

## Briefing

# We don't need no education?

## The thorny issue of whether children should go back to school

May 2020

### Introduction

Should children go back to school? Is it safe for them to venture out of their homes and sit in a classroom with their friends? And is it safe for the adults around them? These questions have formed part of the debate around Coronavirus ever since lockdown was announced on 23 March, and were thrust back into the spotlight when the government confirmed that pupils in Reception, Year 1 and Year 6 can go back to school from 1 June.<sup>1</sup> This follows a number of other countries: young children have started going back to school in France, Germany, Switzerland, Australia and the Netherlands, while in Denmark nurseries and primary schools have been open for a month.<sup>2</sup> In Estonia, Iceland and Sweden, meanwhile, schools have remained open throughout.

The Government's announcement has invited controversy and opposition from some quarters.<sup>3</sup> Parents, meanwhile, are understandably concerned and conflicted. A recent survey<sup>4</sup> found that only 1 in 5 parents would follow the government's public health advice, a similar proportion would only listen to the advice from teachers, while 1 in 10 parents were in favour of keeping their children at home until everyone at their child's school has been vaccinated. On the other hand, a third of parents responding to the survey indicated that they did not feel confident supporting their child's learning at home. Parents were more likely to report being concerned about the effects of isolation on their child than the risk of someone in their family catching Covid-19.

The government says it is "following the science", but this is not always possible – or meaningful – when the science is neither deterministic nor conclusive. At present, the scientific evidence cannot offer any guarantees around whether children are at risk from Covid-19, and whether reopening schools is completely 'safe', and it is unlikely ever to provide such certainty. Yet decisions about returning children to school cannot wait until a vaccine is available. These decisions – and the debates around them – need to accept and respond to inherent uncertainties. A way forward is possible, but only if we continually learn and test, control risk in real time, and focus on what is more likely to be optimal for whom.

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<sup>1</sup> <https://www.gov.uk/government/publications/actions-for-educational-and-childcare-settings-to-prepare-for-wider-opening-from-1-june-2020/actions-for-education-and-childcare-settings-to-prepare-for-wider-opening-from-1-june-2020>

<sup>2</sup> <https://www.bbc.co.uk/news/world-europe-52291326>

<sup>3</sup> <https://neu.org.uk/press-releases/government-guidance-lockdown>

<sup>4</sup> <https://www.parentkind.org.uk/News/Major-new-Parentkind-research---over-a-quarter-of-a-million-parents-have-a-say-on-school-closures-and-coronavirus-fears>

## What the scientific evidence does - and doesn't - say

A full discussion of the scientific and paediatric evidence on the risks from Covid-19 is beyond the scope of this paper, and excellent systematic reviews exist elsewhere.<sup>5,6</sup> These are being continually updated as evidence continues to emerge, with several new studies appearing each week. In the interests of brevity, the current view (as of 13 May) of the Royal College of Paediatrics and Child Health can be summarised as follows<sup>7</sup>:

- > Children may be less likely than adults to get infected with Covid-19
- > The effect of Covid-19 is generally milder in children than in adults
- > The role children play in spreading Covid-19 is not clear, but so far appears to be limited compared to adults

It is important to understand that these are statements about what seems to happen *on average*; they are *not* guarantees about what will happen in every single case. There are a small number of children who have experienced severe symptoms just as there are adults who have mild symptoms. There have also been cases – tragically – of children falling severely ill (including with a related Paediatric Multisystem Inflammatory Syndrome<sup>8</sup>) or even dying from Covid-19. The conclusion is not that these events cannot happen, but that they are rare: the mortality rate among children is currently estimated to be 0.01% (1 in 10,000 cases), which is similar to the rate for ‘normal’ flu.<sup>9</sup>

Much rests on how this evidence is then interpreted, particularly in relation to the question of sending children back to school. There is a view emerging that the risks of infection and onward transmission among children are sufficiently low that returning them to school can be considered an appropriate next step.<sup>10</sup> However, it is also possible to find conflicting views among the scientific community and practitioners<sup>11</sup> as well as ongoing disputes about the quality of some evidence.<sup>12,13</sup> Furthermore, not every single piece of evidence will necessarily conform: new data from the Office for National Statistics, for example, seems to challenge the idea that the prevalence of Covid-19 is lower in young people.<sup>14</sup>

Partly this is because the existing scientific evidence is not yet sufficiently definitive and unambiguous to prevent a range of conclusions being drawn. Better quality evidence is clearly needed. In the meanwhile, the current evidence must not be sensationalised or over-interpreted.<sup>15,16</sup>

A recent review of school closure policies concludes that “policy makers need to be aware of the equivocal evidence”.<sup>17</sup> If the scientific evidence were the only factor to take into account to inform the debate on whether children should return to school, it would form a weak basis for decision-making. However, it is far from the only factor to take into account.

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<sup>5</sup> <https://www.rcpch.ac.uk/resources/covid-19-research-evidence-summaries>

<sup>6</sup> <https://dontforgetthebubbles.com/evidence-summary-paediatric-covid-19-literature/>

<sup>7</sup> <https://www.rcpch.ac.uk/resources/covid-19-research-evidence-summaries>

<sup>8</sup> <https://www.rcpch.ac.uk/resources/guidance-paediatric-multisystem-inflammatory-syndrome-temporally-associated-covid-19>

<sup>9</sup> <https://www.rcpch.ac.uk/resources/covid-19-research-evidence-summaries#epidemiology>

<sup>10</sup> <https://adc.bmj.com/content/early/2020/05/05/archdischild-2020-319474>

<sup>11</sup> <https://www.vox.com/2020/5/2/21241636/coronavirus-children-kids-spread-transmit-switzerland>

<sup>12</sup> <https://twitter.com/apsmunro/status/1259809656567992321>

<sup>13</sup> <https://twitter.com/apsmunro/status/1255876773000237056>

<sup>14</sup> <https://www.ons.gov.uk>

<sup>15</sup> <https://fullfact.org/health/children-transmitting-coronavirus/>

<sup>16</sup> <https://www.rcpch.ac.uk/news-events/news/incorrect-media-reporting-about-children-transmission-covid-19>

<sup>17</sup> [https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(20\)30095-X/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(20)30095-X/fulltext)

## A broader evidence base for decision-making

We can acknowledge that there is an epidemiological benefit to keeping schools closed as part of lockdown: it helps to minimise the rate of spread of Covid-19 among children, their families, and their teachers. That it may be epidemiologically optimal to keep schools closed should not be in dispute (and the benefit will depend on the current level of infections or  $R$ ). The question this paper seeks to ask is whether it is currently *socially* optimal to do so. What may be epidemiologically optimal need not be socially optimal, and vice versa. Alongside the epidemiological benefit of keeping schools closed are a number of wider social and economic costs.

First, there are the many vulnerable children in society with additional needs in the family. We have previously found that there are 2.3 million children in England with a vulnerable family background.<sup>18</sup> This includes around 2 million children living in a household where there is domestic abuse, parental substance misuse or parental mental health issues. The prevalence of these issues will vary across the country, and in some local areas more than 1 in 5 children live with a family affected by one of these issues.<sup>19</sup> Furthermore, a range of national and international evidence also suggests that these issues may have become more prevalent since lockdown started.<sup>20,21,22</sup>

For these children, school provides a crucial outlet and a means for any concerns and risks to be identified. The government's approach thus far has recognised the importance of ensuring vulnerable children continue to attend school, but places have only been available for those officially listed as vulnerable, including children who have a social worker or an Education, Care and Health Plan (EHCP). The latest data indicates that around 14% of these children have been attending school,<sup>23</sup> but the more important point is that these groups (important though they are) represent only a small fraction of the total number of vulnerable children – who may all benefit from going to school.

Vulnerabilities can be particularly acute among the youngest children and toddlers.<sup>24</sup> Lockdown has made these children less likely to be seen routinely by health visitors, GPs and children's centre workers. Putting them out of sight of nursery staff as well makes it even more difficult for risks or concerns to be flagged up and acted upon. The latest government statistics indicate that around 1 in 10 0-4 year olds who have a social worker or an EHCP have been attending early years settings.<sup>25</sup>

Second, there is a 'disadvantage gap' – the disparity in learning and education outcomes between disadvantaged children and their more affluent peers. We have previously found that disadvantaged children, already behind in terms of attainment, slip further behind during school holidays. It has previously been found that summer holidays already account for as much as two thirds of the attainment gap between rich and poor children at age 14.<sup>26</sup> This is because disadvantaged children are less likely to have an environment at home that promotes learning.<sup>27</sup> Teachers working in deprived areas are more likely to report that their pupils have less parental support for learning, less access to the technology needed to learn remotely, and – unsurprisingly – that their pupils are doing less than

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<sup>18</sup> <https://www.childrenscommissioner.gov.uk/publication/childhood-vulnerability-in-england-2019/>

<sup>19</sup> <https://www.childrenscommissioner.gov.uk/our-work/vulnerable-children/local-vulnerability-profiles/>

<sup>20</sup> <https://www.medrxiv.org/content/10.1101/2020.04.24.20078550v1>

<sup>21</sup> <https://www.theguardian.com/society/2020/apr/15/domestic-abuse-killings-more-than-double-amid-covid-19-lockdown>

<sup>22</sup> <https://theconversation.com/new-study-shows-staggering-effect-of-coronavirus-pandemic-on-americas-mental-health-137944>

<sup>23</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/884520/Coronavirus\\_COVID-19\\_attendance\\_in\\_education\\_and\\_early\\_years\\_settings\\_in\\_England\\_summary\\_of\\_returns\\_to\\_7\\_May\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/884520/Coronavirus_COVID-19_attendance_in_education_and_early_years_settings_in_England_summary_of_returns_to_7_May_2020.pdf)

<sup>24</sup> <https://www.childrenscommissioner.gov.uk/publication/lockdown-babies/>

<sup>25</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/884520/Coronavirus\\_COVID-19\\_attendance\\_in\\_education\\_and\\_early\\_years\\_settings\\_in\\_England\\_summary\\_of\\_returns\\_to\\_7\\_May\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/884520/Coronavirus_COVID-19_attendance_in_education_and_early_years_settings_in_England_summary_of_returns_to_7_May_2020.pdf)

<sup>26</sup> <https://journals.sagepub.com/doi/pdf/10.1177/0907568218779130>

<sup>27</sup> <http://www.llcsjournal.org/index.php/llcs/article/view/140>

two hours of studying a day.<sup>28</sup> The implication is clear that keeping schools closed will worsen social mobility.<sup>29,30</sup> The future costs to the education system of attempting to rectify this may also be substantial.<sup>31</sup>

Other vulnerable groups may also be significantly educationally disadvantaged during school closures. The Department for Education's 'Child in Need' review found that children who have needed a social worker in the past six years have significantly poorer outcomes: just 17% achieve GCSE passes in English and Maths.<sup>32</sup> These children may have suffered neglect and/or trauma at home; ensuring they have access to school is particularly important, yet we know that the majority are still at home.

Third, the costs in terms of lost education will extend more widely – these children are not the only ones whose education has been disrupted. The majority of children will have incurred some kind of educational cost. Two-thirds of pupils have not accessed online lessons during lockdown, and a quarter of teachers report that more than three-quarters of their pupils have not done the work that was set.<sup>33</sup>

Fourth, there is an economic cost of lost income and productivity among parents, many of whom will have had to work less in order to provide childcare and home-schooling. While this cost has not been quantified precisely, there is evidence that it falls disproportionately on lower-income families, where parents are less likely to have jobs that allow them to work from home in flexible ways.<sup>34</sup> The wider cost to the economy can also be substantial.

Fifth, there is the impact of lockdown on the mental health and wellbeing of children. We have previously found that school closures have contributed to greater isolation and anxiety among children, especially because of the disruption to their education.<sup>35</sup> A recent survey found that two-thirds of parents have concerns about their child's mental health.<sup>36</sup>

These considerations tally up with many of those advocated by Unicef, which has said that: "when deciding whether to reopen schools, authorities should look at the benefits and risks across education, public health and socio-economic factors, in the local context, using the best available evidence. The best interest of every child should be paramount."<sup>37</sup>

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<sup>28</sup> <https://teachertapp.co.uk/who-could-return-to-school-if-it-were-possible/>

<sup>29</sup> <https://www.suttontrust.com/our-research/covid-19-and-social-mobility-impact-brief/>

<sup>30</sup> <https://www.economist.com/international/2020/04/30/closing-schools-for-covid-19-does-lifelong-harm-and-widens-inequality>

<sup>31</sup> <http://cep.lse.ac.uk/pubs/download/cepcovid-19-001.pdf>

<sup>32</sup> <https://www.gov.uk/government/publications/review-of-children-in-need/review-of-children-in-need>

<sup>33</sup> <https://www.suttontrust.com/news-opinion/all-news-opinion/independent-school-pupils-twice-as-likely-to-get-online-lessons-every-day/>

<sup>34</sup> <https://www.theguardian.com/commentisfree/2020/mar/19/school-closures-uk-financial-catastrophe-poorer-families>

<sup>35</sup> <https://www.childrenscommissioner.gov.uk/2020/04/03/angry-fed-up-isolated-coronavirus-and-childrens-mental-health/>

<sup>36</sup> <https://youngminds.org.uk/about-us/media-centre/press-releases/parent-survey-reveals-widespread-concerns-about-mental-health-impact-of-covid-19-on-young-people-s-mental-health/>

<sup>37</sup> <https://www.unicef.org/documents/framework-reopening-schools>

## How the debate needs to change

### *Understanding what is socially optimal for whom*

A balanced discussion about the costs and benefits of keeping schools closed needs to take all of these factors – and perhaps others – into account. While some have argued that the costs now exceed the benefits,<sup>38</sup> it is not possible to *prove* this because nobody has produced a quantifiable answer to this cost-benefit calculation. However, the epidemiological benefit of keeping schools closed is unlikely to grow over time, especially if the number of infections or  $R$  is falling. Yet the wider social costs will accumulate with each day that passes. Therefore, one can argue that at some point the costs must overtake the benefits.

It is also important to note that this calculation is inherently specific to each child. The physical health benefit of keeping schools closed will be greater for a child who has underlying health conditions or who lives with their grandparents in a multi-generational household, and smaller for children in other situations. Likewise, the costs of keeping schools closed will be more severe for children who are disadvantaged or vulnerable, and living in less affluent families. As these costs and benefits vary from one child to the next, blanket recommendations are difficult to make: what may be optimal for one child may not be optimal for another. We therefore need to consider what is optimal for whom, and how that can be implemented.

### *Acknowledging and responding to uncertainty*

Another feature missing from the debate has been the recognition of the uncertainty that is inherent to evidence. It is impossible for the evidence to demonstrate, in advance, that sending children back to school is guaranteed to be safe. Partly this is because the existing scientific evidence may not always be generalisable, especially when it involves very specific circumstances (e.g. the case of one child on holiday in the Alps<sup>39</sup>).

More broadly, the applicability of evidence from other countries and contexts will be limited by differences in culture, social norms, approaches to lockdown, adherence to rules and geographic factors (such as population density). Simulations based on modelling have provided important and well-reported evidence on the potential effects of hypothetical policy changes including school closures.<sup>40</sup> But all simulations are essentially forecasts predicted by a model – simplified abstractions of reality – and are themselves subject to significant degrees of uncertainty. One piece of modelling predicts that reopening schools could easily trigger a second wave of infections, but also may not do that.<sup>41</sup>

For all of these reasons, *ex ante* evidence can never be as conclusive as *post hoc* evidence. Neither the science nor the modelling can ever prove whether opening schools is safe – only evidence from the ground can.

A more instructive question to ask, therefore, is how best to proceed when the available evidence is not sufficiently conclusive. This requires making decisions about reopening schools in the absence of conclusive evidence, and/or decisions about how to obtain more conclusive evidence. Either way, the

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<sup>38</sup> <https://www.economist.com/leaders/2020/04/30/when-easing-lockdowns-governments-should-open-schools-first>

<sup>39</sup> <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa424/5819060>

<sup>40</sup> <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-12-global-impact-covid-19/>

<sup>41</sup> <https://www.medrxiv.org/content/10.1101/2020.05.03.20089235v1.article-info>

solution is likely to lie in careful trialling, monitoring and evaluation of incremental policy changes.

By the same token, it is not particularly meaningful to ask whether infections or the reproduction rate ( $R$ ) will increase if schools are reopened. It is clearly impossible for infections or  $R$  to fall as a result of reopening schools. It is more meaningful to ask how increases in infections and  $R$  can be kept under control as schools reopen. The answer is most likely to be found through careful monitoring, with additional mitigations and testing, tracing and isolation (TTI) in place.

The importance of scientific evidence as a basis for decision-making may also depend on the availability of widespread TTI for Covid-19. If this is in place, the risk of subsequently reopening schools can be tightly controlled; therefore less *ex ante* certainty may be needed from the scientific evidence. Improving one can lead to less reliance on the other; the weaker that one is, the stronger the other needs to be. Given that conclusive scientific evidence is unlikely to be forthcoming, this reinforces the need for wider availability of TTI measures.

### *Accepting that there may not be a truly safe option*

It is important to recognise that no current approach to reopening nurseries and schools is failsafe. In the absence of a vaccine, a truly failsafe approach does not exist. Either schools stay shut until a vaccine is developed – which, by the government’s own admission, may never happen<sup>42</sup> – or they must reopen before a vaccine is developed. If the former is impossible, then the latter is inevitable.

Once this inevitability is recognised, it becomes more meaningful to ask *when* – not *whether* – schools should reopen. Waiting longer to do so brings certain advantages: each day there is a ‘marginal benefit’ of greater testing capability, potentially improved scientific evidence or learning from other countries, more control over the current level of infections and  $R$ , and the risk that is avoided of contributing to any potential second wave of infections.<sup>43</sup> But it also brings a ‘marginal cost’, namely the daily increase in the wider social and economic costs explained above. The question of when is socially optimal to reopen nurseries and schools therefore involves weighing up these offsetting considerations.

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<sup>42</sup> <https://www.gov.uk/government/publications/our-plan-to-rebuild-the-uk-governments-covid-19-recovery-strategy/our-plan-to-rebuild-the-uk-governments-covid-19-recovery-strategy>

<sup>43</sup> This ignores the additional marginal benefits of the daily increase in the likelihood of achieving herd immunity or a vaccine, which, while theoretically possible, do not seem to be significant.

## New evidence from the ground

A new piece of real-world evidence that we can report relates to the childcare providers registered by NHS trusts. There are 62 of these settings attached to NHS hospitals, which provide childcare for the staff working in those hospitals – who may be caring for patients with Covid-19. The experiment offered by these childcare settings is that all but two have remained open throughout lockdown. They provide an interesting case study, not least because of the elevated Covid-19 risk that may be associated with the parents of these young children.

We conducted a rapid survey of the 57 managers<sup>44</sup> of these settings in order to understand what can be learned from their experiences of staying open during lockdown, and what the risks of Covid-19 infection have been so far. The full findings, including analysis of a separate survey of wider early years providers, are available in a detailed technical report available on our website.<sup>45</sup>

Based on responses from 44 managers of NHS nurseries, we found that:

- > They tend on average to be operating at nearly 50% capacity in terms of the numbers of children who are attending. There is considerable variation, with some at around 20% capacity and others at 80%.
- > In total, 79% of the usual complement of staff are currently coming in to work in these settings. A further 8% are currently shielding, self-isolating or on sick leave due to Covid-19.
- > Eight settings (around a fifth of those spoken to) reported a suspected or confirmed case of Covid-19 among children. At most three of these settings had a confirmed case. None of these settings reported transmission occurring in the nursery, but the majority of did not know where cases may have originated from or spread to.
- > Two of the eight settings reported potential outbreaks in the sense of significant numbers of children displaying symptoms. This could reflect a number of things: a possible outbreak of COVID-19 among children (although the cases were *not* confirmed), or other infections with similar symptoms such as colds and flus – which are also highly transmissible among children. One manager stated that 14 children had been sent home “as a precaution”.
- > Nearly half of the managers we spoke to (20) reported suspected or confirmed cases of Covid-19 among the staff. However only one of these managers stated that the case was actually confirmed. None of the managers reported that staff had contracted Covid-19 within the setting, but the majority did not know where suspected or confirmed cases may have originated.
- > Three quarters of the managers reported being able to access testing for Covid-19 when needed, and 80% stated that their staff had access to PPE.

The settings reported doing the following to maintain safety:

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<sup>44</sup> Three managers operated two settings jointly.

<sup>45</sup> <https://www.childrenscommissioner.gov.uk/wp-content/uploads/2020/05/cco-survey-of-early-years-providers-experiences-during-the-covid-19-pandemic.pdf>

- > Not allowing parents to enter inside
- > Regular hand washing among children
- > Regularly taking children’s temperatures
- > Reducing the number of toys and removing ‘malleable play’ (e.g. sand, soft toys)
- > Social distancing among the staff

This provides suggestive and emerging evidence that, for the settings who responded to our survey, it has been possible to operate at considerable levels of capacity, with little evidence of it causing additional levels of Covid-19 transmission among children or staff. How well this evidence generalises to other settings remains to be seen. These settings may have benefited from greater access to PPE and testing than other settings might, as a result of being attached to NHS hospital. But it should also be borne in mind that these settings were operating in a high-risk environment – caring for the children of NHS staff – with little time to prepare for new operating arrangements (beyond flu contingency plans). Furthermore, the majority of them told us they had used no additional PPE beyond what they would normally use, such as aprons and gloves when changing nappies.

## How might nurseries and primary schools reopen safely?

When the government first closed schools on 20 March, its initial advice to schools indicated that they should aim to have no more than 20% of pupils on site in order to maintain a safe environment.<sup>46</sup> In reality, current rates of attendance stand at around a tenth of that (2.4% of pupils<sup>47</sup>). If the 20% figure can be taken as an indicative ‘safe limit’ then it would suggest there was already some scope to significantly expand school attendance.

Safety considerations may still prevent all young children from being able to return to nursery, and that places still need to be rationed. Again, the principle of what is optimal for whom should determine the best way to allocate these places. Children from vulnerable or disadvantaged homes, living in overcrowded accommodation or without the necessary technology and parental support, have the most to gain from returning to nursery or primary school. There is a rationale for encouraging or even requiring these children to return, while allowing more discretion for other families – especially if they have health-related concerns or vulnerabilities. Some rationing may also happen naturally on account of parental choices.

Additional safety mitigations are also important. Maintaining social distancing among very young children is clearly not feasible or practical, but in other countries where nurseries or primary schools have already reopened<sup>48</sup>, we know that risks have been managed by:

- > Staggering drop-off and pick-up times
- > Regular handwashing and hand sanitising

<sup>46</sup> <https://www.naht.org.uk/advice-and-support/coronavirus-news-and-guidance-for-school-leaders/coronavirus-guidance-for-school-leaders/>

<sup>47</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/884520/Coronavirus\\_COVID-19\\_attendance\\_in\\_education\\_and\\_early\\_years\\_settings\\_in\\_England\\_summary\\_of\\_returns\\_to\\_7\\_May\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/884520/Coronavirus_COVID-19_attendance_in_education_and_early_years_settings_in_England_summary_of_returns_to_7_May_2020.pdf)

<sup>48</sup> <https://www.tes.com/news/coronavirus-reopening-lockdown-denmark-international-school-closure>

- > Not allowing children to bring in toys from home
- > Keeping children in small groups of 4-6 with one teacher per group, and not allowing them to interact with children in other groups (in order to limit the number of contacts)
- > Doing sessions outside where possible
- > Not allowing parents to enter the building
- > Social distancing of parents at school gates

The government's advice on face masks or coverings has recently shifted to encourage the use of these in areas outside the home where adherence to social distancing is difficult.<sup>49</sup> This is now in line with EU<sup>50</sup> and US<sup>51</sup> recommendations. There may be a role for these in nurseries and primary schools as an additional layer of protection, although the government's general advice about face coverings appears not to apply to education settings.<sup>52</sup> While face coverings are now mandatory in Germany for children aged over six<sup>53</sup> and in France for secondary school pupils,<sup>54</sup> the government advises that they should not be a general requirement in education settings.<sup>55</sup> They may still offer a protective benefit if worn by teachers or parents, especially those who are asymptomatic or pre-symptomatic carriers of Covid-19.<sup>56</sup>

Perhaps the most important safety mitigation is that incremental expansions of nurseries or primary schools should be accompanied by large-scale studies that involve regular testing of the children, their families and their teachers (symptomatic or otherwise). This is crucial for three reasons. First, early monitoring and mass TTI infrastructure is the most reliable way to ensure that any relaxing of restrictions does not result in a second wave of infections,<sup>57</sup> especially given the potentially significant role of asymptomatic or pre-symptomatic transmission.<sup>58,59</sup> Second, the results of these studies will provide the best real-world evidence about the safety or otherwise of reopening school.<sup>60</sup> Third, having this infrastructure in place is, in and of itself, an important reassurance for parents and teachers that any reopening of nurseries or schools is being carried out in a prudent and rigorously controlled way.<sup>61</sup>

This goes beyond the government's existing guidance, which states that testing can be made available if children and teachers "become ill with coronavirus symptoms".<sup>62</sup> While the above may be very challenging to deliver, it should also be borne in mind that, in the absence of a vaccine, a mass TTI infrastructure is a critical part of most strategies to exit lockdown more generally, and to overcome

<sup>49</sup> <https://www.gov.uk/government/news/public-advised-to-cover-faces-in-enclosed-spaces>

<sup>50</sup> <https://www.ecdc.europa.eu/en/publications-data/using-face-masks-community-reducing-covid-19-transmission>

<sup>51</sup> <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html>

<sup>52</sup> <https://www.gov.uk/government/publications/coronavirus-covid-19-implementing-protective-measures-in-education-and-childcare-settings/coronavirus-covid-19-implementing-protective-measures-in-education-and-childcare-settings>

<sup>53</sup> <https://www.thelocal.de/20200427/mask-obligation-and-more-students-what-changes-around-germany-starting-monday>

<sup>54</sup> <https://www.bbc.co.uk/newsround/52467760>

<sup>55</sup> <https://www.gov.uk/government/publications/coronavirus-covid-19-implementing-protective-measures-in-education-and-childcare-settings/coronavirus-covid-19-implementing-protective-measures-in-education-and-childcare-settings>

<sup>56</sup> <https://www.ecdc.europa.eu/en/publications-data/using-face-masks-community-reducing-covid-19-transmission>

<sup>57</sup> <https://www.theguardian.com/commentisfree/2020/may/12/tories-lockdown-social-distancing-testing-second-wave-coronavirus>

<sup>58</sup> <https://www.nejm.org/doi/full/10.1056/NEJMe2009758>

<sup>59</sup> [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30917-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30917-X/fulltext)

<sup>60</sup> It should be noted that the results of these studies may be more difficult to interpret or attribute if the reopening of nurseries and schools happens to coincide with the relaxation of other social distancing measures.

<sup>61</sup> [https://blogs.edweek.org/edweek/campaign-k-12/2020/05/covid-19\\_testing\\_key\\_to\\_reopen\\_schools.html](https://blogs.edweek.org/edweek/campaign-k-12/2020/05/covid-19_testing_key_to_reopen_schools.html)

<sup>62</sup> <https://www.gov.uk/government/publications/actions-for-educational-and-childcare-settings-to-prepare-for-wider-opening-from-1-june-2020/actions-for-education-and-childcare-settings-to-prepare-for-wider-opening-from-1-june-2020>

Covid-19.<sup>63,64,65</sup> This prospect has already been acknowledged in some places.<sup>66,67</sup>

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<sup>63</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020XC0417\(06\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020XC0417(06)&from=EN)

<sup>64</sup> <https://www.telegraph.co.uk/news/2020/04/05/revealed-coronavirus-exit-strategy-mass-testing-contact-tracing/>

<sup>65</sup> <https://www.theguardian.com/commentisfree/2020/may/11/britain-economy-coronavirus-deaths>

<sup>66</sup> <https://www.dailymail.co.uk/news/article-8313447/Officials-Norwich-plan-test-140-000-residents-coronavirus-WEEK.html>

<sup>67</sup> <https://www.insider.com/german-school-tests-staff-and-teachers-coronavirus-twice-a-week-2020-5>

## Conclusions

The debate around reopening schools can become very complex, with the hundreds of studies available and the myriad tweaks to classrooms and corridors under consideration. Amid this complexity, there is a very simple and unavoidable principle: either schools stay closed until a vaccine is developed, or they reopen before that point. If the former is impossible, then the latter is inevitable.

Recognising this allows the debate to be reframed in more meaningful ways that foster decision-making under uncertainty. There is no true failsafe option. Furthermore, 'following the science' is not always possible or even meaningful when the underlying evidence cannot provide definitive answers. Decisions still need to be made, which requires learning in real-time, both from other countries and using evidence from the ground in the UK. It means trying new things and carefully evaluating them. A way forward is possible, but only if we continually learn and test, control risk in real time, and focus on what is optimal for whom.

The debate has also failed to recognise that the following positions can all simultaneously be true: (a) the scientific basis for sending children back to school is not clear-cut or convincing; (b) infections and  $R$  can rise as a result of doing so; (c) the overall costs of keeping schools closed will eventually outweigh the benefits, if they have not done so already; (d) the pros and cons will vary for each child.

One piece of evidence from the ground we have reported here suggests that reopening nurseries is not impossible, and that the risks may be limited (but not zero). On top of this, there is already some scope for expansion of school attendance given the government's initial planning assumptions. Beyond that, how bold we can afford to be may depend on how the risks are controlled – especially through real-time monitoring and testing.