



COVID-related teacher and pupil absences in England over 2020 autumn term

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January 2021

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Summary

This short report uses newly published data to compare school staff and pupil absences due to coronavirus during the 2020 autumn term in England.

Key findings include:

- About 0.5-0.9 per cent of primary school teachers were absent due to a confirmed case of coronavirus during the autumn term. This is over 6 times higher than the share of primary school pupils absent due to a confirmed case (0.05 to 0.15 per cent).
- About 0.6-1.0 per cent of secondary school teachers were absent due to a confirmed case over the autumn term, which is about 2-3 times higher than for secondary school pupils (0.2-0.3 per cent).
- Higher pupil absences due to confirmed cases in secondary schools are in line with higher case numbers and infections in older children.
- The share of teachers with a confirmed case is almost certainly higher as compared with the wider population. By exactly how much is unclear. Ideally, the ONS infection survey should publish updated estimates of the relative risk of infection by occupation (currently only available up to mid-October 2020). Such data would inform debate on the relative merits of prioritising different occupations for vaccinations.
- Looking across local authorities, there is much more variation in the share of teachers absent due to a confirmed case than in the share of pupils absent due to a confirmed.
- The average share of secondary school teachers absent due to a confirmed case over the autumn term ranged from close to zero in the Isle of Wight and Herefordshire up to 2 per cent in Hartlepool, Thurrock, Calderdale, Blackburn and Salford, and up to 3 per cent in Bury. The range for secondary pupils is much narrower, generally from 0 to 0.5 per cent.
- In local authorities with higher confirmed cases among pupils, the rate of confirmed cases is much higher among teachers. This could be because of increased infections in school or because teachers are more susceptible to rising infections in the wider community.
- Despite higher number of confirmed cases amongst teachers, it is pupils who are more likely to be absent for all reasons related to coronavirus (a confirmed case, suspected case or close contact with a confirmed case).
- In primary schools, the share of pupils absent for all COVID-related reasons ranged from 4-5 per cent to 8-9 per cent over the autumn term, which compares with a steady level of 4-5 per cent of primary school teachers over the term.
- In secondary schools, total pupil absences due to coronavirus ranged from 4-5 per cent in October to 11-13 per cent by the end of term. This compares with a mostly steady 4-5 per cent of secondary school teachers.
- This difference arises because pupils are more likely than teachers to need to self-isolate because they were a close contact of a confirmed case. Indeed, a need to self-isolate accounts for the vast majority of pupil coronavirus-related absences.
- More data is needed on how many close contacts teachers and pupils form inside school, and the extent to which a higher need to self-isolate for pupils is driven by contacts outside of school.
- There is also a need to understand the extent to which pupils need to self-isolate because of confirmed cases amongst teachers compared with confirmed cases amongst other pupils.

Introduction

Earlier this week, the Department for Education (DfE) published new data on teacher absences over the 2020 autumn term, including the extent to which absences were related to coronavirus. This complements existing data on reasons for pupil absence. In this short briefing, we outline comparative levels and trends in COVID-related absences amongst pupils and school staff. In many ways, these trends and comparisons raise more questions than answers, many of which relate to highly topical issues, such as how and when schools should re-open to more pupils, and the extent to which school staff should be prioritized for vaccinations. We therefore conclude with a list of key data and policy questions raised by this analysis.

All figures relate to the period from the week commencing October 12th to the last week of term in the week commencing December 14th. The figures relate to the Thursday of each week, and Wednesday in the last week of term. This matches the approach used in official figures, though the overall patterns are very similar for December 17th. Figures are only shown when response rates were greater than 50 per cent of schools. Absences due to confirmed cases include pupils and school staff testing positive for coronavirus, with total COVID-related absences including those with suspected cases (i.e. displaying symptoms, but not yet testing positive), and individuals self-isolating due to close contact with a confirmed case (in or outside of school). For pupils, the DfE produces an upper and lower estimate for the proportion of pupils self-isolating nationally, and in a local authority, each day and week, but produces a single estimate for teachers (i.e. no upper and lower bound).

Trends in COVID-related absences in primary schools

Figure 1(a) shows the share of primary school pupils with confirmed cases of coronavirus, as well as the estimated total share of pupils absent for COVID-related reasons, with the latter including pupils with suspected cases and self-isolating due to close contact. The equivalent figures for primary school teachers are shown in Figure 1(b). In all cases, the dashed lines indicate the 10th and 90th percentiles across local authorities.

As can be seen, the share of primary school pupils with a confirmed case of coronavirus was extremely low throughout the period this data was collected, varying from 0.05 per cent of primary school pupils in mid-October to a high of 0.15 per cent in late November. There was some variation across local authorities, but not much. In 10 per cent of local authorities, the share of primary school pupils with confirmed cases was close to or actually zero. In 10 per cent of local authorities, it was above 0.2 per cent, but never rose above 0.6 per cent of primary school pupils.

In sharp contrast, the share of primary school teachers with a confirmed case was much higher, ranging from 0.5 per cent of teachers in mid-October to 0.9 per cent of teachers in late November. There was also significant variation across local authorities. In one in ten local authorities, the share of primary school teachers absent due to a confirmed case was lower than 0.2 per cent, but above 2 per cent of teachers in the one in ten local authorities with the highest confirmed cases. In some isolated cases this rose above 3 per cent of teachers, such as Bury in November, and Havering, and Barking and Dagenham in December.

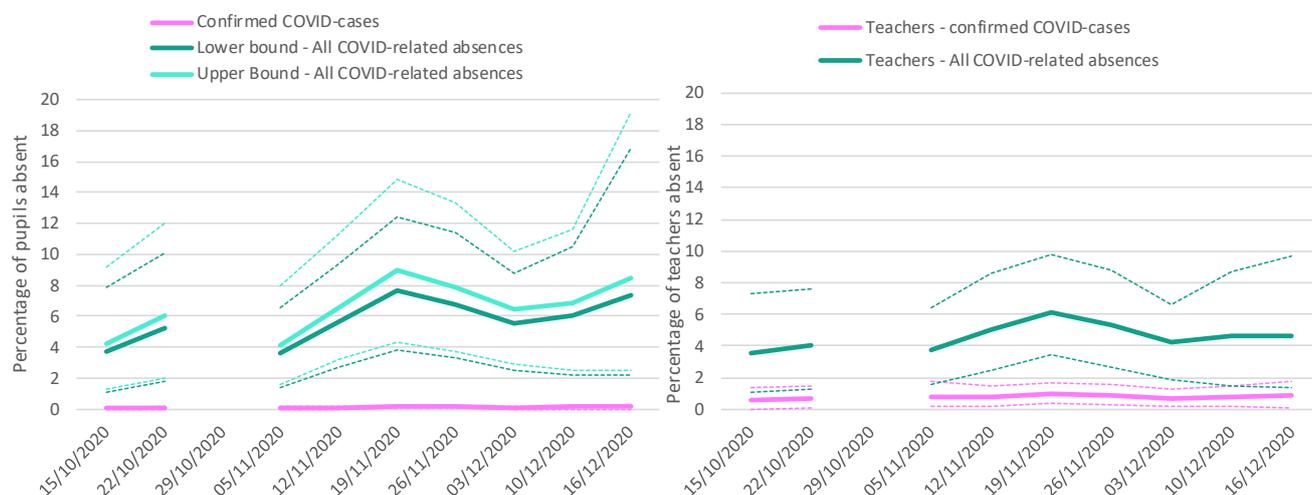
The difference in case numbers between teachers fits with testing data showing that there are higher numbers of confirmed cases amongst adults than in primary school age children, and lower infection rates amongst children (including both symptomatic and asymptomatic cases).¹

¹ <https://coronavirus.data.gov.uk/>, <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveyspilot/8january2021>

Figure 1. Primary school COVID-related absences amongst pupils and teachers

a) Pupils

b) Teachers



Notes and sources for England: Figures relate to the Thursday of each week, except for the last week of term which is shown for Wednesday December 16th. Figures are only included if response rates are greater than 50 per cent. Dashed lines indicate 10th and 90th percentiles across local authorities meeting these sample requirements (<https://explore-education-statistics.service.gov.uk/find-statistics/attendance-in-education-and-early-years-settings-during-the-coronavirus-covid-19-outbreak>).

Despite the much higher case numbers amongst teachers, pupils were more likely to be absent for all COVID-related reasons, largely because they were more likely to be close contacts of confirmed cases. Indeed, self-isolation as a close contact accounts for over 90 per cent of primary school pupils absent for COVID-related reasons (the only exception being the last week of term when suspected cases accounted for a rising share).

In total, about 4-5 per cent of primary school pupils were absent for all COVID-related reasons in October, which rose to about 8-9 per cent of primary school pupils by the end of November. It then fell back during early December before rising back up to 8-9 per cent of primary school pupils by the end of term. There was large variation around these averages, with over 10 per cent of primary school pupils absent for COVID-related reasons in one in ten local authorities during October and much of November. However, this range became even larger by the end of December, with 20 per cent or more of primary school pupils potentially absent for COVID-related reasons in one in ten local authorities in the last week of term, e.g. Waltham Forest, Thurrock, Havering, and Enfield.

The total share of teachers absent for COVID-related reasons was around 4-5 per cent of teachers throughout the whole term. In one in ten local authorities, this rose to above 8-9 per cent of teachers, but was never as high as the potential number of pupils self-isolating.

Further data suggests that, of those self-isolating, 60-80 per cent of teachers were self-isolating because of close contact in school, with the rest self-isolating due to contact outside of schools. This suggests that the main reason for self-isolation is close contact within school, but highlights the importance of also considering behavior outside school.

We therefore see that primary school teachers are much more likely to be absent because they have a confirmed case, but pupils are more likely to be absent because they were a close contact of a confirmed case. The exact reason for this divergence is not clear, but could be explained by a number of factors, e.g.

differences in the number of individuals who teachers and pupils come into contact with in school due to the nature of bubbles and school organisation, or differences in behaviors outside of school.

In Appendix Figure A, we show the equivalent figures for teaching assistants and other staff. This shows a very similar pattern to teachers, with 0.5-0.9 per cent of teaching assistants and other staff absent because they had a confirmed case over the course of the term. But only about 3-5 per cent of teaching assistants and other staff are absent for all COVID-related reasons.

Trends in COVID-related absences in secondary schools

Figure 2 shows the equivalent set of figures for secondary schools. The share of secondary school pupils absent because of a confirmed case was 0.2-0.3 per cent over the autumn term, which is higher than in primary schools (0.05-0.15 per cent of pupils), but still much lower than among teachers. This difference between primary and secondary school pupils is in line with ONS and confirmed case testing data showing higher cases and infections in older children.

The share of secondary school teachers with a confirmed case was 0.6-1 per cent over the course of the term, broadly similar in level and trends to that seen for primary school teachers.

As with primary school pupils, the vast majority of COVID-related absences were down to self-isolation as a result of close contact with a confirmed case (accounting for over 85 per cent of COVID-related absences each week). The share of secondary school pupils absent for all COVID-related reasons rose from 5-6 per cent in mid-October to 10-13 per cent of pupils in mid-November. This then fell back during the November lockdown, but rose back up to 11-13 per cent by the end of term.

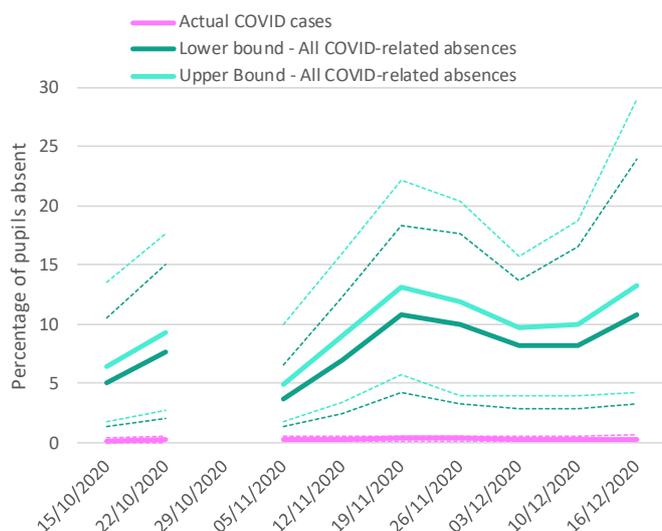
There was also significant variation around this average across local authorities. In one in ten local authorities in mid-November, as many as 20 per cent of secondary school pupils were absent for COVID-related reasons, mainly because they were told to self-isolate as a close contact. By end of term, in one in ten local authorities, potentially 30 per cent or more secondary school pupils were absent for COVID-related reasons. This includes areas such as Luton, Havering, Thurrock, and Kent.

As with primary school teachers, the total share of secondary school teachers absent for all COVID-related reasons was 4-5 per cent across most of the term and is clearly lower than the share of pupils absent for all COVID-related reasons. This again results from a lower share of teachers needing to self-isolate. Of those needing to self-isolate, about 40-50 per cent relate to close contact in school. This again highlights the importance of contacts outside of school.

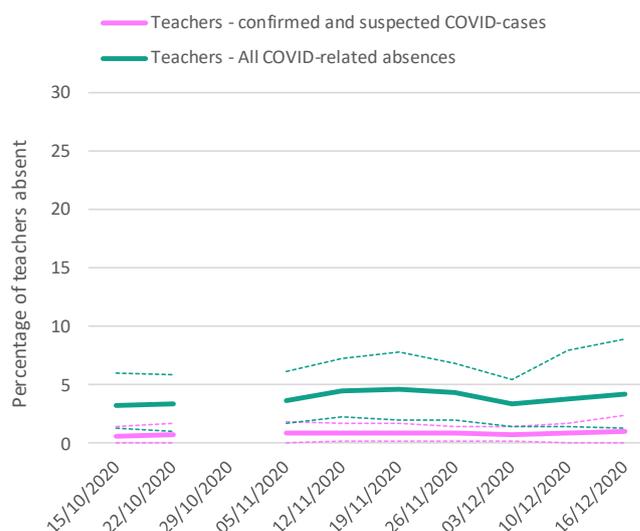
Appendix Figure A shows the same trends for teaching assistants and other staff in secondary schools. The share of teaching assistants and other staff absent due to a confirmed case was around 0.4-0.7 per cent over the autumn term and only about 2-4 per cent were absent for all COVID-related reasons.

Figure 2. Secondary school COVID-related absences amongst pupils and teachers

a) Pupils



b) Teachers



Notes and sources for England: Figures relate to the Thursday of each week, except for the last week of term which is shown for Wednesday December 16th. Figures are only included if response rates are greater than 50 per cent. Dashed lines indicate 10th and 90th percentiles across local authorities meeting these sample requirements (<https://explore-education-statistics.service.gov.uk/find-statistics/attendance-in-education-and-early-years-settings-during-the-coronavirus-covid-19-outbreak>).

Comparisons between teachers and the wider population

Unfortunately, it is not possible to undertake a precise comparison between confirmed cases among teachers and the general population because the school survey captures a different concept (absences resulting from confirmed cases at a point in time) than general testing data (proportion testing positive over the past day or week).

There are, however, strong reasons to believe that the rate of confirmed cases amongst teachers is higher than amongst all adults or the general population. The regular ONS infection survey provides an estimate of the share of the population testing positive for coronavirus, which is a more comprehensive measure, including symptomatic and asymptomatic cases. This shows that the share of the population testing positive for coronavirus was about 0.8-1.2 per cent over the period from mid-October to mid-December. This compares with about 0.2-0.4 per cent of the population testing positive for coronavirus each week over the same period in the daily COVID testing data.² Actual infections are therefore much higher than positive cases in testing data, largely due to a high number of unidentified, asymptomatic cases. Given that we see 0.5-1 per cent of teachers absent due to a confirmed, positive case (highly likely to capture most symptomatic cases), it seems highly likely that the total number of infections amongst teachers is higher than amongst the rest of the population (0.8-1.2 per cent). By how much is not clear.

This contrasts with past evidence from the ONS infection survey, which suggested that case rates amongst teachers were not substantially different from other occupations.³ However, this related to the period from September to early October when general case numbers were much lower. Unfortunately, these

² <https://coronavirus.data.gov.uk/>

³ <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveys/pilot/6november2020#analysis-of-the-number-of-school-workers-key-workers-and-other-professions-in-england-who-had-covid-19>

comparisons have not been repeated, but would be incredibly useful in understanding the relative risk of contracting coronavirus for teachers and other school staff.

Relative levels of teacher and pupil confirmed cases across local authorities

Figure 3 shows a scatter plot of the level of absence due to confirmed cases amongst pupils (x-axis) and teachers (y-axis) across local authorities, averaged over the whole term.

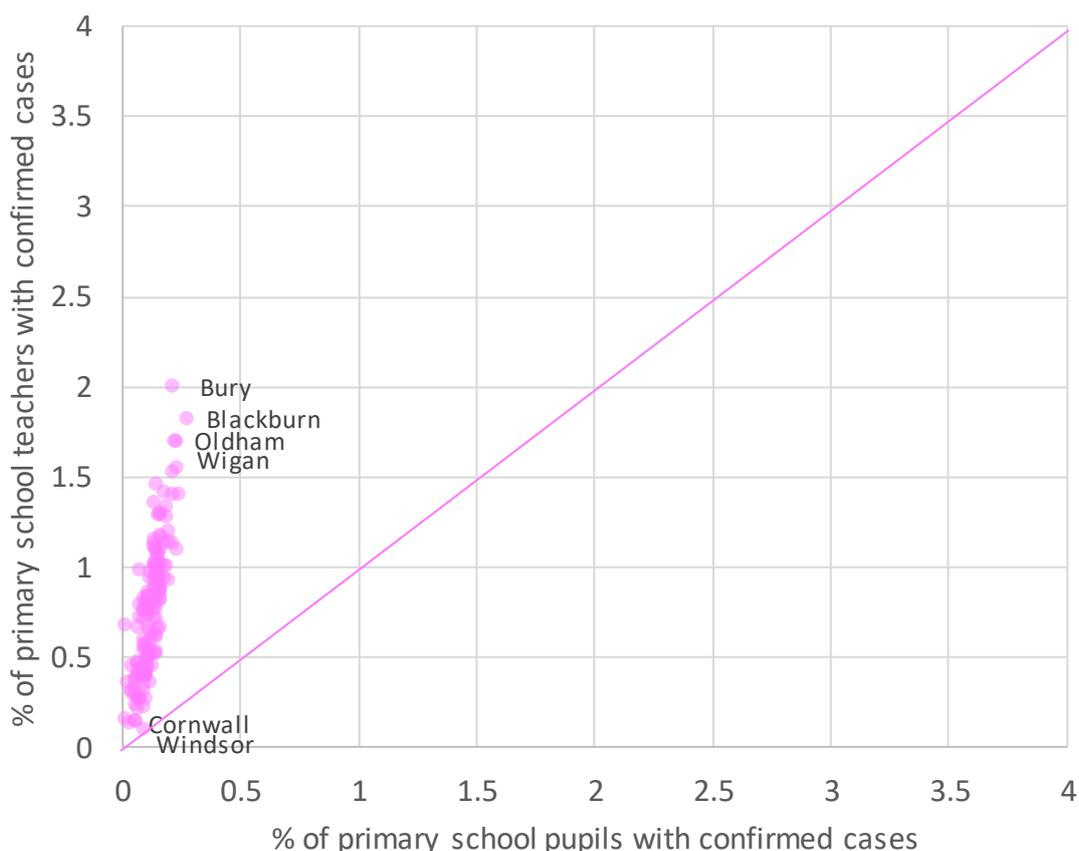
For both primary and secondary schools, we see that the average share of teachers with a confirmed case is almost always higher than the share of pupils absent due to a confirmed case. This pattern is more extreme for primary schools than secondary schools and is to be expected given that we have already seen that teachers were much more likely to have a confirmed case than pupils.

What we further see from this graph is that there is a lot more variation in the average share of teachers with a confirmed case. For example, in secondary schools, the average share of teachers absent due to a confirmed case ranges from 0.1 per cent of teachers in the Isle of Wight and Herefordshire up to 2 per cent in Hartlepool, Thurrock, Calderdale, Blackburn and Salford, and up to 3 per cent in Bury.

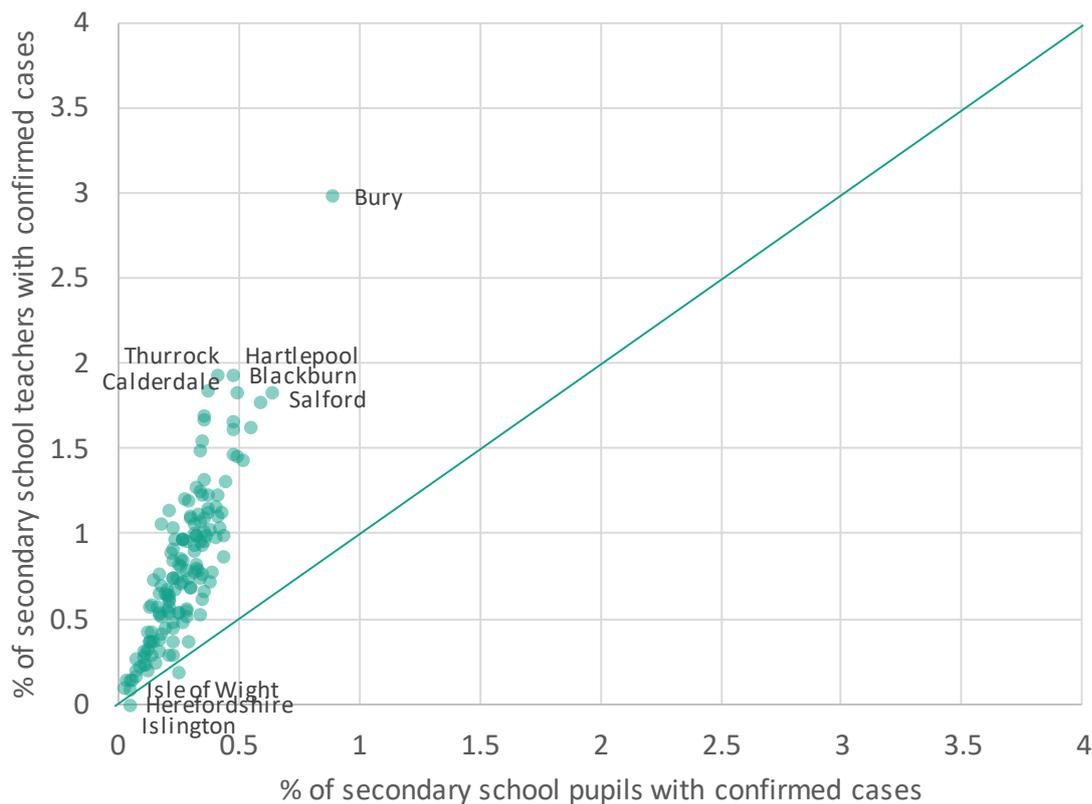
Second, for local authorities with a higher share of pupils with a confirmed case, the share of teachers with a confirmed case is much higher, particularly in primary schools. This could have a number of potential causal interpretations. It could be that as the share of pupils with a confirmed case rises, teachers become more likely to develop cases as a direct result. Alternatively, it could be that case rates amongst teachers respond more quickly to increases in community wide infections amongst pupils.

Figure 3. Primary school COVID-related absences amongst pupils and teachers

a) Primary schools



b) Secondary schools



Notes and sources for England: Figures relate to shares of pupils and teachers absent due to a confirmed case averaged across all data points for each local authority between mid-October and the last week of term in December. Figures relate to the Thursday of each week, except for the last week of term which is shown for Wednesday December 16th. Figures are only included if response rates are greater than 50 per cent. (<https://explore-education-statistics.service.gov.uk/find-statistics/attendance-in-education-and-early-years-settings-during-the-coronavirus-covid-19-outbreak>).

Policy questions

This analysis shows that absences due to confirmed cases of coronavirus were much higher amongst teachers than amongst pupils. In primary schools, teachers were over 6 times more likely to be absent due to a confirmed case than pupils. In secondary schools, teachers were about 2-3 times more likely to be absent due to a confirmed case than pupils. The share of teachers absent due to confirmed cases was similar across primary and secondary schools, and the differences in pupil absences due to confirmed cases between primary and secondary schools is in line with differences in infections and cases by age group.

Despite this, it is pupils who are more likely to be absent from school due to all reasons related to coronavirus. This is because pupils are more likely than teachers to be self-isolating due to close contact with a confirmed case.

This analysis is informative about trends in absences and cases amongst pupils and teachers, but in many ways it raises a large series of key questions, which are highly relevant to ongoing debates:

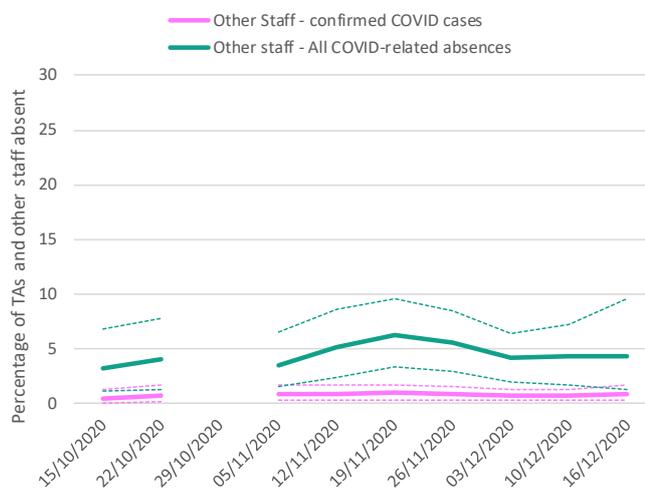
- **How do infection levels for teachers compare with other occupations?** Such a comparison was published using the ONS infection survey for data up to mid-October. Unfortunately, an updated version has not been published. It would be extremely informative for the current debate on the relative risk of infection for school staff and the merits of prioritising school staff for vaccinations, either now or when vaccinations are extended to younger age groups.

- **How many of the COVID-related absence amongst pupils – principally self-isolation rather than confirmed cases - relates to close contact with a teacher or member of school staff with a confirmed case?** The difference in case rates in the school survey between school staff and pupils suggests this could be a substantial source of COVID-related absences in schools. Further data and knowledge here could inform the best ways to reduce infections and self-isolation when schools do reopen to all pupils.
- **How much of the COVID-related absence amongst pupils relate to close contacts and behaviour outside of school?** This doesn't appear to be part of the current school survey, but could be very useful to understand the relative risk of infection in schools vs other settings, as well as how the effect of reopening schools to all pupils may depend on other measures and restrictions in the community.
- **How much of the higher COVID-related absence amongst pupils relates to the way bubbles and classes are organised?** Here, it would be useful to know how many close contacts pupils and teachers make in a regular school day or week. If pupils are likely to be in touch with more contacts in a school than a teacher, it would be useful to understand the feasibility of changing this.

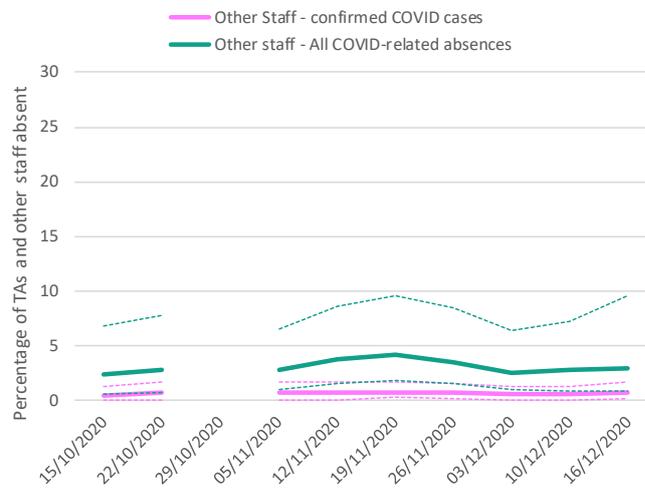
Appendix: COVID-related absences amongst teaching assistants and other staff

Figure A. COVID-related absences amongst teaching assistants and other staff

a) Primary schools



b) Secondary schools



Notes and sources for England: Figures relate to the Thursday of each week, except for the last week of term which is shown for Wednesday December 16th. Figures are only included if response rates are greater than 50 per cent. (<https://explore-education-statistics.service.gov.uk/find-statistics/attendance-in-education-and-early-years-settings-during-the-coronavirus-covid-19-outbreak>).