

ADVICE FROM THE ADVISORY GROUP 20th May 2020

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Cab Sec/ Minister (s) (requested from)	Deputy First Minister Minister for Children and Young People
Title and subject of request	A Safe Return to Early Learning and Childcare Provision and Schools
Policy Directorate/Team	Early Learning and Childcare Directorate Learning Directorate

The COVID-19 CMO's Advisory group has considered the request to review some specific questions related to implementation of physical distancing in schools and ELC settings that require a clear evidential basis in order to progress and provide confidence to the system.

This is a difficult area as there is limited scientific evidence, few data sets and the Advisory Group comprises members with expertise spanning the disciplines of public health, clinical advice, epidemiology, virology, behavioural sciences, global health, medicine and statistical modelling, and not early childcare and schooling. We note the existence of the Education Recovery Group which is where Scottish Ministers receive advice from an educational and early learning and childcare perspective.

The SAGE Schools/Children sub-group (working with SPI-M and SPI-B) is continuing to provide scientific advice on these issues and ONS are presenting an analysis on age distributions of grandparents and parents of primary school aged children at SAGE on 21st May 2020.

We structure our advice as:

1. Summary of SAGE Advice 30th April
2. Summary of CMO Advisory Group Advice 8th May
3. Specific additional advice on Commission of 14th May 2020

1. Summary of SAGE advice (30th April)

Susceptibility and infectivity

- From the outset, it was recognised that the assumptions made about the relative susceptibility and infectivity of children, in comparison to adults, would have a central influence on the influence of schools openings on overall covid-19 transmission. A review suggests:
 - Evidence remains inconclusive on both the susceptibility and infectivity of children, **but the balance of evidence suggests that both may be lower than in adults.**

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- Serological studies are starting to be available on child infection history, with some suggesting low rates of infection. These must be interpreted with caution based on exposure history (e.g. school closure) in the area they are drawn from, and given also some suggestions that mild infections (as are more common on children) may be less likely to generate antibodies.

Insights from indicative modelling of scenarios

- Given this uncertainty, the SPI-M BSI subgroup considered the impact on effective R or transmission rate from relaxing school closures across a range on assumptions for the infectivity of children, with the main findings presented considering equal probabilities, as this, if anything, will give an upper end estimate of impact.
- At all levels of infectivity, some important insights can be drawn on the relative impact of the different approaches partial re-opening.
- The effect of school openings will not happen in isolation: although the choice of scenario for relaxing school closures is of importance, a more critical issue is adherence to existing measures in the broader community.
- **The modelling consistently suggests that resuming early years provision has a smaller relative impact than primary school, which in turn has a smaller relative impact than resuming secondary schooling. However, this analysis does not incorporate potential for indirect impacts on contacts outside of school – which may differ by age of child.**
- Scenario 7 (alternating one/two weeks on, one/two weeks off) may be a good way to stop extensive transmission chains in schools. When this effect in schools is embedded into the wider community, the impact is less strong, but still has some value in reducing overall R.
- The modelling of Scenario 7 is the least robust of the scenarios, and further exploration is needed.

Behavioural Factors

- The behavioural science assessment of the options for the easing of school closures recognises that scenarios 2-9 will increase interactions from the current baseline, though the dynamics will differ depending on the intervention. Adaptations to routines and environments may mitigate the extent of the increase, and pupil age and other characteristics will impact the effectiveness of interventions.
- Messaging to teachers, parents, and students will play an important role in each scenario.

- Additional work is required to identify perceptions of risk and information needs across these groups. Most importantly, each of these groups must perceive that the risk of infection is low before they will be willing to attend or send their children to school.
- The scenarios for relaxing school closures must be understood in the context of interactions taking place beyond the school. For example, social distancing guidance beyond the school will inform the infection rate in schools.
- Wider contextual issues must be taken into account when assessing the impact of the options for relaxing school closures (e.g. impact on the susceptibility of BAME and adolescent young adults; the role of testing in schools; employers allowing flexibility to enable parental engagement with school returns involving rota systems)
- Scenario 7 is likely to be the most effective strategy to make school attendance normative. If steps are taken to synchronise attendance for families with multiple children, this may be the most effective at enabling parents to return to work. Scenario 7b, where children alternate in and out of school on a weekly basis, was perceived to be potentially preferable – both developmentally and practically – for young children and working parents.

A number of caveats of importance were noted in the modelling and behavioural science:

- **School closures do not constitute a solitary intervention.** It is important to understand the other types of physical distancing measures that staff, parents, and students are engaging in beyond the boundaries of the school. • It is important to understand what is going on inside of the school (e.g. physical distancing, hygiene measures, and more).
- The potential effect of such actions is not incorporated into the modelling • Interventions must be eased in in a logical manner. Failure to do so will influence the number of parents who are willing to send their children to school. It will be vital to explain why and how school reopening is safe, and ensure that changing restrictions is not a signal that the risk from coronavirus is over and that it is safe to resume other activities or to abandon social distancing.
- Messaging to teachers, parents, and students must be robust to enhance confidence and willingness to return. This is especially important in respect to 'susceptibility'.
- The role of testing in maintaining the health of school systems, and the health of the nation, will need to be considered.

2. Summary of CMO Advisory Group advice 8th May

This is for reference, as much of this is still relevant. The advice for the request from 14th May adds further to this in some areas.

Consensus on

- Vast majority of children are asymptomatic or have relatively mild disease.
- Younger children (up to 11-13) are less susceptible to clinical disease than adults; there is not enough evidence to determine whether this is also the case for older children, but severity of infection still is very low in those under 18.
- Note concerns about the rare emerging syndrome in children, especially from BAME backgrounds.
- Limited, relatively weak evidence base on transmission in children; It is not clear whether transmissibility by children is lower than in adults, but some variable evidence indicates that this may be the case for younger (up to age 11-13) children.

Points to note

- Opening of schools likely to impact to increase R. Waiting till number of infectious people is lower is expected to have less impact.
- Any changes to restrictions (not just schools) should be accompanied by an appropriate monitoring system
- Mention of likely need for hygiene and other measures to be implemented
- Messaging and consideration of other issues such as transport
- Actions to support distancing guidance in schools in situations where children are in indoor environments for extended periods of time would be appropriate to consider
- Take account of international experiences

3. Specific Comments on Commission of 14th May

Transmission

Would the scientific evidence support our position that you could design a safe model for reopening ELC and early primary years provision which does not include physical distancing between children or between children and a key worker?

Does the Group assess that the combined effect of these measures would likely be sufficient to manage transmission and infection risks in re-opened ELC and early primary school settings, or would other measures be necessary?

Is the Advisory Group able to provide a view on the extent to which such measures would mitigate the risks of (i) infection amongst children and (ii) transmission of the virus to key workers/teachers, even if only in broad terms (e.g. significantly, moderately, etc.)?

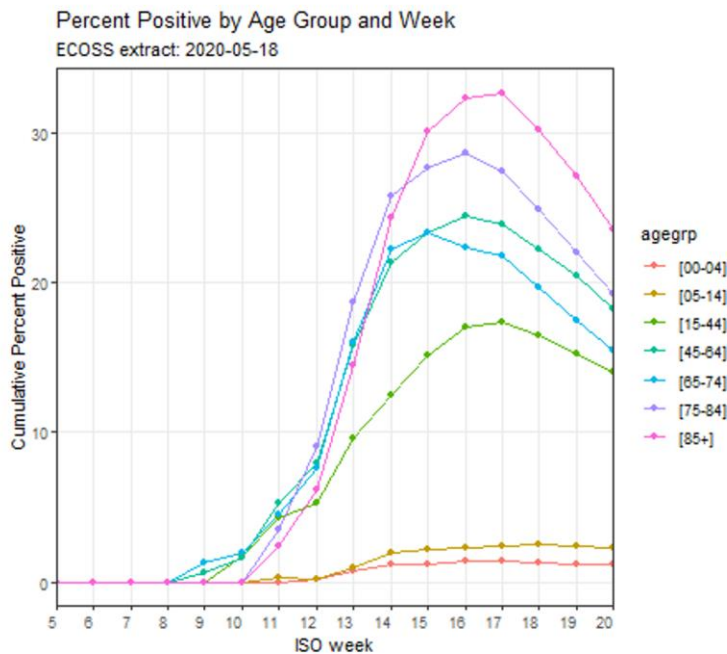
Would there be any scientific justification for the proposed approach set out above to differ between (i) ELC settings and (ii) early primary school settings where children cannot be expected to maintain physical distancing?

Questions about physical distancing measures for children, young people and staff who are capable of observing such rules

- Opening schools should be considered in the context of the R number and overall incidence estimate. Currently for Scotland it is estimated at 1000-1500 new cases per day (pro rata from UK-wide value but could be higher if our R value is higher).
- **There is little or no evidence** on the impact of social distancing within schools on transmission rates. There is little evidence of children transmitting covid-19 (just 2-3 worldwide according to a University of Edinburgh rapid review). The Advisory Group are not aware of any school-based outbreaks. There are some data showing that even hospital nurseries very rarely experience any cases at all and no outbreaks. **There will be more of an issue with transmission between teachers and potentially parents if physical distancing is not maintained.**
- Social distancing might achieve two things
 - Give parents confidence that wider measures to minimise risk (eg between teachers) are being adopted, along with hygiene measures etc
 - Reduce risks of transmission between teachers and other staff
- A study in Australia found no evidence of teachers acquiring infection from children. The Group consider that a rationale for being cautious about opening schools **is to protect the staff (teaching and support) from each other**, and maybe parents too.

- The current Scottish data on infections is shown in the figure below:

Figure 5: Percentage of positive results by age group and week



The lowest positivity rates are in the two youngest age groups and the highest positivity rate is in those aged 85 years and over. Declining incidence can be observed in all age groups over 15 years from week 16 -17.

- **Due to the evidence base at the time, there was not a unanimous view on transmission risks in children and the benefits of social distancing of children in schools and nurseries in the advice provided by the group on 8th May 2020. There was a minority view that once the timing was appropriate to enable opening of schools in any form, physical distancing in classrooms may not be a necessary measure. On balance, there is still a variety of views on the group on this issue, though the group note the increasing weight of evidence that children are not as badly affected by the virus and may be less implicated in its transmission.**
- **Physical distancing among young children is unlikely to be practical and the overall goal therefore should be containing the virus within communities, quickly identifying cases, and driving down numbers.**

Direct COVID-19 Harm

What evidence exists as to the risks to children of developing paediatric inflammatory multisystem syndrome (PIMS-TS) linked to Covid-19?

- On the question on inflammatory multisystem syndrome (PIMS-TS) linked to Covid-19, **it is not possible to comment whether this will be a problem that could be exacerbated by school openings**. Studies from Italy and the U.S. have described the increase in number of children presenting and the clinical features and age range, but have not calculated what percentage of children exposed to the virus are later affected by this disorder.
- It is the group's view decisions should be guided by a risk-based approach that seeks to maximise the health and education benefits for children, teachers and other staff and the wider community and help prevent new outbreaks of covid in the community.

Non-Pharmaceutical Interventions in Children

- The same health protection advice is pertinent to a 3 year old and 13 year old. The difference is the ability of the child to understand and adhere to it. Sourcing expertise on what are the practical issues in this environment and the likelihood of adherence to various aspects by different age groups is recommended. This is beyond the expertise of the group.

Uncertainty - Need for Evaluation and Research

- It is recommended that Scottish Government prioritise data on:
 - Numbers of children who have developed COVID-19 in Scotland/the UK and the associated outcomes
 - Children of essential workers who are already in Scottish schools
 - Identification of those children (and adults) who actually need shielding
 - Rigorous sampling of a small number of schools at different age groups and where positive cases identified undertake viral sequencing to assess transmission dynamics.

International Best Practice

- Norway and Denmark managed their outbreak in a completely different way, and have little community transmission. They moved aggressively, locked down early, did widespread testing/tracing to identify and stamp out the virus, and have largely suppressed their outbreaks. Norway has had only 8K confirmed cases and 232 deaths (pop 5.4 million). Denmark has 10.9K confirmed cases and 547 deaths (5.8 million). They both seem to have good monitoring in place to detect if clusters emerge through frequent testing.

- Looking at the Norway and Denmark experience and Germany's (in opening schools for older children) is **that local-level data is needed by catchment/neighbourhood to inform parents/teachers about the level of transmission/daily number of cases emerging in the community**, and for parents/teachers/local council officials to make a decision about schools being open/closed based on this data. This puts the information directly into the hands of key members of the educational community as there will never be no risk but that there can be local knowledge on the general level of risk (similar to there being risks associated with driving/cycling/flu season).
- Some states in Germany are swabbing older children on their way into school and doing this twice a week, to quickly pick up any cases, including asymptomatic cases. This approach has similarities to the decisions made in the UK to frequently test health workers and social care workers. As teachers may be sentinel cases this might be an approach to be considered,
- As any solution may be required for years, this kind of local public health infrastructure and data systems seem essential to create data-driven policies for schools, rather than one high-level policy for entire country.
- Some countries have adopted policies to make-up for the lost school time (esp important for disadvantaged kids): both New Zealand and Thailand have revised school holidays for the remainder of the year to make up for some time lost during the lockdown. In Scotland- could this mean keeping schools closed slightly longer to build up the infrastructure/protocols needed, but then opening early in the summer (e.g. mid July)
- WHO guidance is useful in this regard.
<https://apps.who.int/iris/rest/bitstreams/1277622/retrieve>

Behavioural Science considerations

- **Cocreation:** Whatever policy is developed, we have to get parents to be prepared to send children to school. Trust is slipping, especially elsewhere in the UK (we are probably better off here) so it is especially important to build trust and get parents involved in the decision making. The principle of 'co-creation' is critical. Not just making an expert decision and handing it down but fully involving parents, at a school level, in the dialogue. That needs doing considerably before any return to school is implemented
- **Messaging:** The messaging is core. It has to be clear that this is absolutely an issue of harm reduction and addressing the harms of children staying off school (including the inequalities dimension) with the harms of going to school. We have to convince people that the harm equation tips towards return.

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- **Travel to school** - not just avoiding public transport and the school gates, but avoiding groups travelling together and giving lifts to other households.
- **Curriculum design:** Using schools as a means of spreading positive norms of distancing and hygiene - hence giving teachers guidance and time to prepare for this as well.

Need for Integrative Approach to Policy Development

- This is an area where joined up policy making is essential- integrating policies on return to school, return to work, TTI and shielding. We need an integrated whole to be convincing and it is hard to roll out one bit without the others in place.
- **Relationship to other harms:** The risk of education deficit should be measured and that it is balanced with whatever policy is adopted as this deficit may be large and those who are most disadvantaged either socially or intellectually might not catch up
- **Relationship to Shielding:** The shielding criteria will be different this needs paediatric input. I imagine the guidance is going to be different for a child ie those with a history of significant prematurity and lung problems and one who has been ventilated for RSV will probably not be the first to send back. There is also the family risk – a sibling with ALL or cyanotic congenital heart disease
- **TTIS** The group agrees that schools should open as soon as possible but it must be done in a way that is integrated into the test/trace/isolate/support strategy- and with full transparency to teachers/parents, etc about the trade-offs involved and the large scientific uncertainty remaining.

Other Sources of Advice

- The CMO Group is not expert in early childcare and schooling. We therefore recommend other advice is sought from
 - Further SAGE advice
 - Public Health Scotland
 - British Psychological Society
 - World Health Organisation

Durability of Changes

The Group commented that these measures need to be considered for the medium to long term. A real risk is that any interventions will need to remain until there is a vaccine (we have no evidence that this disease is going to go away). So whatever is suggest has to last for two years or perhaps longer.