

Advisory Sub-Group on Education and Children's Issues

**Coronavirus (COVID-19) – Children, Schools,
Early Learning and Childcare Settings:
Evidence Summary**

April 2022

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Introduction

This paper provides a summary of the latest evidence on the current state of the epidemic, the role of schools in transmission of COVID-19; the health and wider harms to children and young people from COVID-19; and workplace-associated risks to staff from COVID-19.

The studies referenced within the paper employ a range of research methods and, whilst an assessment of relative validity is beyond the scope of this paper, it is important to highlight that some are likely to be more robust than others as a result.

The paper is also not intended to be comprehensive, but instead to provide an illustration of the key issues the Advisory Sub-Group on Education and Children's Issues considered before advising on whether it would be appropriate and proportionate to move towards a set of routine protective measures within schools and ELC settings. For ease of reference, links to where additional detail can be found are provided.

Having reviewed such evidence, the sub-group noted:

- although case rates had increased recently, the evidence still showed that, compared to adults, children and young people have a very low risk of severe COVID-19 related health outcomes, and that those without symptoms (asymptomatic) are also at a relatively low risk of transmitting the virus to adults
- although the Omicron variant has higher transmissibility than previous variants, there is no evidence suggesting that it impacts children and young people disproportionately
- severe health outcomes for all age groups are also far less likely to arise while vaccination rates are high and the current variant is less severe
- advice from Public Health Scotland, supported by senior clinicians, is that there would be little benefit in continuing with routine asymptomatic testing of children and young people and school/ELC staff in mainstream and special schools.

Based upon these observations and a wider review of the relevant evidence, the sub-group advised that it would be appropriate to move to routine measures in schools and ELC settings in a proportionate and responsible manner. Their view was that this should commence in line with any adjustments made across wider society and the timetable for the revised strategic framework for COVID-19, and all relevant changes should be in place no later than the return to school after the Easter break.

Further details of the advice can be found in the minutes of the [sub-group meeting of 8 March](#), and further detail on the public health advice on asymptomatic testing is attached as Annex A.

Overview

Children and young people as a group have a relatively low risk of direct COVID-19 harm but are at particularly high risk of wider – and long-term – social, educational, developmental, and wellbeing harms. Those wider risks are particularly relevant for more disadvantaged children, and those with additional needs. These disproportionately affect the most vulnerable, and include concerns about learning, and speech and language development, as well as wider health concerns such as mental health and obesity.

There is widespread consensus that school and early learning and childcare (ELC) closures have significant impacts on child health and development. The [August 2020 statement](#) from the UK Chief Medical Officers highlighted the criticality of schooling, stating:

“We are confident that multiple sources of evidence show that a lack of schooling increases inequalities, reduces the life chances of children and can exacerbate physical and mental health issues. School improves health, learning, socialisation and opportunities throughout the life course including employment. It has not been possible to reduce societal inequalities through the provision of home-based education alone. School attendance is very important for children and young people.”

In 2021, the World Health Organisation identified schools as an essential service and [advised on how to adjust public health and social measures](#) in order to keep schools open and minimise any further disruption to education:

“the closure of educational facilities should only be considered when there are no other alternatives.”

A [joint publication from UNESCO, UNICEF and the World Bank](#) stated that:

“Reopening schools should be countries’ highest priority. The cost of keeping schools closed is steep and threatens to hamper a generation of children and youth while widening pre-pandemic disparities. Reopening schools and keeping them open should therefore be the top priority for countries, as growing evidence indicates that with adequate measures, health risks to children and education staff can be minimized. Reopening is the single best measure countries can take to begin reversing learning loss”

A children’s rights approach is being embedded into the Scottish Government’s response to COVID-19, and the subsequent approach to recovery and renewal. So there is a need to ensure that we pay particular attention to the needs and rights of children and young people when considering the relative risks and benefits of protective measures.

Current state of the epidemic

Omicron has been the dominant variant in the UK and Scotland since December 2021, with [increasing dominance of the BA.2 sub-lineage](#) of this variant from late January 2022.ⁱ The profile of this wave differs from that of the first two waves in that most positive cases tend to be in younger adults [with much lower risk of COVID-related hospitalisations and deaths](#)ⁱⁱ. These differences are likely due to the success of the roll-out of the COVID-19 vaccination programme, alongside a reduced risk of severe outcomes for Omicron compared to Delta.

([https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(22\)00462-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00462-7/fulltext))

[Most recent data from the ONS Infection Survey](#) estimate that 1 in 11 (95% credible interval 1 in 12 to 1 in 10) people in Scotland had tested positive for COVID-19 in the week ending 20 March 2022.ⁱⁱⁱ

The COVID-19 vaccination programme was rolled out in Scotland, along with the rest of the UK, in December 2020 in line with JCVI guidance on priority groups. All individuals aged 5 years or older are now eligible to get a COVID-19 vaccine. Individuals aged 75 or over, and those clinically extremely vulnerable, are currently being offered a spring booster.

The UK Health Security Agency (UKHSA) [estimate of vaccine effectiveness against hospitalisation because of omicron](#), 4-6 months after a booster, is 75-85%. This means that for individuals who get symptomatic infection, if you have had a booster within the past 6 months you are 75-85% less likely to be hospitalised compared to someone who is unvaccinated. Vaccine effectiveness for individuals with two doses more than 6 months ago indicates significant waning. UKHSA have not seen any reduction in vaccine effectiveness for the sub-lineage BA.2 compared to the first Omicron variant (BA.1). [A review by UKHSA](#) concludes that there is evidence that people who have had one or more doses of a COVID-19 vaccine are less likely to develop long COVID-19 than those who remain unvaccinated.

As of 14 March 2022, 93.7% of all adults over the age of 18 have received at least one dose, 90.0% have received two doses, and 77.7% have received a third or booster dose of the vaccine.

Almost all individuals over the age of 55 years have received two doses of the vaccine, and [91.2% have received a third or booster dose](#). In the 18 to 29-year age group, 81.4% have had one dose, 73.9% have completed two doses, and 51.8% have received a third or booster dose. In the 16 to 17-year age group, 84.0% have had one dose, 61.0% have had two, and 16.1% have received a third or booster dose. In the 12 to 15-year age group, 70.8% have had one dose, 44.0% have had two, and 1.3% have received a third or booster dose.^{iv}

2020-2022: data and surveillance

Between March 2020 and 13 March 2022, 327,330 (34.6%) children and young people between the ages of 2 to 17 years have a reported positive infection for COVID-19 in Scotland.

Compared to adults, children and young people under the age of 18 are at much lower risk of severe COVID-related health outcomes [such as hospitalisation, requirement for intensive care or death](#).^v In Scotland, between March 2020 and 13 March 2022, there were six deaths due to COVID-19 in the <15 year age group.

Although the Omicron variant and its associated BA.1 and BA.2 sub-lineages have shown higher transmissibility than the Delta variant, there is no current evidence to suggest that children are disproportionately impacted in terms of severe illness or hospitalisation.

Transmission and the role of schools

The body of evidence on the role of children in transmission continues to point to household transmission as the primary driver. Consistent with previous PHS analysis, a recently updated systematic review found that the secondary attack rate was markedly lower in school compared with household settings, suggesting that household transmission is more important than school transmission ([Ismail et al. Lancet Infect Dis. 2021 Mar;21\(3\):344-353](#)). School infection prevalence has been found to be associated with community infection incidence, supporting hypotheses that school infections broadly reflect community infections.

While we saw a significant rise and fall in under 16 infection rates since the return to school during the Omicron wave (January 2022), we saw a far smaller increase in adult / parent age cases. This reinforces the public health view that adults, including parents or others in households, are relatively protected through vaccination.

Occupational exposure in education settings

PHS published a [study](#) in September 2021, which did not find any evidence for an increased risk of being admitted to hospital with COVID-19 for teachers compared with other working-age adults (between March 2020 and July 2021). Teachers' overall risk of hospital admission was lower than that of other working-age adults. This risk varied over time, with a pattern of being lower than the general population in periods when schools were largely closed, and similar to that of the general population when schools were open. This study was carried out before the more transmissible Omicron variant became dominant in Scotland.

COVID-19 related health harms

Compared to adults, children and young people under the age of 18 are at much lower risk of severe COVID-related health outcomes such as hospitalisation and requirement for intensive care, or death. Children are susceptible to and can transmit SARS-COV-2 but are less likely to acquire the virus. Once infected, they are more likely to experience mild infection. Severe illness, hospitalisation and mortality are rare.

Although the Omicron variant has higher transmissibility than Delta, there is no evidence suggesting that it impacts children and young people disproportionately. In Scotland, since mid-August 2021 until 13 February 2022, the proportion of children and young people age 0-17 who have tested positive for COVID-19 who are

admitted to hospital within 14 days has been below 1%, although since then it has crept above 1%.

Long-COVID

If infected with COVID-19, children and young people are more likely than adults to experience mild infection. Severe illness, hospitalisation and mortality are rare. Over the time of the pandemic, however, concerns have grown about the longer-term effects of infection, known as long COVID.

Looking at the most recent studies, since November 2021, nine studies have been identified which have looked at ongoing symptoms or increased healthcare use post SARS-CoV-2 infection in children and young people. These studies vary in their methods and conclusions, making direct comparison difficult. An analysis of controlled and uncontrolled studies, [published in the Journal of Infection](#) suggests that higher quality studies are associated with a lower prevalence of ongoing symptoms.

Recent large national cohort studies from Norway and Denmark have suggested that SARS-CoV-2 [infection leads to more reports of ongoing symptoms](#)^{vi}, and a short term increase in health care use, but with [no apparent severe long term health concerns or requirement for specialist care](#)^{vii}. In both of these studies, however, ongoing symptoms are largely resolved within one to six months. Commonly reported symptoms include [fatigue](#), [respiratory conditions](#), [cough and throat/chest pain](#), [loss of taste and muscle weakness](#), loss of smell, [cognitive difficulties and sore throat and eyes](#)^{viii,ix,x,xi,xii}. Other reported symptoms include [abdominal, muscle and joint pain](#)^{xiii}, sadness, difficulty sleeping, [mood swings and anxiety](#)^{xiv}.

Findings in relation to risk factors are mixed. Some studies report [increased symptoms with age](#), with older age associated [with more symptoms](#)^{xv,xvi, xvii, xviii} and also female gender. However there is a degree of overlap between the primary studies included in these reviews. Other studies have not found the link between [older age](#) and [ongoing symptoms](#)^{xix,xx}. One English study found that there was no difference in the level of ongoing symptoms in asymptomatic cases [compared to asymptomatic controls](#)^{xxi}

Wider health and wellbeing

There is increasing evidence of the effects on children and young people of the pandemic and time out of school. This is particularly true for those living in the most deprived areas.

Viner et al carried out a [systematic review of the impacts on physical and mental health of children and young people](#). This was published on 12 February 2021, and was the first comprehensive systematic review of the effects of school closures on the health and wellbeing of children and young people. It found that almost all of the 72 studies it looked at, from 20 countries, documented harms to children and young people that occurred during school closures and social lockdown, the vast majority during the first wave of the COVID-19 pandemic. Available data suggested likely higher harms in children and young people from more deprived populations.

It concluded that:

“School closures as part of broader social distancing measures are associated with considerable harms to CYP health and wellbeing. Available data are short-term and longer-term harms are likely to be magnified by further school closures. Data are urgently needed on longer-term impacts using strong research designs, particularly amongst vulnerable groups. These findings are important for policy-makers seeking to balance the risks of transmission through school-aged children with the harms of closing schools.”

The Scottish Directors of Public Health and PHS jointly published a [discussion paper](#) on the impact of COVID-19 on Children and Young People. It highlighted some positive, but mainly adverse, impacts and found that:

“While the consequences of the pandemic have implications for all children, it is unlikely that these are the same for all children and young people. Instead, impacts are likely to be greater for those already experiencing poverty and more significant disadvantages, with particularly stark implications for single-parent families, those living with children with a disability or serious illness, families affected by substance use and those with a parent in jail.”

Attainment and equity

Pre-pandemic, the poverty related attainment gap in Scotland was closing, but the negative impact of the pandemic cannot be ignored.

The [2020/21 Achievement of a Curriculum for Excellence Level](#) (ACEL) data published on 14 December highlighted the impact of the pandemic on literacy and numeracy in primary schools. This year’s data show that the percentage of pupils achieving the expected CfE level in 2020/21 is lower than in 2018/19 for all stages and across all organisers. The size of these decreases range between three and six percentage points and are generally larger than previous changes at national level.

The gap between the proportion of primary pupils (combined P1, P4 and P7) from the most and least deprived areas who achieved their expected level in literacy and numeracy has widened since 2018/19 and is now wider than at any point since 2016/17 (the first year for which comparable data is available). Before the pandemic, the year on year trend in the ACEL data was positive.

There has been a decrease in the [percentage of school leavers who were in a positive destination three months after leaving school](#); 93.3% in 2019/20 compared with 95% in 2018/19 (the lowest since 2014/15 - 93.2%). Whilst 72.2% of 2019/20 leavers were in Higher or Further Education (the highest rate since consistent records began in 2009/10), the percentage of school leavers in employment decreased from 22.9% in 2018/19 to 16.2% in 2019/20, (the lowest figure on record) and the percentage who were unemployed increased from 4.5% to 6%.

The [2022 National Improvement Framework](#) (NIF) includes 11 key measures to assess progress towards closing the poverty related attainment gap. Of the 11 key

measures, we only have data on 7 this year. Secondary ACEL data was not collected as a result of COVID, and the health and wellbeing data is not collected every year. Of those 7, there is a narrowing of the gap in only 2 (the 27-30 month check, and the school leaver participation measure) and a widening in 5.

The [equity audit](#) of the impact COVID-19 and school building closures had on children from socio-economically disadvantaged backgrounds in Scotland identified that both the mental and physical health and wellbeing of pupils had been impacted negatively. Of particular importance to children and young people was the loss of face-to-face teaching and the inability to socialise with friends. Children in the early years of primary, or those starting secondary, were most likely to have seen a negative impact on their progress, with literacy more often cited as being affected negatively than numeracy. Children for whom English was an additional language often had to revisit skills they had developed prior to the closure of school buildings, in both their mother tongue and in English. During and after school building closure, schools reported food insecurity as an emerging issue.

Importantly, the equity audit also noted the energy and resilience shown by children and young people to overcome the challenges of school building closures, as well as their remarkable ability to adapt to ongoing challenges in their learning.

We also know that the opportunity to intervene in the early years is a cornerstone to closing the poverty-related attainment gap. This is borne out by the COVID-19 Early Years Resilience and Impact Survey (CEYRIS) which found that the impact of closure appears to be more severe for less well-off households. Closure has also been assessed as having a disproportionate impact on other social groups – including children in single-adult households, and households where children had long-term health conditions.

This issue is not unique to Scotland. Ofsted's Chief Inspector's Annual Report noted nearly all children and learners have been affected by the pandemic, and a recent report from the World Bank documents evidence of pandemic related learning loss over 28 countries, at all income levels.

A study carried out for the Department for Education (DFE) to assess the [learning loss experienced by pupils in England as a result of COVID-19](#) showed that throughout the academic year 2020/21, pupils from disadvantaged backgrounds (primarily those eligible for free school meals at some point in the last six years) experienced greater learning losses than their more affluent peers as a result of the pandemic. By the end of the first half of the autumn term, pupils from disadvantaged backgrounds had lost, on average, approximately 1.9 months in reading amongst both primary and secondary aged pupils, and around 4.5 months in mathematics for primary aged pupils. In comparison to their peers this means that early in the 2020/21 academic year, disadvantaged pupils had experienced similar learning losses to non-disadvantaged pupils in primary reading, lost about half a month more learning than non-disadvantaged pupils in secondary reading, and lost around a month more learning in primary mathematics.

The [Studiosity Student Wellbeing Survey](#), carried out with students across the UK, found that 71% had considered dropping out of university in 2021 (up from 59% in

2019), 81% said Covid-19 has had a negative effect on their university experience, and 66% said that university has not been as good as they expected. In a 2020 NUS survey, 52% of students said their mental health has deteriorated or been affected negatively by COVID-19, whilst 84% of those due to graduate during the pandemic were concerned about their job prospects.

In the UK, the employment rate of young people (aged 16-24) decreased by 2.6 percentage points to 51.9% between Q1 2020 and Q4 2020. This decrease was greater than for other age groups, likely due to the imposition of lockdown restrictions which had a greater impact on industries with higher employment concentrations of young people. Research highlights that young people who have recently left education and who have recently entered the labour market are [more susceptible to long-term unemployment and pay scarring](#) as a result of the pandemic^{xxii}.

Mental and physical health and wellbeing

There is a growing body of evidence relating to negative impacts on learning, achievement and health and wellbeing, including the sustained increase in the number of developmental concerns reported in younger children at the 27-30 month review point. These concerns were mainly in terms of speech and language development among other factors.

Public Health Scotland data from the Child Health Surveillance Programme indicates that there has been a rise in developmental concerns noted at Child Health Reviews at the 13-15 month and 27-30 month points. The proportion of children with at least one concern at the 13-15 month review increased from 9.6% (for the period May 2019 - February 2020) to 11.8% (for the period January – September 2021). The proportion of children with at least one concern at the 27-30 month review increased from 14.6% (for the period January 2019 to February 2020) to 18.7% (for the period January – September 2021). Both measures have been consistently above the pre-pandemic level since February 2021. <https://scotland.shinyapps.io/phs-covid-wider-impact/>

Child protection concerns and inter agency referrals (IRDs) rose significantly after each lockdown; during the first lockdown the rates of unborn child referrals that were newly registered on the Child Protection Register rose by 4 percentage points, from 16% to 20% in the first six months from April 2020 to July 2020. There was no similar rise or pattern for other age groups during this period, however as pregnant women continued to be seen by maternity services during this time, this suggests that the lack of rise in other age groups was due, at least in part, to a large cohort of children going unseen.

There is also increasing evidence of the wider impacts on children and young people of the pandemic beyond the educational impact. [The proportion of Primary 1 children at risk of being overweight or obesity](#) increased by 6.8 percentage points between 2019/20 and 2020/21, having been stable for a number of years prior to this. The most substantial increase was in the proportion of children at risk of obesity. Among children living in the most deprived areas there was an 8.4 percentage point increase

between 2019/20 and 2020/21, to 35.7% at risk of overweight or obesity, compared to a 3.6 percentage point increase, to 20.8%, in the least deprived areas.

In addition, the National Child Measurement Programme in England found that the prevalence of obesity among Reception class and Year 6 children was significantly higher in 2020/21 than in 2019/20, likely caused at least in part by school closures and resulting changes in diet and physical activity. The prevalence of obesity was more than twice as high for children living in the most deprived areas compared to children living in the least deprived areas. It should be noted that 2020/21 was an incomplete year of data collection compared to previous years.

[The full impact of the COVID-19 pandemic on children's oral and dental health in Scotland is not yet fully known or understood](#). The [National Dental Inspection Programme](#) (NDIP) data had shown a continuous population improvement in child oral health in recent years. However, the programme was paused in the school year 2020/21. The improvements in Scotland's child oral health population observed for over a decade have been driven by the world-leading [Childsmile](#) – national child oral health improvement programme for Scotland. However, this multifaceted public health improvement programme delivered in nurseries, schools, communities and primary care dental practices, has also been paused through the pandemic. Revised guidance and protocols have been produced to support the recovery of this programme, which is only slowly beginning to recommence.

There is also an ongoing concern about the mental health and wellbeing of children and young people as a result of COVID-19. Young Scot, the Scottish Youth Parliament, and YouthLink Scotland carried out a survey of young people (aged 11-25) which ran from 3-17 April 2020. The [Lockdown Lowdown](#) showed that almost two fifths of respondents (39%) stated that they felt moderately or extremely concerned about their own mental wellbeing. When asked about the mental wellbeing of others, 46% stated that they felt moderately or extremely concerned about the wellbeing of others. It also showed that 42% of respondents were concerned about school closures.

An updated [Lockdown Lowdown](#) was published in November 2020, which surveyed over 6,000 young people from across Scotland asking what they thought about their lives as lockdown restrictions changed. It showed that two in five (38%) of young people remained worried about their mental health, and that over two thirds (67%) of those who had returned to in-person learning were happy to be back.

The phase 3 [Lockdown Lowdown](#) survey was published in July 2021 and identified mental health as a primary concern among young people in Scotland, with over a third (35%) worried about their mental wellbeing.

Scottish Child and Adolescent Mental Health Services (CAMHS) eating disorder leads reported an increase in the number and severity of children and young people presenting with eating disorders. In the seven health boards able to present data to the [Eating Disorders Services Review](#), there has been a combined 86% increase in referrals between 2019 and 2020. Furthermore, the UK eating disorder charity Beat has seen calls to its helpline from Scotland increase by 162% between April and October 2020.

[Data from Public Health Scotland](#) shows that the number of children presenting with self-harming issues within Scottish NHS acute hospitals increased substantially during the pandemic. In 2020, 1400 such cases were recorded, compared with 1141 in 2019 and 1105 in 2018. It should be noted these figures are for hospital admissions only and so will vastly undercount the prevalence of self-harming amongst young people in Scotland.

The [COVID-19 Early Years Resilience and Impact Survey](#) (CEYRIS) of parents of children aged 2 to 7 highlights a range of impacts on children during the period when ELC settings and schools were closed – including: social and emotional development; wellbeing; behaviours; and social interaction with peers. The survey found a worsening of behaviours among ELC and early primary aged children compared with pre-lockdown, including in relation to behaviour overall, mood, amount of physical activity and eating behaviours.

Vulnerable children and young people

The Scottish Government children, young people, and families monthly evidence [summaries](#) show that, throughout the first lockdown, services received reports of children being exposed to increased levels of abuse. There were some reports of children who had fled domestic abuse experiencing severe isolation and digital exclusion, with remote engagement with younger children being reported as very difficult. The most consistent finding throughout lockdown and Phases 1 to 3 related to domestic abuse perpetrated via child contact.

The [latest official statistics from the Scottish Children's Reporter Administration](#) underline the significant impact the pandemic has had on the Children's Reporter and the Children's Hearing system in Scotland. These exist to provide support to under 18s in Scotland who need care and protection or have allegedly committed an offence. Referrals are most commonly made to the Reporter by statutory agencies, including police, social work, health and education. Between 1 April 2020 and 31 March 2021, referrals to the Reporter decreased by around 25% compared to 2019-20. This decrease sits alongside an increase in children with child protection orders (4.2%) following three years of declining numbers. Lack of parental care is the most common reason for referral and is more likely for younger children. However, of the children referred to the Children's Reporter, almost a fifth (17.4%) were under 20 days old and 43.7% under two years. Thus, in part, a higher frequency of referrals for the youngest children is due to the urgency for protection required for very young children.

The recently formed UK Trauma Council published a [report](#) which sets out how the pandemic is impacting on children's experiences of trauma in terms of increasing the risk of Adverse Childhood Experiences (ACEs) (e.g. domestic abuse, bereavement, family mental illness, extreme poverty etc.) and limiting the ability of adults and services to identify children and mitigate the impact of trauma. More evidence is needed on the extent to which children have been exposed to ACEs during the pandemic, and how those with prior experience of childhood adversity and/or trauma have been impacted.

There is some emerging UK evidence of an increase in online bullying during lockdown ([YMCA survey](#)). There are also indications of increases in online sexual abuse during the pandemic (based on data on UK-wide Childline and NSPCC helpline data). A NSPCC briefing suggests that this may be aggravated by children and young people using online platforms to counter loneliness without sufficient understanding of online risks.

The TIE report [online in lockdown](#), looking at mental wellbeing, bullying and prejudice, provides some insight into the experiences and impact of the pandemic on LGBTQ+ young people, in particular their experience of online bullying and prejudice. It found that there has been a significant difference in young people's self-reported emotional wellbeing since lockdown began, with more young people reporting that they would describe their emotional wellbeing as poor. LGBTQ+ respondents reported higher rates of negative mental wellbeing as a result of not being in school/further education compared to heterosexual young people (53% compared to 34% respectively).

The socioeconomic impact on families with children

Poverty has a detrimental impact on children's outcomes, from pre-birth and throughout their life course. Pre-pandemic, it was estimated that one in three children would be in poverty by 2023. We know that child poverty was increasing prior to the pandemic and that [the pandemic has exacerbated this](#), exposing more families to and amplifying pre-existing levels of social and economic inequality and poverty.^{xxiii} The measures introduced to suppress the virus have [disproportionately affected low income families](#) with young children.^{xxiv}

Further evidence of the financial impacts of lockdown is available from the [coronavirus financial impact tracker survey](#) published in March 2021. Based on findings from individuals across the UK responsible for household finances (n = 6,071), nearly a third of families with dependent children were living on less income than in February 2020 due to the financial impact of the pandemic. Loss of income was 10% higher for families with than without children (27% vs 17%). Around 10% of households reported serious financial difficulty, with the proportion of single-parent households with serious financial problems increasing from 13% in July 2020 to 18% in January 2021. Additionally, 31% of families with dependent children reported using credit to make ends meet, compared to 15% of those without dependent children. This figure increases to 79% of families in severe financial difficulty.

A joint submission from [Aberlour, Child Poverty Action Group and One Parent Families \(Scotland\)](#) to the Scottish Parliament Social Security Committee highlighted that the pandemic has resulted in an increased number of families looking to charities for material support, often without knowledge of or facing barriers to accessing, statutory sources of financial support such as the Scottish Welfare Fund.

Prevention and control measures

While the vaccination programme was being rolled out, non-pharmaceutical interventions (NPI) such as physical distancing, hand and respiratory hygiene, face coverings, and zero tolerance to symptoms were the main public health tool against COVID-19.

Vaccination

As of 7 March 2022, 96.2% of teachers have taken up the first dose of the vaccine, 95.4% the second, and 88.4% have had the third/booster. For ELC staff it is 92.8% for the first, 90.2% for the second, and 73.5% for the third/booster. The success of the vaccination programme means that not all NPIs will continue to be required in schools and ELC settings, although there will need to be some routine measures in place as set out in the latest guidance on reducing the risks in [schools](#) and [ELC](#).

Face coverings

Face-coverings can reduce the risk of infection and onward transmission. However, covering the lower half of the face can also reduce the ability to communicate, and some young people find them uncomfortable to wear for long periods of time.

The UK Health Security Agency recently published an [updated review on the effectiveness of face coverings to reduce transmission of COVID-19 in the community](#). The review includes 25 studies (including 9 preprints and 2 non-peer-reviewed reports): 2 randomised controlled trials (RCTs) and 23 observational studies (search date: up to 14 September 2021). The evidence predominantly suggests that face coverings can reduce the spread of COVID-19 in the community, through both source control and wearer protection, as well as universal masking.

In general, the [expert view](#) is that face coverings reduce risks mainly from shorter and longer range droplet and airborne transmission, whereas [ventilation](#) reduces risks from longer range airborne transmission. [SAGE](#) advised in December 2021 that there are preliminary indications that Omicron might show more airborne transmission; this would make [the use of face coverings and ventilation even more important than for Delta](#).

There are also preliminary findings from a [Department for Education study](#) in England indicating face coverings may have a potential positive effect in reducing pupil absence.

Consistent with the approach of undertaking a holistic assessment of the impact of mitigations, these benefits of face coverings in reducing transmission need to be balanced with equivalent evidence of associated harms regarding their use. For example, there is [evidence from previous studies](#) that pupils find communication and learning more difficult when wearing face coverings. Examples include:

- in the [2021 Young People in Scotland survey](#), 44% of pupils surveyed agreed that it was harder to connect with other people when one or both of them was wearing a face covering, and 41% of the pupils agreed that it was difficult to

understand teachers when they were wearing a face covering, with slightly higher figures being reported for those in more deprived areas (47/48% in SIMD 1/2, compared to 32% in SIMD 4)

- from the same survey, 18% of secondary pupils agreed that wearing face coverings made them feel anxious. Girls were more likely to agree that they felt anxious because of face coverings than boys (24% compared with 11%) as were those with a physical or mental health condition (28% compared with 12%). Those living in the most deprived areas of Scotland (SIMD 1 and 2) were more likely to agree that wearing a face covering made them feel anxious (22% and 23% respectively) than those living in less deprived areas (SIMD 4 – 13%)
- 94% of secondary teachers in a [Department for Education snapshot survey](#) found face coverings made communication more difficult between students and teachers
- [research into the effect of mask wearing on communication](#) found that concealing a speaker's lips led to lower performance, lower confidence scores, and increased perceived effort on the part of the listener
- the mental health charity MIND has identified that face masks can have a particular impact on people with mental health problems, including anxiety, claustrophobia and negative feelings around identity and body image. As a result, it has produced guidance on managing what it calls [mask anxiety](#)
- the [National Deaf Children's Society](#) has also described specific challenges around face coverings for deaf children and young people, and has given suggestions around communication when wearing these

Asymptomatic testing

Analysis by PHS shows that over 9% of 5-11 year olds reported an LFD test in the week ending 23rd January¹. Given levels of under-reporting noted, PHS believe it is not unreasonable to estimate that at least 1 in 4 children aged 5-11 years old had performed at least one LFD test in the week ending 23 January 2022. PHS estimate that 1 in 3 infections in 5-11 year olds were undiagnosed in the Delta era (through comparison of PCR results and serology samples), and that this has reduced to 1 in 2 infections in the Omicron era (due to the increase in testing in this age group picking up more asymptomatic cases). Over 50% of the infections we now know about in this age group are from LFD tests.

Evidence from COVID and comparable viral illnesses is that asymptomatic cases are on average at lower risk of transmitting virus to their contacts than those who are symptomatic. Where a child develops symptoms of COVID or other infectious disease they should not attend school until they have recovered.

¹ NB: these children do not participate in regular testing under the schools asymptomatic testing programme, but are recommended to undertake an asymptomatic test if they receive a warn and inform letter before returning to school, and are also eligible to test to shorten isolation and to leave isolation as contacts with daily negative LFDs.

Asymptomatic Testing

Advice from Public Health Scotland, supported by senior clinicians, is that there would be little benefit in continuing with routine asymptomatic testing of children and young people and school/ELC staff in mainstream and special schools.

The following key factors have informed this advice:

- expert advisers are now of the view that, at the current time, the population has much stronger protection against COVID-19 than at any other point in the pandemic, due to the vaccination programme and the development of natural immunity to the infection. In addition, severe health outcomes are now far less likely to arise due to this protection, availability of and access to antiviral treatments, and increased scientific and public understanding about how to manage risk
- due to the very low risk of harm to children from COVID-19 infection, the Harm 1 public health goal of identifying cases asymptotically in this age group was with the plausible aim of interrupting any transmission to vulnerable adults (the elderly and otherwise immunocompromised), rather than to prevent transmission within the age group
- children are much less likely to suffer severe health outcomes as a result of catching COVID than adults. Identifying them as asymptomatic cases and asking them and their household contacts to self-isolate when they otherwise feel well comes at a cost to them (isolation of children and anxiety for children and parents) and is likely to result in educational or developmental harms to those individuals (or those they teach or care for)
- while we do not yet know the full impact of the disruptions to education on children's and young people's learning, health and wellbeing, and it is not possible to tie this directly to asymptomatic testing, there is evidence to suggest that for primary school-aged children attainment is reduced and the inequalities gap increased during the pandemic. There has been a rise in child development concerns at the 13-15mths and 27-30mths health review points, with these being particularly marked at the 27-30mth review and for those children in the most deprived areas. Ongoing disruption to learning is likely to exacerbate any existing challenges. Being in school or ELC settings also provides essential services for children who are at increased risk of poor outcomes e.g. free school meals or funded healthy snacks
- the ends justifying these means have been substantially weakened by evidence gathered since the emergence of Omicron, which has shown itself in Scotland and international evidence to be a weaker virus; and the success of Scotland's booster programme coupled with high levels of previous infection, leading to a far smaller pool of susceptible older hosts

- vaccination coverage in education staff is very high with an estimated 88% of school teachers and 72% of ELC staff having had their third/booster dose
- vaccines have shown very good effectiveness against harm from COVID-19 infection. The latest UKHSA evidence summary is that a primary course and a booster are between 75% and 95% effective against hospitalisation dependent on the booster and time since boosting; and 95% against mortality. A recently published rapid evidence review from UKHSA also found that vaccinated people were less likely to develop prolonged symptoms ('long COVID') following infection
- while we saw a significant rise and fall in under 16 infection rates since the return to school during the Omicron wave (January 2022), we saw a far smaller increase in adult / parent age cases. This reinforces the public health view that adults, including parents or others in households, are relatively protected through vaccination
- in addition, where we have seen potential transmission from children to adults, who are more vulnerable to COVID-19 infection than children, this has not translated to public health harm e.g. hospitalisation, ICU admission or death of the same scale as previously seen
- the body of evidence on the role of children in transmission continues to point to household transmission as the primary driver. Consistent with previous PHS analysis, a recently updated systematic review found that the secondary attack rate was markedly lower in school compared with household settings, suggesting that household transmission is more important than school transmission ([Ismail et al, Lancet Infect Dis. 2021 Mar;21\(3\):344-353](#)). School infection prevalence has been found to be associated with community infection incidence, supporting hypotheses that school infections broadly reflect community infections
- Omicron is demonstrably less likely to result in individual health harm than Delta (UKHSA estimate 59% less likely to result in hospital admission, 69% less likely to result in death). Omicron (BA.1 and BA.2) account for almost all COVID-19 infections in Scotland. BA.2, whilst more rapidly spread and contributing to an increasing proportion of cases compared to BA.1, is showing no evidence of more severe health outcomes compared to Omicron BA.1, and it has not to date been flagged as a variant of concern by UKHSA and remains only under investigation
- the PHS view is that COVID-19 will continue to circulate in children in future years and there is evidence that infection provides some protection against future infection in both the vaccinated and the unvaccinated
- Throughout the pandemic we have seen higher numbers of cases present in ELC settings when community transmission is high, but there is no evidence of increased or disproportionate transmission within these settings when compared to the wider community. Although clusters of cases do occur in ELC settings the average size of these clusters is low and large outbreaks are uncommon, especially when compared to schools with older children or adult workplaces or hospitality venues. With our wider communities and businesses now largely

open, e.g. hospitality, leisure centres, soft plays and children's parties, it can be challenging to identify where transmission has occurred, and focused action in one setting is unlikely to have a significant impact on overall transmission

- with regard to ending regular testing in special schools, the following points summarise advice from PHS, confirmed by senior clinicians:
 - despite likely hosting a higher proportion (or density) of clinically vulnerable children than mainstream schools, children in special schools remain at low absolute risk from COVID-19. This absolute (and relative) risk has fallen since the introduction of the vaccination programme and the emergence of Omicron. We are not in the same public health situation we were when the asymptomatic testing programme was introduced
 - to prevent direct health harm to children PHS would recommend focusing on individual clinical risk rather than broad brush community asymptomatic testing of those they come into contact with. Vaccination remains our best route to minimising individual health risk in a proportionate way. Continuing asymptomatic testing in special schools is unlikely to significantly reduce the risk to children in these settings, and may risk harming them (see final bullet below)
 - in an otherwise open society, asymptomatic testing of children in special schools is also highly unlikely to be effective in preventing transmission to staff who work in these settings, and therefore unlikely to minimise educational disruption in these settings
 - there are significant potential harms associated with focusing testing in special schools including: inequity including potential for increased rather than decreased educational disruption; the harms of repeatedly testing otherwise well children; the challenges with isolation of asymptomatic children with special educational needs; increased anxiety in children, parents and staff
 - PHS would propose alignment of special schools and mainstream schools in terms of this policy, from a public health point of view

ⁱ https://publichealthscotland.scot/media/12164/22-03-16-covid19-winter_publication_report.pdf

ⁱⁱ Public Health Scotland COVID-19 statistical report, https://publichealthscotland.scot/media/8433/21-07-14-covid19-publication_report.pdf

ⁱⁱⁱ [Coronavirus \(COVID-19\) Infection Survey, UK - Office for National Statistics](https://www.gov.uk/coronavirus)

^{iv} https://public.tableau.com/app/profile/phs.covid.19/viz/COVID-19DailyDashboard_15960160643010/Overview#!/vizhome/COVID-19DailyDashboard_15960160643010/Overview

^v <https://www.ecdc.europa.eu/en/publications-data/children-and-school-settings-covid-19-transmission>

^{vi} Borch L, Holm M, Knudsen M, Ellermann-Eriksen S and Hagstroem S (2022) Long COVID symptoms and duration in SARS-CoV-2 positive children — a nationwide cohort study. Eur J Pediatr (2022). <https://doi.org/10.1007/s00431-021-04345-z>

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