Manchester City Council
Report for Information

Report to: Children & Young People Scrutiny Committee – 10 November 2021

Subject: COVID-19 in Manchester School-Age Children, and Across Manchester School Settings: a retrospective analysis of academic year 2020/21

Report of: Director of Public Health

Summary

This report offers a data-driven retrospective analysis of the academic year 2020/21 in Manchester. The report explores the impact of COVID-19 on school settings across Manchester, levels of school absence, and confirmed cases in school-age children resident in the City.

Recommendations

The Committee is asked to consider the report and note the conclusions.

Wards Affected: All

Alignment to the Our Manchester Strategy Outcomes (if applicable)

Manchester Strategy outcomes	Summary of how this report aligns to the OMS
A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities	
A highly skilled city: world class and home grown talent sustaining the city's economic success	
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	
A liveable and low carbon city: a destination of choice to live, visit, work	
A connected city: world class infrastructure and connectivity to drive growth	

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Background documents (available for public inspection): none

1.0 Introduction

This report offers a data-driven retrospective analysis of the academic year 2020/21 in Manchester, exploring the following:

1.1 **The impact of COVID-19 on school settings and school absence**. To do this, we have used data collected as part of our local Manchester Test and Trace case reporting arrangements, principally via a dedicated notification form for educational settings

1.2 **The impact of COVID on school age children resident in Manchester**, considering patterns and characteristics in young people who tested positive. To do this, we have used the confirmed cases dataset provided by PHE.

2.0 Background

2.1 National Context

This report considers the impact of COVID-19 on school settings and school age residents over the academic year 2020/21. The following timeline offers a snapshot of national policy and restrictions over this time period, alongside term dates for Manchester.

Timeline for schools: March 2020 to July 2021

Manchester Test and Trace

MARCH 2020

20 March – Nurseries, schools and colleges close, only staying open for vulnerable children and children of key workers. The Education Secretary further announced GCSE and A-level exams are cancelled.

10 May – Prime Minister announced plans for schools to begin reopening in stages, beginning with nursery, reception, Year 1 and Year 6 as key transition years, from 1 June. Plan was for all children to be back in primary school for a month if feasible before the summer holidays.

19 May – in light of case rates being so high, Greater Manchester's Councils raise concerns over the June 1 date.

1 June – Schools begin reopening, beginning with nursery, reception, Year 1 and Year 6 as key transition years.

9 June – Government drops its plan to have all children back before summer.

17 September – .Government set up a new helpline for schools to report COVID cases, which aimed to '*free up the health protection teams to deal with more complex cases or outbreaks where there was more than one confirmed case*'.

18 December – Government agreed for an additional inset day to avoid school staff having to deal with contact tracing over the festive break'

2021

3 January – Government urged parents to send their children into school the following day, with the Prime Minister declaring '*there is no doubt in my mind that schools are safe*'.

4 January – The Government announced schools would close immediately as England entered another lockdown. All but the children of key workers and vulnerable children would have to stay at home.

March – Most children returned to schools. Secondary school pupils asked to wear masks in class as well as when walking around. Pupils and staff were tested on site in the first two weeks back at school, and then were asked to carry on testing twice a week from home.

May – Despite masks being scrapped in schools elsewhere, pupils across Greater Manchester were told they would have to keep wearing them in class after the break.

1 September – Schools open for 2020/21 year

23 October – half term holiday

13 November – Manchester Test & Trace takes leadership over contact tracing in school settings

18 December – Festive break

12 February – half term holiday

1 April – Easter break

28 May – half term holiday

21 July – Schools close for the summer

3.0 Manchester Test & Trace

3.1 In line with a *locally led, GM-supported* model of contact tracing and outbreak management, on Monday 16 November 2020 Manchester Test and Trace took responsibility for the oversight, management and tracing of cases in early years and educational settings. Prior to this, contact tracing was managed by the Greater Manchester Integrated Contact Tracing Hub. Settings began notifying our local Team directly of cases across their children, teaching staff and non-teaching staff, and visitors. This notification process was completed via an online form, which both standardised and increased the level of data received by the local Team.

3.2 From the launch of the notification form on 13 November to the end of the academic year on 22 July, a total of 4,756 cases were reported by school settings across Manchester. This outstanding level of engagement and partnership working facilitated the early identification of clusters of cases and subsequent rapid response. Our local Test & Trace Specialist Nurses reviewed all cases reported via the form as and when they came in and were available seven days a week for schools to call with any clinical or complex questions related to COVID-19 and contact tracing. This support reinforced the work of the Senior School Quality Assurance Officers (SSQAs), who continued to be the first port of call for school leaders throughout the year. The 'one Team' approach between MCC's Education Team and Manchester Test and Trace enabled a robust pathway to respond to every reported case in a school.

3.3 Where an outbreak of COVID was suspected or confirmed, the Community Health Protection Team (CHPT) led the response, utilising their expertise in infection control and immense experience of working with educational settings. Where required Outbreak Control Team (OCT) meetings were held, typically bringing together leaders from the school, Consultants in Health Protection working for the UK Health Security Agency (UKHSA, formerly PHE), City Council Health and Safety colleagues and MCC Education Team as well as Manchester Test and Trace. The OCT supports the management of an outbreak and will recommend additional control measures, for example, enhanced testing to identify asymptomatic positive cases using Mobile Testing Units (MTUs) stationed on school grounds. Over 25 OCTs were held during the academic year 2020/21.

3.4 Outside of the reporting and management of cases in schools, over the academic year Manchester Test and Trace supported educational settings in the following ways:

- Provided regular communications, including guidance on infection prevention and control, accessing support, template letters and tools for use with parents/carers
- Offered all schools the option of using the Manchester Test and Trace service to contact parents and carers of contacts identified during the Christmas break and February half term break to ease the burden on school leaders

- Supported schools with setting up on site asymptomatic testing using lateral flow tests – providing a model risk assessment and access to training at a community testing site
- Reviewed risk assessments with the City Council's Health and Safety Team
- Attended weekly meetings with colleagues from across Greater Manchester to understand the picture of COVID in schools across the City Region.

4.0 COVID-19 Situational Awareness Explorer

4.1 The COVID-19 Situational Awareness Explorer is the vehicle through which PHE (now part of the new UK Health Security Agency) has made COVID-related data and other associated analytical and modelling tools available to local authorities. The system includes individual record level data relating to new cases of COVID-19 in Manchester residents, as well as positive, negative and void tests (both PCR and LFD) and details of contact tracing activities with cases and contacts.

4.2 The Public Health Knowledge and Intelligence Team has made (and continues to make) extensive use of the data within the COVID-19 Situational Awareness Explorer to monitor the trends and patterns of COVID-19 within the school age population living in Manchester. For the purposes of this work, the primary and secondary age population has been defined as follows:

- Primary school age: Children between 5 and 10 years of age
- Secondary school age: Children between 11 and 16 years of age

4.3 Between 1 September 2020 and 31 July 2021, there were a total of 8,846 new confirmed cases of COVID-19 in school age children living in Manchester - a rate of 108.0 per 1,000 population. Put another way, around 10.8% of the estimated number of school age children living in Manchester were infected with COVID-19 at least once over the course of the school year. This excludes children who exhibited symptoms but did not take a test to confirm the presence of COVID as well as any children who were unfortunate enough to be reinfected with the virus at some point after their first positive test.

4.4 Overall, around 62% of the total number of new confirmed cases of COVID-19 were in secondary school age children and 38% were in primary school age children (rates of 124.5 per 1,000 population and 88.8 per 1,000 population respectively).

4.5 Rates of COVID in school age children were highest in the early and late stages of the school year (early September to mid-December and late-May to the end July) when whole school testing was in operation at the beginning of the school year and again in June and July in response to outbreaks in school settings. Rate were lower during and after the closure of schools as part of national restrictions.

5.0 Findings

Manchester Test and Trace

MANCHESTER CITY COUNCIL NHS

COVID-19 across Manchester school settings and in Manchester school-age children: a retrospective analysis of academic year 2020/21

To consider:

School settings

1. Reported cases in school settings over the year: considering use of the local Manchester Test & Trace notification form, and levels of engagement
2. Who needed to self-isolate from school as a reported case? A descriptive analysis
3. Who needed to self-isolate from school as a contact (including geographical patterns)?
4. What role did COVID play in school absences over the year?

School age-children resident in Manchester

1. Epidemiological analysis of school age children who tested positive for COVID; considering age bands, geography, ethnicity and deprivation

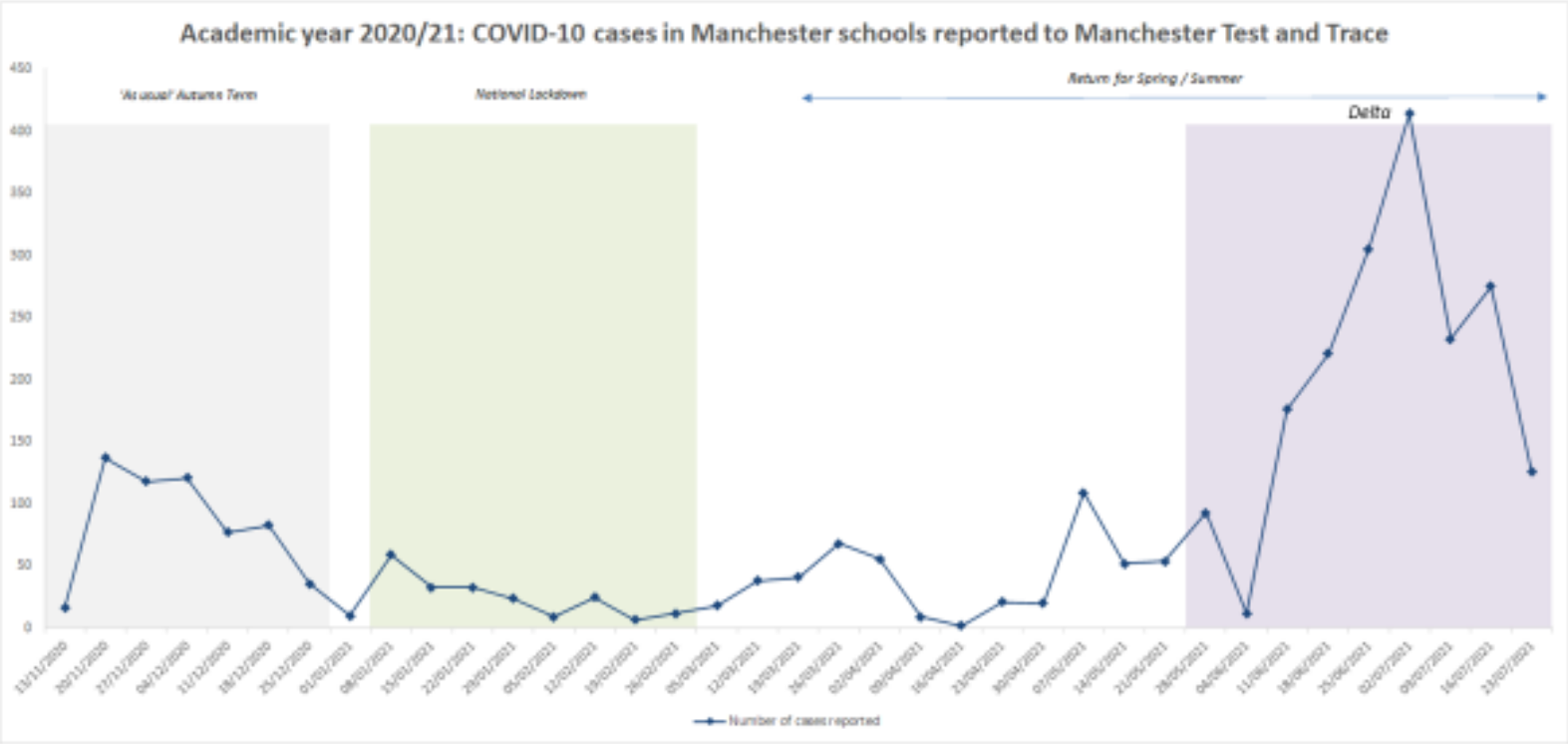
Sources of data

Analysis in this presentation is based on two sources of data available to Manchester Test and Trace - *Reported* and *Confirmed* cases. The scope of each data set is described.

Reported cases (MCC)	Confirmed cases (PHE / UKSHA)
• Data on cases voluntarily reported to Manchester City Council by schools in Manchester through the online notification form • Includes cases in staff and students reported by schools located within the Manchester City Council boundary, including cases in individuals living outside of Manchester • Geographical distribution of reported cases based on location of school • Trends based on date the case was reported by the school • Demographic characteristics of cases (age, gender, ethnicity etc.) based on information submitted by schools using their knowledge of the individual (rather than by the individuals themselves).	• Data on cases identified through formal testing activities of any type (PCR or LFD) • Includes all children resident within the Manchester City Council boundary, including children attending a non-Manchester school or an independent school outside of local authority control • Education stage (primary or secondary) based on age of child • Trends based on date the test / specimen was taken • Demographic characteristics of cases (age, gender, ethnicity etc.) based on self-reported information at time of registering a test • Area of residence based primarily on the postcode supplied at time of registering a test

An overview of reported cases over time

- During the period 13th November – 23rd July, Manchester Test and Trace's local notification form was used 1,981 times for a total of 3,144 reported cases in children
- On average, each time a school used the form they were notifying 1.6 reported cases in children
- There were an average of 89 submissions per week, every one of which our local specialist tracing team reviewed and risk assessed, with support from Manchester's Community Health Protection Team where situations were complex.



The policy for schools and educational settings was not static over the academic year; following a national rise in cases over in late 2020, a national lockdown was announced for 4th January. From 4th January, the majority of teaching was delivered on-line (face-to-face teaching was available for the children of key workers and children deemed to be vulnerable).

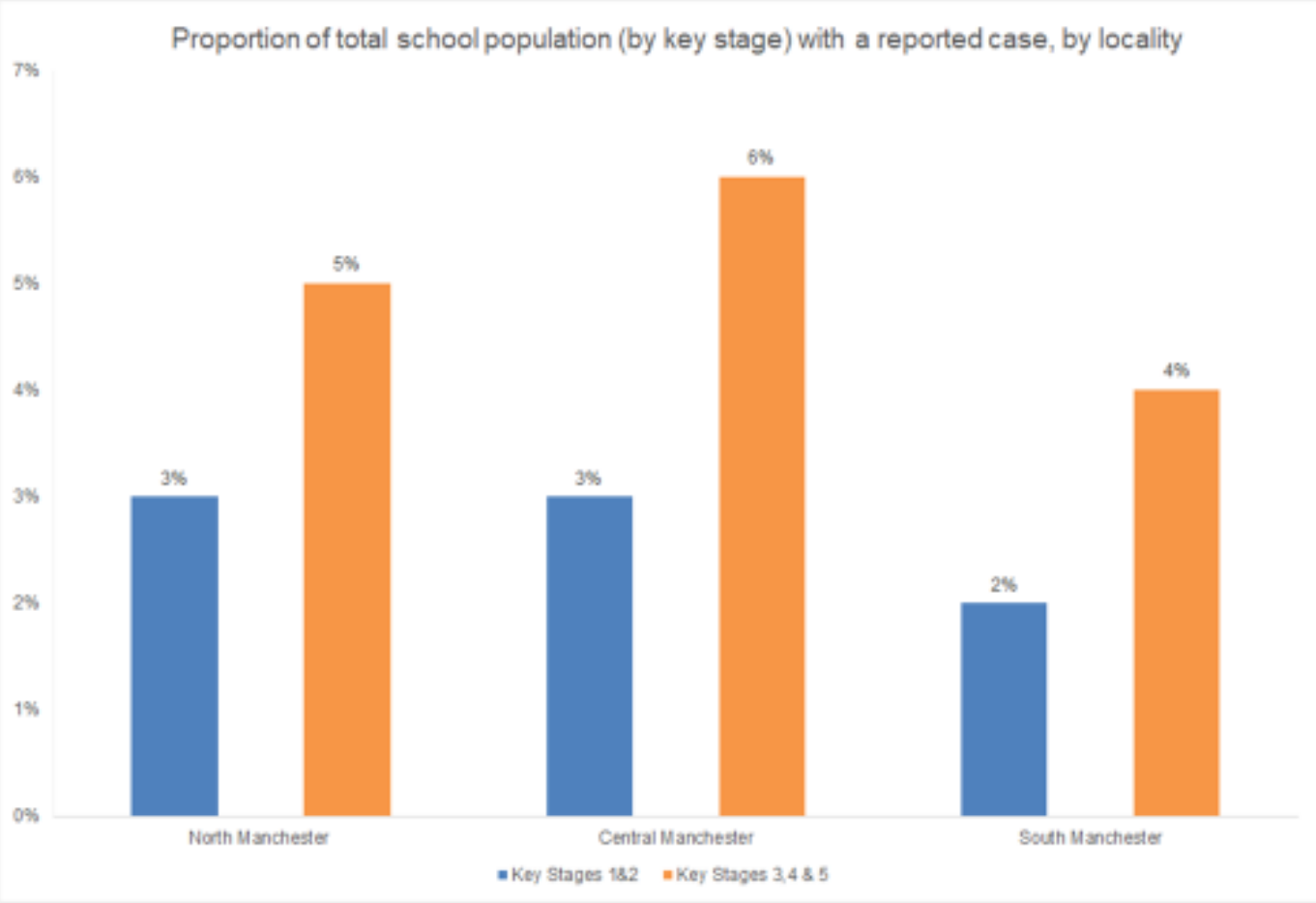
This had an associated impact on the numbers of reported cases. In the summer term of 2021, Delta became the dominant variant.

Levels of engagement with schools throughout the year – How was the Manchester Test & Trace notification form used?

Primary Schools	Secondary Schools
• **98%** of primary schools in Manchester reported cases via the notification form. This equates to 138 of the 141 primary schools (this does not include special primary schools). • Primary schools used the form almost daily during term time to notify Manchester Test and Trace of reported cases (average time between notification was 0.8 days)	• **100%** of secondary schools in Manchester reported cases via the notification form (this does not include special secondary schools). • Secondary schools used the form almost daily during term time to notify Manchester Test and Trace of reported cases (average time between notification was 0.1 days)
Both primary and secondary schools notified Manchester Test and Trace of the case within a maximum of 48 hours of the child testing positive.	

The Manchester Test and Trace notification form was received well and used by the majority of Manchester schools. Engagement was strong throughout the academic year. This suggests that this reporting mechanism was effective for schools to communicate with Manchester Test and Trace.

What proportion of pupils tested positive or were identified as contacts in school?

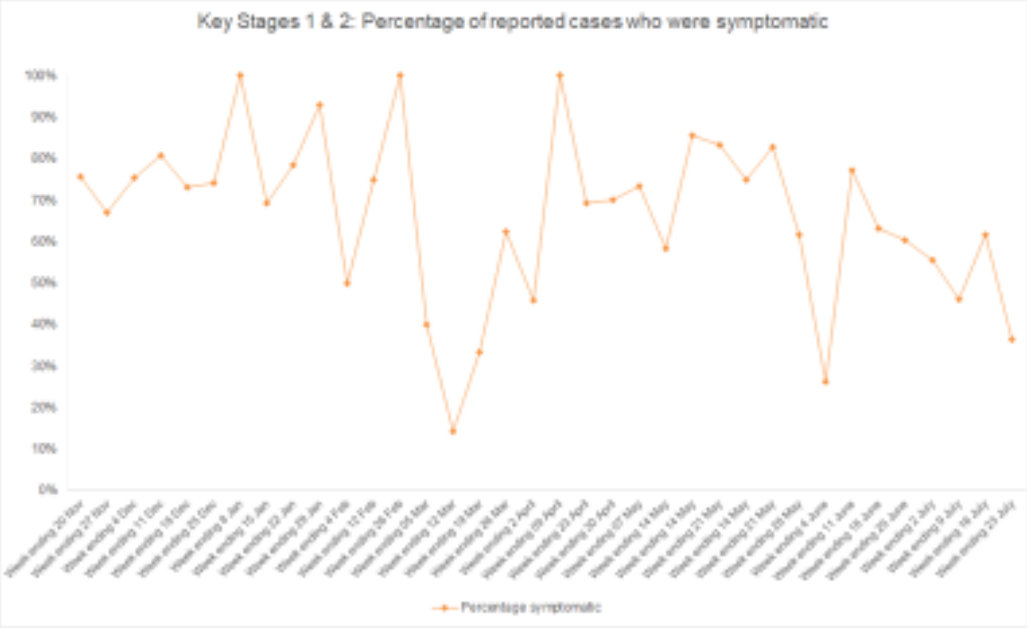


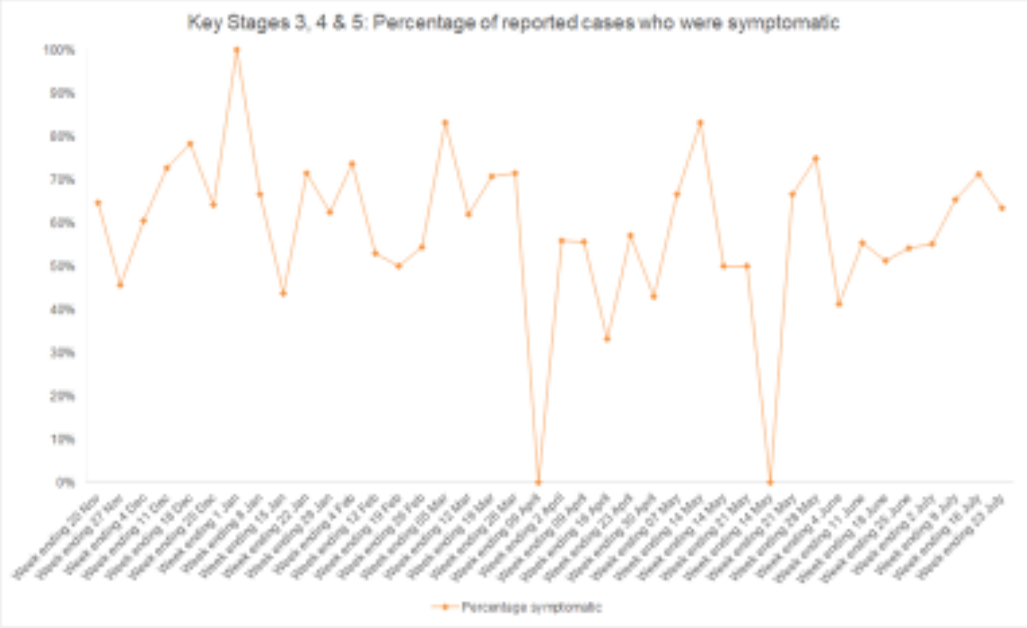
Stand-alone sixth-form colleges, and special primary and secondary schools are not included

Analysis of reported cases to Manchester Test and Trace against total school population indicates that a greater proportion of the secondary school population in Central had a reported case. Due to the association between testing and reported cases, this may be due to targeted school testing.

Primary and Secondary schools in South had the smallest proportion of their whole-school population with a reported case.

Tracking symptoms over time





Key Stages 1&2

There did not appear to be a change over time in the proportion of reported cases from Key Stages 1&2 (aged between 5 – 10 years old) who declared symptoms

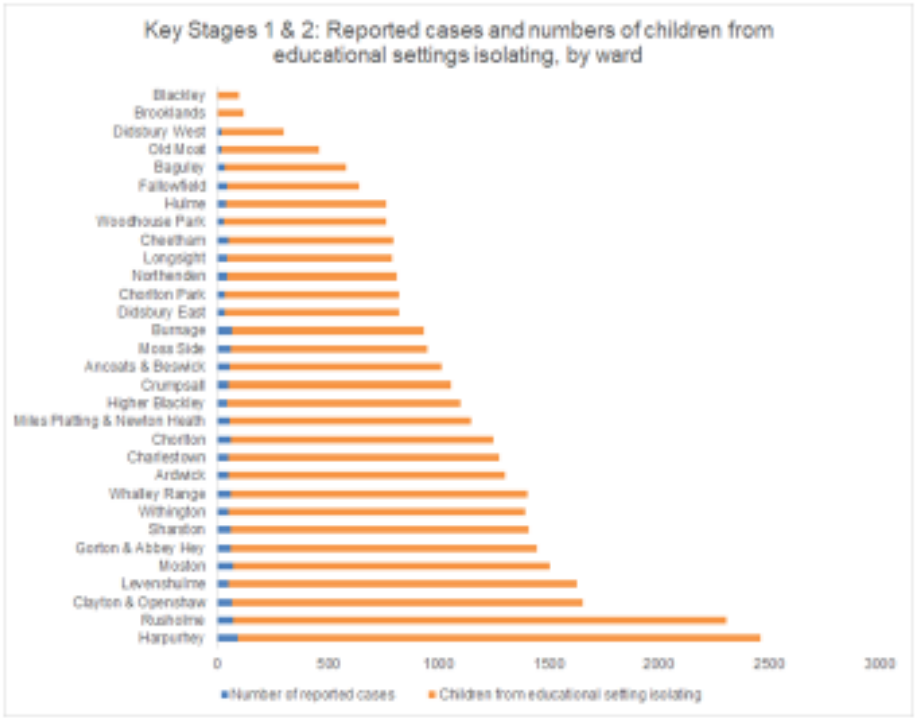
- Term 1 (Sept to Dec): 62% were symptomatic
- Term 2 (Jan to March): 64% were symptomatic
- Term 3 (April to July): 60% were symptomatic

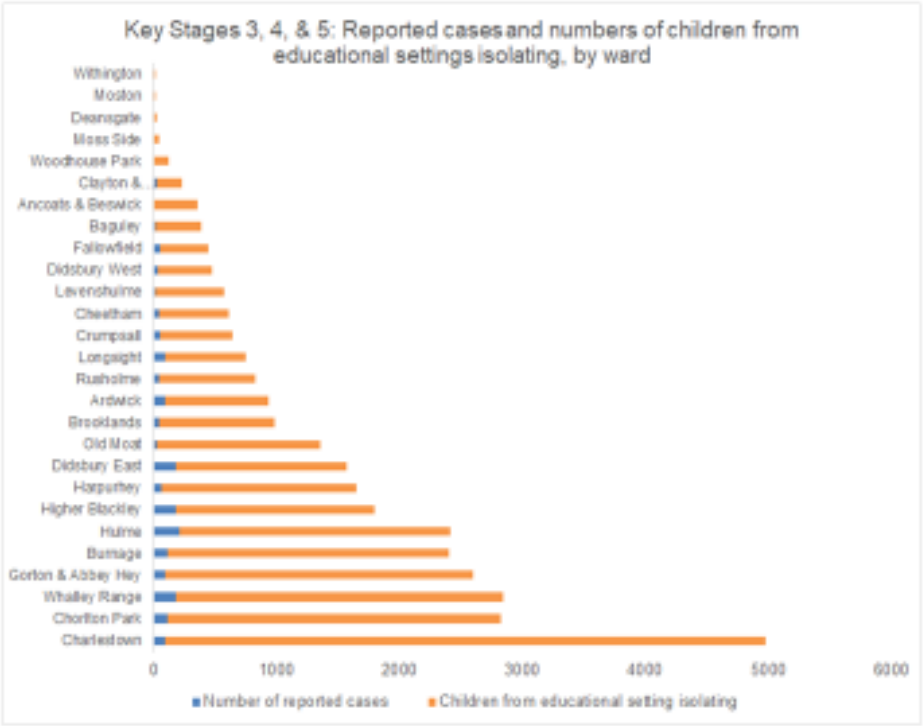
Key Stages 3, 4 & 5

Children and young adults from Key Stages 3, 4 & 5 (11 – 17) reported a greater proportion of symptomatic cases during the Autumn term (Sept – Dec 2020)

- Term 1 (Sept to Dec): 74% were symptomatic
- Term 2 (Jan to March): 58% were symptomatic
- Term 3 (April to July): 58% were symptomatic

Did educational settings in some wards identify more contacts who needed to self-isolate than others?

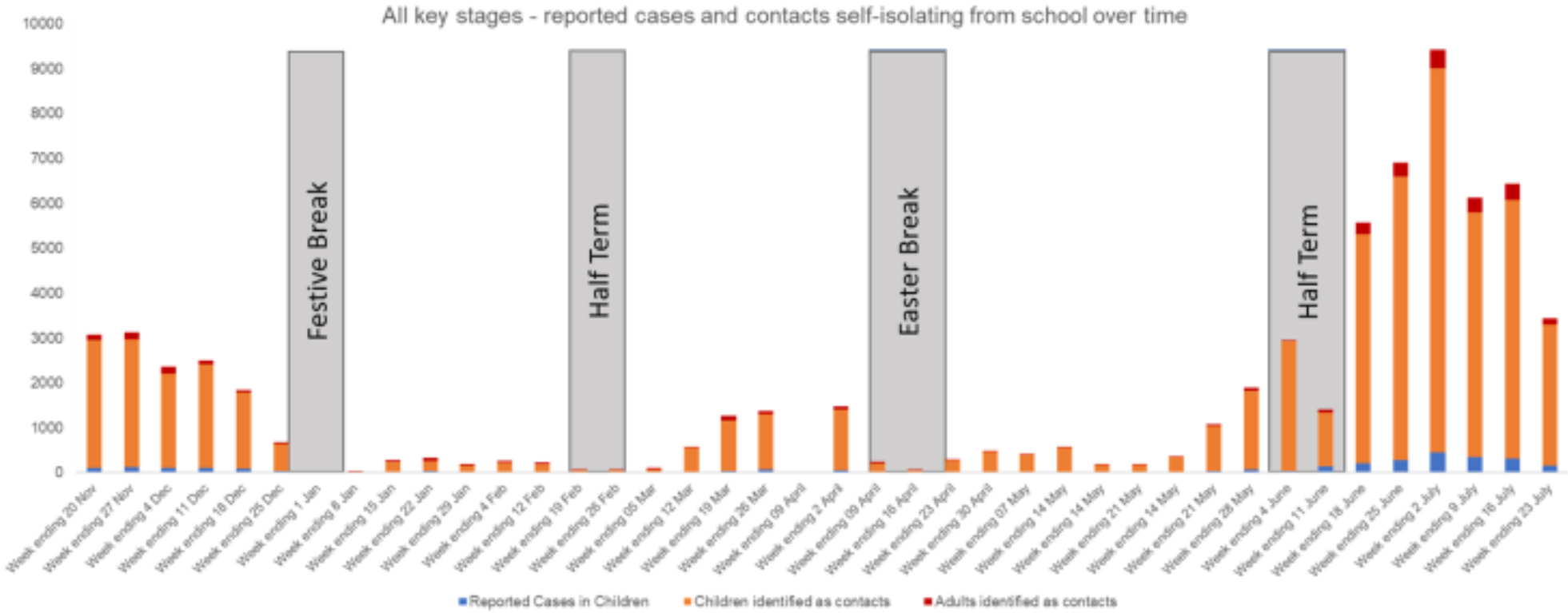




- Across key stages 1 & 2, a mean average of 22 contacts were identified per reported case.
- The ward with the highest *proportion* of contacts per case in KS1&2 was Blackley, where there were 48 isolated children from school per case. Blackley, however, had the lowest number of reported cases.
- The ward with the lowest proportion of cases to contacts was Burnage with 13 contacts identified per case.

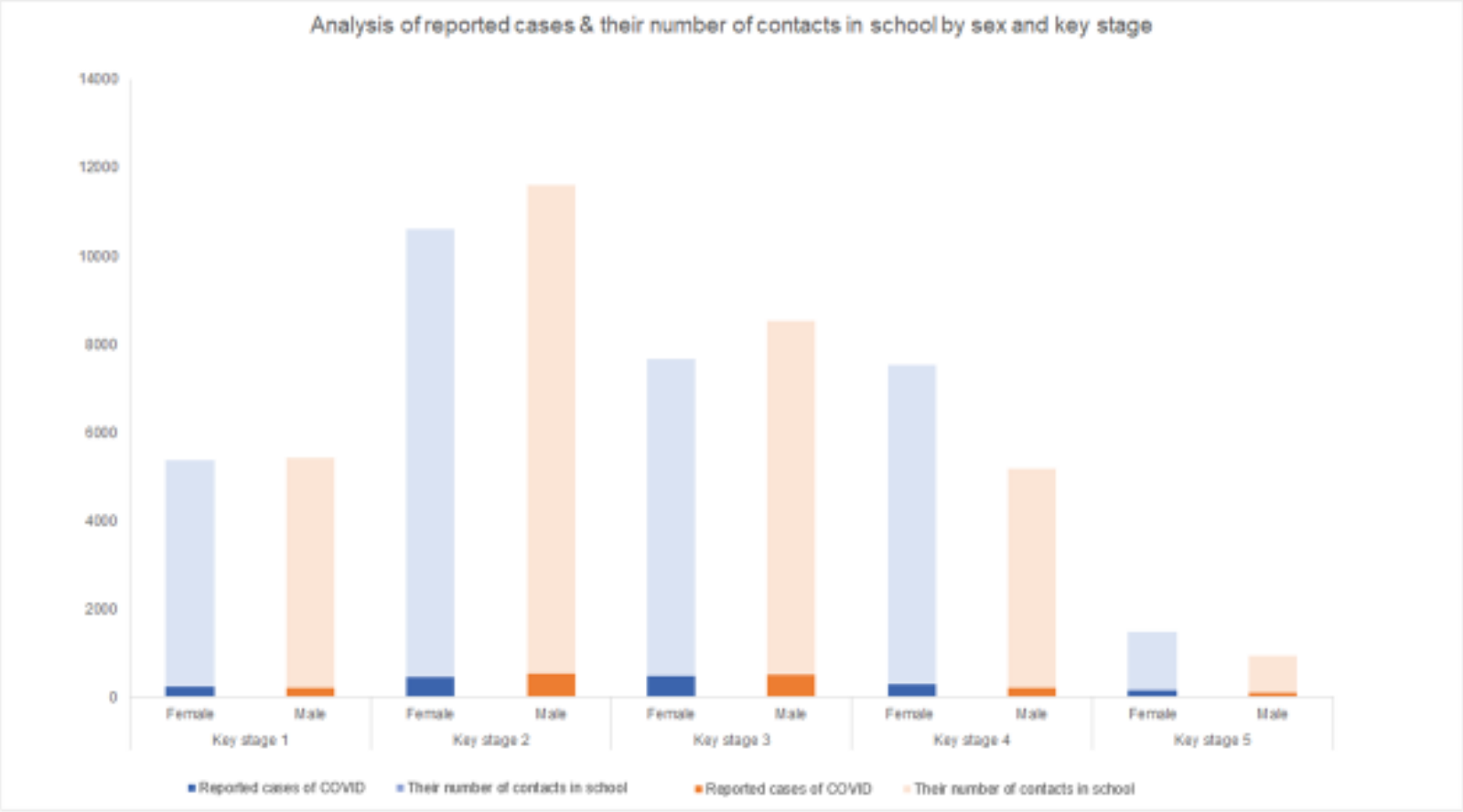
- Across key stages 3,4 & 5, a mean average of 22 contacts were identified per reported case.
- The ward with the highest *proportion* of contacts per case in KS 3,4,5 was Charlestown, where there were 52 contacts amongst children from school per case.

How did the number of people self-isolating from school settings change over time?



The differing numbers of contacts in school reflects the relative attendance in school linked to restrictions, the impact of half term mixing, and the rise in Delta cases.

Who was more likely to have contacts in school?



Females in Key Stage 4 had the highest number of contacts per case – 26 contacts for each female reported case

The largest disparity between average contacts was also found in Key Stage 4, with 26 contacts for each female case and 22 contacts for each male case

However, considering cases across all key stages, there is a minimal difference; on average females and males both had 19 contacts per reported COVID-19 case

What impact did COVID-19 have on lost face-to-face teaching time across Manchester Schools?

On average, each school age child in Manchester lost 43 days of face-to-face teaching during 2020/21

This has been calculated using data schools submitted to the Department for Education on non-attendance.

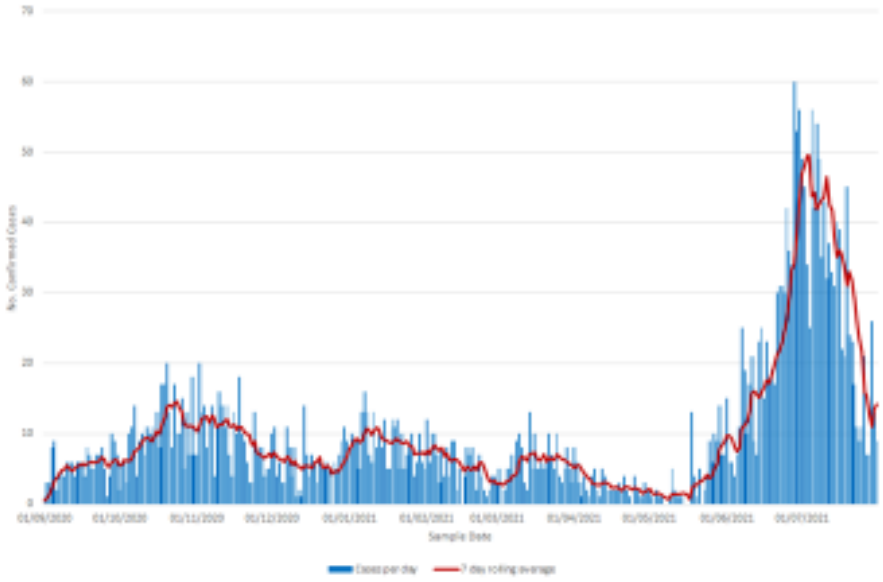
The figure includes hours of face-to-face teaching lost during periods of national lockdown, and also includes those who were unable to attend school settings because they were:

- Isolating because they tested positive
- Isolating because they were symptomatic
- Isolating as household, social or community contacts
- Isolating as school contacts
- Shielding
- Quarantining due to travel

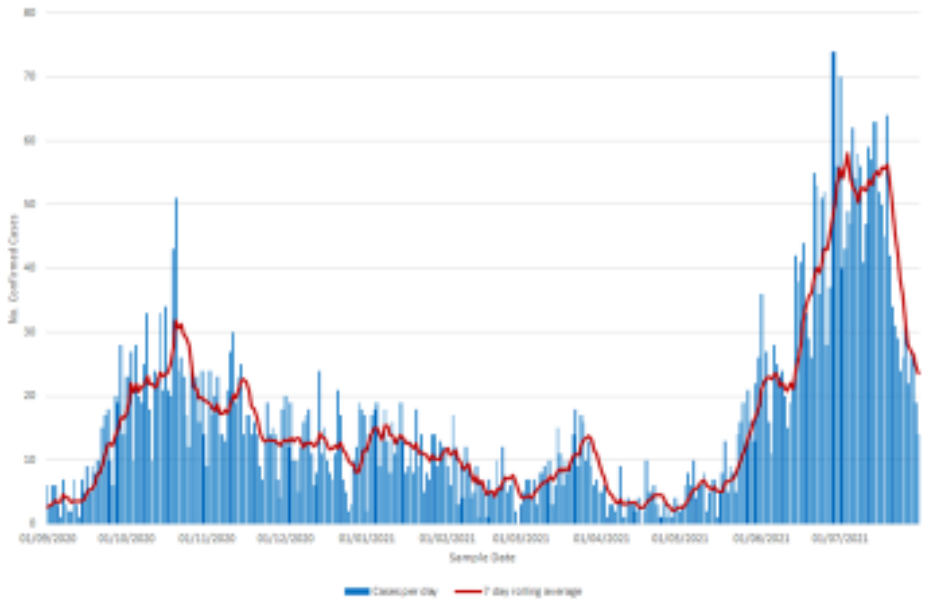
This considerable impact of the pandemic on time spent in school only stresses the importance and timeliness of '2022 Our Year' - Manchester's upcoming year-long campaign focusing on children and young people that also supports our ambition to being recognised by UNICEF as a child-friendly city

How did confirmed cases of COVID-19 in school age children living in Manchester change over the course of the 2020/21 academic year (1 September 2020 to 31 July 2021)?

Primary school age children (5-10 years)



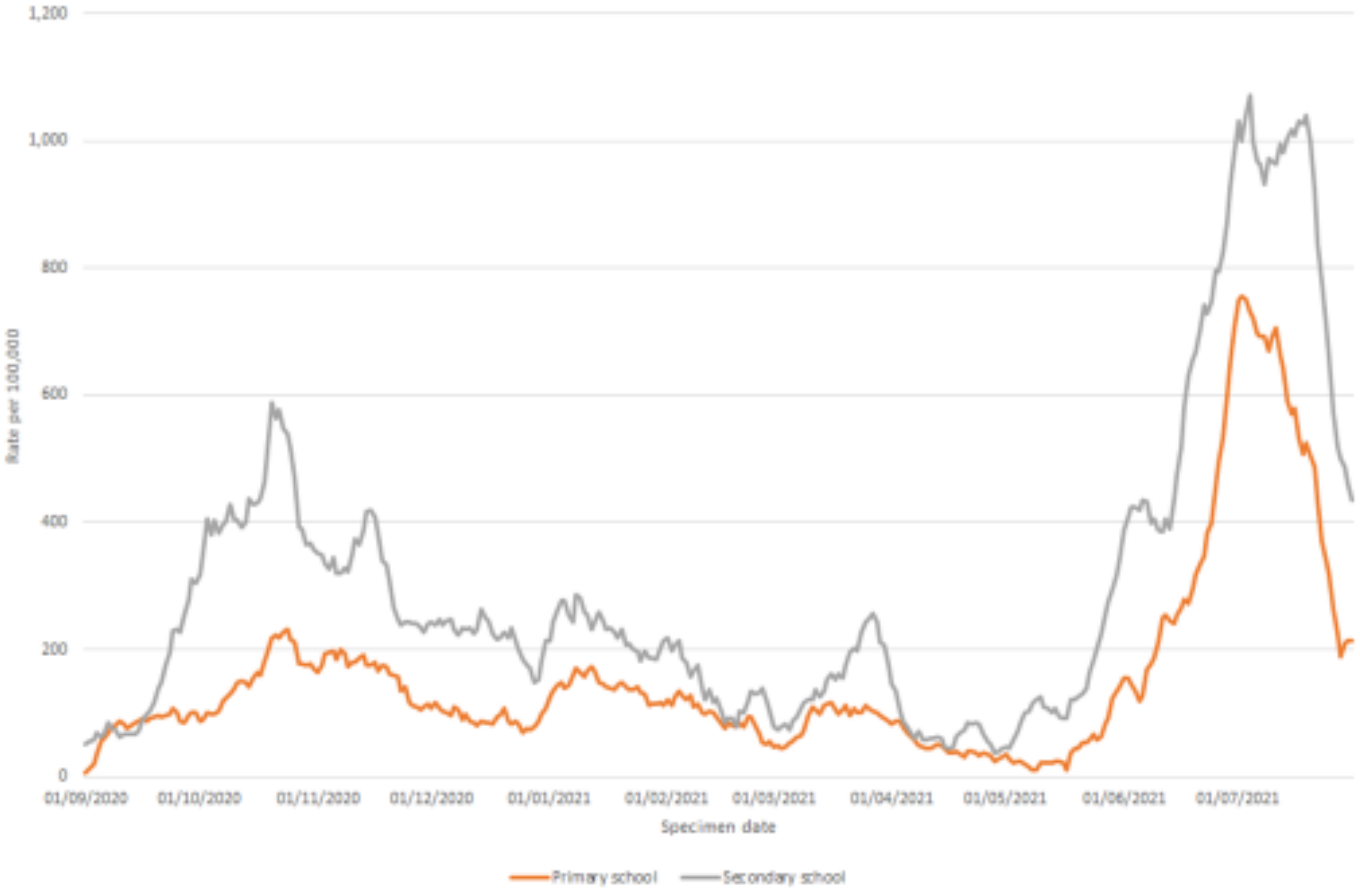
Secondary school age children (11-16 years)



The broad trend of confirmed cases over time in primary and secondary school age children followed similar epidemic curves. The spring / summer peak (coinciding with the emergence of the new Delta variant) in secondary school-age children was greater. The trends broadly mirror the patterns of testing.

How did confirmed cases of COVID-19 in school age children living in Manchester change over the course of the 2020/21 academic year (1 September 2020 to 31 July 2021)?

Rate per 100,000 population based on ONS Mid-2000 Population Estimate



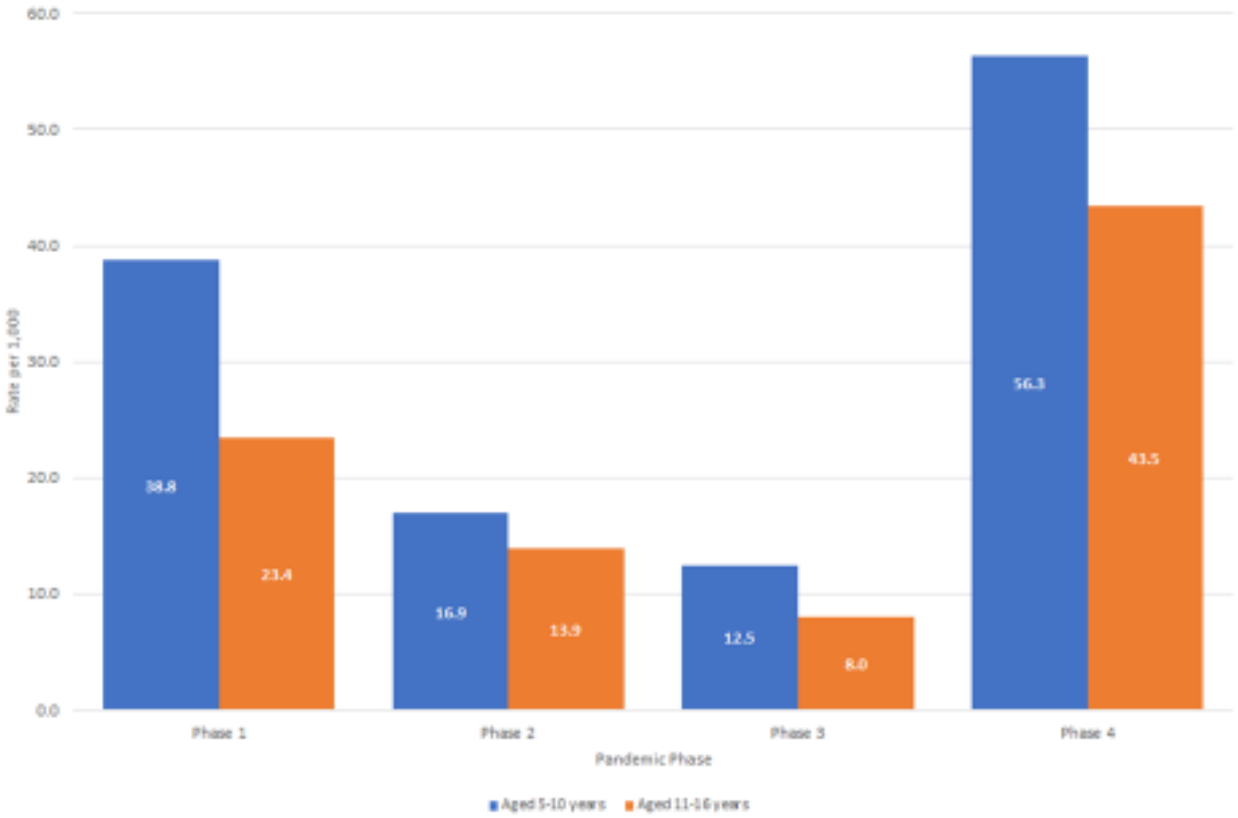
The case detection rate (number of new confirmed cases of COVID-19 per 100,000 resident population) has consistently been higher in secondary school age children compared with primary school age children, particularly at the beginning and end of the academic year when whole school testing took place in secondary schools.

Cases rose in May-July following the growth of the Delta variant.

This chart includes all children living in Manchester irrespective of the location and type of school attended.

How did confirmed cases of COVID-19 in school age children living in Manchester change over the course of the 2020/21 academic year (1 September 2020 to 31 July 2021)?

Rate per 1,000 population based on ONS Mid-2000 Population Estimate

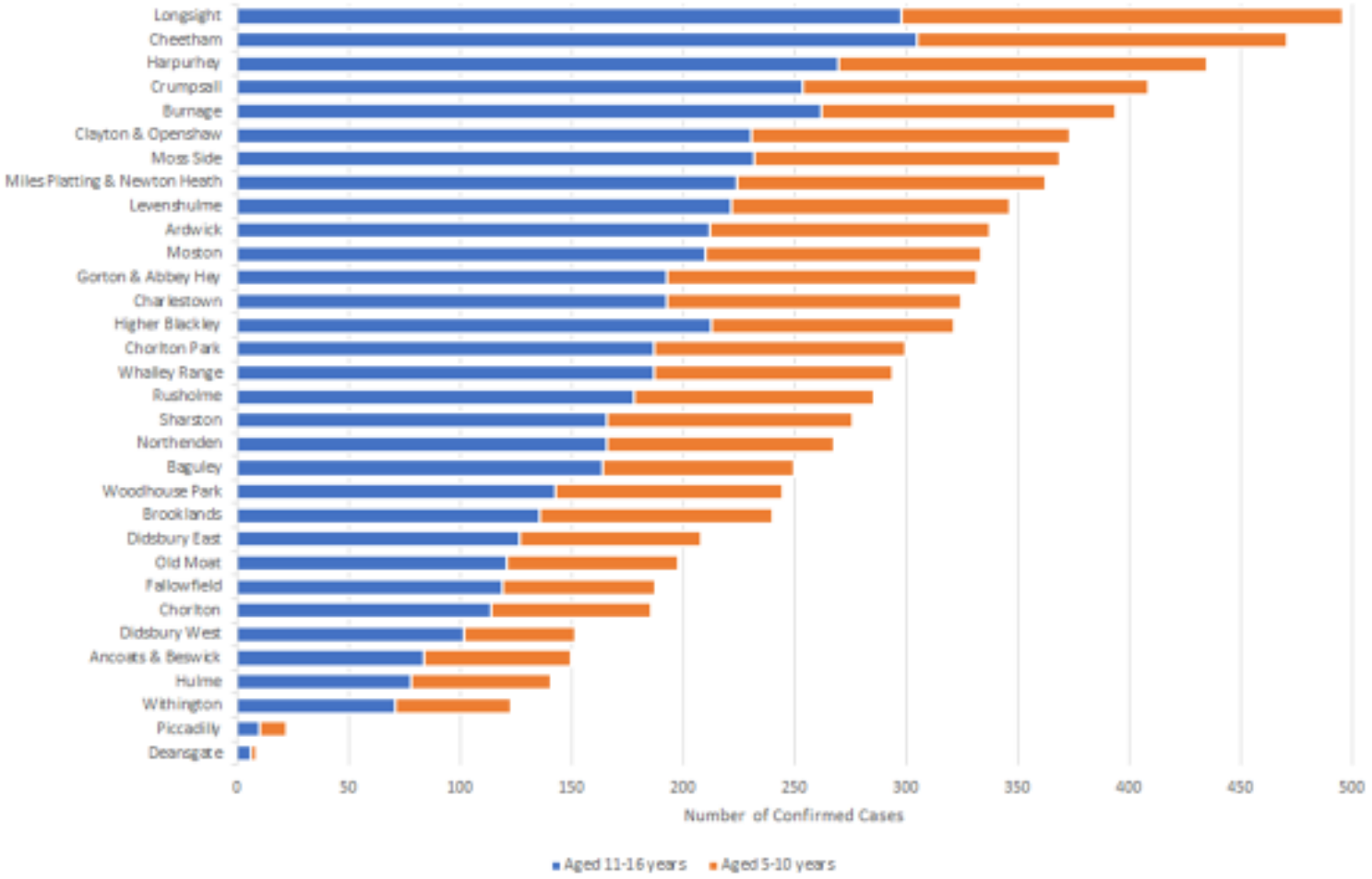


The trend of confirmed cases during the academic year 2020/21 can be broken down into 4 distinct time phases based on variant prevalence and national measures, specifically:

- Early September to mid-December (Autum term and emergence of Alpha variant)
- Mid-December 2020 to early March 2021 (Christmas break and second national lockdown linked to Alpha variant)
- March to May (recovery)
- Late-May to end July (end of Spring terms and emergence of Delta variant).

Rates of COVID in school age children were highest in Phase 1 and 4 of the pandemic when whole school testing was in operation at the beginning of the school year and again in June and July in response to outbreaks in school settings. Rates were lower during and after the closure of schools as part of national restrictions.

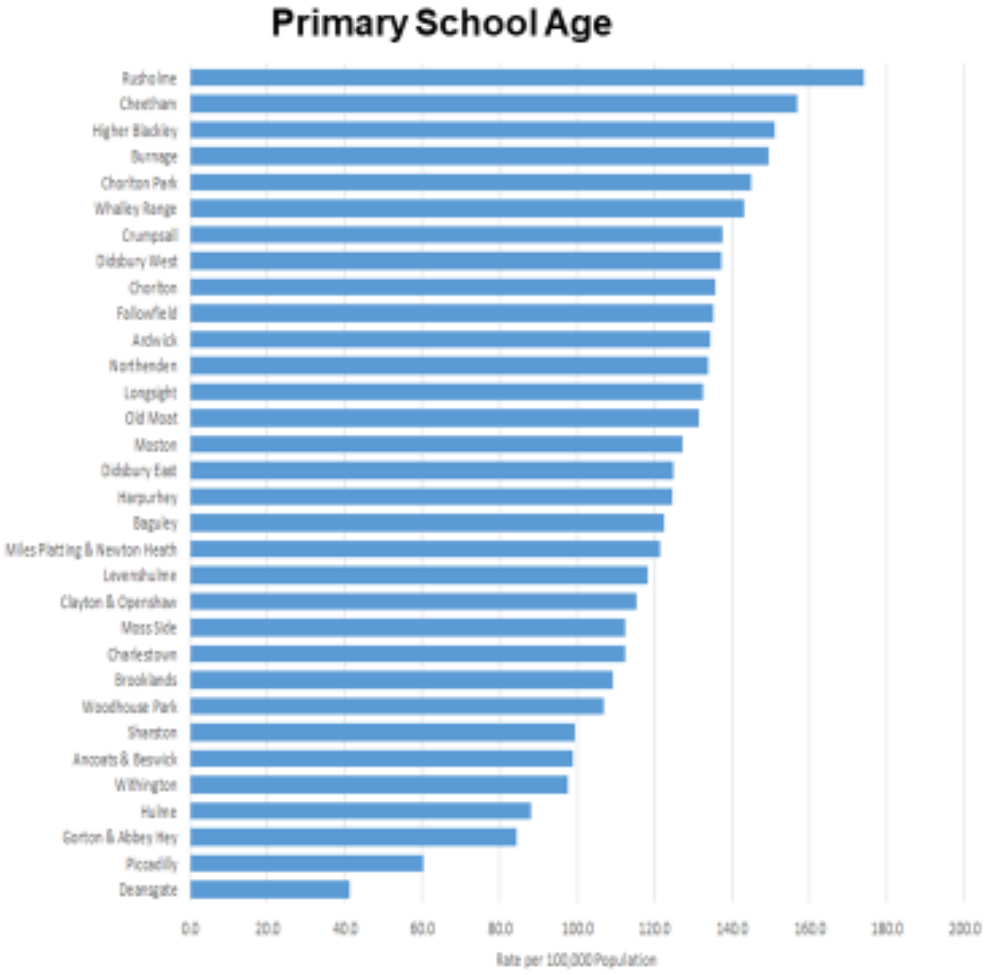
Number of confirmed cases of COVID-19 in school age children resident in Manchester by ward of residence, 2020/21 academic year (1 September 2020 to 31 July 2021)

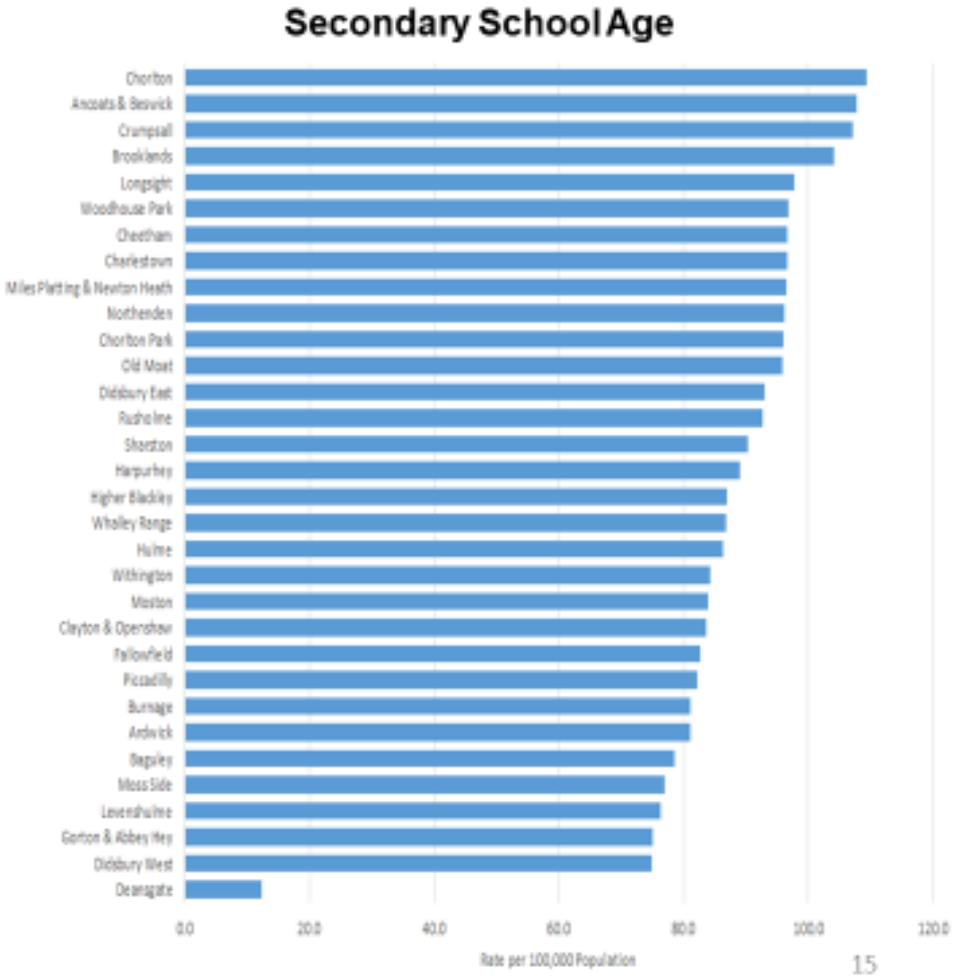


The number of confirmed cases of COVID-19 over the academic year was higher in school age children living in more deprived wards (particularly in the north of the city) and in wards with larger ethnic minority populations including Longsight, Cheetham, Crumpsall, Moss Side and Levenshulme.

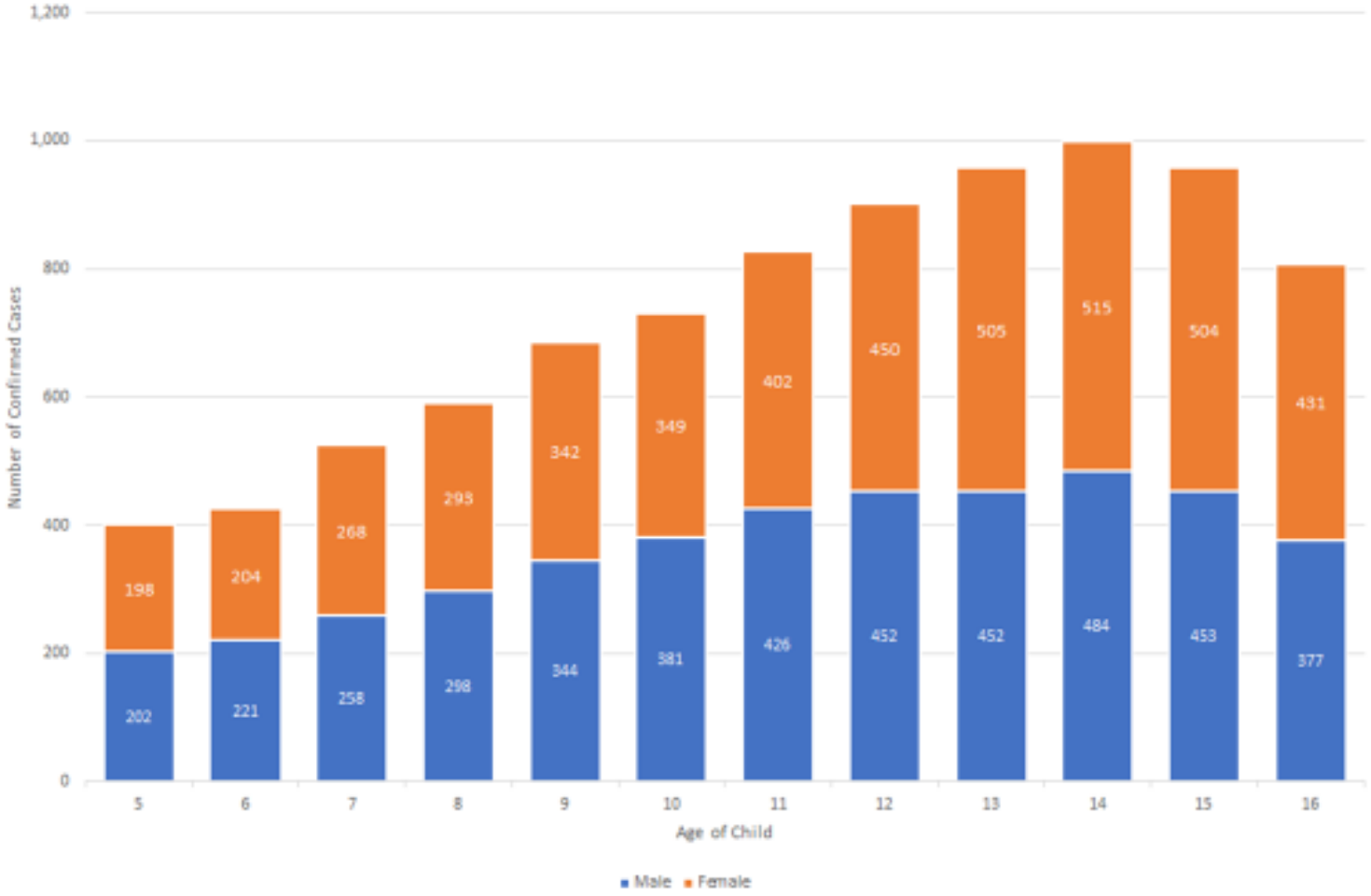
In part, this reflects the larger family sizes and greater number of children living in these wards.

Number of confirmed cases of COVID-19 in primary and secondary school age children resident in Manchester per 1,000 population by ward of residence, 2020/21 academic year (1 September 2020 to 31 July 2021)





Number of confirmed cases of COVID-19 in school age children resident in Manchester by single year of age and sex, 2020/21 academic year (1 September 2020 to 31 July 2021)

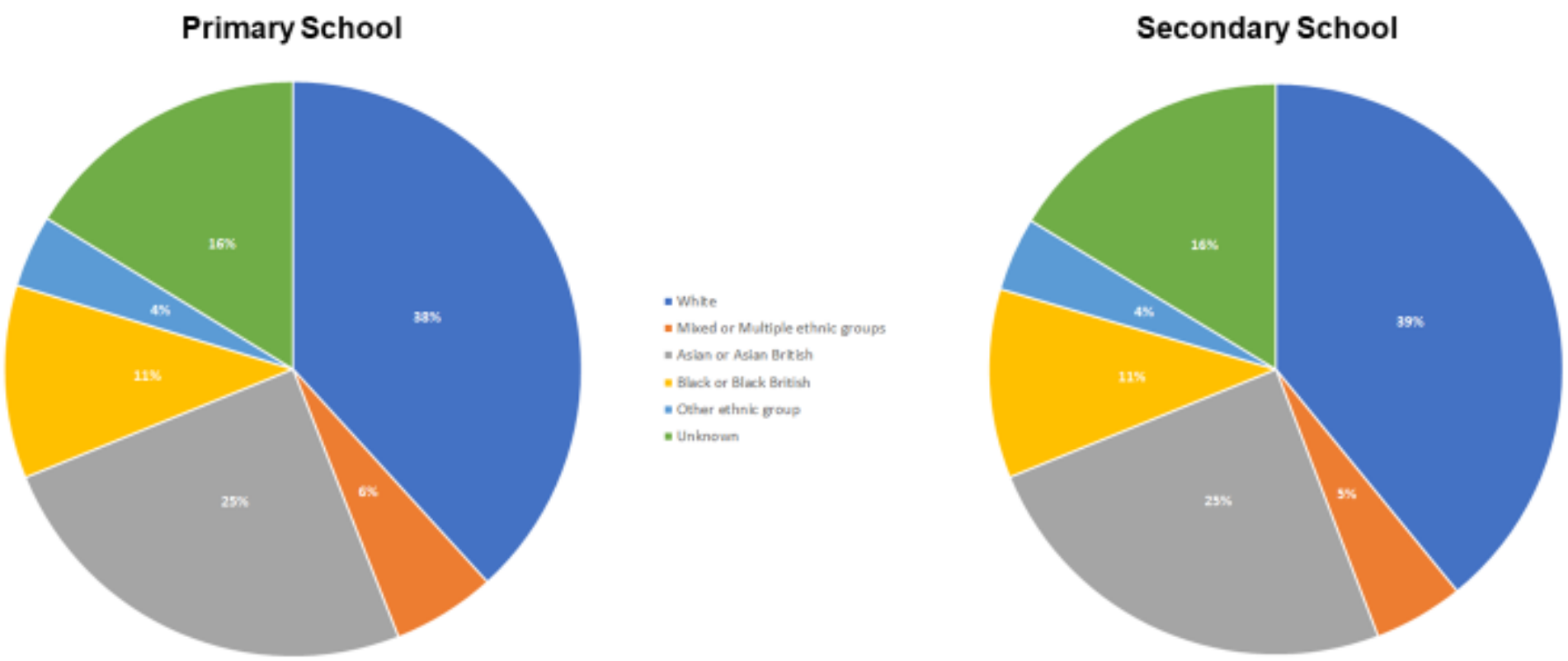


The number of confirmed cases of COVID-19 was highest in secondary school children between 12 and 15 years of age.

Overall, there were more cases in girls than boys, particularly in secondary school age children.

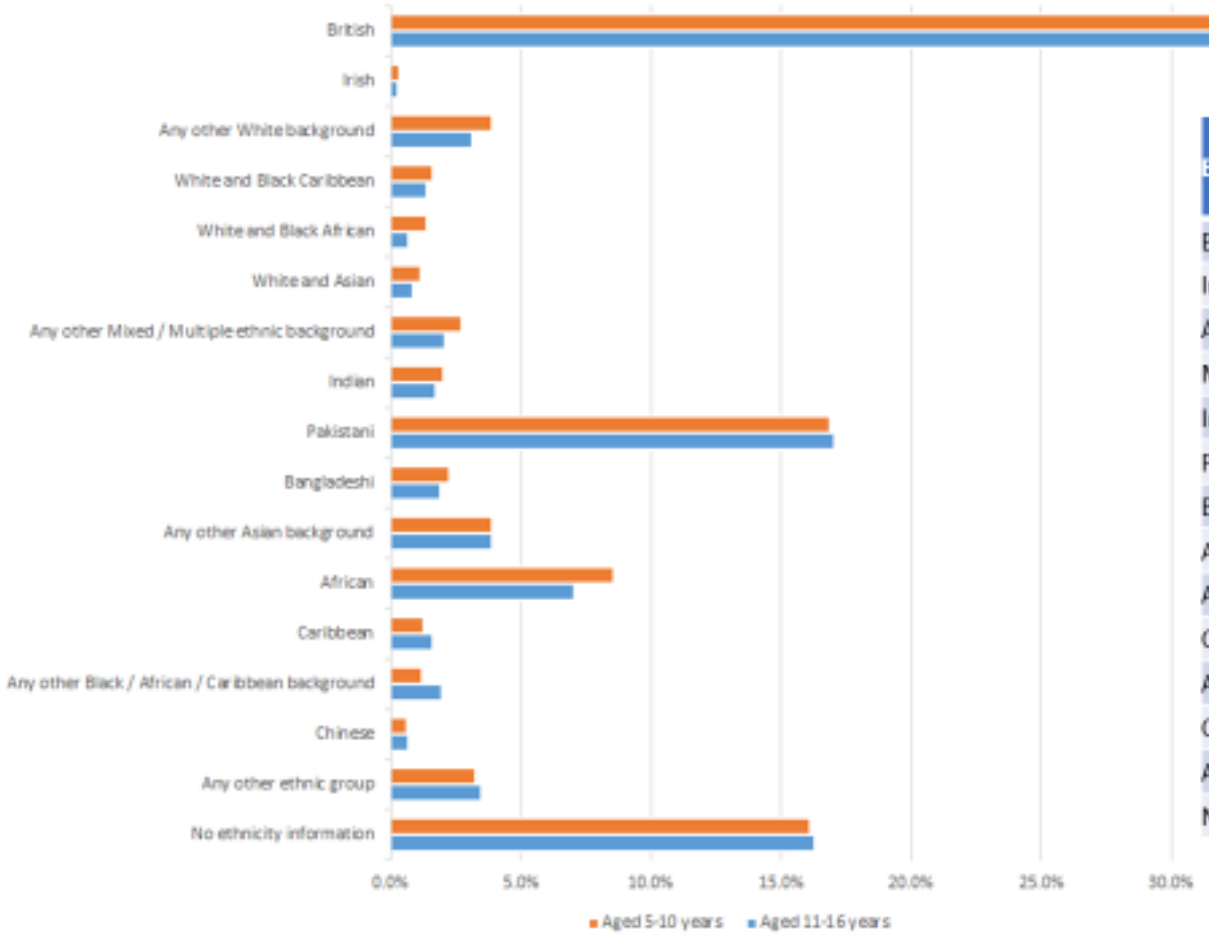
In primary school age children, the gender split was more equal.

Percentage of confirmed cases of COVID-19 in school age children resident in Manchester by broad ethnic group, 2020/21 academic year (1 September 2020 to 31 July 2021)



The pattern of confirmed cases of COVID-19 by broad ethnic group was similar in primary and secondary school aged children.

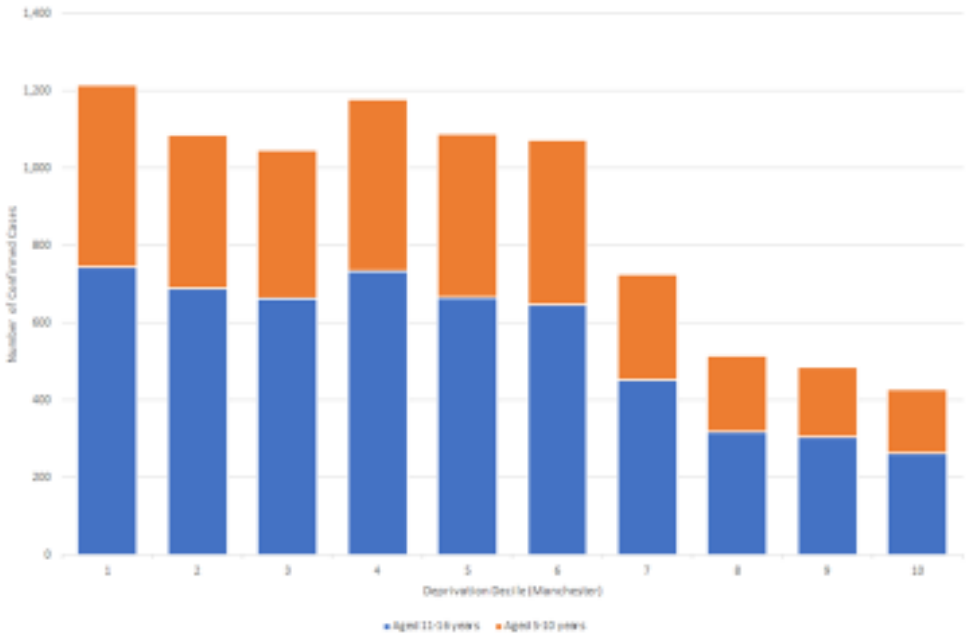
Percentage of confirmed cases of COVID-19 in school age children resident in Manchester by ethnic group, 2020/21 academic year (1 September 2020 to 31 July 2021)



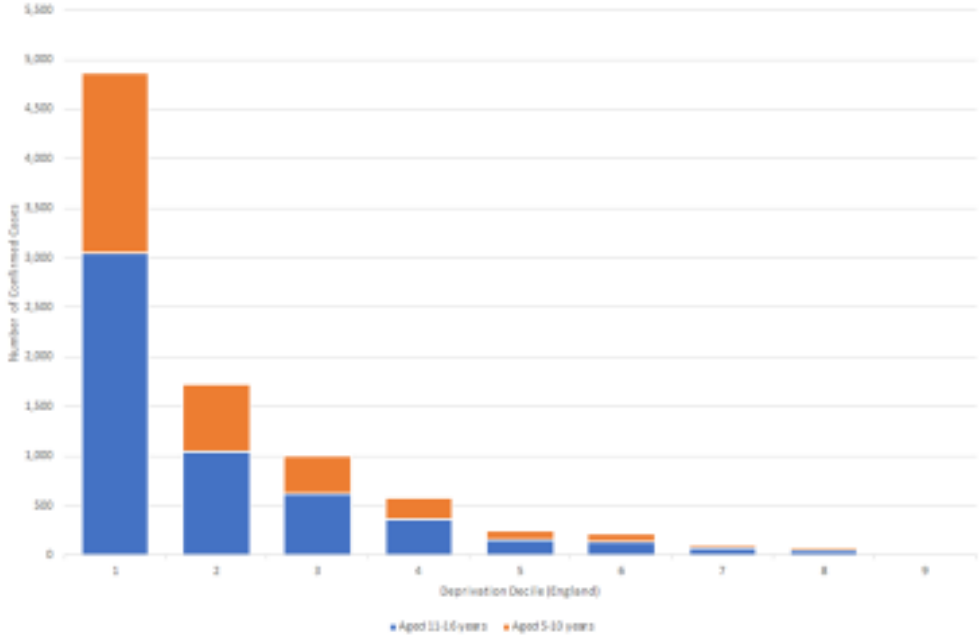
Ethnic Group	Primary school age (5-10 years)	Secondary school age (11-16 years)
British	32.6%	35.7%
Irish	0.3%	0.3%
Any other White background	3.9%	3.2%
Mixed / Multiple ethnic background	7.6%	5.1%
Indian	2.0%	1.8%
Pakistani	16.9%	17.1%
Bangladeshi	2.3%	1.9%
Any other Asian background	3.9%	3.9%
African	8.6%	7.1%
Caribbean	1.3%	1.6%
Any other Black background	1.2%	2.0%
Chinese	0.7%	0.7%
Any other ethnic group	3.2%	3.5%
No ethnicity information	16.1%	16.3%

Confirmed cases of COVID-19 in school age children resident in Manchester by deprivation decile based on IMD 2019, 2020/21 academic year (1 September 2020 to 31 July 2021)

Local deprivation deciles (where 1 is most deprived 10% of LSOAs in MANCHESTER)

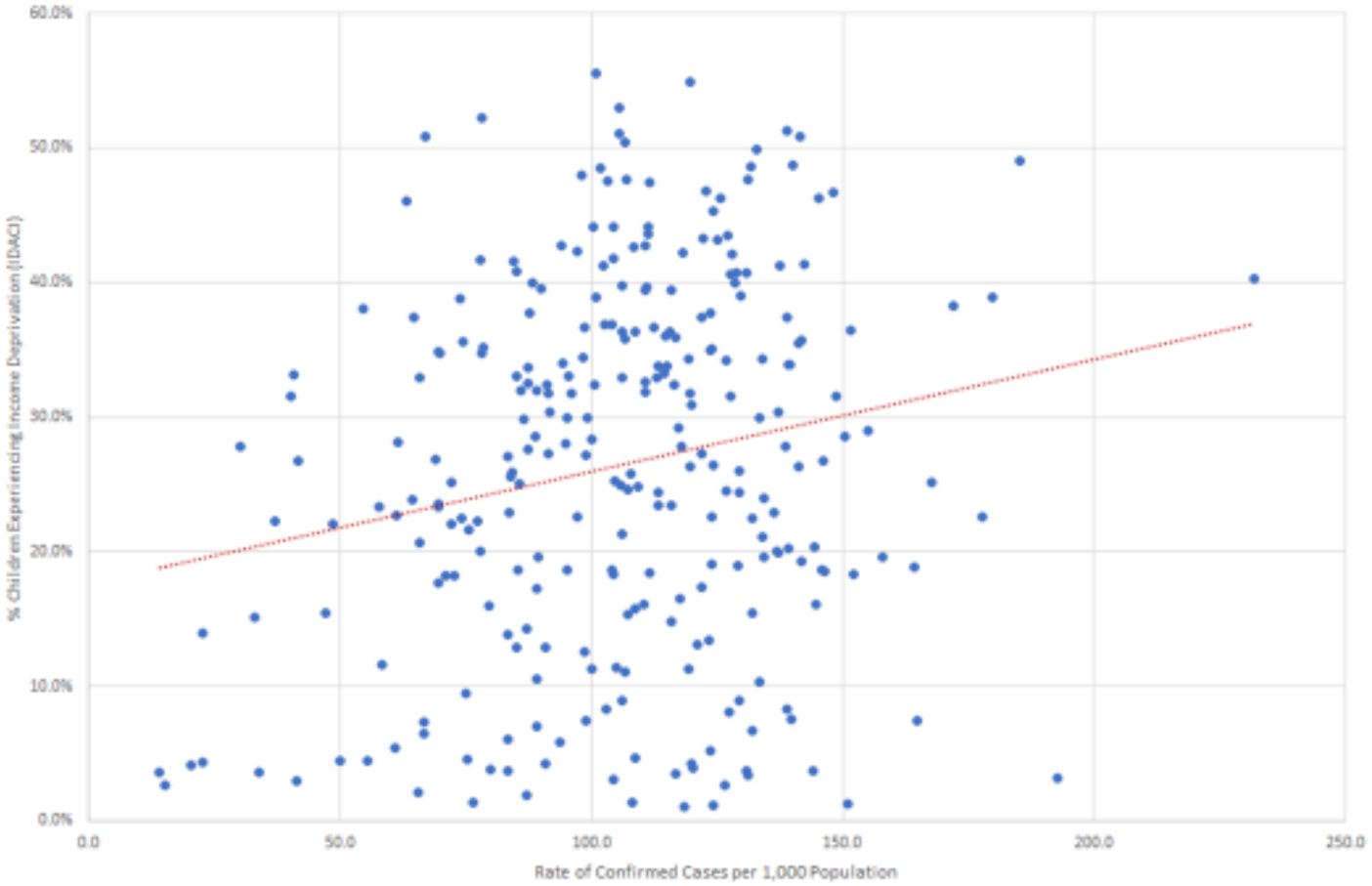


National deprivation deciles (where 1 is most deprived 10% of LSOAs in ENGLAND)



Have children experiencing deprivation been more likely to catch COVID?

Rate of confirmed cases of COVID-19 per 1,000 population and percentage of children experiencing income deprivation (IDACI 2019) by LSOA, 2020/21 academic year (1 September 2020 to 31 July 2021)



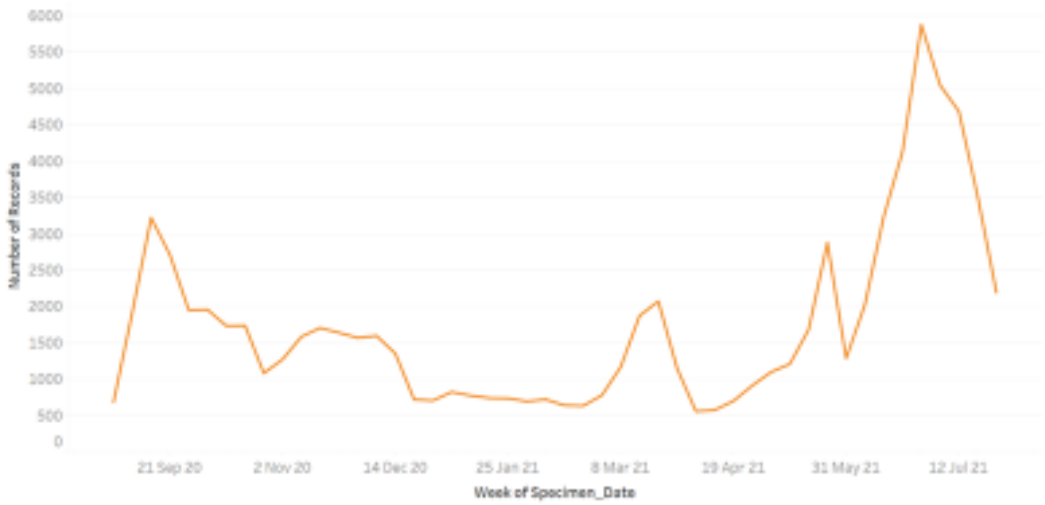
There is a moderate link (r^2 = 0.0374) between the rate of COVID-19 in school age children and the proportion of children experiencing income deprivation at LSOA level.

This illustrates that deprivation is only one of a number of factors that impacts on the risk of infection. Other risk factors include living in larger, multi-generational households and in households where family members are employed in higher risk occupations.

What were the testing patterns over time?

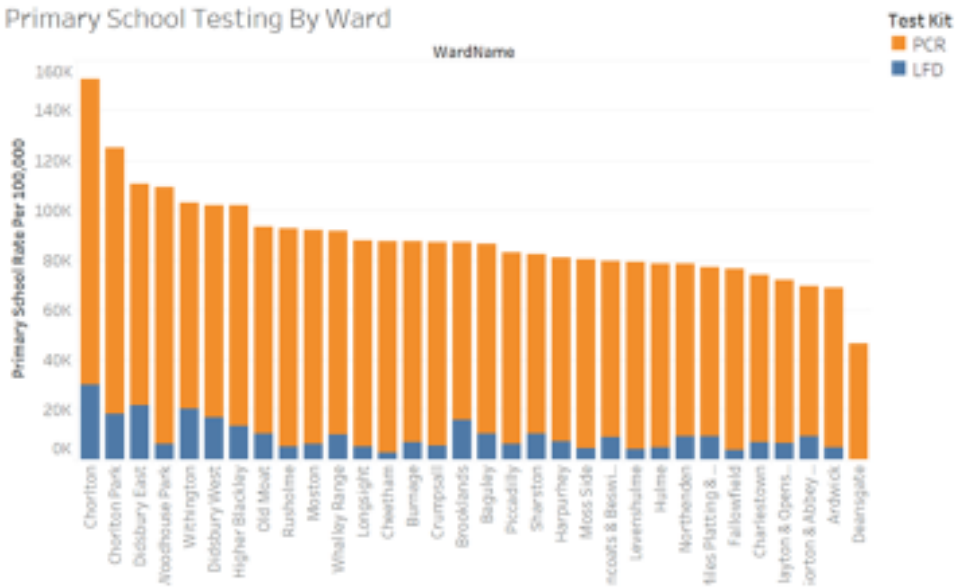
LFD Testing Over Time

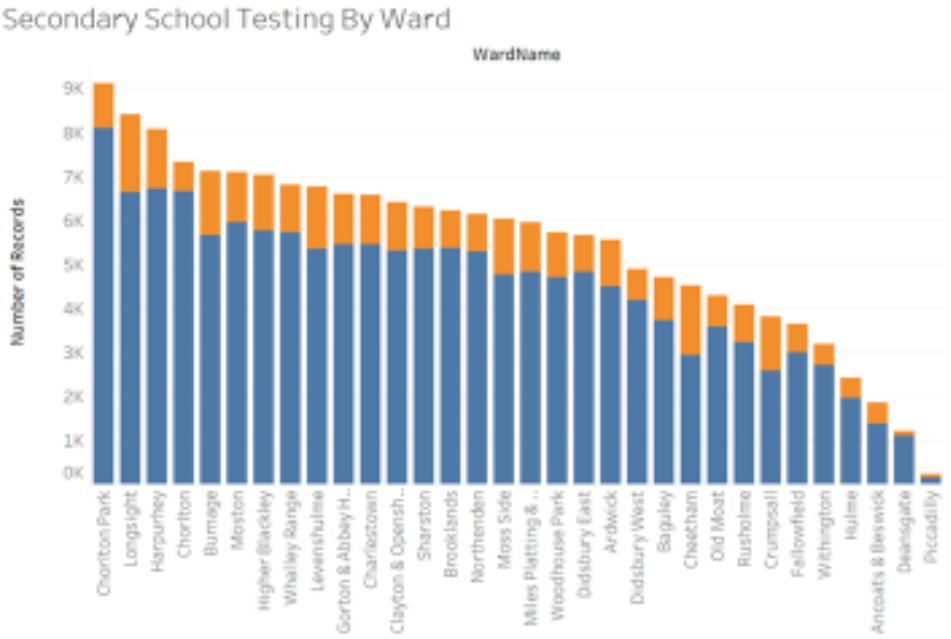
PCR Testing Over Time



Testing patterns in school-age children were influenced by the regulations requiring lateral flow device tests (in the Winter term) and by targeted school testing as a result of the increasing cases from Delta (particularly in the Summer term).

How have testing patterns varied by ward?





When looking at both types of COVID-19 Test (lateral flow test devices (LFD)) and PCR (polymerase chain reaction) across primary and secondary schools, there is variation in the propensity of schools in wards to engage with COVID-19 testing.

6.0 Conclusions

6.1 Schools and school-age children across Manchester have been adversely affected during the Coronavirus pandemic, losing a notable number of face-to-face teaching hours.

6.2 Analysis of confirmed cases in school-age children and school-based testing clearly demonstrates the association between focused testing activities and COVID-19 case detection. This has the result of 're-balancing' usual testing patterns: Manchester's least deprived wards have demonstrated increased engagement with and propensity to test.

6.3 The majority of reported cases across both primary (Key Stages 1 & 2) and secondary (Key Stages 3, 4 & 5) throughout the academic year were symptomatic; this suggests that maintaining and promoting awareness of Coronavirus symptoms is important for reducing transmission.

6.4 Analysis of confirmed cases indicates that confirmed cases in school age children are affected by similar socio-economic and demographic factors to adults (I.e. income deprivation, living in large, multi-generational households, and living with family members who work in high-risk occupations). Communications raising awareness of these factors should include children in their content.

6.5 School children in Key Stage 4 (aged 12 – 15) experienced the highest number of confirmed cases over the academic year: females aged 12 – 15 had both the highest number of confirmed cases and the highest average number of contacts. Given requirements for both cases and contacts to self-isolate this will have adversely impacted their time spent in face-to-face education. There may be a need to focus 'catch-up' resources on this cohort in particular and to deliver focused communications / awareness-raising.

6.6 Confirmed cases were higher in the Summer 2021 term in both Primary and Secondary age school-children. It may be prudent to consider prioritizing material covered in this term in particular when focusing 'catch-up' efforts.

6.7 This analysis has informed local guidance that will support schools through the autumn and winter months in preventing the transmission of COVID-19. The Director of Public Health and Director of Education will be writing to school leaders following the October half-term.

7.0 Recommendations

7.1 The Committee is asked to consider the report and note the conclusions.