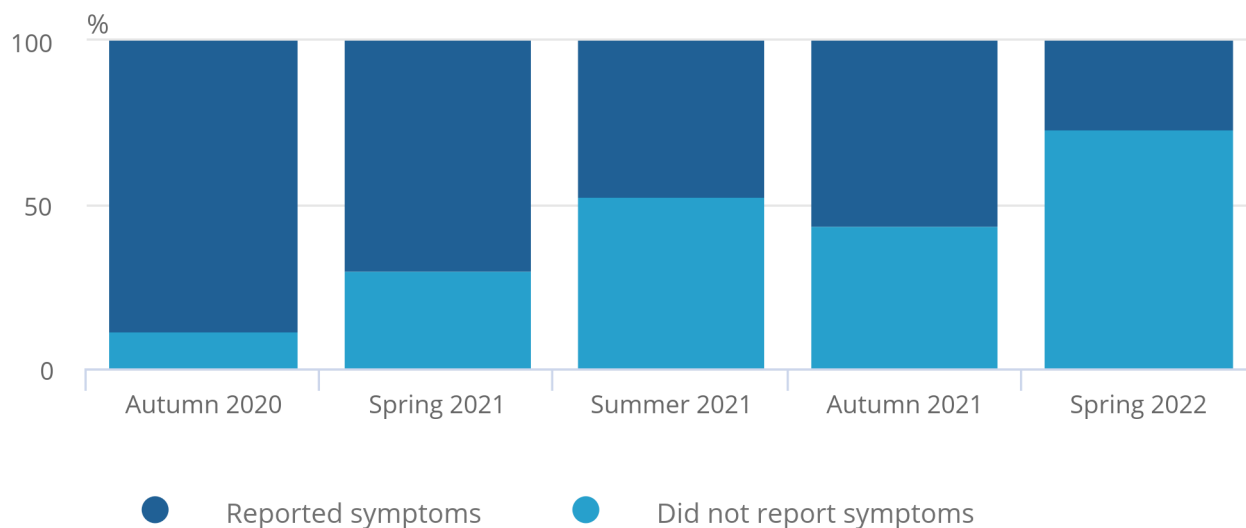
1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

Figure 2b: Spring 2022 had the lowest proportion of school staff reporting symptoms at the time of a positive coronavirus (COVID-19) test

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by reported symptoms and school type, England, up to 6 April 2022

Figure 2b: Spring 2022 had the lowest proportion of school staff reporting symptoms at the time of a positive coronavirus (COVID-19) test

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by reported symptoms and school type, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

5. Coronavirus (COVID-19) cases by staff characteristics

All charts in Figures 3 to 7 and 9 to 12 reflect coronavirus (COVID-19) cases and vaccination rates for all staff types combined. See [Section 15: Glossary](#) for further information on staff types. Detailed breakdowns by staff type as well as breakdowns for special schools can be found in the [accompanying dataset](#).

COVID-19 cases by ethnicity

White British, White Other and Mixed primary school staff had the highest proportions with a positive COVID-19 test in both autumn 2021 (12.6%, 12.2% and 12.1% respectively) and spring 2022 (20.0%, 18.3% and 17.5% respectively). The lowest proportions with a positive test in the autumn 2021 term were seen in Pakistani (8.1%) and Black African (8.9%) primary school staff (Figure 3).

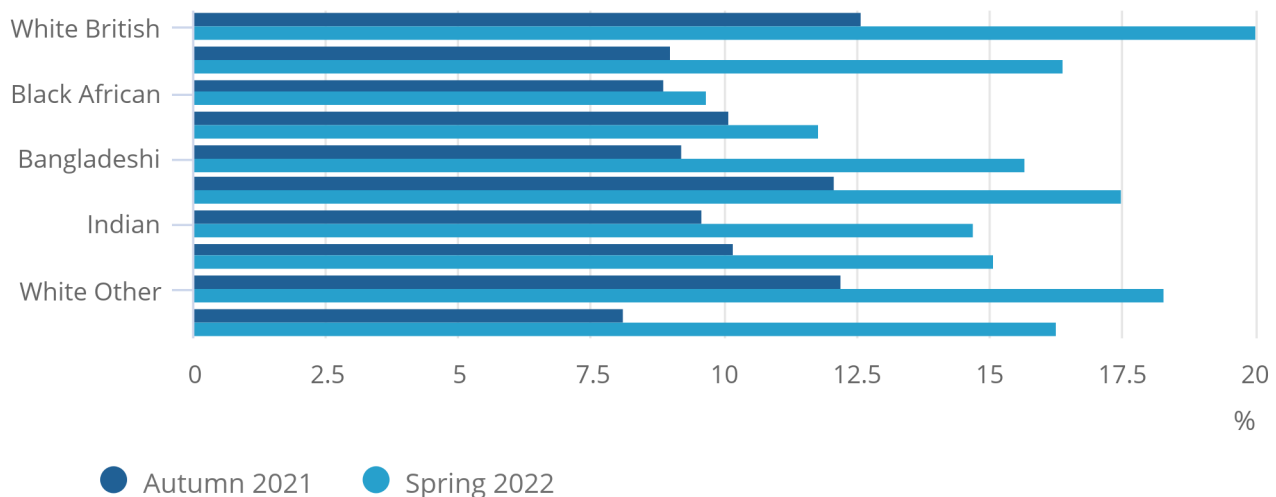
Black Caribbean (10.0%) and White British (10.0%) secondary staff had the highest percentages of staff with a positive test in the autumn 2021 term. In the spring 2022 term, this was the highest among Pakistani (13.5%), Bangladeshi (13.0%) and White British (13.0%) secondary staff.

Figure 3a: The proportion of school staff with a positive coronavirus (COVID-19) test varied by ethnicity

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by school type and ethnicity, England, up to 6 April 2022

Figure 3a: The proportion of school staff with a positive coronavirus (COVID-19) test varied by ethnicity

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by school type and ethnicity, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

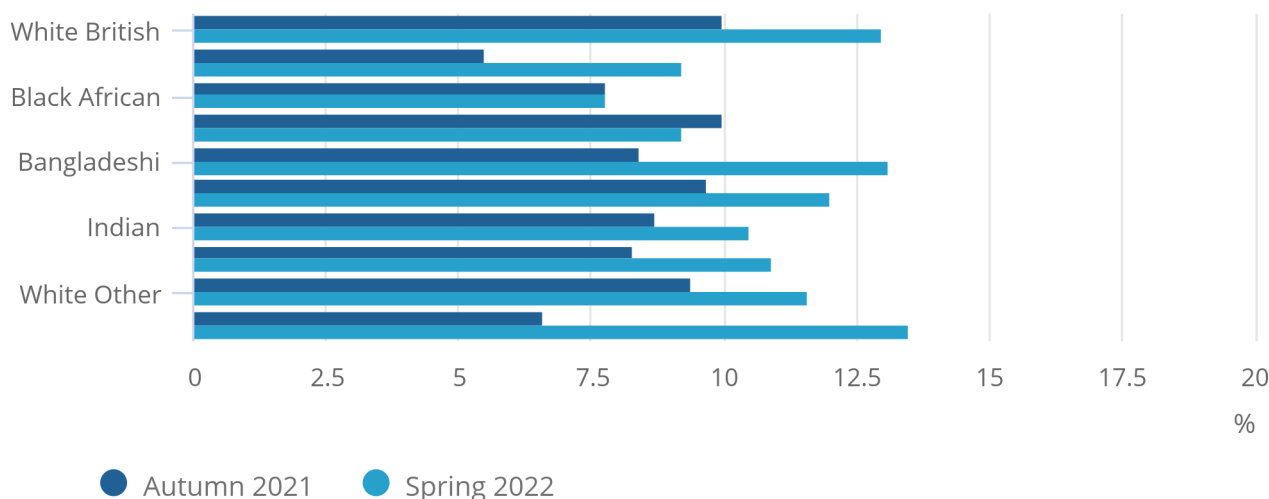
1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.
2. 7.5% of the primary school workforce and 8.7% of the secondary school workforce had no recorded data for ethnicity and therefore have been removed from this analysis.

Figure 3b: The proportion of school staff with a positive coronavirus (COVID-19) test varied by ethnicity

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by school type and ethnicity, England, up to 6 April 2022

Figure 3b: The proportion of school staff with a positive coronavirus (COVID-19) test varied by ethnicity

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by school type and ethnicity, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.
2. 7.5% of the primary school workforce and 8.7% of the secondary school workforce had no recorded data for ethnicity and therefore have been removed from this analysis.

COVID-19 cases by age band

The percentage of staff with a positive COVID-19 test was higher in primary school staff than in secondary school staff across all age bands and across both the autumn 2021 and spring 2022 terms (Figure 4).

The percentage of staff with a positive test in primary schools was highest among those aged 40 to 49 years in both autumn 2021 (15.9%) and spring 2022 (21.7%). This age group also had the highest percentage of staff with a positive test in secondary schools in autumn 2021 (12.8%). Those aged 30 to 39 years had the highest percentage of staff with a positive test in secondary schools in spring 2022 (14.1%).

Those aged under 25 years and aged over 60 years had the lowest percentages with a positive test for both primary and secondary staff in both autumn 2021 and spring 2022.

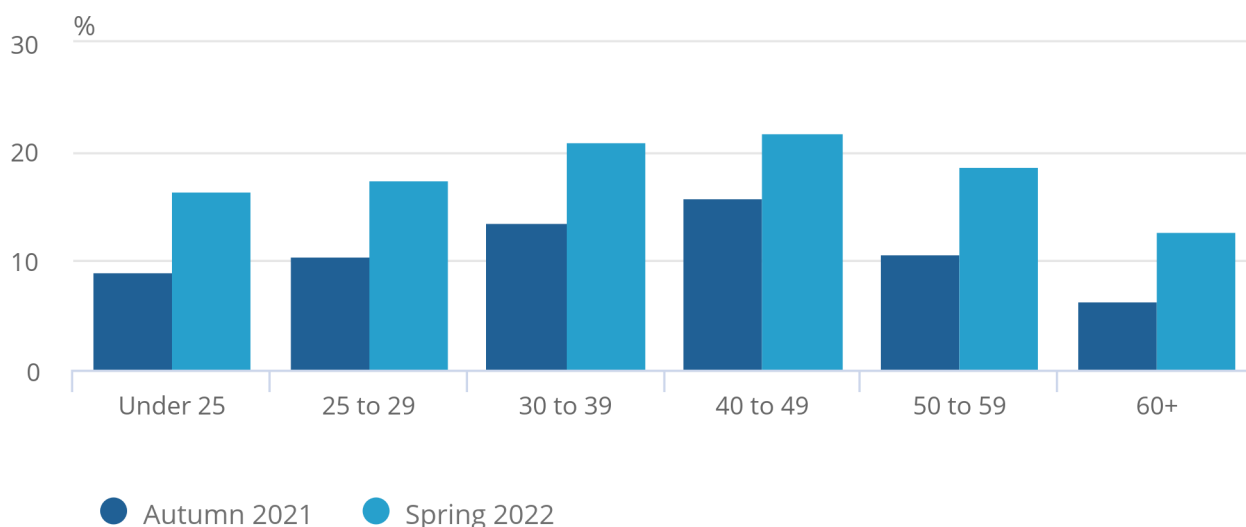
This is broadly consistent with the results from Office for National Statistics (ONS) [Coronavirus \(COVID-19\) Infection Survey](#), which also reported lower rates of infection among older age groups.

Figure 4a: Staff aged 26 to 59 years had a higher proportion with a positive coronavirus (COVID-19) tests compared with other age groups

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by age band and school type, England, up to April 2022

Figure 4a: Staff aged 26 to 59 years had a higher proportion with a positive coronavirus (COVID-19) tests compared with other age groups

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by age band and school type, England, up to April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

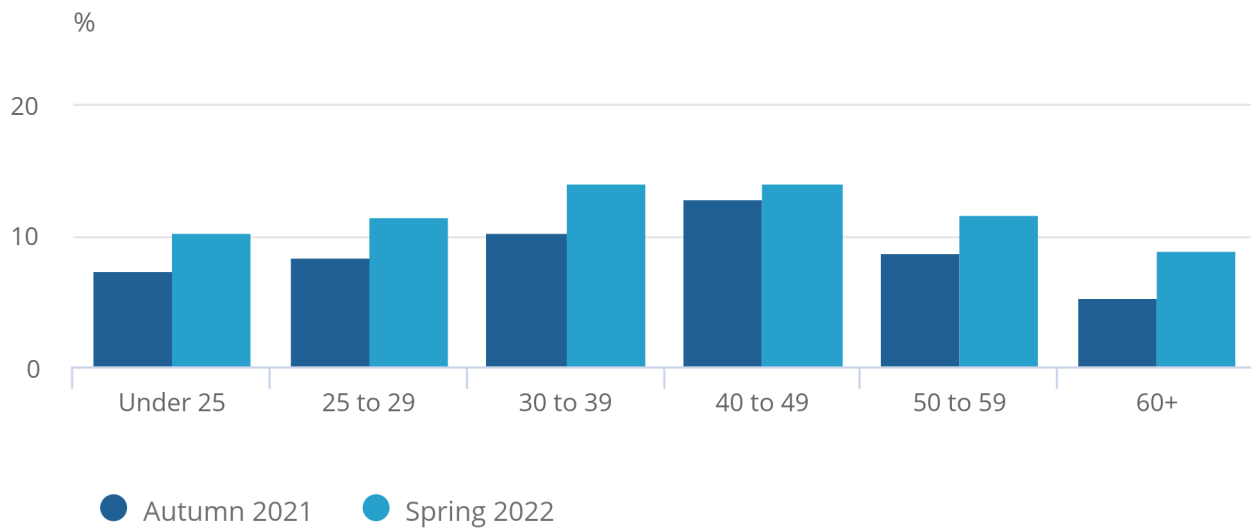
1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

Figure 4b: Staff aged 26 to 59 years had a higher proportion with a positive coronavirus (COVID-19) tests compared with other age groups

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by age band and school type, England, up to April 2022

Figure 4b: Staff aged 26 to 59 years had a higher proportion with a positive coronavirus (COVID-19) tests compared with other age groups

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by age band and school type, England, up to April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

6 . Coronavirus (COVID-19) cases by school deprivation

There was little variation in the percentage with a positive coronavirus (COVID-19) test between staff working in schools with higher proportions of pupils eligible for free school meals (FSM) and those working in schools with lower proportions of pupils eligible for FSM. See [Section 15: Glossary for further information](#).

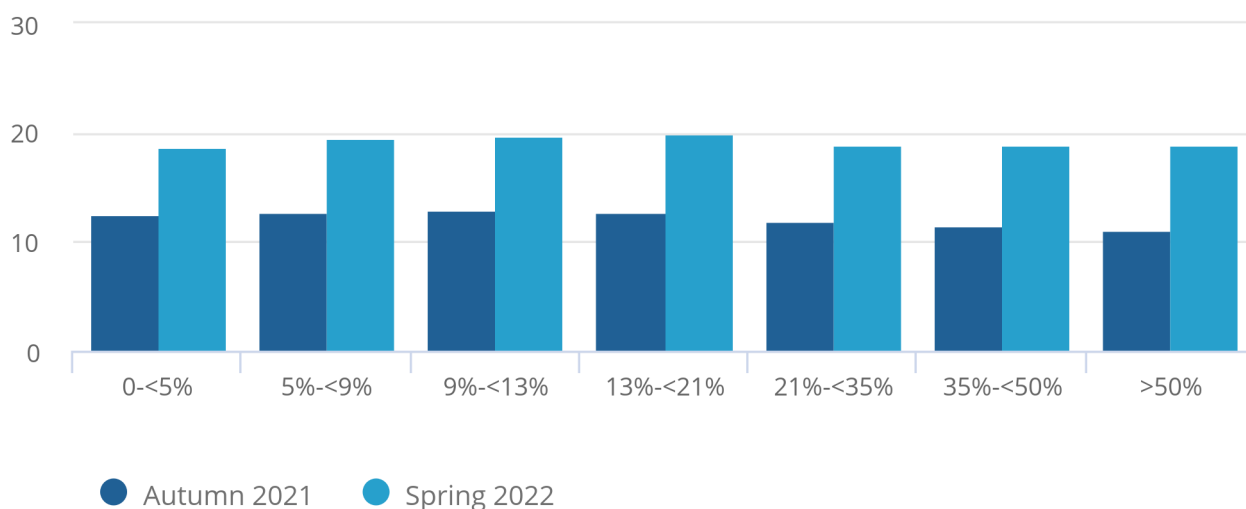
This contrasts with the data for pupils seen in [Coronavirus \(COVID-19\) cases in school pupils, England: up to 6 April 2022](#). Schools with a lower proportion of pupils eligible for free schools meals (FSM) had a higher proportion of pupils with a positive test in both the autumn 2021 and spring 2022 terms.

Figure 5a: There was little variation in the percentage of staff with a positive coronavirus (COVID-19) test across schools with different proportions of pupils eligible for free school meals (FSM)

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by the percentage of pupils eligible for FSM and school type, England, up to 6 April 2022

Figure 5a: There was little variation in the percentage of staff with a positive coronavirus (COVID-19) test across schools with different proportions of pupils eligible for free school meals (FSM)

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test, by the percentage of pupils eligible for FSM and school type, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

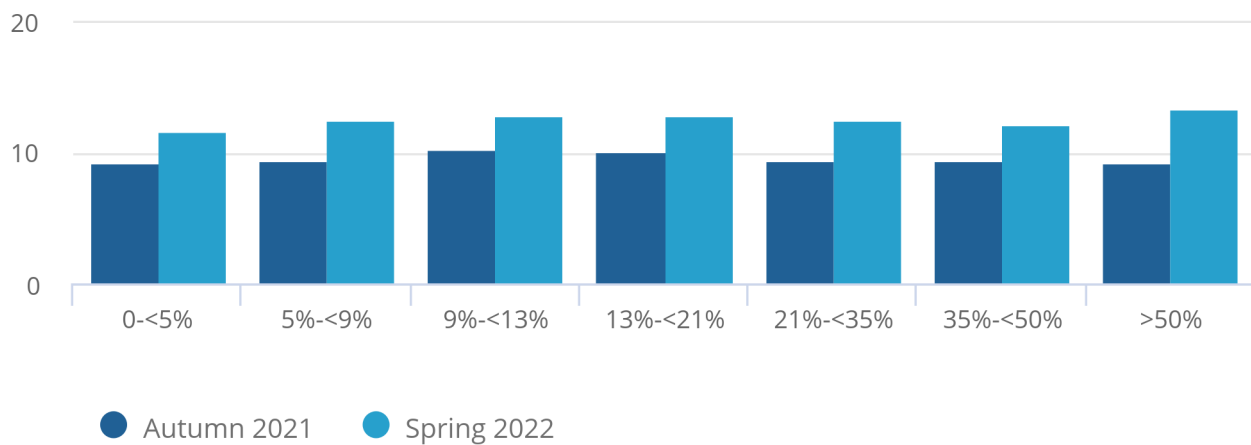
1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

Figure 5b: There was little variation in the percentage of staff with a positive coronavirus (COVID-19) test across schools with different proportions of pupils eligible for free school meals (FSM)

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by the percentage of pupils eligible for FSM and school type, England, up to 6 April 2022

Figure 5b: There was little variation in the percentage of staff with a positive coronavirus (COVID-19) test across schools with different proportions of pupils eligible for free school meals (FSM)

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test, by the percentage of pupils eligible for FSM and school type, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

7 . Coronavirus (COVID-19) cases by region

Spring 2022 saw a larger regional variation in the proportion of staff with a positive coronavirus (COVID-19) test than autumn 2021 (Figure 6).

This was lowest in London (15.2% of primary school staff and 10.8% of secondary school staff) and highest in the South West (23.0% of primary school staff and 15.1% of secondary school staff).

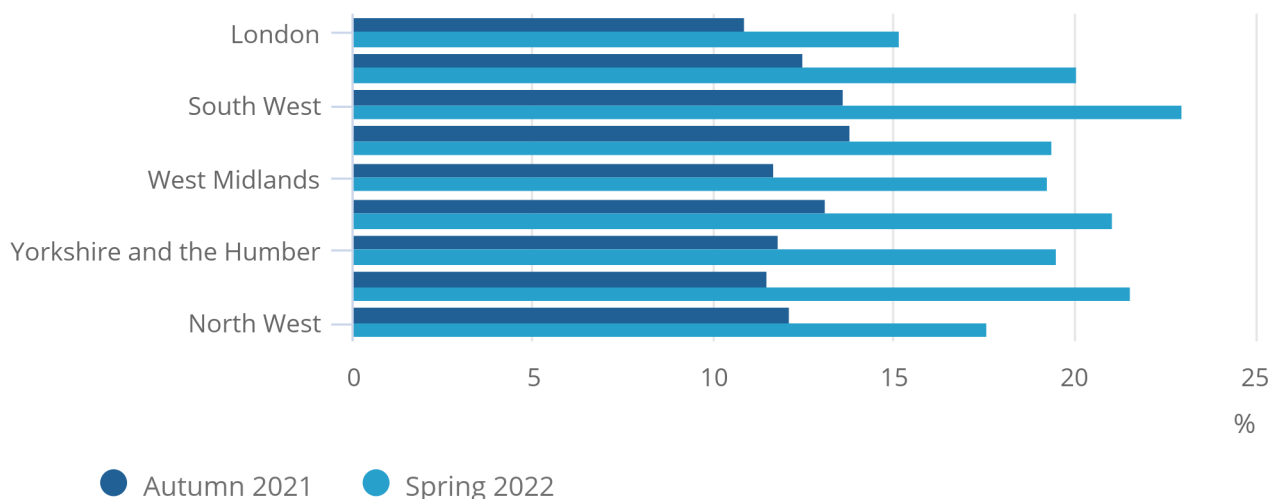
This is similar to regional trends seen among school pupils, who were less likely to have a positive test in London across both terms, and most likely in the South West in spring 2022.

Figure 6a: In spring 2022, for both primary and secondary schools, the South West of England had the highest percentage of staff with a positive coronavirus (COVID-19) test, while London had the lowest percentage

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test by region and term, England, up to 6 April 2022

Figure 6a: In spring 2022, for both primary and secondary schools, the South West of England had the highest percentage of staff with a positive coronavirus (COVID-19) test, while London had the lowest percentage

Proportion of school workforce in state-funded primary schools with a positive COVID-19 test by region and term, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

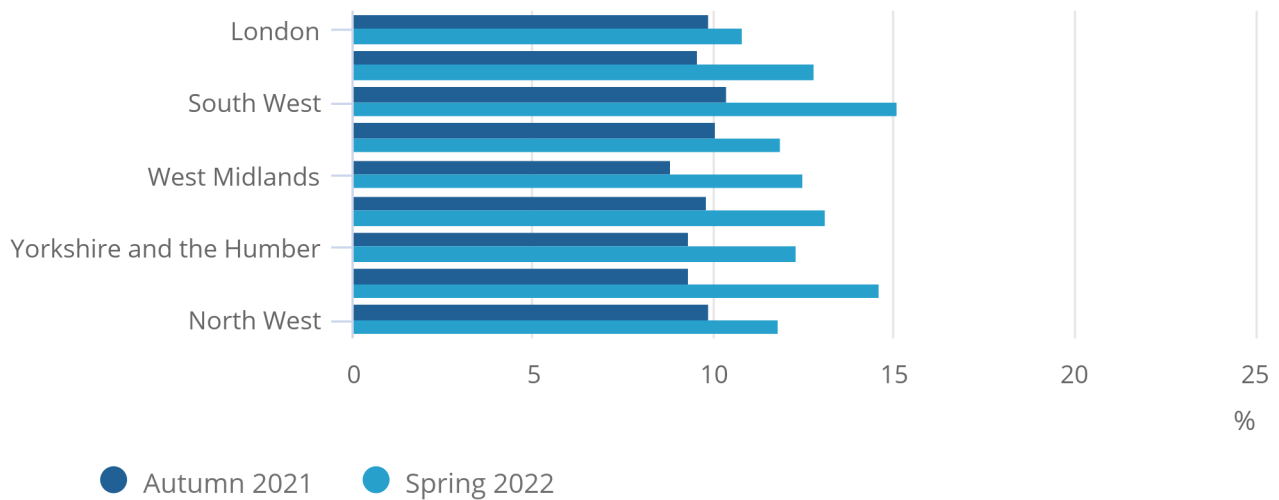
1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

Figure 6b: In spring 2022, for both primary and secondary schools, the South West of England had the highest percentage of staff with a positive coronavirus (COVID-19) test, while London had the lowest percentage

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test by region and term, England, up to 6 April 2022

Figure 6b: In spring 2022, for both primary and secondary schools, the South West of England had the highest percentage of staff with a positive coronavirus (COVID-19) test, while London had the lowest percentage

Proportion of school workforce in state-funded secondary schools with a positive COVID-19 test by region and term, England, up to 6 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

8 . Number of coronavirus (COVID-19) cases per individual

At the end of the Delta-dominant period (20 December 2021) a very low proportion of staff had more than one positive coronavirus (COVID-19) test relating to a new infection episode (0.5% of primary school staff and 0.4% of secondary school staff). By the end of March 2022 (when Omicron was still dominant) 4.1% of primary staff and 2.5% of secondary staff had more than one positive test. These percentages are much lower than those seen in secondary-aged pupils where 26.0% had reported more than one positive test relating to a new infection episode by the end of March 2022.

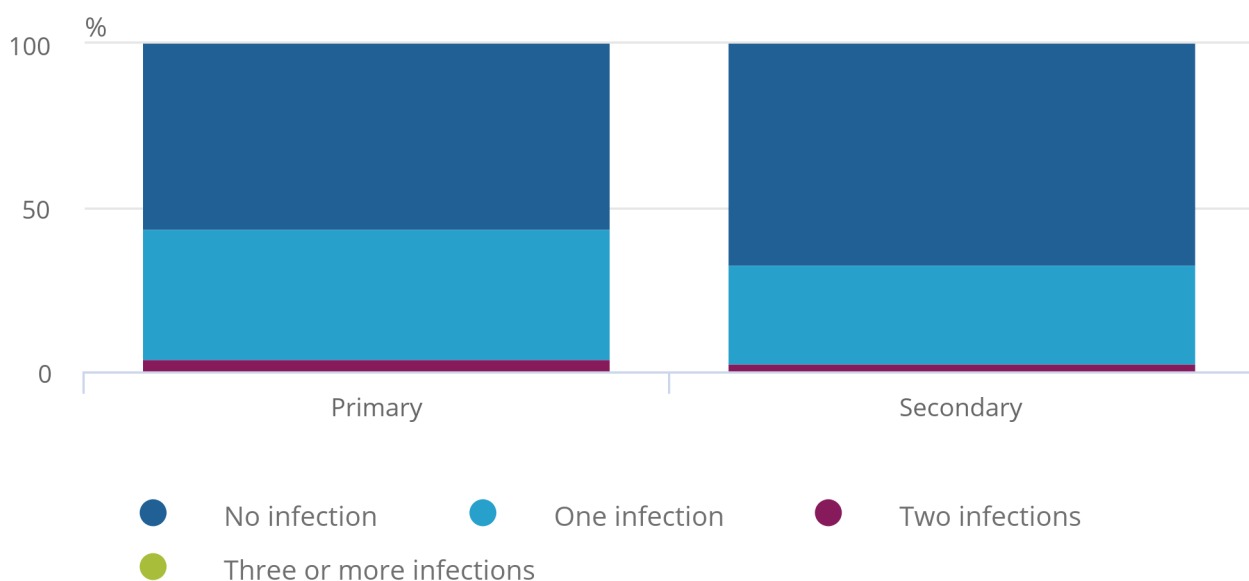
More information on how a positive test relating to a new infection episode has been classified can be found in [Section 15: Glossary](#). These data will underestimate the number of infections because of asymptomatic or mild infections being missed and less widespread testing in earlier (original- or Alpha-dominant) periods.

Figure 7: A small proportion of school staff had more than one positive coronavirus (COVID-19) test by 31 March 2022

Proportion of school workforce in state-funded schools by number of positive COVID-19 tests, by school type, England, up to 31 March 2022

Figure 7: A small proportion of school staff had more than one positive coronavirus (COVID-19) test by 31 March 2022

Proportion of school workforce in state-funded schools by number of positive COVID-19 tests, by school type, England, up to 31 March 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and Test and Trace dataset (NHS)

Notes:

1. NHS Test and Trace data cannot be used to estimate the true proportion of the school workforce that have had a COVID-19 infection. See [Section 16: Data sources and quality](#) for more details.

9 . Coronavirus (COVID-19) vaccination rate by staff role

The proportion of staff having received at least two doses of a coronavirus (COVID-19) vaccination by 20 April 2022 was high across all staff types. The uptake was highest among deputy head teachers and head teachers for both primary (98.4%) and secondary (98.6%) schools. Deputy head teachers and head teachers also had the highest percentage of third dose uptake for both primary (93.6%) and secondary (93.7%) schools. The lowest percentage was seen in secondary school teaching assistants (76.3%) and primary school support staff (76.9%).

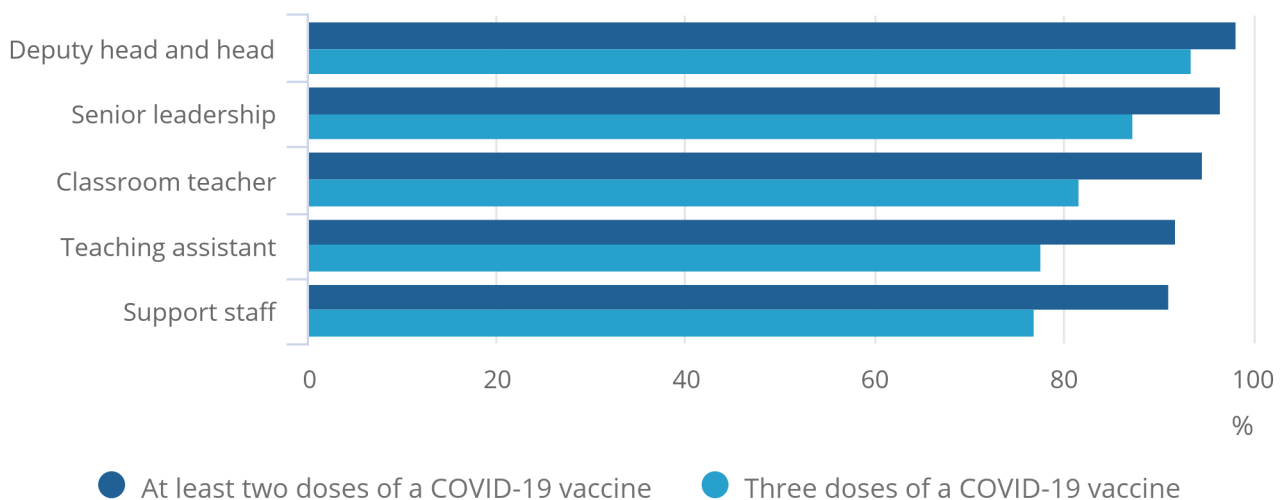
High vaccination rates among teaching staff is consistent with findings from our [Coronavirus and vaccination rates in people aged 18 to 64 years by occupation, England: 28 February 2022 bulletin](#). The bulletin showed teaching and other educational professionals to have some of the highest proportions of triple-vaccinated individuals compared with other occupational groups. The numbers presented in this article differ because of a difference in the time period covered as well as the data sources used to classify occupation.

Figure 8a: In primary schools, deputy head and head teachers displayed the highest third-dose coronavirus (COVID-19) vaccine uptake

Proportion of primary school workforce in state-funded schools who have received two or more COVID-19 vaccine doses and three vaccine doses by staff type, England, up to 20 April 2022

Figure 8a: In primary schools, deputy head and head teachers displayed the highest third-dose coronavirus (COVID-19) vaccine uptake

Proportion of primary school workforce in state-funded schools who have received two or more COVID-19 vaccine doses and three vaccine doses by staff type, England, up to 20 April 2022



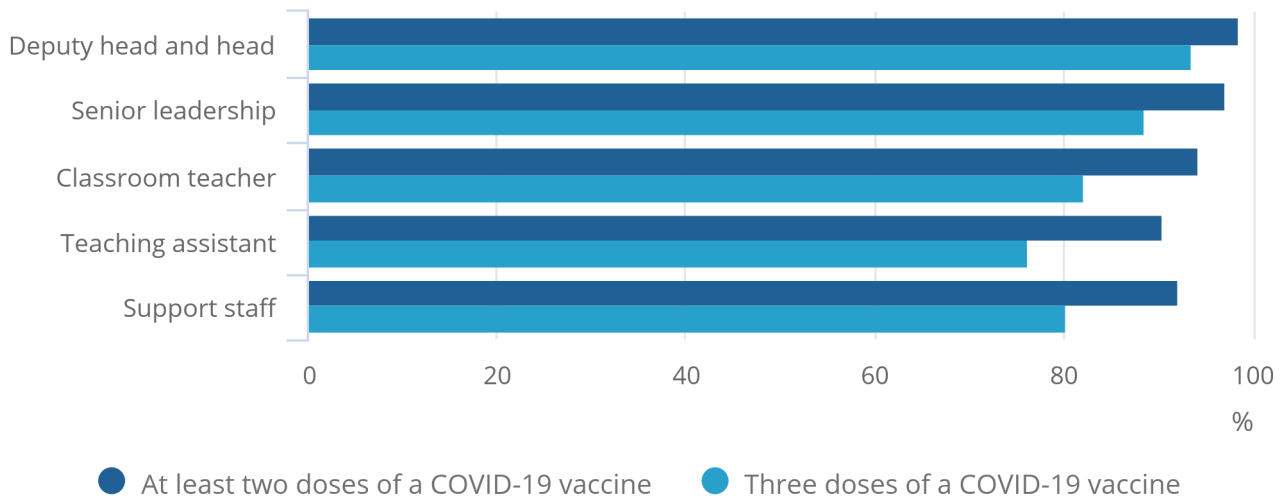
Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

Figure 8b: In secondary schools, deputy head and head teachers displayed the highest third-dose coronavirus (COVID-19) vaccine uptake

Proportion of secondary school workforce in state-funded schools who have received two or more COVID-19 vaccine doses and three vaccine doses by staff type, England, up to 20 April 2022

Figure 8b: In secondary schools, deputy head and head teachers displayed the highest third-dose coronavirus (COVID-19) vaccine uptake

Proportion of secondary school workforce in state-funded schools who have received two or more COVID-19 vaccine doses and three vaccine doses by staff type, England, up to 20 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

10 . Coronavirus (COVID-19) vaccination rate by staff characteristics

Vaccination rate by school type and ethnicity

There were large variations in coronavirus (COVID-19) vaccine uptake by ethnicity, with a 50.7 percentage point difference from the ethnic group with the highest third-dose uptake to that with the lowest uptake (Figure 9).

In primary schools, Black Caribbean staff had the lowest percentage of staff with at least two vaccines (54.7%). The lowest third-dose uptakes were observed among Black Caribbean (32.6%), Black African (39.4%), and Pakistani (41.5%) staff. The highest uptakes were seen among White British (83.3%), Chinese (83.1%), and Indian (72.4%) staff.

In secondary schools, the lowest percentage of staff having received a third dose of the vaccine were seen among the Black Caribbean (36.5%), Bangladeshi (39.5%), and Pakistani (42.2%) ethnic groups. The highest proportions were seen among White British (85.9%), Chinese (83.1%), White Other (73.6%), and Indian (73%) staff.

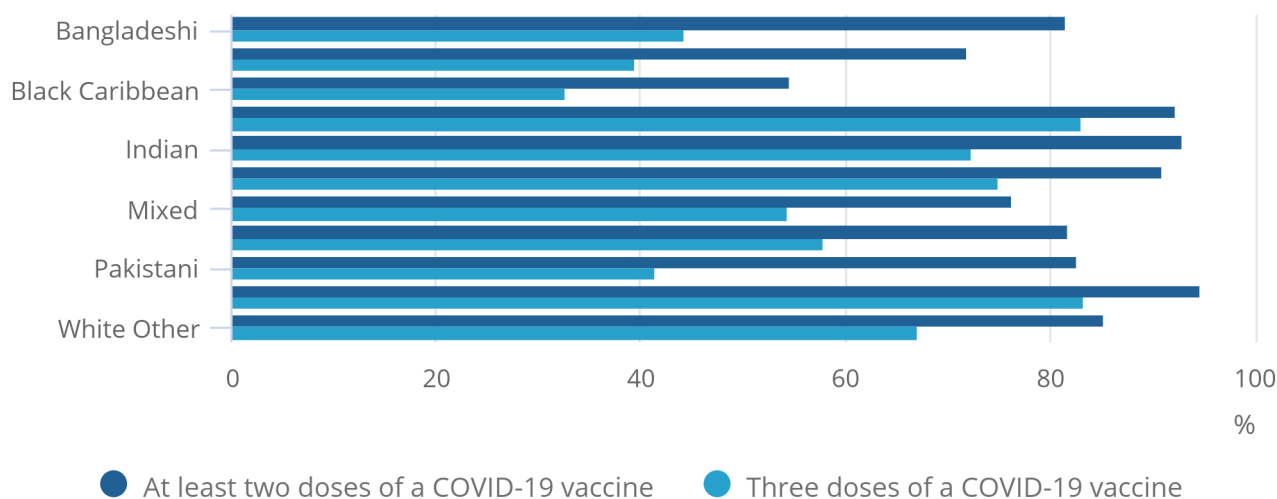
These trends largely reflect the patterns seen among school pupils in findings from our [Coronavirus \(COVID-19\) vaccination uptake in school pupils, England: up to 9 January 2022 bulletin](#). They also reflect patterns seen in third-dose uptake by ethnicity in the wider adult population as seen in [Coronavirus and vaccination rates in people aged 18 years and over by socio-demographic characteristic and region, England](#).

Figure 9a: In primary schools, third-dose coronavirus (COVID-19) vaccine uptake rates were highest among White British, Chinese, and Indian staff

Proportion of primary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine, and three vaccine doses by ethnicity, England, up to 20 April 2022

Figure 9a: In primary schools, third-dose coronavirus (COVID-19) vaccine uptake rates were highest among White British, Chinese, and Indian staff

Proportion of primary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine, and three vaccine doses by ethnicity, England, up to 20 April 2022



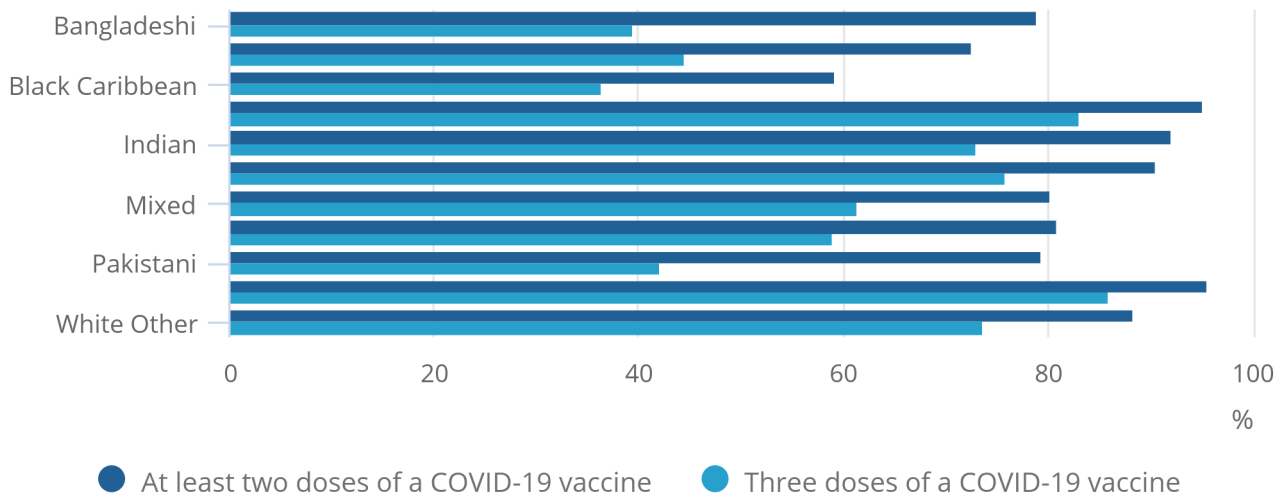
Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

Figure 9b: In secondary schools, third-dose coronavirus (COVID-19) vaccine uptake rates were highest among White British, Chinese, and Indian staff

Proportion of secondary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine, and three vaccine doses by ethnicity, England, up to 20 April 2022

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Proportion of secondary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine, and three vaccine doses by ethnicity, England, up to 20 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

COVID-19 vaccination rate by school type and age band

Across both primary and secondary schools, third-dose uptake was higher for those in older age brackets (Figure 10).

Of primary school staff aged over 60 years, 92.3% had a third vaccination. This figure was 60.2% for those aged under 25 years and 61.9% for those aged 25 to 29 years.

Similarly, among secondary schools, 92.5% of staff aged over 60 years had a third vaccination, while this figure was 61.8% for those aged under 25 years and 65.7% for those aged 25 to 29 years.

While this reflects trends among the general population as reported in the [COVID-19 dashboard](#), uptake of third doses was higher among the school workforce, particularly among younger staff.

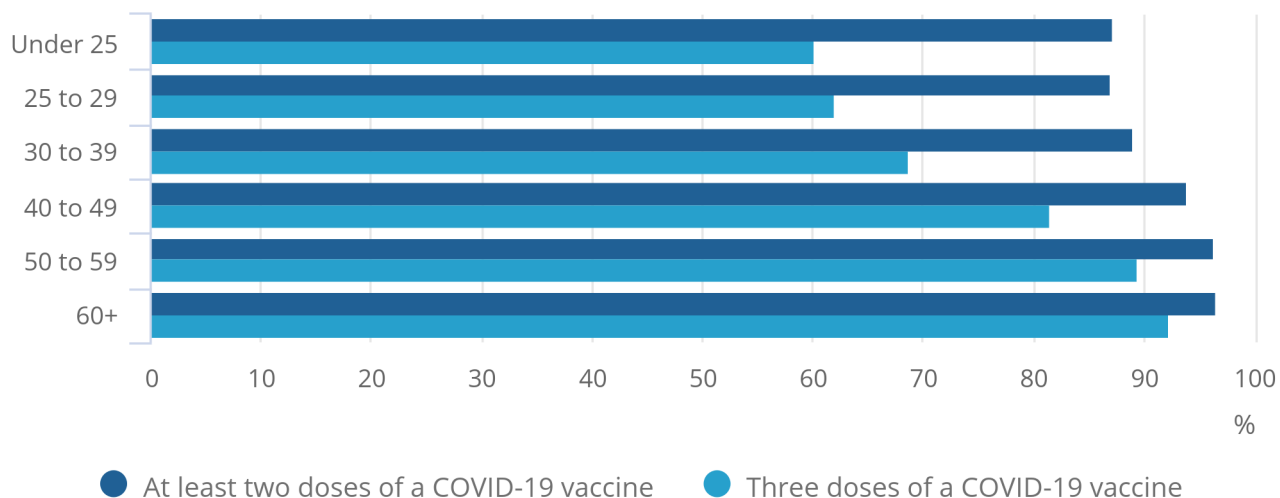
Of school staff aged 25 to 29 years, 61.9% had received a third dose compared with 37.9% of the wider population in this age group. Of school staff aged 50 to 59 years, 89.5% had received a third dose compared with 75.6% of the wider population.

Figure 10a: In primary schools, coronavirus (COVID-19) vaccine uptake was higher among older age groups across dose numbers

Proportion of primary school workforce in state-funded schools who have reported at least two or more doses of a COVID-19 vaccine and three vaccine doses, by age band, England, up to 20 April 2022

Figure 10a: In primary schools, coronavirus (COVID-19) vaccine uptake was higher among older age groups across dose numbers

Proportion of primary school workforce in state-funded schools who have reported at least two or more doses of a COVID-19 vaccine and three vaccine doses, by age band, England, up to 20 April 2022



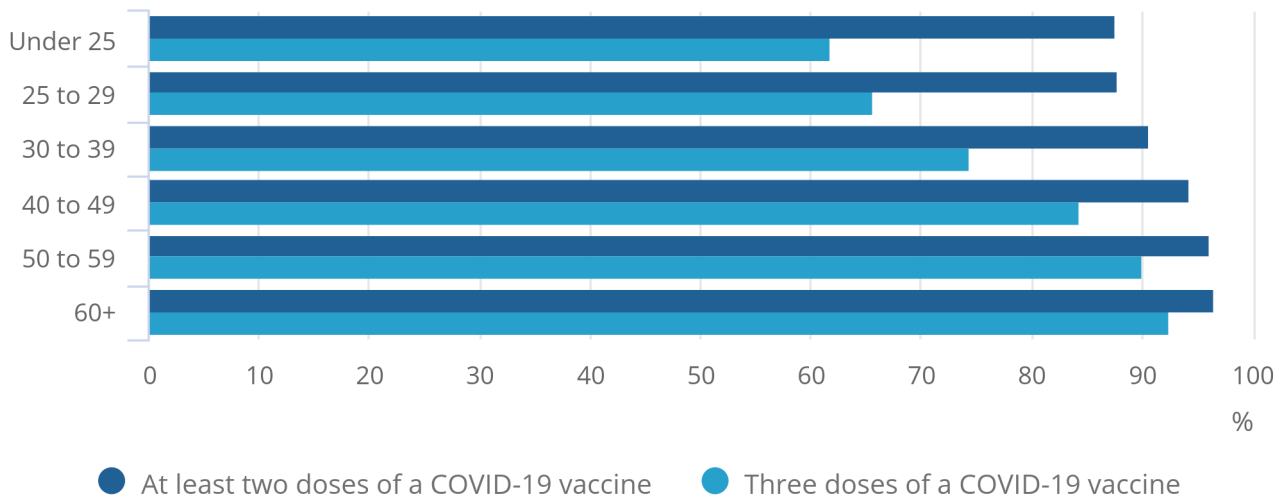
Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

Figure 10b: In secondary schools, coronavirus (COVID-19) vaccine uptake was higher among older age groups across dose numbers

Proportion of secondary school workforce in state-funded schools who have reported at least two or more doses of a COVID-19 vaccine and three vaccine doses, by age band, England, up to 20 April 2022

Figure 10b: In secondary schools, coronavirus (COVID-19) vaccine uptake was higher among older age groups across dose numbers

Proportion of secondary school workforce in state-funded schools who have reported at least two or more doses of a COVID-19 vaccine and three vaccine doses, by age band, England, up to 20 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

11 . Coronavirus (COVID-19) vaccination rate by school deprivation

COVID-19 vaccine uptake by the percentage of pupils eligible for free school meals (FSM) in school

There was some variation in coronavirus (COVID-19) vaccine uptake between staff working in schools with differing proportions of pupils eligible for free school meals (FSM).

In primary schools, 87.0% of staff working in schools with less than 5.0% of pupils accessing FSM had a third vaccine. This was 72.8% for staff working in schools with over 50.0% of pupils accessing FSM.

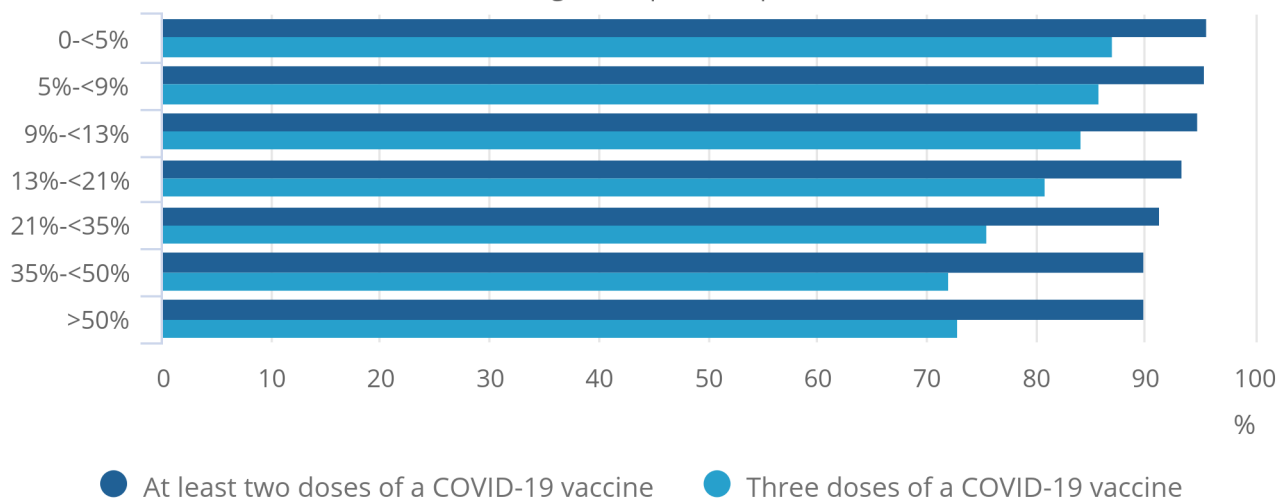
Similarly in secondary schools, 88.2% of staff working in schools with less-deprived pupils had a third vaccine, and 69.3% of those in schools with more-deprived pupils had taken a third vaccine.

Figure 11a: In primary schools, third-dose coronavirus (COVID-19) vaccine uptake was higher among staff teaching in schools with lower proportions of pupils accessing free school meals (FSM)

Proportion of primary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by the percentage of pupils eligible for FSM, England, up to 20 April 2022

Figure 11a: In primary schools, third-dose coronavirus (COVID-19) vaccine uptake was higher among staff teaching in schools with lower proportions of pupils accessing free school meals (FSM)

Proportion of primary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by the percentage of pupils eligible for FSM, England, up to 20 April 2022



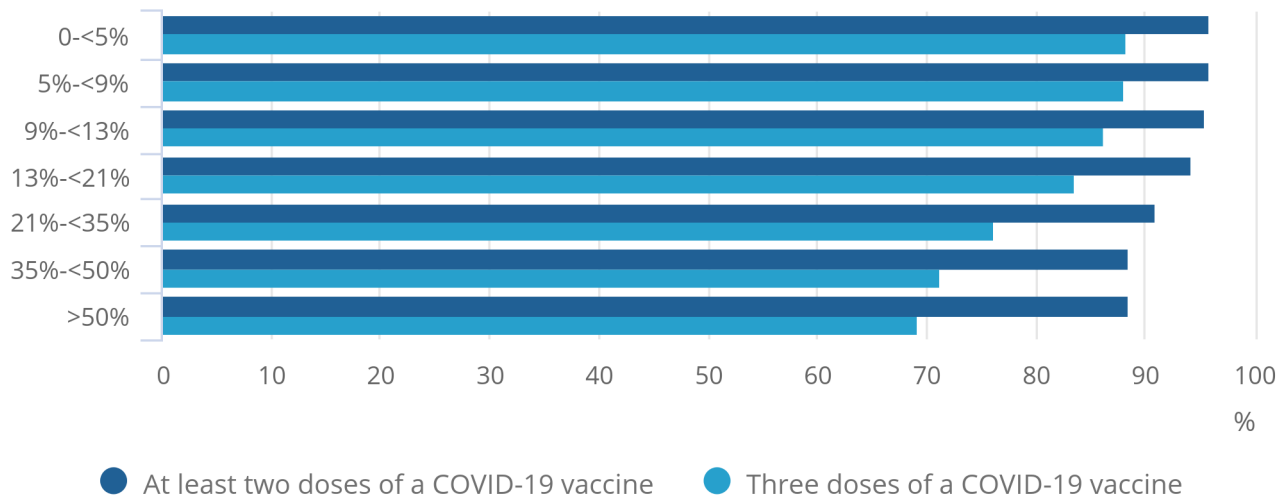
Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

Figure 11b: In secondary schools, third-dose coronavirus (COVID-19) vaccine uptake was higher among staff teaching in schools with lower proportions of pupils accessing free school meals (FSM)

Proportion of secondary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by the percentage of pupils eligible for FSM, England, up to 20 April 2022

Figure 11b: In secondary schools, third-dose coronavirus (COVID-19) vaccine uptake was higher among staff teaching in schools with lower proportions of pupils accessing free school meals (FSM)

Proportion of secondary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by the percentage of pupils eligible for FSM, England, up to 20 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

12 . Coronavirus (COVID-19) vaccination rate by region

Coronavirus (COVID-19) vaccine uptake was high in the South West, where 95.4% of primary school staff had two vaccinations and 86.2% had a third.

Secondary staff in the South West also had the highest proportion of staff with three doses (87.7%), while those in the North East had the highest proportion with two doses (96.3%).

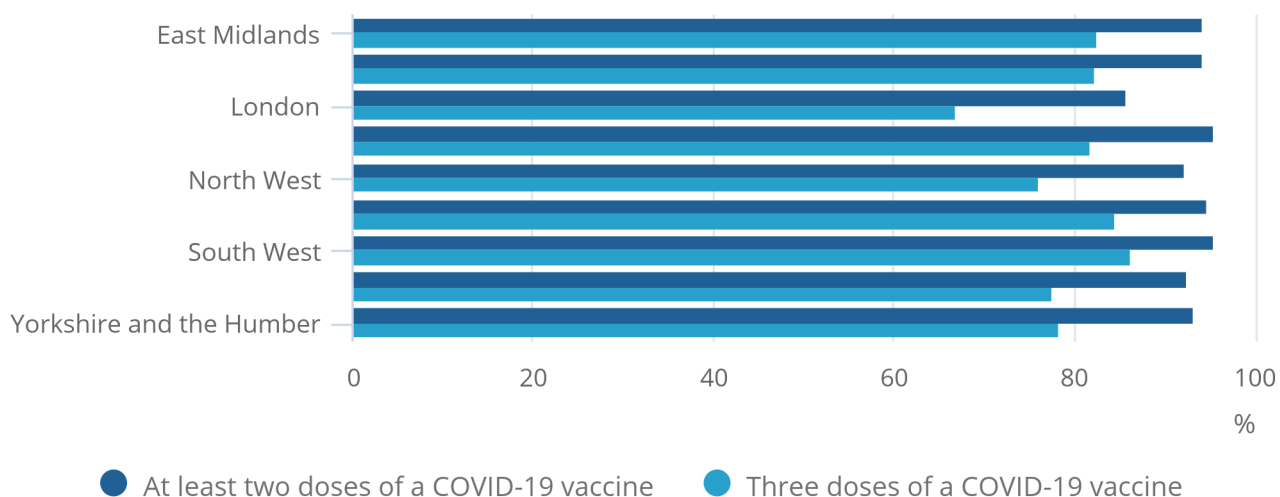
The regional trends in vaccine uptake among school staff reflect the regional trends seen in the wider population as reported in the [National Immunisation Management System \(NIMS\)](#).

Figure 12a: In primary schools, London had the lowest coronavirus (COVID-19) vaccination rates

Proportion of primary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by region, England, up to 20 April 2022

Figure 12a: In primary schools, London had the lowest coronavirus (COVID-19) vaccination rates

Proportion of primary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by region, England, up to 20 April 2022



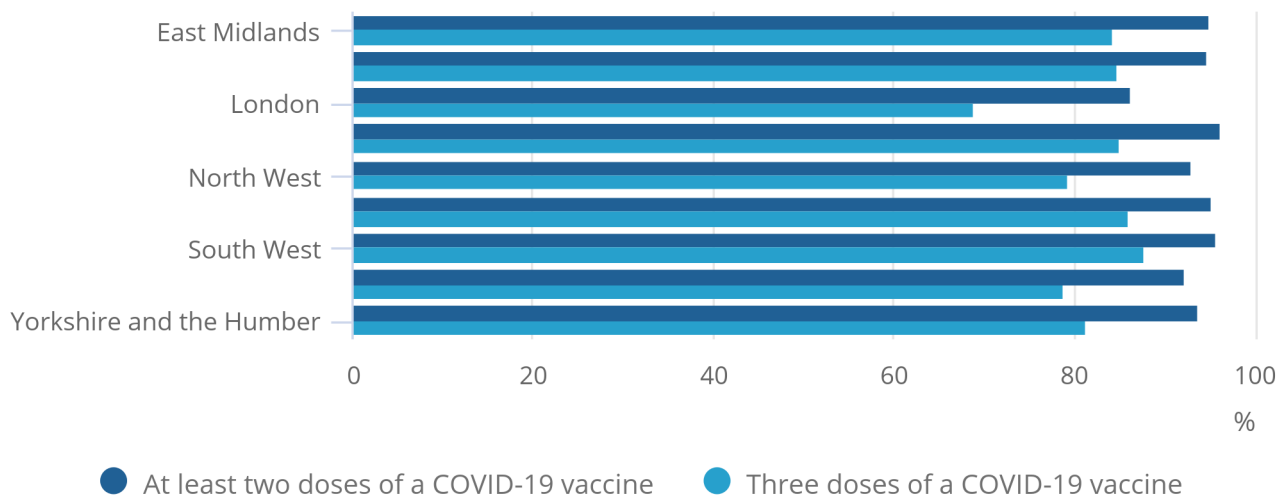
Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

Figure 12b: In secondary schools, London had the lowest coronavirus (COVID-19) vaccination rates

Proportion of secondary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by region, England, up to 20 April 2022

Figure 12b: In secondary schools, London had the lowest coronavirus (COVID-19) vaccination rates

Proportion of secondary school workforce in state-funded schools who have received two or more doses of a COVID-19 vaccine and three vaccine doses by region, England, up to 20 April 2022



Source: Office for National Statistics - Linked School Workforce Census (Department for Education) and NHS Immunisation Management Service (NIMS)

13 . Coronavirus (COVID-19) cases by vaccination status

Receiving a third dose of the coronavirus (COVID-19) vaccine between 1 and 44 days before the start of the spring 2022 term had an impact on whether or not staff had a positive test during the term, when compared with those who had two doses.

Figure 13 compares the likelihood of having a positive test by vaccine status at the start of the spring term and whether or not the staff member had previously had a positive test, to staff with two vaccine doses and no prior infection. For more information on the methodology of the model see [Section 16: Data sources and quality](#).

Figure 13: Staff who had received a third dose of a coronavirus (COVID-19) vaccine were less likely to have a positive COVID-19 test in the spring term compared with those with two doses and no prior infection

Odds ratios of school workforce testing positive for COVID-19 in the spring 2022 term by prior infection and vaccine status, England, up to 6 April 2022

Notes:

1. All odds are compared with staff who had no prior COVID-19 infection and two doses of the COVID-19 vaccine at the start of the spring term.

Download the data

[.xlsx](#)

Compared with the baseline category (staff who had two doses and no prior infection reported) the likelihood of having a positive test in the spring term 2022 was lowest for those with a third dose and a prior infection (68.6% lower, 95% confidence interval (CI): 66.2% to 70.9% lower).

Prior infection in those with only two vaccine doses was associated with a greater reduction in the odds of reporting a positive infection during the spring 2022 term (53% lower odds) than the third vaccine dose alone (with no prior infection (7% lower odds)). However, there was evidence that a third vaccine dose was beneficial for both those with and without prior infection.

This analysis does not control for any differences in testing behaviour and does not provide an indication of the impact of vaccination on severity of disease.

14 . Coronavirus (COVID-19) cases and vaccination uptake among the school workforce, England data

[Coronavirus \(COVID-19\) cases and vaccination uptake among the school workforce, England](#)

Dataset | Released 8 July 2022

Figures on coronavirus (COVID-19) cases and vaccination uptake among the school workforce in state-funded primary, secondary, and special schools in England broken down by demographic and geographic characteristics. Using a linked School Workforce Census, NHS Test and Trace and National Immunisation Management System dataset (experimental statistics).

15 . Glossary

Confidence interval

A confidence interval gives an indication of the degree of uncertainty of an estimate, showing the precision of a sample estimate. The 95% confidence intervals are calculated so that if we repeated the study many times, 95% of the time the true unknown value would lie between the lower and upper confidence limits. A wider interval indicates more uncertainty in the estimate. Overlapping confidence intervals indicate that there may not be a true difference between two estimates.

For more information, see our methodology page on [statistical uncertainty](#).

Free school meals (FSM)

[Free school meals \(FSM\)](#) are a statutory benefit available to school-aged children from families who meet the qualifying criteria (predominantly based around income). This is published by the Department for Education.

Odds ratio

An odds ratio indicates the likelihood of staff having a positive test for coronavirus (COVID-19) given a particular characteristic or variable, compared with a baseline category. When a characteristic or variable has an odds ratio of one, this means there is neither an increase nor a decrease in the odds of having tested positive for COVID-19 compared with the baseline category. An odds ratio greater than one indicates an increased likelihood of having a positive test for COVID-19 compared with the baseline category. An odds ratio less than one indicates a decreased likelihood of having reported a positive test for COVID-19 compared with the baseline category.

Staff type

The staff workforce covers a large range of roles which have been categorized into three staff types; teaching staff, teaching assistants and support staff. Teaching staff encompasses classroom teachers, leading practitioners, advisory teachers, head teachers, as well as deputy and assistant head teachers. Support staff covers a wide range of roles, including administrative, catering, caretaking, nursing, and technician positions.

Positive test

The outcome measure includes positive polymerase chain reaction (PCR) test results recorded by the testing labs or lateral flow device (LFD) test results reported by individuals on the NHS Test and Trace system. Several positive tests can be recorded for each individual. Up until 20 December 2021, we consider positives more than 120 days after the first positive of that infection episode to be new infections in order to be consistent with our existing [publications on COVID-19](#). From 20 December 2021 onwards, positives more than 90 days after the first positive of that infection episode are considered a new infection.

Variants of COVID-19

In the time periods analysed in this article there have been different dominant variants of SARS-CoV-2, the virus causing COVID-19, at each point in time. In the autumn 2020 term, the original strain of COVID-19 was dominant, with Alpha emerging towards the end of the term and becoming dominant on 21 December 2020. In the Autumn 2021 term, Delta was the dominant variant. Omicron infections were identified towards the end of this term but were not considered dominant until 20 December 2021. Omicron was the dominant variant in the spring 2022 term.

16 . Data sources and quality

Measuring the data

Data from the School Workforce Census (SWC), NHS Test and Trace (pillars 1 and 2), and the National Immunisation Management Dataset (NIMS) were linked to produce the analysis used in this article.

The SWC is a mandatory annual return to the Department for Education and collects individual level data for all types of staff in state-funded schools in England with a contract of 28 days or longer. The Department for Education releases [SWC data](#).

Staff in the SWC are linked to their NHS number which allows onward linking to their coronavirus (COVID-19) test results and vaccination records.

The SWC does not contain the home postcode for school staff (which is a commonly used data item in data linkage). To reduce the risk of linking staff in the SWC to the incorrect NHS number, the postcode of the school was used in the process to restrict matches to those living within a reasonable commuting distance to the school.

The match rate for SWC staff to their NHS number was 86% for primary school staff and 75% for secondary school staff, which is lower than that seen when [matching pupils with the English Schools Census](#) (98%). In part, the lower match can be attributed to the lack of geography information available and strict guidelines intended to ensure accurate matches. Analysis of the unmatched population by key characteristics such as gender and ethnicity revealed no obvious systematic bias between the matched and unmatched population (see [accompanying dataset](#)).

School staff may have multiple roles either within the same school or work across different schools. In the figures presented in this bulletin, each individual is only counted once and the record relating to the highest full time equivalent (FTE) has been used.

NHS Test and Trace recorded all COVID-19 testing that took place in England. The outcome measure includes individuals receiving a positive polymerase chain reaction (PCR) or lateral flow device (LFD) test result reported in the NHS Test and Trace data.

From the spring 2020 to 2021 term onwards school staff were advised to take two LFD tests twice a week. Variation in the uptake and/or reporting of LFD testing could also affect the trends reported here. From 11 January 2022, the need for a confirmatory PCR test following a positive LFD test result was dropped placing greater reliance on the individual to record the result on the NHS Test and Trace system.

From 21 February 2022 onwards, the guidance to test twice a week was dropped. From 24 February 2022, close contacts were no longer required to test daily for seven days and from 31 March 2022, access to free COVID-19 testing ended for the majority of the population in England. These changes will further affect the identification of new infections in the second half of the spring 2022 term. The large increase in cases reported in the Coronavirus (COVID-19) Infection Survey from mid-March 2022 is not seen in NHS Test and Trace data. See [Coronavirus \(COVID-19\) latest insights: Comparisons](#) for more information.

This is analysis of newly collected data, and our understanding of it and its quality will improve over time. The estimates presented in this article are experimental statistics as the NHS Test and Trace data are subject to further quality assurance tests.

NIMS records England's COVID-19 vaccinations programme.

Logistic regression model

To control for any differences in the characteristics of those who received a third dose compared with those who only received two, a logistic regression model was fitted.

Staff who received their third COVID-19 vaccine dose more than 44 days before the start of the spring term 2022, or during the spring term, were excluded from the model. This meant our vaccine statuses contained staff members who had received their third dose close to the start of the term and whose vaccine status did not change in the period of interest. Those with no or one vaccine dose were also excluded.

Those who had a positive COVID-19 test less than 90 days before the start of the spring term 2022 were also excluded from the analysis, leaving in the analysis only vaccinated (two and three doses) staff who were "at risk" of a new infection for the full duration of the spring term. Full details of all the variables included in the model can be found in Table 24 in the [accompanying dataset](#).

Strengths

One strength of the dataset is its size. The SWC contains data for all staff in state-funded schools in England. Over 900,000 staff were matched and retained in the linked dataset. This allows for potential analysis of school staff in under-represented groups.

The data contain a rich source of background characteristics. These allow us to analyse how proportions of staff reporting positive COVID-19 tests differ by demographic group and examine the extent to which these differences are driven by other factors.

Making use of already existing administrative data sources avoids the need of setting up bespoke surveys which can be costly and suffer from response bias.

Limitations

Using NHS Test and Trace data to monitor trends in COVID-19 infection relies on infections being diagnosed, which is influenced by:

- testing guidance
- whether people have symptoms
- awareness they may have been a contact of someone infected
- a willingness to test

Changes to the availability of tests and isolation rules over time may also influence the willingness to test and the impact of these rules and any changes could vary between different socio-demographic groups. This means the NHS Test and Trace data cannot be used to provide an estimate of the true positivity rates within the population.

We are not able to confirm whether positive tests that we have classified as reinfections are actual new infections or a continuation of a previous infection as this would require genetic sequencing. Conversely, by only counting positive tests occurring 90 days after the first positive in the previous infection episode we may be missing genuine new infections that occurred in a shorter space of time.

The latest data available for analysis relate to the census carried out on 3 November 2020. Therefore, analysis for the autumn 2021 and spring 2022 terms relates to staff employed in the previous academic year, some of which will no longer be employed in schools. Those joining the school workforce after this date will also be excluded from the analysis.

The SWC does not collect geographic or demographic data in as much detail as the pupil equivalent (the English School Census), this has mainly affected analysis by deprivation. As we do not have any information on where school staff live, we are only able to look at deprivation in relation to the school where they teach.

17 . Future developments

We will continue to examine the analytical potential of the linked data asset and expand on our existing analysis.

18 . Acknowledgments

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UK Health
Security
Agency

This analysis was produced by the Office for National Statistics (ONS) with support from our School Infection Survey research partners at the London School of Hygiene and Tropical Medicine and UK Health Security Agency.

19 . Related links

[Coronavirus \(COVID-19\) vaccination uptake in school pupils, England: up to 9 January 2022](#)

Bulletin | Released 1 February 2022

Coronavirus (COVID-19) vaccination uptake in school pupils aged 12 to 17 years attending state-funded schools. Including detailed analysis by demographic and geographic characteristics for those aged 12 to 15 years.

[Coronavirus \(COVID-19\) Infection Survey, UK: 1 July 2022](#)

Bulletin | Released 1 July 2022

Percentage of people testing positive for coronavirus (COVID-19) in private residential households in England, Wales, Northern Ireland and Scotland, including regional and age breakdowns.

[Coronavirus \(COVID-19\) case rates by socio-demographic characteristics, England: 1 September 2020 to 10 December 2021](#)

Bulletin | Released 14 February 2022

Analysis of age-standardised case rates for coronavirus (COVID-19) in England by socio-demographic characteristics between 1 September 2020 and 10 December 2021.

[Coronavirus \(COVID-19\) latest insights](#)

Interactive tool | Updated as and when data become available

A live roundup of the latest data and trends about the coronavirus (COVID-19) pandemic from the ONS and other sources.