



## **Covid-19 and reopening Scotland's schools**

### **A note from the Chief Medical Officer on the latest scientific evidence**

#### Introduction

This note sets out a brief summary of the latest scientific evidence of most relevance to the safe reopening of schools in Scotland.

#### Background

The Scottish Government (SG) has committed to being guided by scientific evidence in its response to Covid-19. It has also committed to monitoring that evidence closely as our knowledge of this new pandemic develops worldwide, changing our advice as new information becomes available. This note sets out in summary form the most salient scientific evidence currently available on 7 August 2020, placing this evidence in the context of Scotland's progress with suppressing the virus .

#### Prevalence of Covid-19 in Scotland

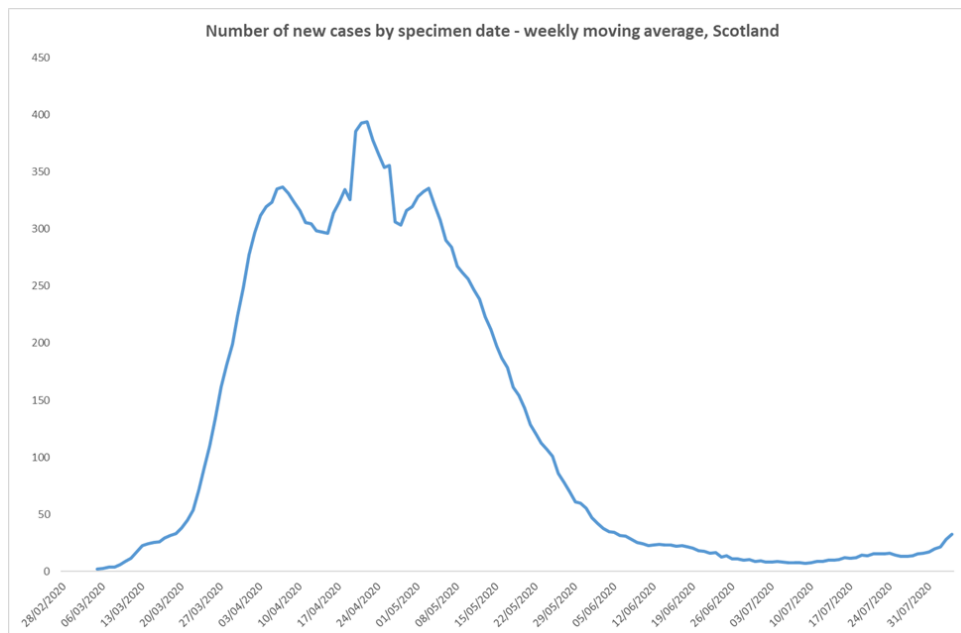
Schools are integral parts of the communities in which they are located, and school staff and pupils are sub-groups of the wider population. The most important factor in considering the risk of returning to school is therefore the prevalence of Covid-19 within the community – the infectious pool and how well this is being controlled. In considering when schools should re-open, taking account of SAGE modelling of the potential impact on R of a range of 'return to school scenarios', Independent SAGE advised that decisions on school opening should be guided by evidence that there are low levels of Covid-19 infections in the local community, and the ability to respond rapidly to new infections through a well-functioning local test, track and isolate strategy. This recognises that the likely impact of school reopening is highly dependent on current R and on the context within which schools are located.

The evidence here is encouraging. Although the recent outbreak in Aberdeen reminds us of the ongoing need for constant vigilance, the overall trends in Scotland are very encouraging. The Scottish Government's epidemiological model estimates that on 31 July there were around 25 new cases of Covid-19 in Scotland (compared to around 780 on 15 May), and the number of people in Scotland who could be infectious on this date was around 275 (compared to 10,100 on 15 May). Our estimates indicate this number is declining by around 24% each week, and will continue to decline at a similar rate over the next two weeks. The number of new cases shows a sustained decline since peaking in April even in the context of increased testing.

The number of hospital admissions of those with a positive case has shown a sustained decline since April. From 25 June to 15 July there was on average one admission per day. From 10 to 19 July there were 0 confirmed patients admitted to intensive care; in the latest week (to 2 August), 2 new Covid patients were admitted.



There has been a sustained decline in the number of deaths per week where Covid is recorded on the death certificate. There has been no such death for 21 consecutive days up to 6 August. SAGE's consensus view, as of 5 August, was that the value of  $R_t$  in Scotland was between 0.6 and 1.0.



In terms of school-age children and young people, the data are as follows:

As at 3 August, of the 18,694 positive Covid cases in Scotland, less than 1% involved children aged under 15 and around 2% involved children and young people aged under 20. This equates to 17 per 100,000 children under 5 years, 20 per 100,000 children 5-14 years and 76 per 100,000 young people aged 15-19 years.

There were no Covid-19 related deaths in Scotland for age groups 0-24 as at end June (the latest confirmed data) and less than 1% of COVID deaths have involved people aged under 45 years.

There have been no cases linked to any community school hubs which have been open throughout the epidemic.

This evidence is consistent with what has been observed internationally. Globally, Covid-19 has been reported in children and young people of all ages, but there have been many fewer confirmed cases in children than adults.

### Other evidence

The infection appears to take a milder course in children than in adults. While a small number of children have developed a significant systemic inflammatory response, clinical signs are in general very similar to other childhood respiratory infections and very few infected children develop severe disease. There is emerging evidence that children may be less likely to acquire Covid-19 than adults; and some evidence that children, who tend to have a less frequent and milder cough, have a limited role in transmitting the virus both between children and from children to adults. Contact tracing studies have identified very limited transmission by children in school settings. Children most frequently acquire Covid-19 from adults, rather than transmitting it to them.



We recognise that the evidence relating to older school-age pupils is less clear. Recent studies have demonstrated that they may play a greater role in transmission than was previously understood. That said, we need to continue to return to the likelihood of someone being infected in the first place and that is currently very low indeed in Scotland. Moreover, internationally there is little direct evidence of transmission from pupils to teachers – even where there have been localised clusters involving schools. This suggests that any risk to teachers is more associated with potential contacts with other school staff or parents/carers.

There is growing international evidence relating to the effects of re-opening schools on wider community transmission. We are monitoring this and evidence on paths of transmission closely. As with the analysis of English models mentioned above, WHO reports that modelling studies suggest a limited, but non-negligible, effect of school reopening on wider transmission in the community. Studies from Scandinavian countries, Ireland, France and the Netherlands indicate that school opening has made no discernible difference to community transmission and there is little or no onwards transmission in school settings. Analyses of infection clusters revealed that for children who were infected, transmission was traced back to community and home settings or adults, rather than among children in schools. The widely-quoted less positive experience of reopening in Israel was almost certainly caused by other issues such as low compliance with guidance, poor test and trace and over-confidence of the public in returning to “normal”. There was an extreme heatwave, crowded classes and distancing between pupils and teachers was not possible.

### Mitigations

There is clear evidence that the transmission of Covid is made much less likely by a range of mitigating measures. There is well-established evidence of the importance of paying close attention to respiratory and hand hygiene, good ventilation and use of outdoor spaces, and regular cleaning of high touch and shared surfaces. Ensuring that two metre distancing is maintained is particularly important for those at higher risk and is therefore more important for adults than for children. Extra consideration needs to be given to interactions between adult staff, and staff-parents.

Evidence from other settings and other epidemics highlights the role played in transmission by people moving between institutions. Careful thought needs to be given to the role of peripatetic teachers and others who move between schools.

There is a variety of evidence about face coverings. Some studies conclude these should be considered for all adults and older children in schools, especially if there is a high rate of viral transmission locally and physical distancing is not possible. Others point to the need to ensure they are worn and cleaned/disposed of appropriately, together with the risks that they may increase face touching, and suggest that given the low risk of transmission by children the detrimental developmental impacts of extended face covering use may be greater than the potential protective benefit.

### The benefits of school

There is clear scientific evidence of the harm done by not having schools open. The most recent collation by the SG of evidence on the impact of Covid-19 on children, young people and families identifies a range of harms as a result of not being in school. These include stress related to exams/the future, worries about transitions on return to school, isolation and loneliness and impacts on mental wellbeing. The psychological literature unequivocally shows that children rely on social interaction with their peers to meet their broad

developmental needs including learning, well-being and positive mental health outcomes. This evidence base is likely to grow as more children in more countries return to school over the coming weeks and months and will need to be reviewed regularly.

Not being in school also means children and young people are less likely to be in contact with people who could identify harm/risks. This is reflected in decreased child protection referrals in Scotland, a source of concern.

All of these harms are likely to have a disproportionate impact on those from disadvantaged backgrounds. Learning loss and developmental disadvantage will be felt by all children and all age groups but are particularly significant for secondary school pupils and for children living in households experiencing poverty.

### Future developments

The Scottish Government will continue to monitor very closely developments in the pandemic in terms of both the science and the position on the ground in Scotland.

As we emerge from the current lockdown, we will almost certainly experience local outbreaks which may or may not impact on schools. A range of monitoring arrangements are in place to allow us to act swiftly to identify such outbreaks and respond effectively. These arrangements are being enhanced for schools.

This monitoring will also allow us to adjust our guidance and rules in the light of either changes in scientific evidence or in prevalence on the ground - either to tighten up mitigations or alternatively to allow further activities in our schools.

### Conclusion

The scientific evidence on Covid-19 and in particular on its impact on schools continues to develop at pace. The current overview of evidence as set out here reinforces the conclusions of the Covid-19 Advisory Subgroup on Education and Children's Issues, as reflected in the [guidance agreed by the Education Recovery Group](#). I shall continue to monitor the evidence and update this note as and when required.

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Interim Chief Medical Officer

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