

Trends in COVID-19 School Absences by Measures of Deprivation

Trystan Leng, University of Warwick
trystan.leng@warwick.ac.uk

Context

Covid school closures 'put children's lives on hold', says Ofsted chief

🕒 3 January

Covid: School closures 'throwing children under the bus'

🕒 8 January 2021

'Collapse' in secondary school attendance warning

By Sean Coughlan
BBC News family and education correspondent

🕒 24 November 2020

Covid pandemic fuels deepening education inequalities in England, say MPs

By Branwen Jeffreys
Education Editor

🕒 11 March

School Covid absences rise two-thirds in fortnight

By Hannah Richardson
BBC News education reporter

🕒 5 October 2021 | [Comments](#)

1.5m pupils out of school in England last week

By Hannah Richardson
Education and social affairs reporter

🕒 13 July 2021 | [Comments](#)

Control measures implemented last academic year

Since 8th March 2021, both teachers and secondary school pupils have been strongly encouraged to participate in twice weekly mass testing using LFTs.



- Until July 2021, implemented alongside an isolation of close contacts policy.
- Positive LFTs at home are followed up by confirmatory PCR tests, to minimise absences from false positives.

Rapid COVID-19 testing

	Where	When
Staff in primary schools	At home	Twice weekly
Students in secondary schools and colleges	Initial 3 tests at school or college, then at home	
Staff in secondary schools and colleges	At home	
Staff in special schools and alternative provision	At home	
Staff and students in university	At university	
Nursery staff (school-based and maintained)	At home	
Nursery staff (private and independent)	At home	Twice weekly from late March



Educational settings status data

- Throughout the COVID-19 pandemic, until 7th March 2022, English schools and other educational settings have recorded daily information relevant to COVID-19 using the UK Government's Educational setting status data form:
<https://www.gov.uk/guidance/how-to-complete-the-educational-setting-status-form>
- The data recorded includes:
 - Daily COVID related pupil absences
 - Daily COVID related staff absences
 - The number of pupils on roll
 - The number of pupils eligible for free school meals
 - The number of pupils with a social worker
- From 7th March 2022, a more limited set of data has been recorded weekly by schools.
- The analyses presented in this talk is for state-funded schools in England, but data on independent schools is also recorded in the data.
- We consider the period 12th October 2020 - 4rd March 2022, corresponding to dates when format of settings data changed.

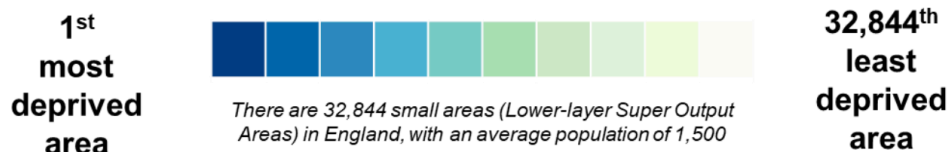
What is a Covid related absence?

- Confirmed cases of COVID-19
- Suspected cases of COVID-19
- Absent due to being asked to isolate
 - As a close contact of an infected pupil throughout the 2020/21 academic year.
 - As a close contact of someone infected outside of the school setting

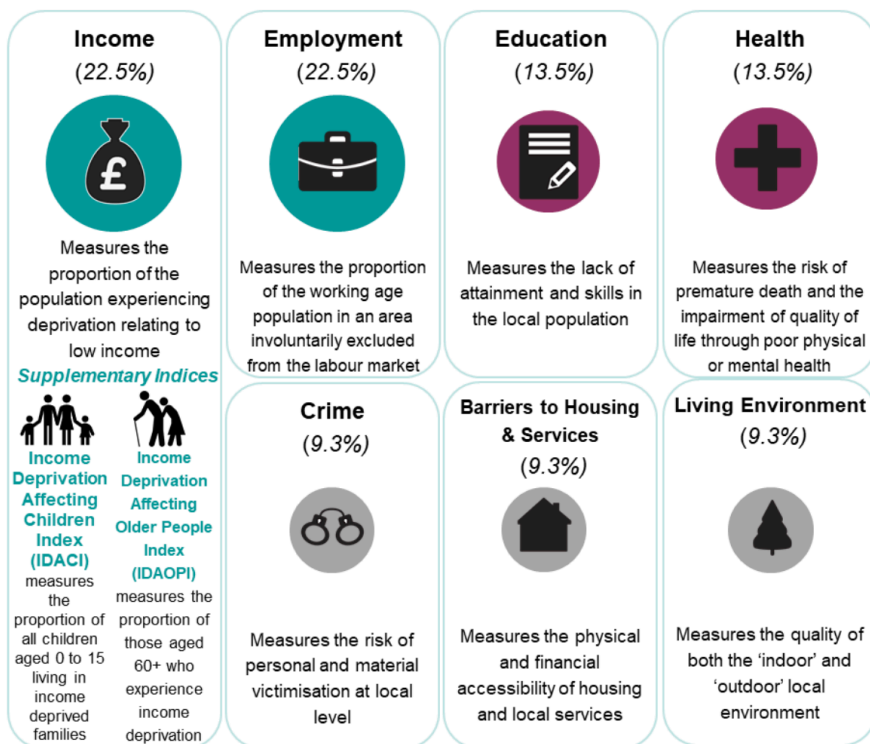
Index of Multiple Deprivation

The index of multiple deprivation (IMD) is the government's official measure of relative deprivation in England, based on 39 different indicators, with an IMD given to each Lower layer super output area (LSOA).

The Indices relatively rank each small area in England from most deprived to least deprived



There are 7 domains of deprivation, which combine to create the Index of Multiple Deprivation (IMD2019):



Key Info:

IoD2019 Domains

The IoD2019 is comprised of seven distinct domains of deprivation which, when combined and appropriately weighted, form the

IMD2019. They are;

- **Income (22.5%)**
- **Employment (22.5%)**
- **Health Deprivation and Disability (13.5%)**
- **Education, Skills Training (13.5%)**
- **Crime (9.3%)**
- **Barriers to Housing and Services (9.3%)**
- **Living Environment (9.3%)**

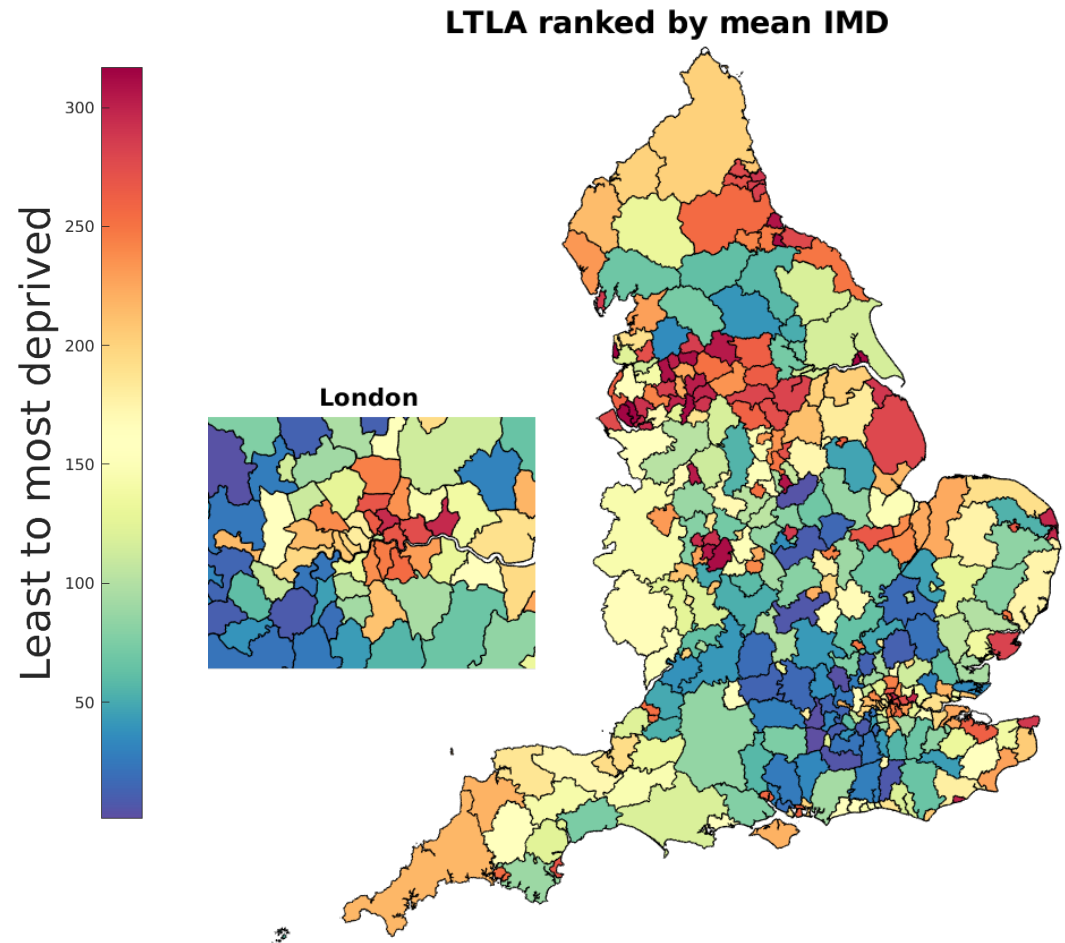
Source: Ministry of Housing, Communities & Local Government.

Regional inequality

There is considerable regional inequality in the UK.

Dividing England by Lower tier local authority (LTLAs), deprived areas are focussed in the North West, North East, Greater London, and the Birmingham area.

We can compare COVID-19 related absences in schools in the most deprived areas to absences in schools in the least deprived areas.



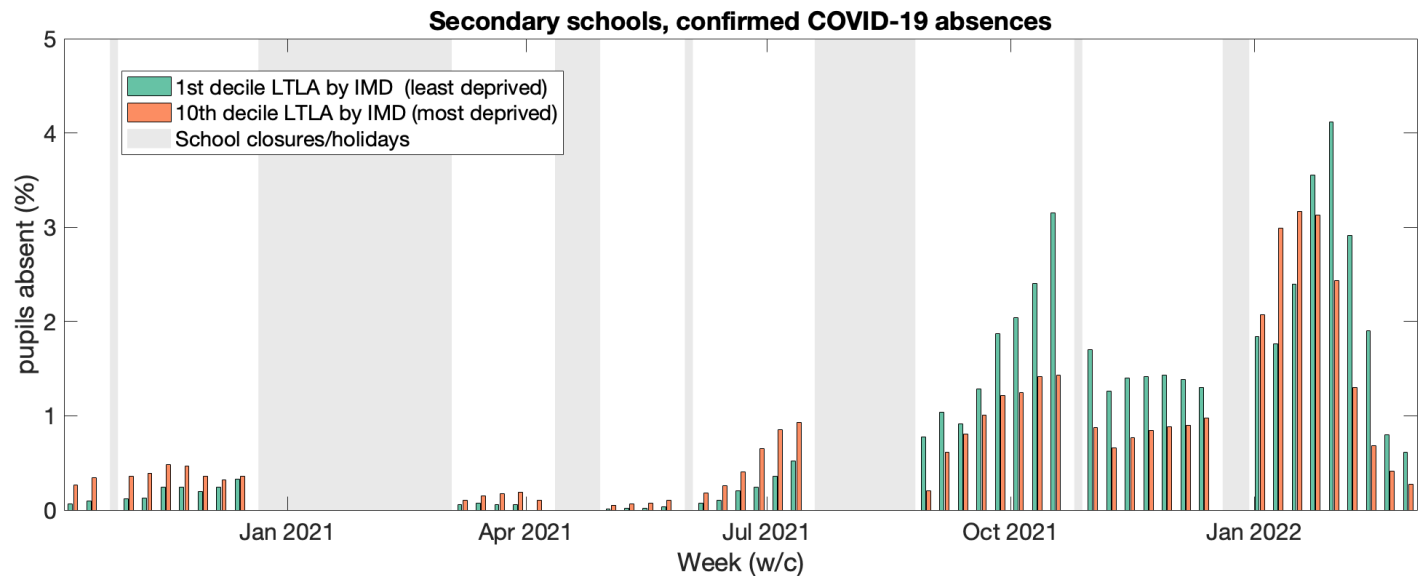
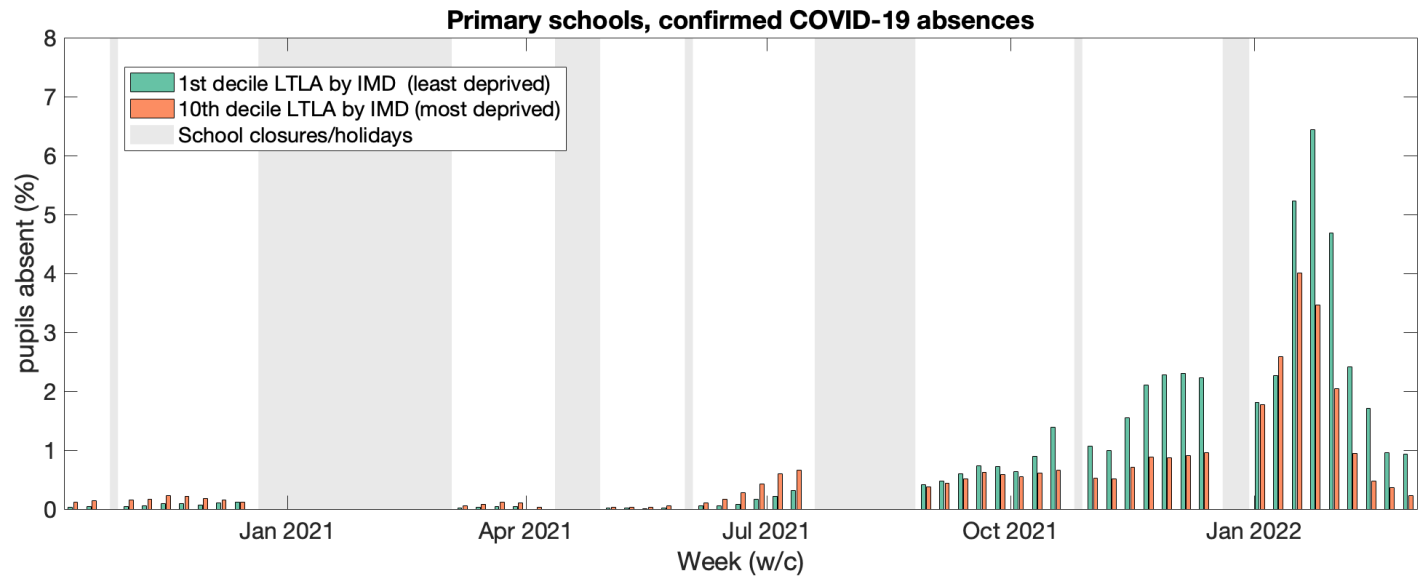
LTLAs - England split into 317 regions,

Regional Inequality - Time series

October 20 to July 21 - higher levels of COVID-19 cases in schools from the most deprived LTLAs than schools in the least deprived LTLAs.

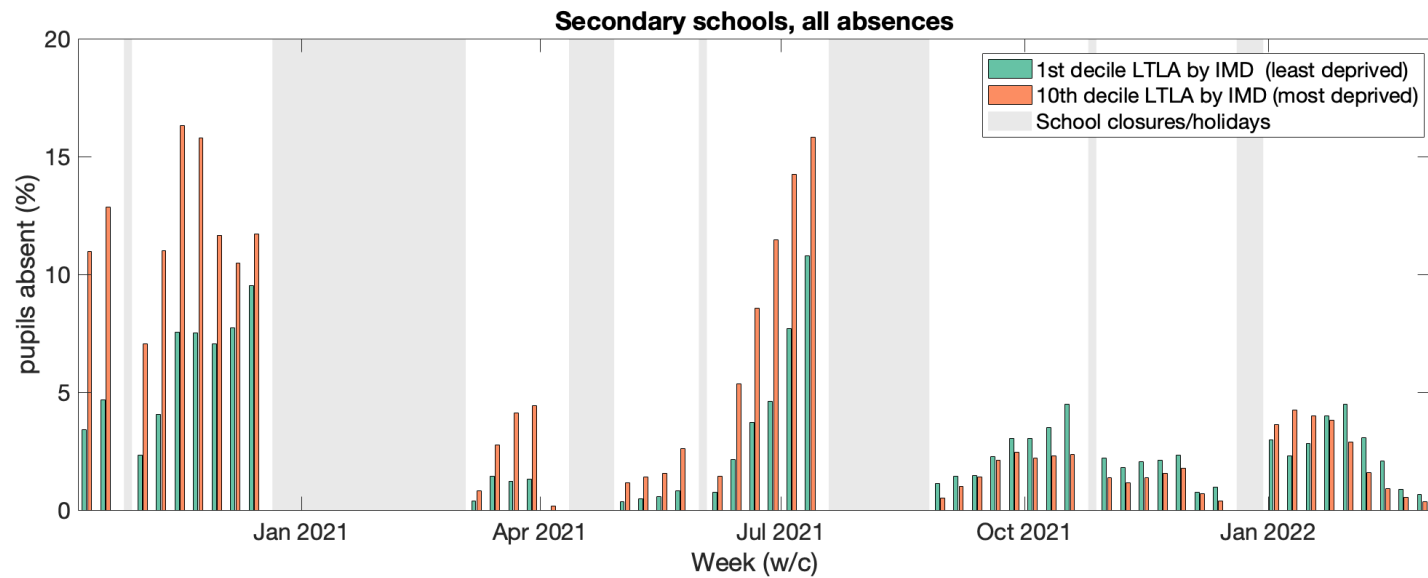
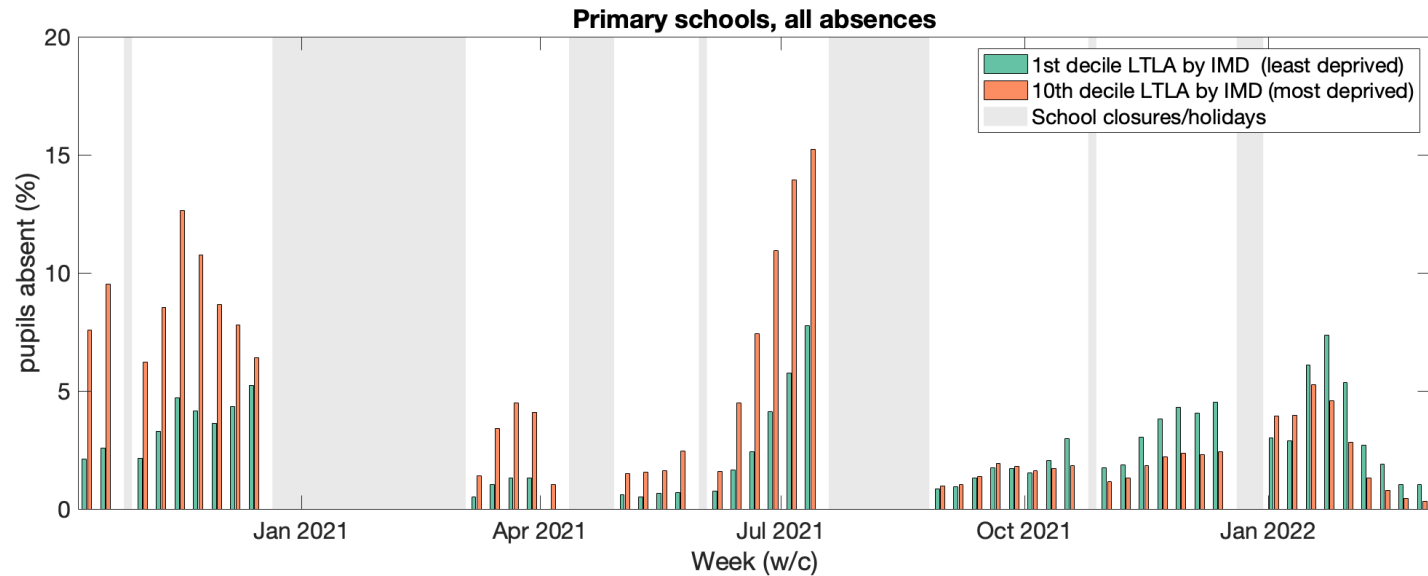
This trend reverses in September 21, with higher levels in the least deprived schools.

Trend apparent in both secondary and primary schools.



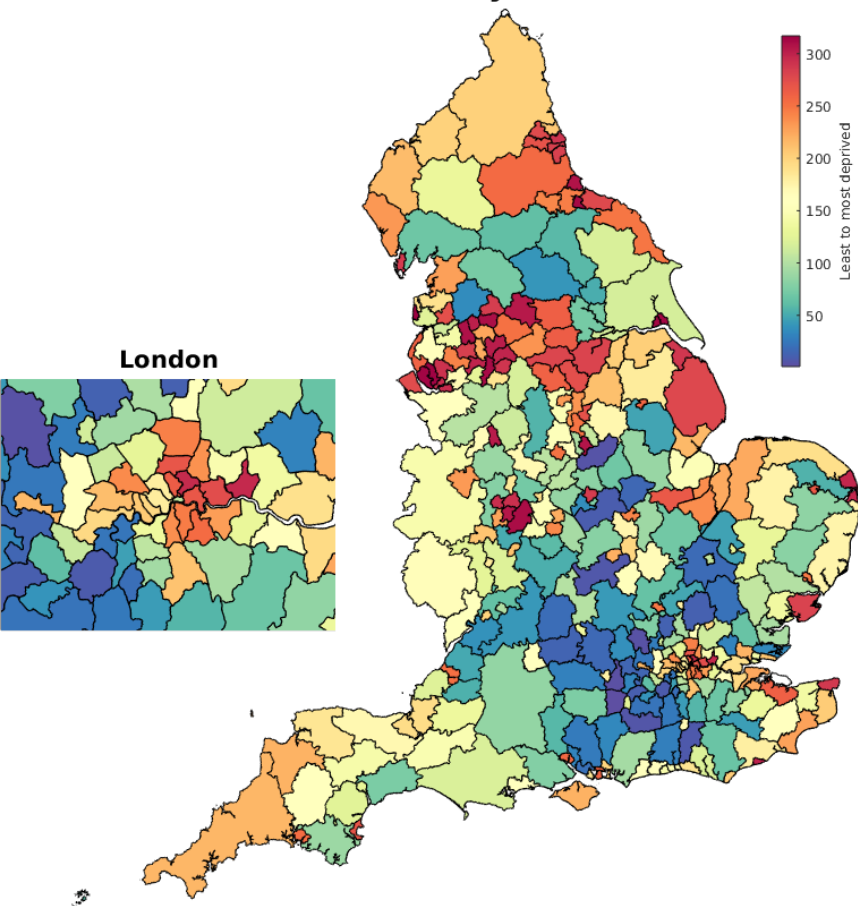
Regional Inequality - Time series

With schools operating an isolation of close contacts policy, higher cases of COVID-19 in the 2020/21 academic year translates to higher levels of absences in schools in more deprived LTLAs

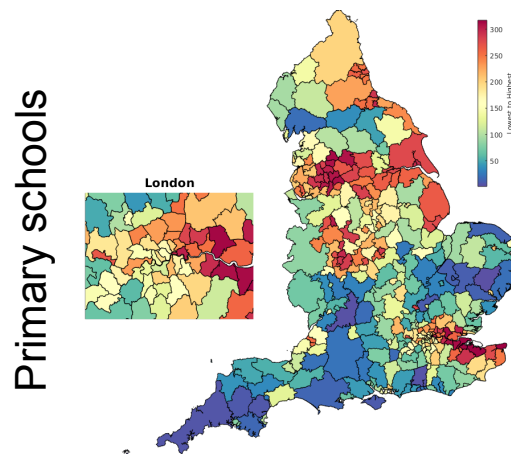


Regional inequality in maps

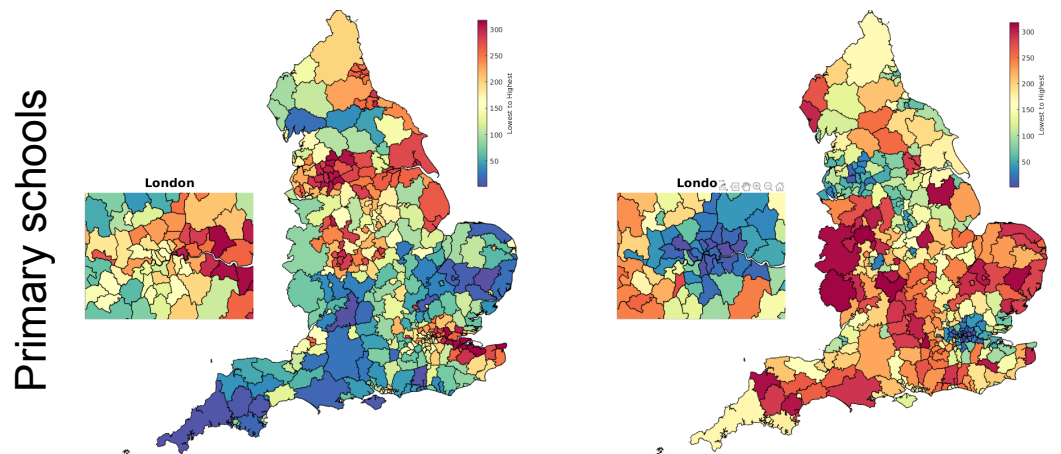
LTLA ranked by mean IMD



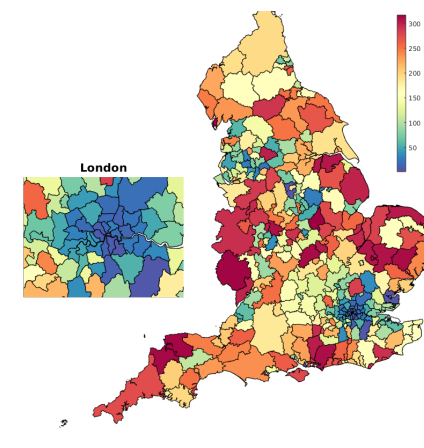
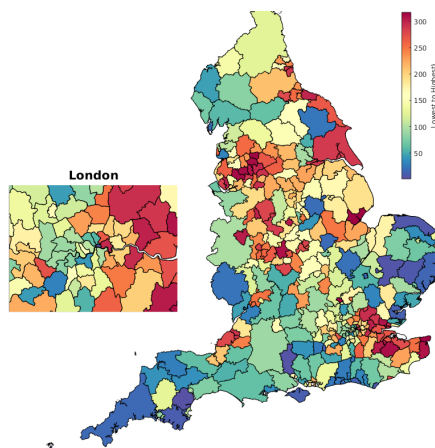
Absences Oct 20 - Jul 21



Absences Sep 21 - Mar 22



Secondary schools



LTLAs that had higher levels of absences from October 2020 - July 2021 had lower levels of absences from September 2021 - March 2022, and vice versa.

Measures of deprivation at the school level

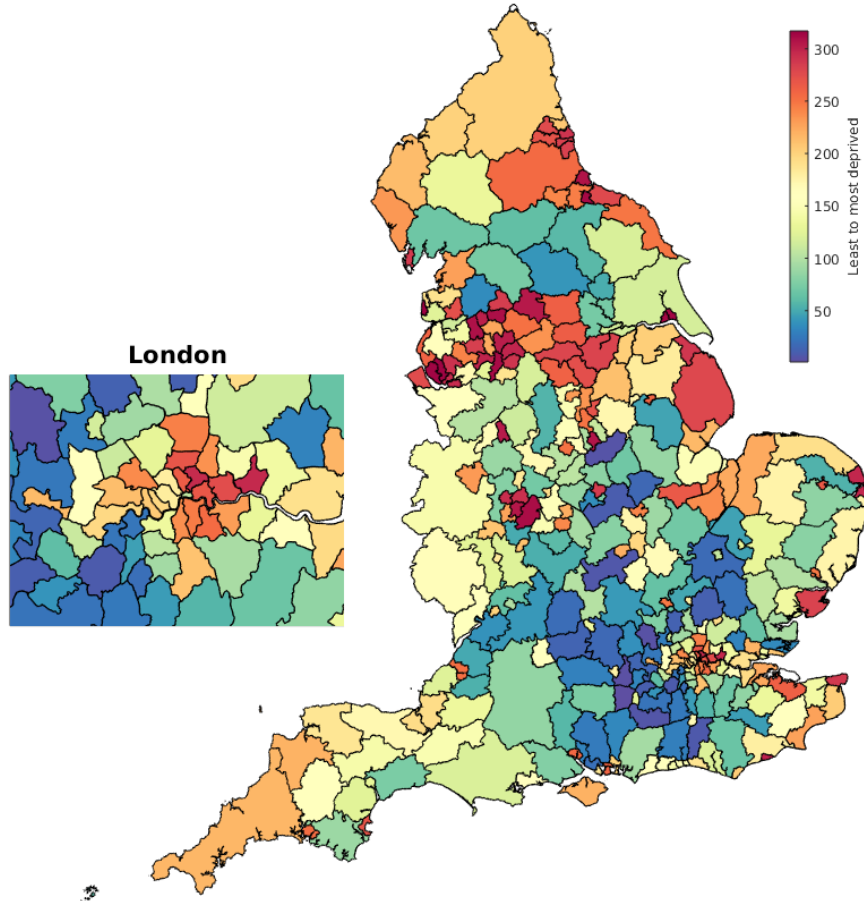
Rather than considering deprivation at the regional level, we can also consider deprivation at the school level. We consider two measures:

- **The percentage of pupils on roll at a school who are eligible for free school meals**
 - Only accounts for family income and not other factors
 - Good measure of deprivation, but maybe not it's inverse.
- **The mean IMD of postcode of pupil on roll at a school**
 - Uses IMD of the LSOA of a pupil's postcode as a proxy for their IMD.
 - Not a measure of affluence.
 - Access to pupil postcode data is restricted.

We consider both measures.

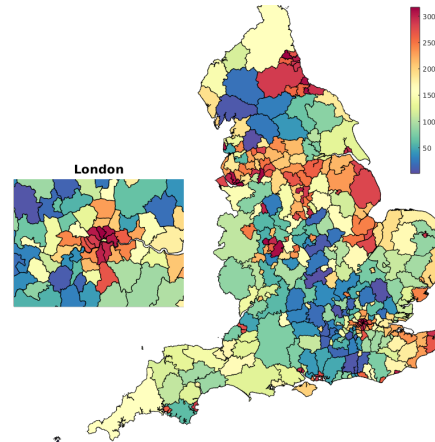
Comparing measures 1

LTLA ranked by mean IMD

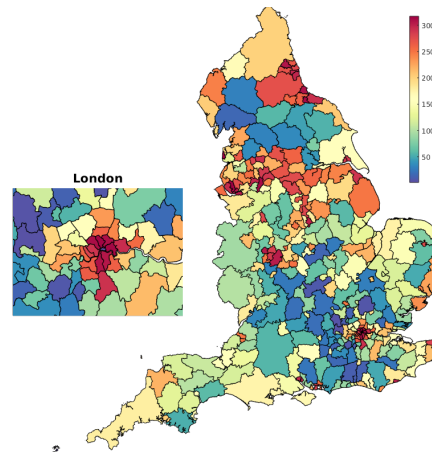


Ranked by % eligible FSM

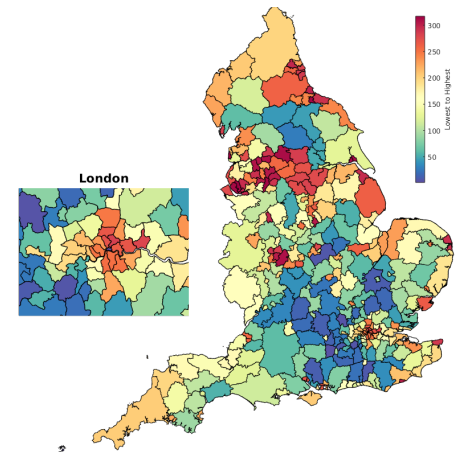
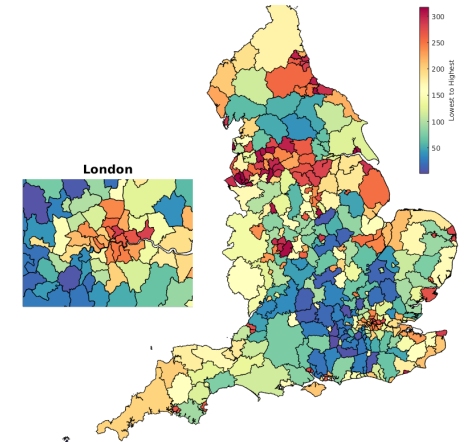
Primary schools



Secondary schools

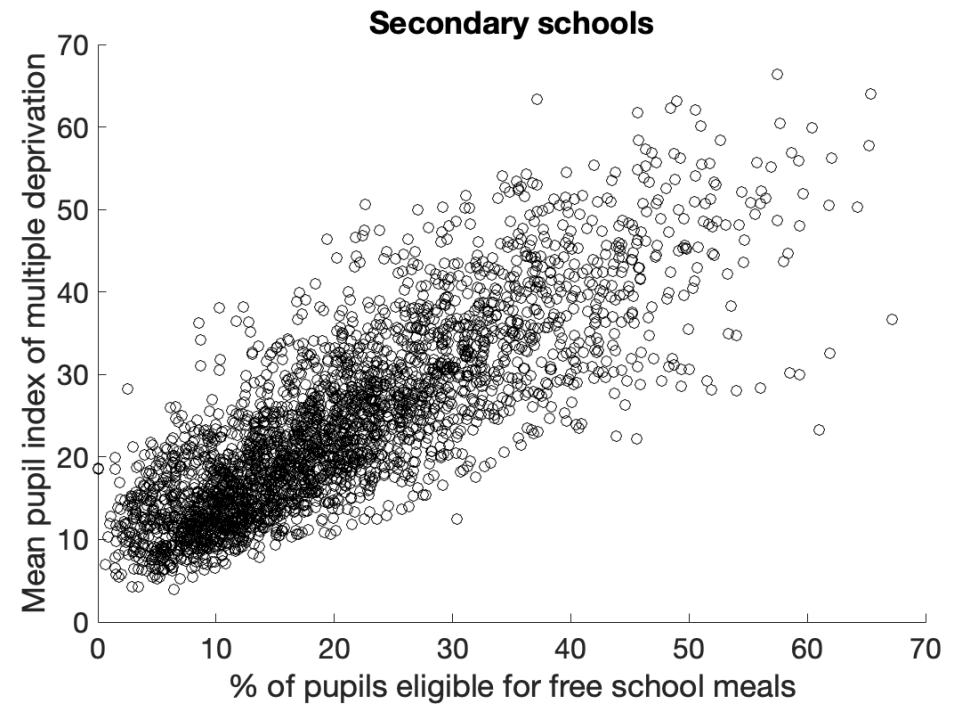
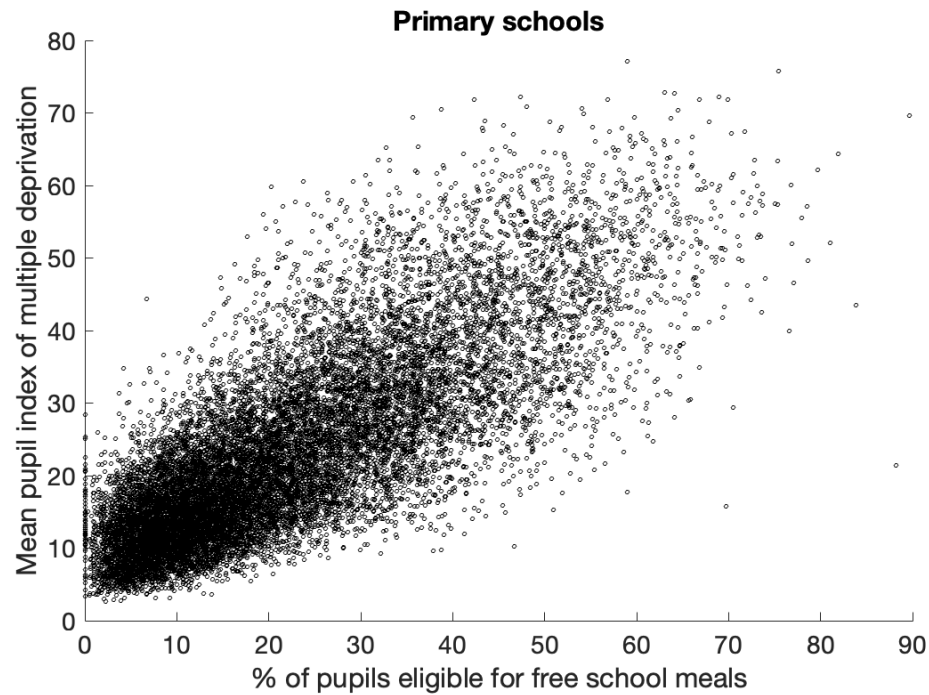


Ranked by mean pupil IMD



LTLAs ranked by the % of pupils eligible for FSM, or ranked by the mean IMD of pupil LSOAs, closely matched LTLAs ranked by their mean IMD.

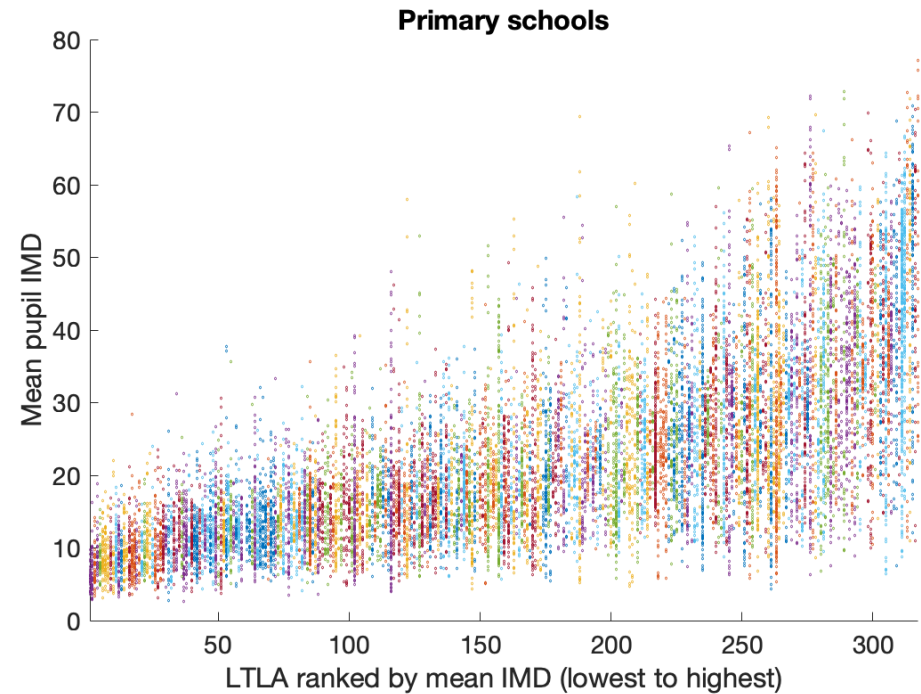
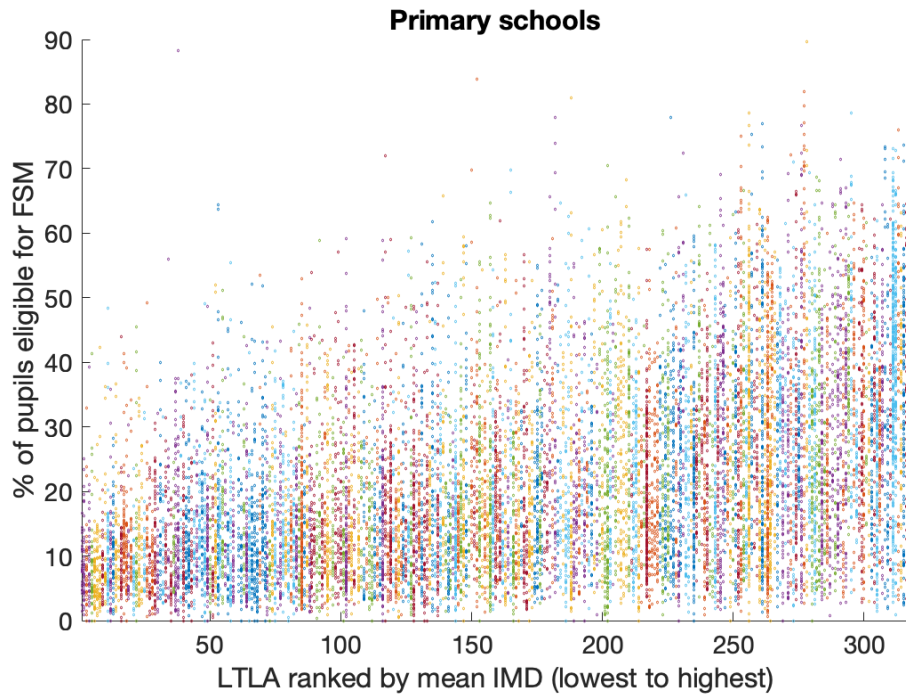
Comparing measures



The % of a pupil at a school eligible for FSM within a school is highly correlated with the mean IMD of pupils at that school.

Comparing measures

Below, each dot represents a school, and each LTLA is shaded a different colour.



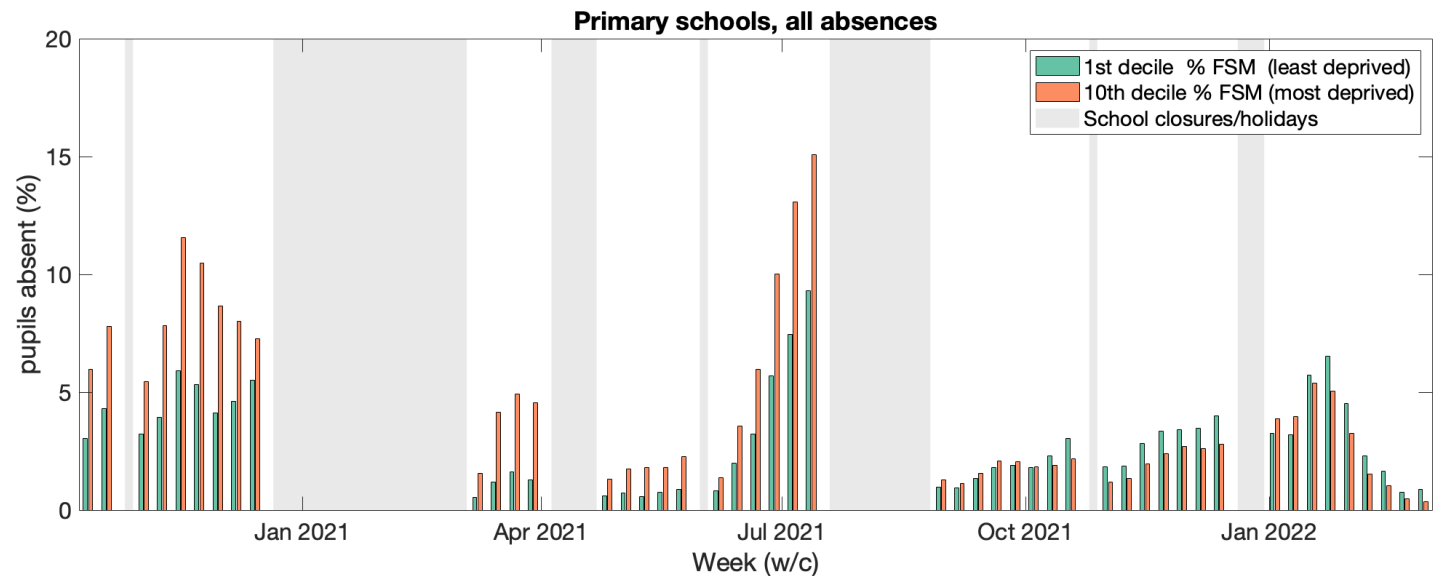
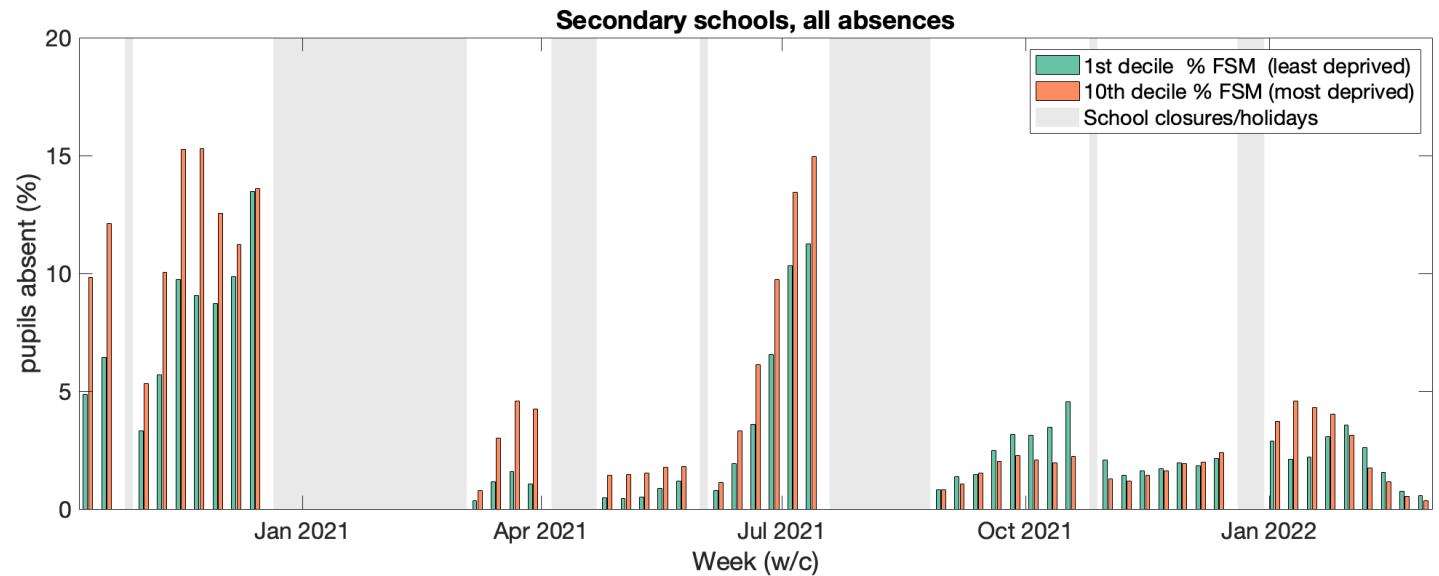
In each LTLA there is significant heterogeneity in deprivation across both measures.
(Similar patterns are seen when considering secondary schools - not shown)

Inequality by % eligible FSM - Time series

October 20 to July 21 - higher levels of COVID-19 cases in schools from the most deprived LTLAs than schools in the least deprived LTLAs.

This trend reverses in September 21, with higher levels in the least deprived schools.

Trend apparent in both secondary and primary schools.

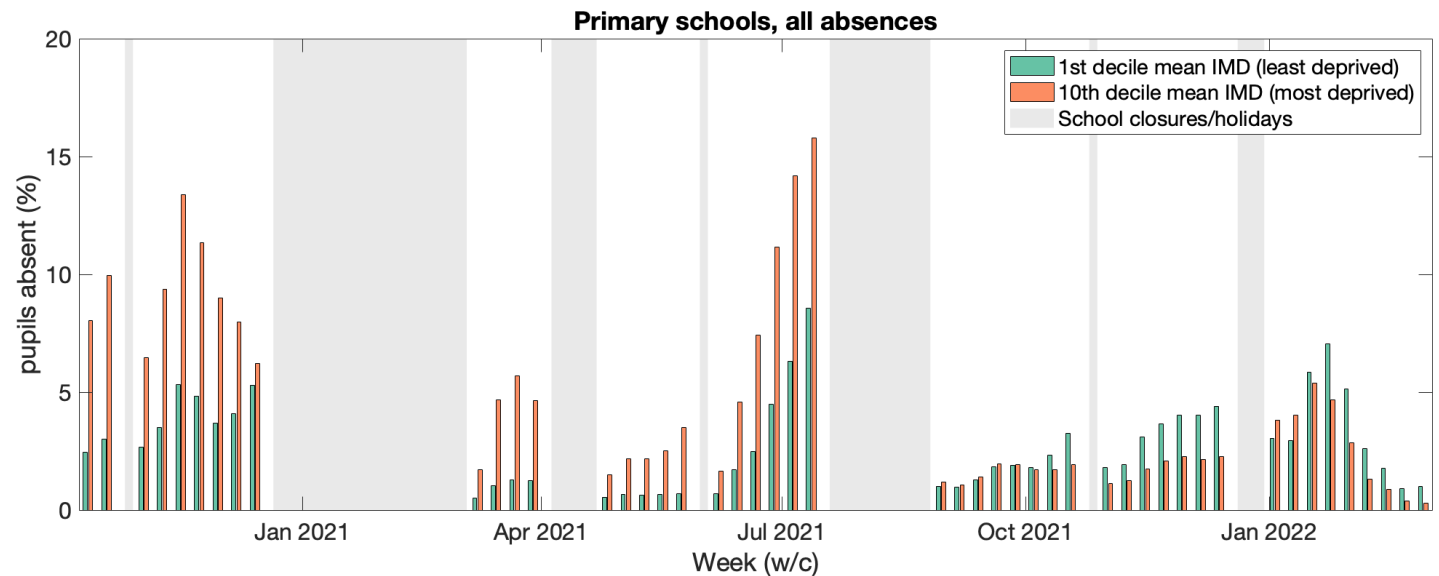
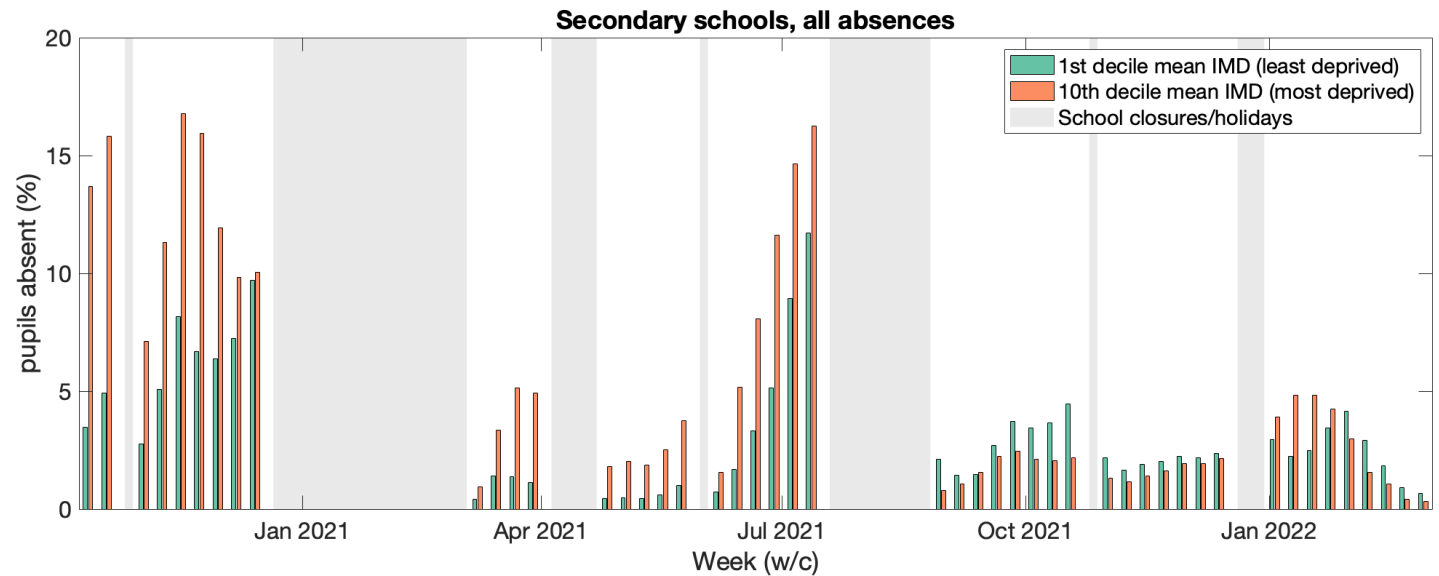


Inequality by mean pupil IMD - Time series

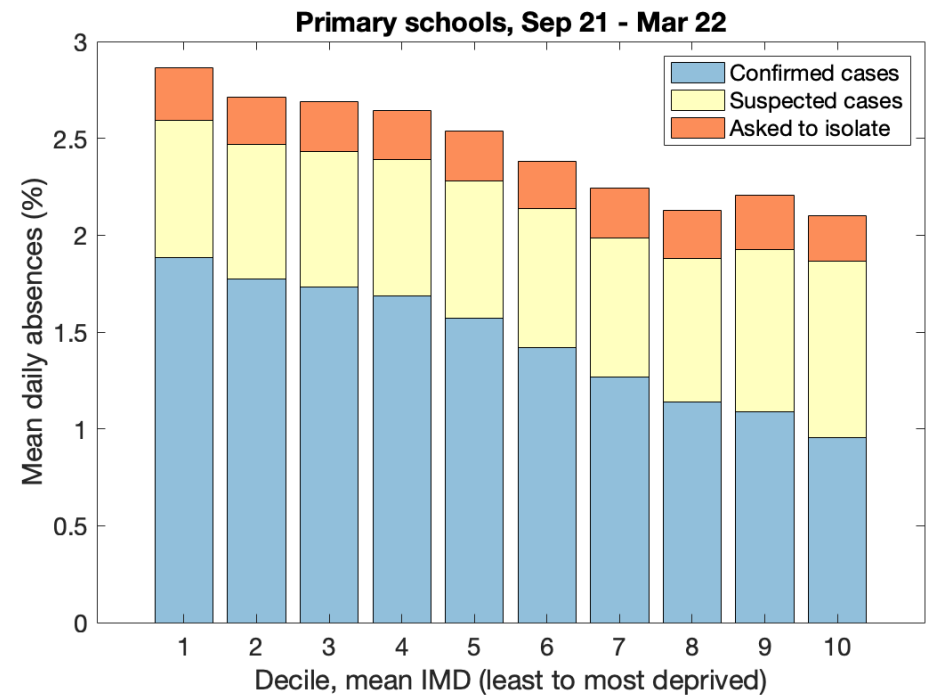
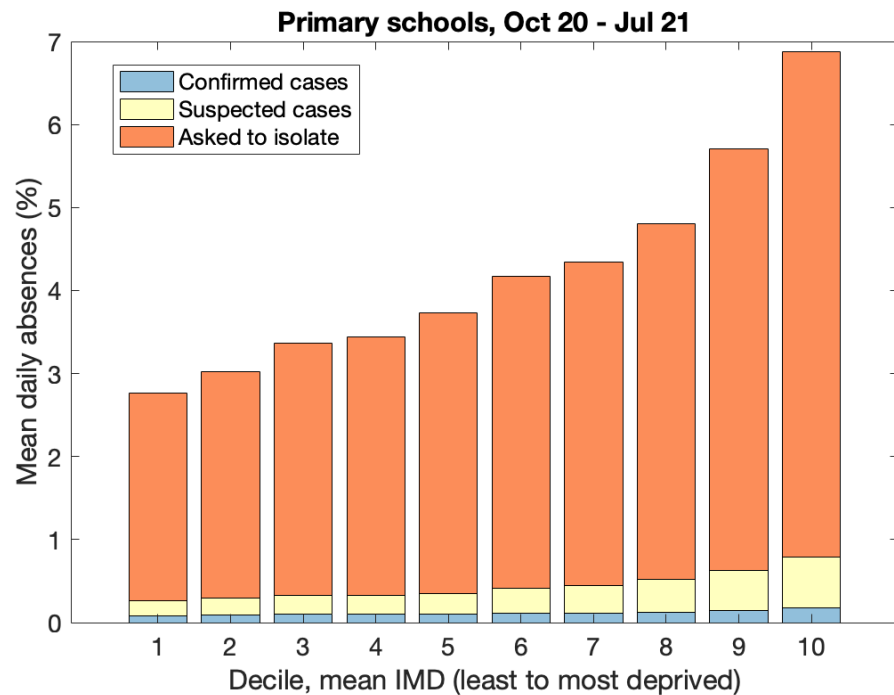
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Trend apparent in both secondary and primary schools.



School-level inequality by mean pupil IMD

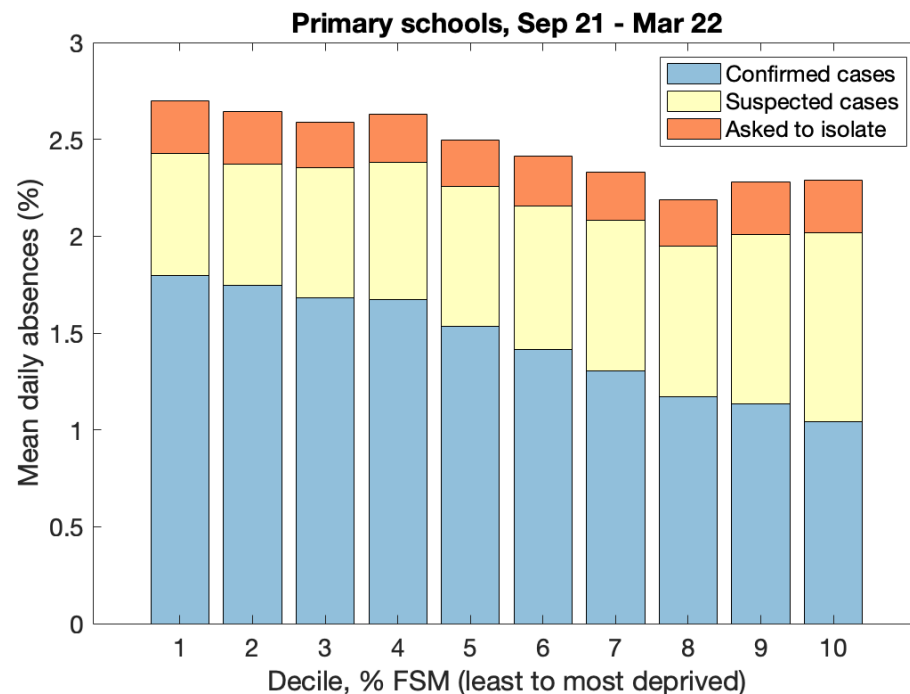
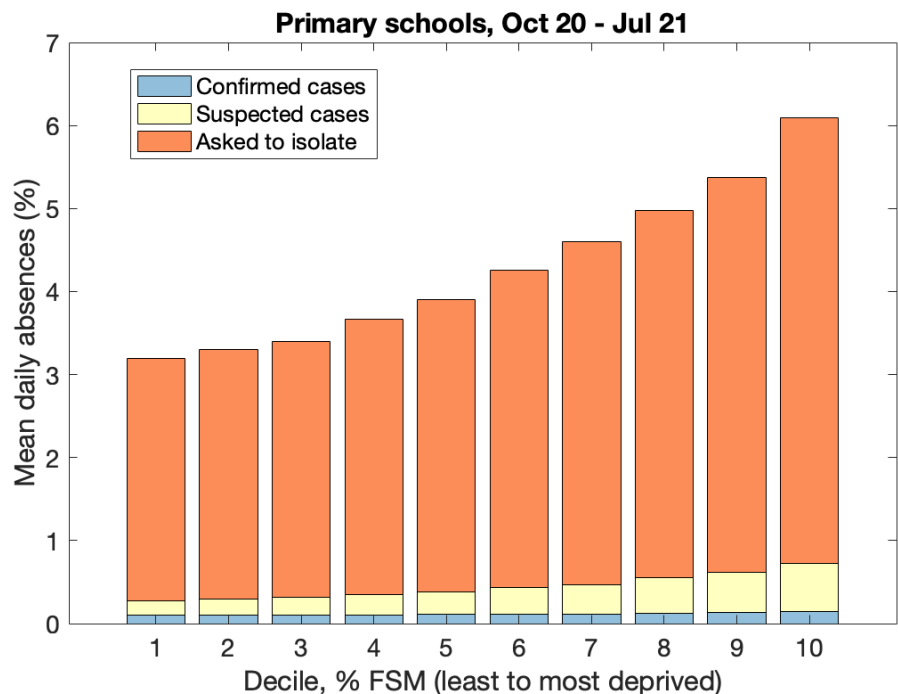


Using Primary schools and mean pupil IMD as an example, we see that absences increase as we move from the least to most deprived decile of schools for October 2020 - July 2021.

This trend is reversed for September 2021 - March 2022.

However, the number of suspected increases as deprivation increases in this period.

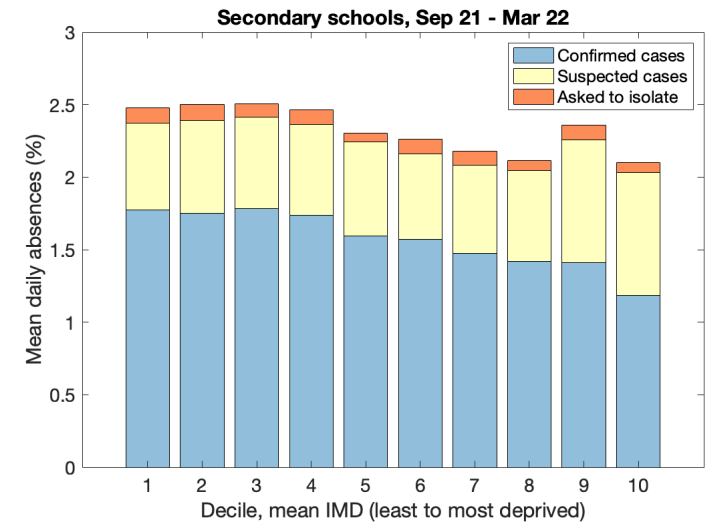
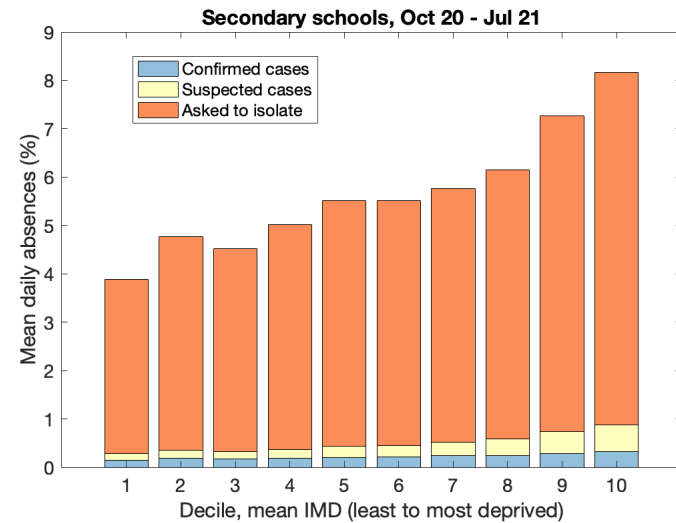
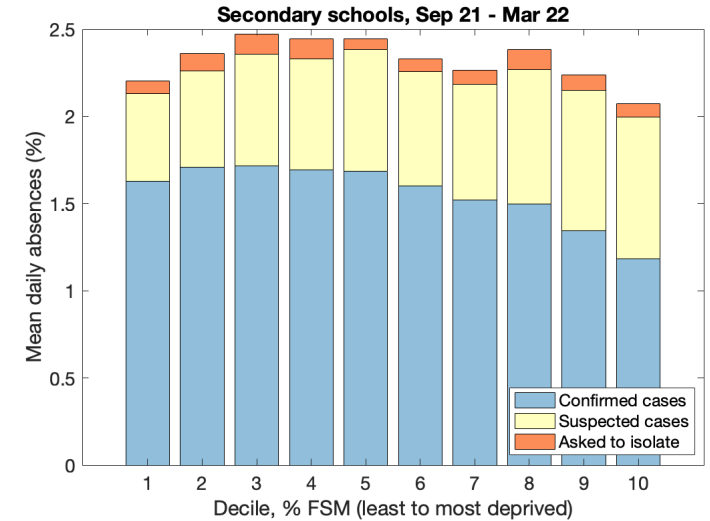
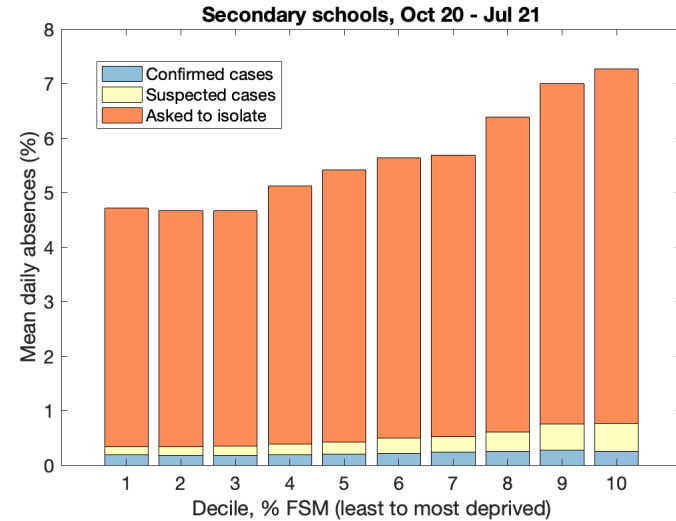
School-level inequality by % eligible FSM



These trends are echoed when we use the percentage of pupils eligible for FSM as our measure of deprivation.

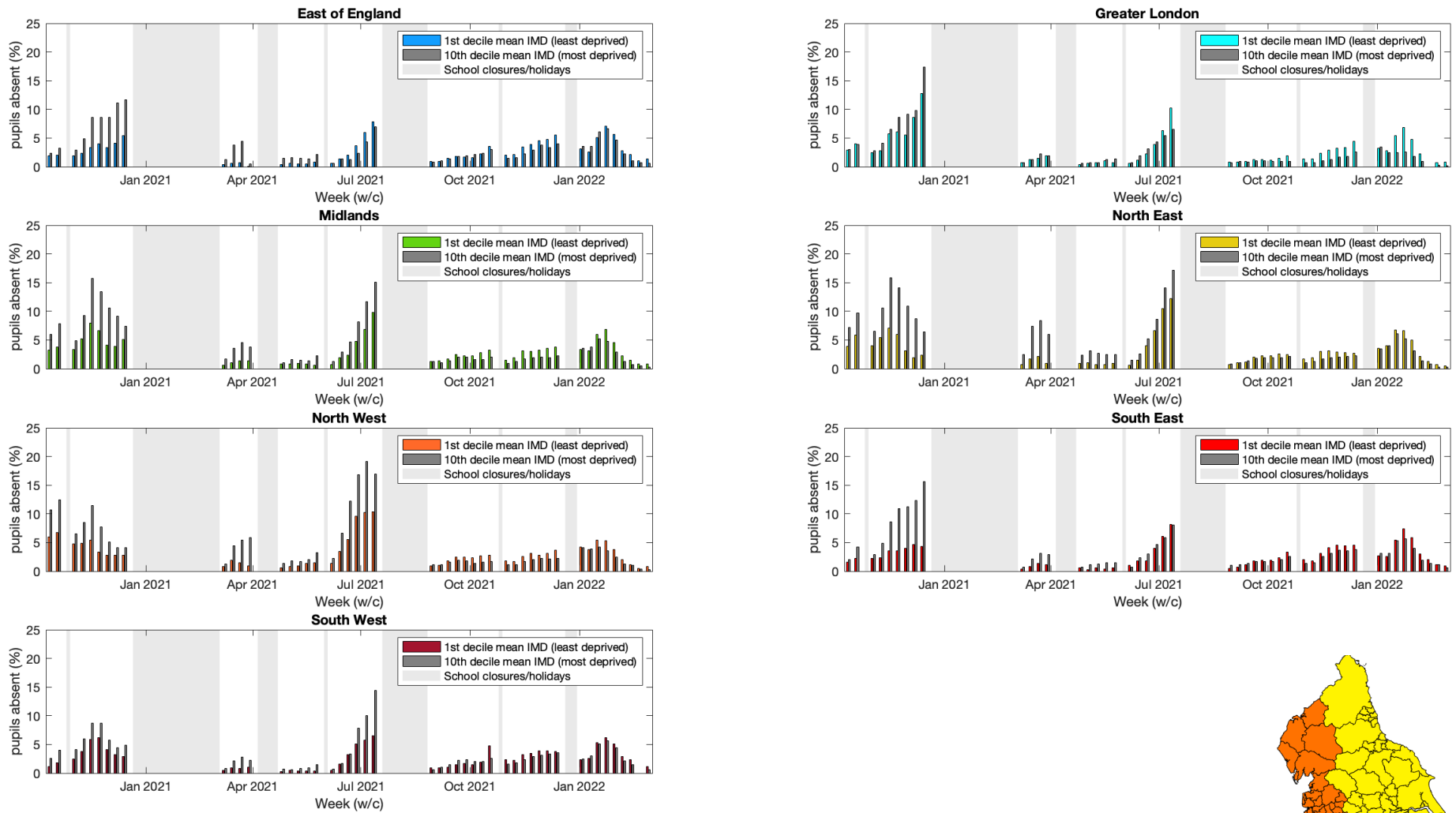
School-level inequality - secondary

This trend is also reflected in Secondary schools when either % eligible for FSM or mean pupil IMD is used as the measure of deprivation

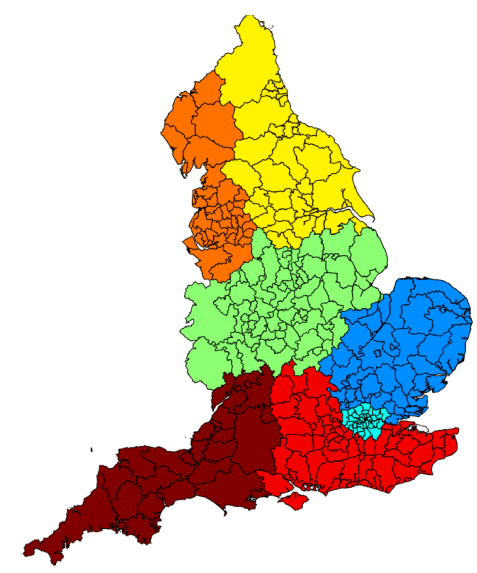


Primary schools broken down by region

Primary schools, all absences

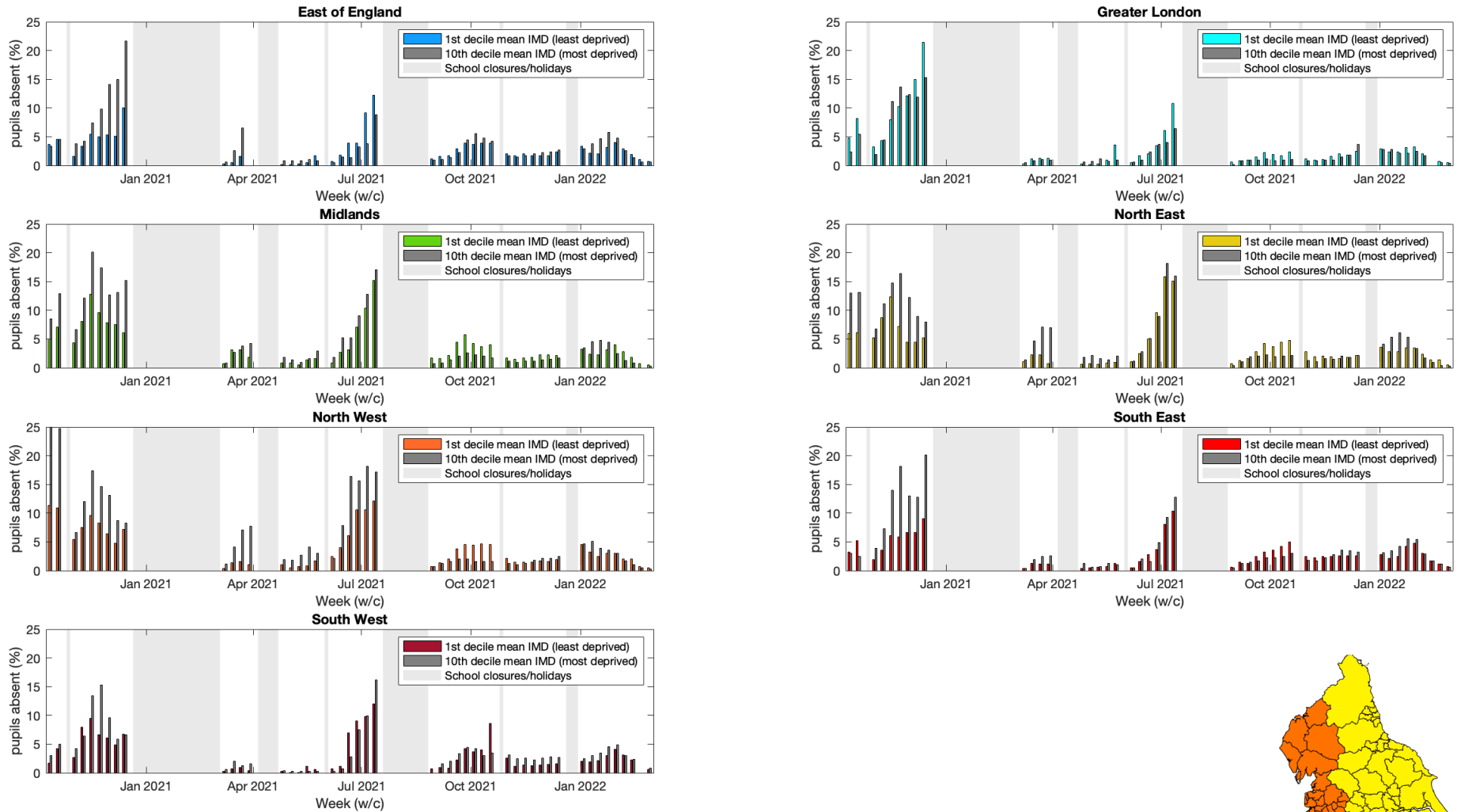


This shift is also apparent when we consider the least and most deprived schools in particular regions (regions coloured in the map on the bottom right)

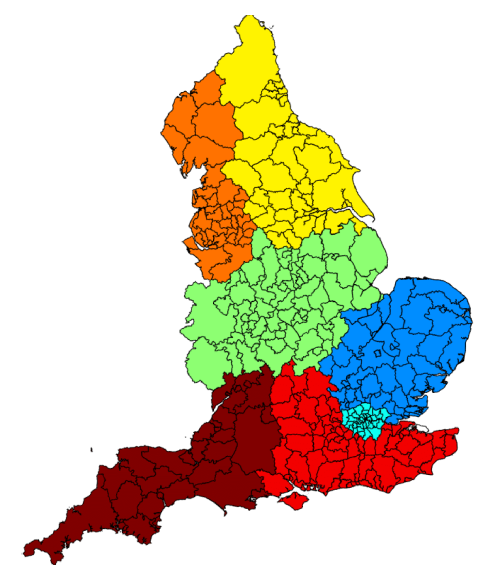


Secondary schools broken down by region

Secondary schools, all absences



This shift is also apparent when we consider the least and most deprived schools in particular regions (regions coloured in the map on the bottom right)



Conclusions and key questions

Conclusions

- Across a range of measures, for Primary and Secondary schools, there were higher absence levels in more deprived schools in the 2020/21 academic year.
- However, from September 2021, this trend has shifted, with higher absence levels now observed in the least deprived schools.
- Levels of deprivation at the school level are highly heterogeneous within a local area (LTLA).
- Data recorded at the school level provides an important data stream to explore a range of COVID-19 related trends.

Key questions

- What factors have driven this shift in levels of absences by deprivation?
- How do we design school-level control policies that do not exacerbate educational inequalities?

Possible explanations

- 1) **Levels of immunity?** Have higher cases in deprived groups resulted in higher levels of immunity, and has the effect of this been strong enough to change the relative likelihood of infection for deprived and affluent groups?
- 2) **Differences in testing?** Are there systematic differences in testing behaviours between socioeconomic groups, driven by socioeconomic factors?
- 3) **Shifting contact patterns in different socioeconomic groups?** As restrictions have relaxed, has there been different shifts in contact patterns by different socioeconomic groups?
- 4) **Another explanation?**

Thanks for listening!

Acknowledgements

University of Warwick:

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Jonathan Read, Alison Hale

Data

Data from the Department for Education Educational Settings database were supplied after anonymisation under strict data protection protocols agreed between the University of Warwick and the Department for Education in the UK. The ethics of the use of these data for these purposes was agreed by the Department for Education with the Government's SPI-M(O)/SAGE committees. Due to the sensitive nature of the data, they can only be made available by DfE through a data-sharing agreement directly with the user, and so are not publicly available.

Upcoming Event 27th April 2022 (in person and virtual)

“Controlling COVID-19 in Schools: Lessons Learned and Open Questions”

Isaac Newton Institute - sign up here: <https://gateway.newton.ac.uk/event/tgm121/registration>

Contact

Email: trystan.leng@warwick.ac.uk

 @trystanleng



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