An Roinn Sláinte Department of Health Office of the Chief Medical Officer



Mr. Stephen Donnelly TD, Minister for Health, Department of Health, Miesian Plaza, 50-58 Lower Baggot Street, Dublin 2.

5th January 2021 *Via email to Private Secretary to the Minister for Health*

Dear Minister,

I refer to ongoing considerations in relation to the reopening of schools next week and I am writing to provide you with updated information which might help inform those considerations.

Approach to Date

As you will be aware, the NPHET's advice throughout the pandemic has been guided by and founded on the absolute priority of protecting public health, particularly in relation to those most vulnerable to the severe outcomes of COVID-19 and ensuring the continued delivery of essential public services, namely:

- the safe delivery of health and social care services for care needs unrelated to COVID-19;
- the safe provision of childcare services, and the safe delivery of primary and secondary education.

At its meeting of the 30th December, the NPHET reiterated its advice that full Level 5 measures of the Government's Plan for Living with COVID-19 should be implemented as soon as possible to comprehensively reduce infection levels and to enable the continued protection of these core priorities. The NPHET specifically considered the matter of schools at that meeting and it advised that, on balance, that schools should reopen in January as planned, as provided for in Level 5. While acknowledging the deteriorating epidemiological situation, this advice was based on an assessment at that time that the known negative impacts of school closures on children (including student mental health, wellbeing, development, educational attainment and overall health outcomes), outweighed the risks of reopening in terms of potential direct health risks to children and staff from COVID-19 (with evidence to date confirming that schools are a safe and protected environment – see below) and the wider impact of school opening on community transmission levels. This advice was in line with most recent ECDC advices from 23rd and 29th December 2020, which notes that "the negative physical, mental health and educational impact caused by proactive school closures on

children, notably more vulnerable children, are substantial. Thus, a decision to close schools to control the pandemic should be used as a last resort"¹.

However, the NPHET did note that the high and rising levels of community transmission would become a risk to the ongoing provision of education at primary and secondary level unless these levels of transmission could be addressed. It further cautioned that Level 5 measures might not be sufficient to bring the disease under control and that additional measures might be required if there was a continued deterioration over the following period.

Current Epidemiological Position

The epidemiological situation has deteriorated substantially since NPHET met on the 30th December. Headline indicators are as follows:

- A total of 21,106 cases have been notified in the 7 days to 4th January, compared to 8,018 in the 7 days up to the 30th December
- The 7-day incidence is now 443 compared to 168 on the 30th December
- The 14-day incidence is now 583 compared to 273 on the 30th December
- The 5-day moving average is now 3,568 compared to 1,213 on the 30th December
- There are now 817 people with COVID-19 in hospital and 75 in critical care, respectively; this
 compares with 454 and 37 people with COVID-19 in hospital and critical care, respectively,
 on 30th December.

Assessment of Situation in Children and Schools

The available epidemiological evidence shows that:

- Children under 13 years of age, and to a lesser extent adolescents aged 13-18 years, appear
 relatively protected from infection, with children having an incidence significantly less than
 the population average, and adolescents having an incidence close to the population
 average but much less than that of the young adult (19-24 years old) population
- Schools are safe environments, with very little evidence of transmission within schools, so
 that it seems that the majority of infections of children and adolescents occurs outside the
 school setting
- The opening of schools in August 2020 had no detectable effect on the growth rate in case numbers over subsequent weeks.

Children under 13 years of age have consistently had a lower detected incidence of SARS-CoV-2 infection, even when levels of community transmission are relatively high: at the peak of the October 2020 wave of disease, we were reporting over 1,000 cases per day on average, so for the seven days to 18 October 2020 we confirmed on average 1,083 cases per day, or 22.7 cases per day per 100,000 population. The age-specific incidence in children aged 0-4 years and 5-12 years was

¹ https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-risk-related-to-spread-of-new-SARS-CoV-2-variants-EU-EEA.pdf

10.1 and 12.2 per 100,000 respectively, or approximately half the population incidence (Figure 1, Appendix 1 - Tables 1&2). The pattern is similar during the December 2020 surge, with incidence in children approximately one-third of the population incidence.

Adolescents aged 13-18 years had an incidence at or just above the population average during the October 2020 peak; incidence in December 2020 is below the population average. This is in sharp contrast to young adults aged 19-24 years, where incidence at high levels of community transmission is typically 2-3 times the population average.

When we contrast the incidence in children and adolescents with that in young adults, it is not clear to what extent the lower incidence in children and adolescents is due to biological factors (lower susceptibility to infection), under-detection (not being tested because they are less likely to have symptoms), and the fact that children and adolescents spend much of their time in the controlled environment of the home and the school.

It is clear from the available data that there is very little evidence of transmission in schools. Cases in schools are subject to intense public health investigation. Despite this there have been relatively few outbreaks in schools, and relatively few cases associated with those outbreaks (Figure 2); the vast majority of cases in children and adolescents occur outside the school setting. During the October 2020 peak in disease, cases linked to school outbreaks were detected relatively late in the peak when overall incidence was very high; for a short period at peak we detected about 25 cases per day in children and adolescents in school outbreaks, but were detecting almost 200 cases per day in this age group overall. In the month of October 2020, there were 401 cases in children and adolescents associated with school outbreaks, but 4,023 cases in this age-group overall.

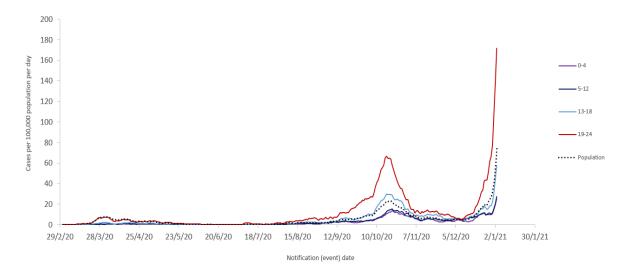
Finally, the opening of schools in August 2020 was not associated with any increase in the growth rate of the infection across the population as a whole; the period from the end of June 2020 to the peak of disease in October 2020, when the outbreaks in Kildare, Laois and Offaly are excluded, was associated with a near-constant growth rate of close to 4% per day; this did not change significantly between August and September 2020.

Nonetheless, there is some international evidence which suggests that the closure of schools may achieve a reduction in viral transmission and reproduction number across the population as a whole. It is not clear to what extent this might be due to the elimination of the opportunity for the virus to transmit in the school setting, or due to decreased mobility of and social mixing between adults because of school closure, or a combination of both. We should be alert to the possibility that the closure of secondary schools in winter might lead to increased social mixing between adolescents in private homes, heightening the importance of continued adherence to the public health measures currently in place (i.e. the advice to the general public to stay at home).

Figure 1: Age Specific Incidence for those under 25

Incidence by age
Age-specific incidence for those aged under 25, compared with the overall population. The incidence in those aged 18 and under remains at or below the population average





Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated by notification (event) date. Tests outsourced to German laboratory in April backdated, using the specimen collection date, to the date they would have been confirmed if tested in a timely manner

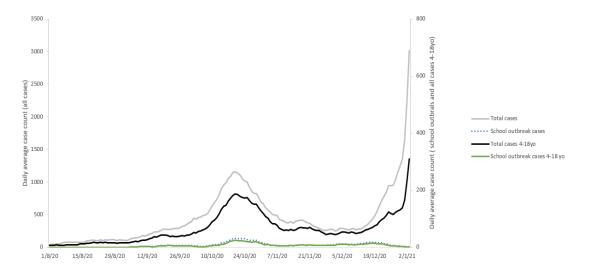


Figure 2: Cases in School Outbreaks

Cases in school outbreaks

The number of cases associated with outbreaks in schools is very small, and is a small proportion of the cases amongst children of school-going age. The October wave led to a small number of cases in school outbreaks (on average 25 cases per day at peak) which was delayed relative to the overall rise in incidence, and made a relatively small contribtion to the total number of cases in the 4-18 age group (on average 195 cases per day at peak).





Daily average case counts for all cases (grey, primary y-axis), cases per day in school outbreaks (secondary y-axis) and all cases in those aged 4-18 years (secondary yaxis). Cases dated by notification (event creation) date.





Update on emergence of novel variants

A novel SARS-Co-V2 variant VOC 202012/01 (also known as B.1.1.7) emerged in southeast England as early as September 2020. Investigation in November 2020 into the increasing number of cases in the region discovered this new variant of the virus. Separately, In South Africa, another lineage of the coronavirus (named 501.V2) has gained one particular mutation that is also found in VOC 202012/01.

A number of separate independent analyses indicate that the novel variant in the UK has significantly increased levels of transmission compared to other variants in circulation – potentially in the region of 50% more transmissible. The UK's Scientific Advisory Group for Emergencies (SAGE) has made the following conclusions with regard to the impact of the variant in the UK;

- The variant is now dominant in London and the East of England and is also spreading to the South East and South West of England.
- It is not yet clear whether the faster spread observed with this variant is consistent across age groups, or if there is a greater increase in transmission relative to other variants in some age groups.
- It is considered unlikely that measures with stringency and adherence in line with the measures in England in November (i.e. with schools open) would be sufficient to maintain R below 1 in the presence of the new variant. R would be lower with schools closed, with closure of secondary schools likely to have a greater effect than closure of primary schools. But it is also stated that it is not known whether measures with similar stringency and adherence as Spring, with both primary and secondary schools closed, would be sufficient to bring R below 1 in the presence of the new variant.
- It is noted that it remains difficult to distinguish where transmission between children takes place, and it is important to consider contacts made outside of schools.

A separate preliminary analysis by Imperial College London suggests that there may be a small but statistically significant shift towards under 20s being more affected by the novel variant. However, this difference in age distribution could arise for a number of reasons: the overall increase in transmissibility of the variant, especially during a time where lockdown was in force but schools were open, increased susceptibility of under 20s, or more apparent symptoms (and thus a propensity to seek testing) for the variant in that age range.

The ECDC published a Rapid Risk Assessment on the novel variants on the 29 December 2020^[1].

- The ECDC Assessment states that preliminary analyses indicate that the UK variant has increased transmissibility compared to previously circulating variants, while the South African variant is associated with a heightened viral load and may have increased transmissibility. It also states that there is no evidence to date that either variant is associated with higher severity of infection. UK researchers estimate that the UK variant has an increased transmission rate of 50-70% compared with other variants in the United Kingdom.
- As of 26 December 2020, more than 3,000 cases of the UK variant, confirmed by genome sequencing, have been reported from the UK. The ECDC report that the new UK variant has been detected in 14 EU/EEA/Swiss countries (up to 29 December): Denmark (46), Portugal

^[1] Risk Assessment: Risk related to spread of new SARS-CoV-2 variants of concern in the EU/EEA (europa.eu)

- (21), Italy (14), Iceland (13), Netherlands (11), Spain (9), Ireland (7), Belgium (4), Switzerland (2), Germany (2), Finland (2), Norway (2), France (1) and Sweden(1). It has also been detected in 10 other counties Japan(8), India (6), Israel (5), Australia (4), Canada (4), S Korea (3), Jordan (2), Hong Kong (2), Lebanon (1), and Singapore(1).
- More than 300 cases of the South African variant have been detected in South Africa. The ECDC report that 2 cases of this variant have been detected in the UK and 1 case in Finland to date.

Genomic tests on the 24 December 2020 confirmed the presence of the UK variant in Ireland. Further analysis to date has indicated the following cases of the UK variant:

- Week 51 (to 20th Dec): 6 variants in 70 samples or 8.6%
- Week 52 (to 27th Dec): 18 variants in 141 samples or 12.8%
- Week 53/Week 1 (to 3rd Jan): 47 variants in 189 or 24.9%

Further analysis and sequencing will take place over the coming weeks to establish the extent of the presence of both variants in Ireland. It is anticipated that, from next week, a new PCR testing platform will facilitate a higher throughput screening approach for the UK variant.

Situation in other EU countries

All EU countries with the exception of Finland are currently experiencing significantly high levels of Covid-19 infections and strict public health measures are in place across the EU. As part of these measures, many countries have closed/partially closed schools or have extended school holidays and are providing primary and secondary education remotely – see Appendix 2 for summary update across EU countries.

In addition, decisions have recently been taken across the UK to delay the reopening of schools and move to online learning:

- England until at least February mid-term
- Northern Ireland for an extended period of time (no specific time period agreed)
- Scotland until at least the start of February
- Wales Until 18th January

Current Position

There has been a further significant deterioration across all indicators of disease transmission and severity in the six days since NPHET last met. The situation is expected to deteriorate further in the coming days given the known time lags associated with the impact of measures. Furthermore, latest information in relation to the presence of the UK variant here in Ireland and reports of its increased transmissibility from the UK are an emerging concern and point to the urgent need for as strict as possible adherence to the measures that have been mandated by Government and for measures that are as strong as possible in relation to travel, particularly with regard to travel from the UK and South Africa. A further risk assessment on the novel variants will be undertaken later today.

While the clear priority to date has been the continued protection of the core priorities outlined above and this was achieved during the second wave of infection in October/November, the current volume of disease and level of acceleration in growth makes this increasingly difficult. Decisions have already been taken by the HSE in relation to the curtailment of provision of non-essential services in adult hospitals given the necessity to protect capacity for COVID-19 admissions. Equally, it is my view that, while the experience from September to December 2020 has clearly demonstrated that schools are in themselves a safe environment, the current epidemiological situation has deteriorated to a point where the significant levels of mobility and linked activity that the full reopening of schools would generate, constitutes a very significant additional risk in the context of what are already unprecedented levels of disease transmission in the community. It is important to state that this advice is not based on a changed assessment of the risks in relation to transmission levels in schools. Rather, it is a reflection of the overall epidemiological situation and the absolute need now to reduce all opportunities for transmission.

It will be important however, that the protection of our core priorities continues to guide the NPHET's advice in relation to our response in future weeks, including advice in relation to the epidemiological conditions for the reopening of schools, taking into account the need to ensure the continued protection of the overall health and wellbeing of children. Given the staffing challenges already evident across the health and social care sector, it will also be important that measures are taken to limit the impact of a closure of schools on health care workers and other essential workers. Specific measures should also be taken to ensure that more vulnerable children can best be supported over the coming weeks.

NPHET will meet as usual this Thursday 7 January and will give consideration to any further measures which may be required to address the current levels of community transmission and its consequences.

As always, I would be happy to discuss further, should you wish.

Dr Tony Holohan

Chief Medical Officer

Chair of the COVID-19 National Public Health Emergency Team

cc. Ms Elizabeth Canavan, Department of the Taoiseach and Chair of the Senior Officials Group for COVID-19

Appendix 1

Table 1: Average daily case count (7-day average)

Average daily case count (7-day average)					
	0-4	5-12	13-18	19-24	All cases
6-Sep-20	5	10	8	24	137
13-Sep-20	8	15	15	31	201
20-Sep-20	10	19	23	43	275
27-Sep-20	7	20	22	67	323
4-Oct-20	13	21	34	86	452
11-Oct-20	18	33	61	140	679
18-Oct-20	34	67	105	216	1083
25-Oct-20	40	77	97	164	1000
1-Nov-20	30	58	60	90	665
8-Nov-20	17	32	33	46	420
15-Nov-20	18	28	33	47	396
29-Nov-20	11	24	22	34	264
6-Dec-20	14	30	23	25	281
13-Dec-20	10	30	22	28	284
20-Dec-20	21	43	36	60	547
27-Dec-20	34	55	60	143	949
3-Jan-21	71	131	178	488	3015

Table 2: Age Specific 7-day Incidence

	0-4	5-12	13-18	19-24	Population
6-Sep-20	1.6	1.8	2.2	7.3	2.9
13-Sep-20	2.5	2.7	4.1	9.4	4.2
20-Sep-20	3.0	3.4	6.3	13.1	5.8
27-Sep-20	2.1	3.6	5.9	20.1	6.8
4-Oct-20	3.9	3.8	9.1	26.1	9.5
11-Oct-20	5.6	6.1	16.4	42.4	14.3
18-Oct-20	10.1	12.2	28.3	65.3	22.7
25-Oct-20	12.2	14.0	26.0	49.4	21.0
1-Nov-20	9.0	10.5	16.1	27.3	14.0
8-Nov-20	5.2	5.9	9.0	13.8	8.8
15-Nov-20	5.5	5.1	9.0	14.3	8.3
29-Nov-20	3.2	4.3	5.8	10.3	5.6
6-Dec-20	4.3	5.4	6.2	7.6	5.9
13-Dec-20	3.0	5.5	5.8	8.5	6.0
20-Dec-20	6.4	7.9	9.6	18.2	11.5
27-Dec-20	10.3	10.1	16.2	43.0	19.9
3-Jan-21	21.4	23.8	47.9	147.5	63.3

Appendix 2: Summary of international situation –primary and post primary school closures

Scotland	Schools closed to the majority of pupils until 1 February. To be reviewed again in mid- January. Applies to all pupils - except vulnerable children, and children of key workers.
	https://www.gov.scot/publications/coronavirus-covid-19-update-first-ministers-statement-monday-4-january-2021/
England	Primary and secondary teaching will be carried out remotely until February half term. Colleges, primary and secondary schools will remain open only for vulnerable children and the children of critical workers.
	https://www.gov.uk/guidance/national-lockdown-stay-at-home#going-to-school-college-and-university
Northern	[Note – update expected on NI later today (5 Jan)]
Ireland	Primary school remote until 11 January
	Post-primary pupils remote during the first week of January. From 11 January pupils in years 8 to 11 will continue to be taught remotely until the end of January while pupils in years 12 to 14 will attend school for face-to-face teaching.
	https://www.nidirect.gov.uk/articles/coronavirus-covid-19-advice-schools-colleges-and-universities
Wales	All schools and colleges will move to online learning until 18 January
	Schools and colleges are open for children of critical workers and vulnerable learners, as well as for learners who needed to complete essential exams or assessments. https://www.bbc.com/news/uk-wales-55534599
Austria	Distance learning in all schools when they return on January 7, with face-to-face lessons again allowed from January 25.
	https://www.thelocal.at/20201222/what-does-austrias-coronavirus-lockdown-mean-for-schools
Belgium	Schools are open. Pupils in second level will have a max of 50% contact education. https://www.info-coronavirus.be/en/faq/#004
Bulgaria	Online learning until 31 January for both primary and secondary https://www.gov.uk/foreign-travel-advice/bulgaria/coronavirus
Croatia	Most secondary schools teaching online from 14 December until 18 January
	https://www.croatiaweek.com/majority-of-secondary-schools-in-croatia-to-go-online-next-week/
Cyprus	Until 10 January 2021, lessons at public and private schools of primary and secondary education will be carried out online.
	https://www.pio.gov.cy/coronavirus/public/uploads/22%2012%202020%20MEASURES%2 <u>OEN.pdf</u>
Czech Republic	Primary school: only first-graders and second-graders may attend school in person under the current government regulations. As for now, third, fourth, and fifth-graders are being taught through distance education.
	In-person education in secondary schools is banned.
Donmark	https://covid.gov.cz/en/situations/children-and-students/distance-learning
Denmark	Primary school and secondary school education can continue with some restrictions. https://coronasmitte.dk/en/national-measures/overview-of-national-measures
Estonia	Online education in place until 10 January in some areas and until 17 January in Tallinn. https://www.hm.ee/et/koroona

Finland	Municipalities decide whether to keep schools open or not based on the rate of infection
	in the region. Many regions have schools still open.
	https://www.hus.fi/en/newsroom/coronavirus-covid-19/regional-situation-coronavirus-
	epidemic-and-issued-recommendations
France	Primary schools open.
	Secondary schools open with reduced face-to-face lessons. Must be at least 50% face-to-
	face teaching for each student.
	https://www.gouvernement.fr/info-coronavirus
Germany	Schools are closed until 10 January (looks set to be extended)
,	https://www.dw.com/en/germany-politicians-call-for-3-week-lockdown-extension/a-
	56119325 and https://www.dw.com/en/germany-face-to-face-school-learning-not-
	expected-anytime-soon/a-56121568
Greece	Education has moved online until the 7 January
	https://covid19.gov.gr/covid19-live-analytics/
Hungary	All teaching above 8 th grade is online.
σ,	Kindergartens and primary schools remain open for students under the age of 14.
	https://hu.usembassy.gov/covid-19/
Italy	Primary schools are still open for students.
icary	From 7 January, secondary school in-presence learning must be available for 75% of
	students.
	http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioFaqNuovoCoronavirus.jsp?li
	ngua=english&id=230#11
Latvia	All education is carried out online until 7 February
	https://www.mk.gov.lv/lv/aktualitates/rikojums-par-arkartejas-situacijas-izsludinasanu
Lithuania	Primary and secondary schools are closed with online learning available until 31 January.
	Schools can provide a service for children whose parents cannot work remotely.
	https://koronastop.lrv.lt/en/news/covid-19-related-restrictions-updated-on-3-january-
	2021
Luxembourg	Primary and secondary – closed – distance learning (28 Dec 20 – 10 Jan 21)
· ·	https://men.public.lu/fr/support/coronavirus/faq-en.html
Malta	Schools are open
	Source: COVID-19 Digest of Mission Reporting -22 Dec 2020
	gard and a grant of the same o
The	Primary and secondary schools carrying out remote teaching (16 Dec 20 - 17 January 21).
Netherlands	In secondary education, the following activities may continue on location: practical
	training, lessons for students with upcoming examinations, and school exams in the year
	of final examinations or the year before.
	Emergency childcare will be available for children whose parents work in critical sectors.
	This will be provided at primary schools or at establishments providing childcare or out-of-
	school care.
	https://www.government.nl/topics/coronavirus-covid-19
Poland	Students of all grades of preliminary and secondary schools, students of continuing
-	education institutions and vocational training centres are taught remotely.
	https://www.gov.pl/web/coronavirus/temporary-limitations
Portugal	Primary and secondary schools are open
U-	https://covid19estamoson.gov.pt/medidas-covid19-ambito-nacional-v2/
	TILLDS.//COVIDED CSLATIOSOTI.gov.pt/Tiledidas-covided-allipito-fiacional-vz/

Romania	All schools moved to online teaching only (14 Dec 20 – 12 Jan 21)
	https://www.gov.uk/foreign-travel-advice/romania/coronavirus
Slovakia	Renewed school education in primary schools in the fifth to ninth grade, in secondary
	schools, in primary art schools and in language schools with conditions.
	https://korona.gov.sk/en/reopening-schools-after-11-12-2020/
Slovenia	Distance learning is carried out in all primary, music and secondary schools
	https://www.gov.si/en/topics/coronavirus-disease-covid-19/measures-to-contain-the-
	spread-of-covid-19-infections/#e91799
Spain	No information found on school closures
Sweden	Primary schools are open. Upper secondary schools will use distance learning until January
	24 2021.
	https://www.krisinformation.se/en/hazards-and-risks/disasters-and-
	incidents/2020/official-information-on-the-new-coronavirus/schools-and-childcare