

Covid -19 in Children and data on Schools and Childcare Facilities 2021

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Section 1: Key points summary and recommendations

- Since March 2020, there have been 33,655 cases of Covid-19 in the 0-18 year old population. This represents 2.9% of the 0-18 population.
- The importance of on-site education has been discussed nationally and internationally, and schools have been recognised as the last places which should close in the pandemic, and the first places to re-open. The significant negative consequences and long term effects of school closures, with accompanying lack of psycho-social, holistic and health-care opportunities has been documented here in Ireland, and internationally.
- Since schools and child-care facilities re-opened in Ireland, Public Health teams across the country have responded to all cases of Covid-19 notified to them who were in school within their infectious time period. A Public Health Risk Assessment is undertaken, close contacts are identified and excluded and organised for swift onward Covid-19 PCR testing. These tests are flagged and batched for swift testing and batched reporting, to enable further Public Health decisions to be rapidly determined and implemented. An assessment of the particular risks identified in that setting is undertaken and recommendations to prevent further cases and spread are made.
- This process has highlighted that schools, with correct recommendations and mitigation measures in place, are a low risk setting. All staff and families who are part of the broader school community should abide by the national public health measures recommended at that time, to ensure they can remain low risk settings.
- Since week 6 2021, 164 outbreaks have been reported associated with schools and childcare facilities. This reflects the level of COVID-19 activity in the community and the increased transmissibility of the B.1.1.7 variant (UK variant) which is now the dominant SARS-CoV-2 variant in Ireland
- 82 outbreaks associated with school pupils and staff. Evidence of transmission within the school has not been identified in many of these outbreaks.
- In general, these outbreaks are small with 94% of outbreaks (n=77) having <10 cases linked to the outbreak. This likely reflects the success of current public health control measures in containing these outbreaks.
- 82 outbreaks associated with childcare facilities (CCFs). The majority of CCF outbreaks also involved small number of cases, 77% of outbreaks (n=63) had <10 cases linked to the outbreak.
- The impact of the UK variant has been considered since schools returned, with slightly wider exclusions having been made, especially in the post-primary sector. The close contact positivity has remained stable post-Christmas, in-line with what was identified pre-Christmas for school facilities. A doubling of close-contact positivity has been identified in the CCF sector, dominated by some larger outbreaks. Sustained work has been undertaken with the sector to ensure better understanding and compliance with Infection Prevention and Control measures, and a change to recommendations with regard to more routine use of face-coverings in this sector by staff members.

Close contact positivity summary:

- Primary sector - 3% before Christmas; 2.1% post-Christmas
- Post-primary sector -1.9% before Christmas; 1.9% post-Christmas
- SEN sector - 3.6% before Christmas; 3.4% post-Christmas
- CCF sector - 4.5% before Christmas; 9.2% post-Christmas

Pre-Christmas in school settings approximately 14% of close contact exclusions made were staff members; 86% were student. Close contact positivity data were equivalent. Since the phased re-opening, approximately 10% of exclusions have been staff; 90% students. Close contact positivity data are equivalent

Recommendations

To continue to ensure that schools and CCFs remain low risk settings and continue to be available for on-site education:

- 1) No person should present to a facility if they, or a household member, have signs or symptoms of Covid-19, until results of Covid-19 tests are known. No-one should attend if they have been designated a close contact.
- 2) Schools should implement mitigation measures required as laid out in the 'return to school' documents e.g. distancing, hygiene, face coverings, ventilation etc
- 3) Public Health swiftly responding to cases to identify close contacts, assess whether an outbreak is ongoing and implement necessary control measures to rapidly contain the outbreak

Section 2: Epidemiology: COVID-19 cases and outbreaks in schools and childcare facilities since 7th February 2021 and reported up to midnight on 27th March 2021

Between March 1st 2020 and March 27th 2021, a total of 234,539 confirmed COVID-19 cases were notified on CIDR (correct as of March 29th 2021 at 8.30am). 7,082 (3%) of these cases were pre-school aged children (aged 0-4 years), 11,942 (5%) were primary school aged children (aged 5-12 years), and 14,631 (6%) were secondary school aged children (13-18 years). A total of 200,840 (86%) were adults (aged over 18 years) and age was unknown for 44 cases. Please see Figures 1a-1d for weekly trends in the number of confirmed COVID-19 cases by age group since week 27 2020 (week commencing 28/06/2020) to week 12 2021 (week ending 27/03/2021). Prior to week 27 2020 childcare facilities and schools remained closed since week 11 2020. Childcare facilities were re-opened in week 27 2020 and schools were re-opened in week 35 2020.

Schools were closed again in week 52 of 2020 and the phased re-opening of schools began during week 6 2021 (week commencing 07/02/2021), with the partial return of special education schools. Junior classes in primary school (junior infants-2nd class) and leaving certificate students in secondary school returned during week 9 2021 (week commencing 28/02/2021). The remaining primary school classes and 5th year students in secondary school returned during week 11 2021 (week commencing 14/03/2021).

During the second wave of COVID-19 infection in Ireland (commencing week 32 2020), the rate of COVID-19 infection among children (aged 0-12 years) remained lower than the rate in secondary school aged children (aged 13-18 years), adults (>18 years) and the national average rate (across all age groups). During the peak of the third wave of COVID-19 infection in Ireland (commencing week 48 2020), the rate of COVID-19 infection in all children (aged 0-18 years) remained lower than the rate in adults (>18 years) and the national average rate (across all age groups). Incidence rates plateaued and were comparable across all age groups from week 6 to week 10 2021. In week 11 and week 12 2021, incidence rates among children (particularly those aged 0-12 years) increased and were slightly higher than rates in adults (>18 years) and the national average rate (across all age groups) (Figures 1c and 1d).

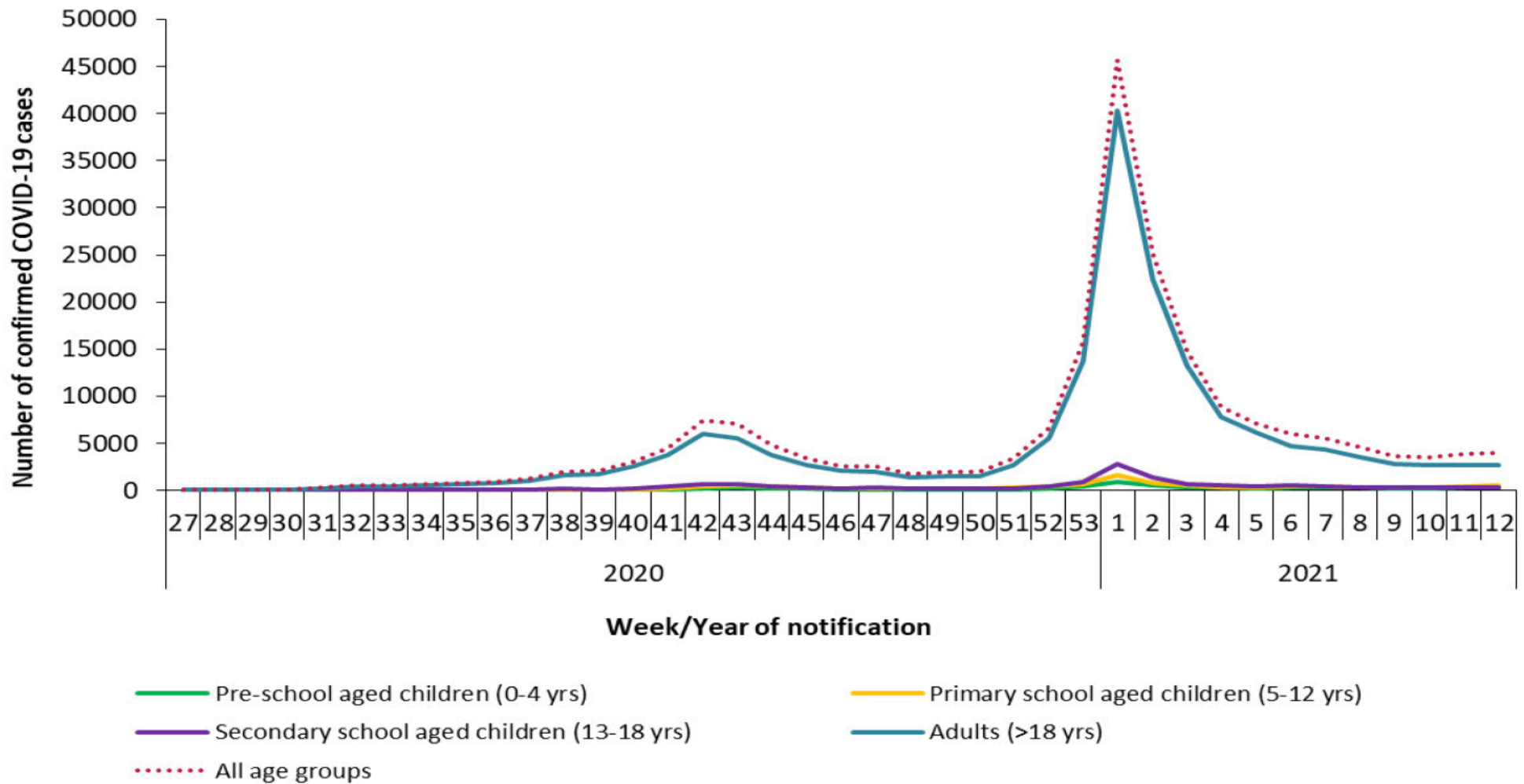


Figure 1a. Number of confirmed COVID-19 cases reported per week in pre-school, primary school, secondary school aged children and adults (aged over 18 years) relative to the total number of confirmed COVID-19 cases across age groups, week 27 2020-week 12 2021

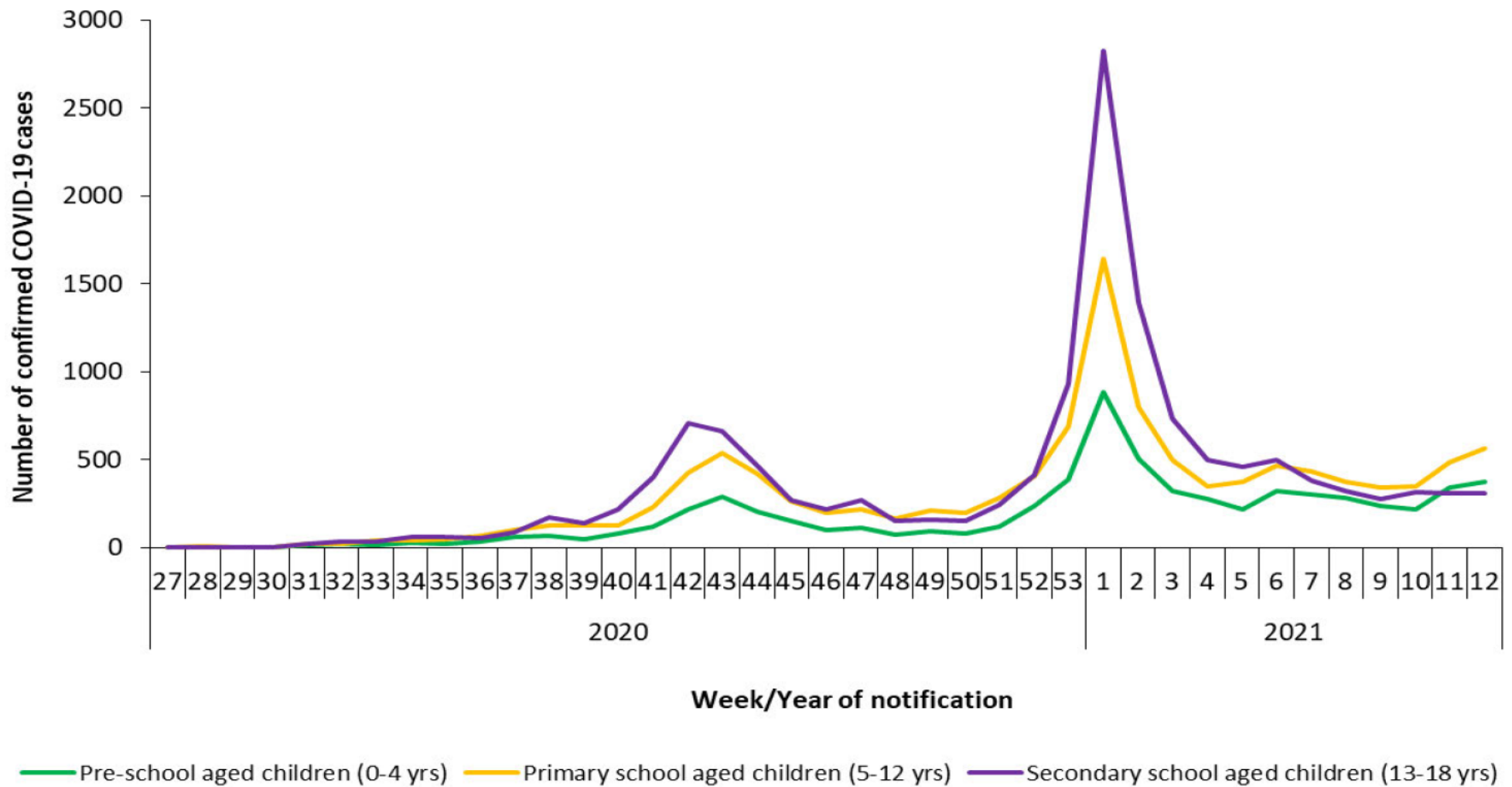


Figure 1b. Number of confirmed COVID-19 cases reported per week in pre-school, primary school and secondary school aged children only, week 27 2020-week 12 2021

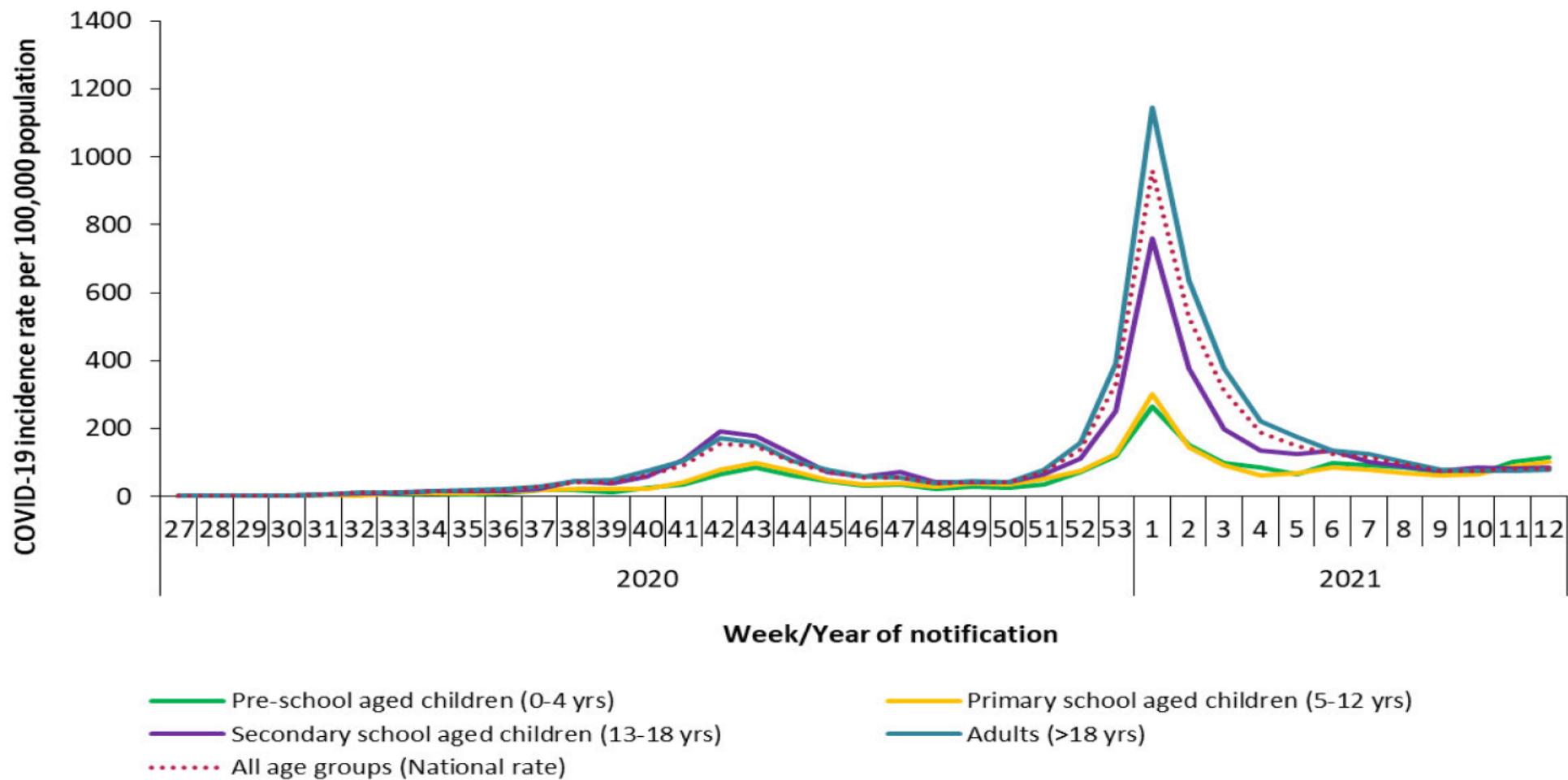


Figure 1c. Weekly age specific incidence rates* of confirmed COVID-19 cases per 100,000 of the population in pre-school, primary school, secondary school aged children and adults relative to national age specific incidence rate, from week 27 2020-week 12 2021

*Age-specific population data were taken from Census 2016

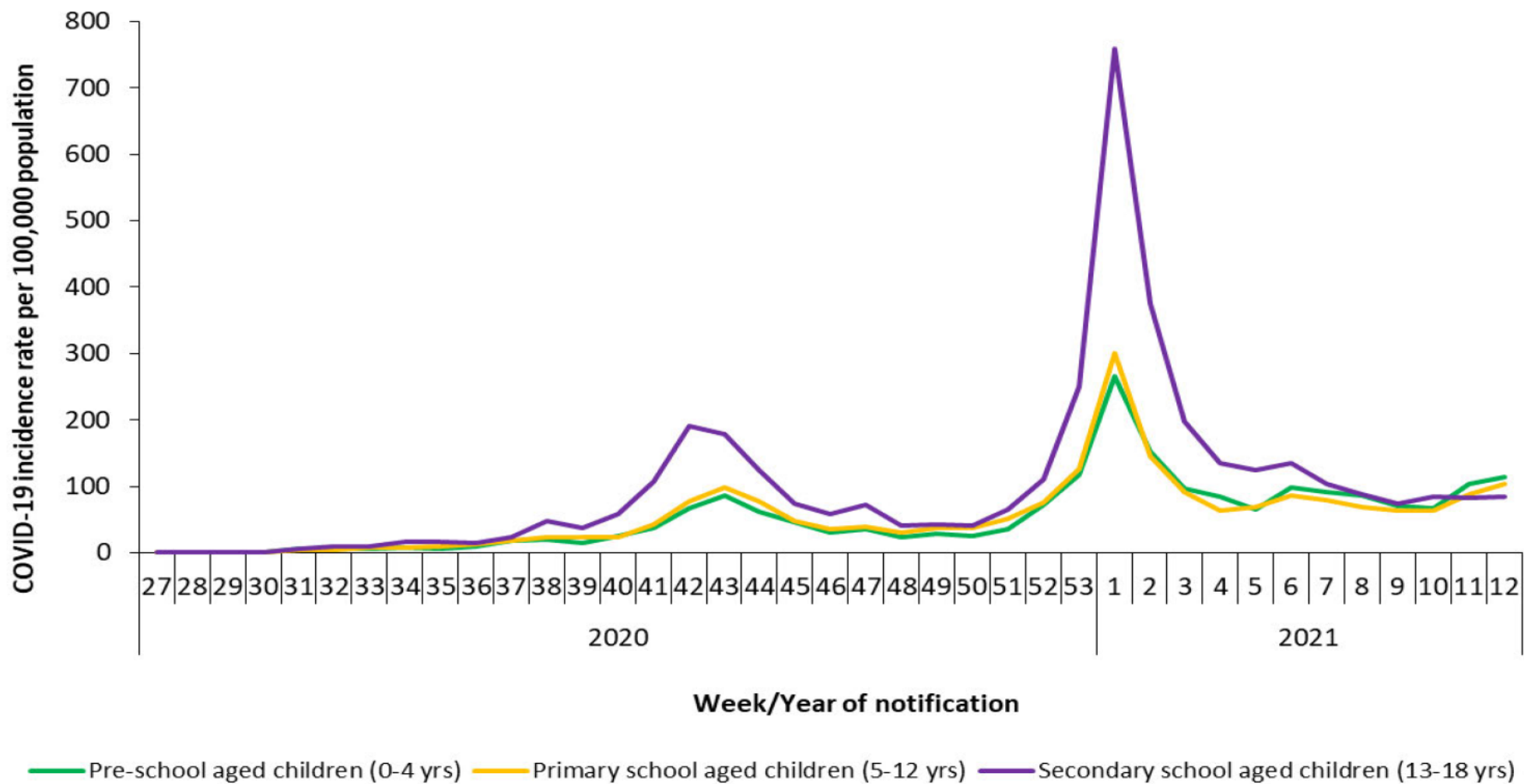


Figure 1d. Weekly age specific incidence rates* of confirmed COVID-19 cases per 100,000 of the population in pre-school, primary school and secondary school aged children only, from week 27 2020-week 12 2021

*Age-specific population data were taken from Census 2016

2.1: School and childcare facility outbreaks since phased re-opening of schools commenced (week 6 2021)

Since week 6 2021, 82 outbreaks associated with students and staff of schools (including special education schools) have been reported (Figure 2). A total of 311 confirmed COVID-19 cases have been linked to these outbreaks (range: 0-14 linked cases) (Figure 3). Five of these outbreaks have been closed and 77 remain open.

Since week 6 2021, 82 outbreaks associated with children and staff in childcare facilities have been reported (Figure 2). A total of 539 confirmed COVID-19 cases have been linked to these outbreaks (range: 0-48 linked cases) (Figure 3). Fifteen of these outbreaks have been closed and 67 remain open.

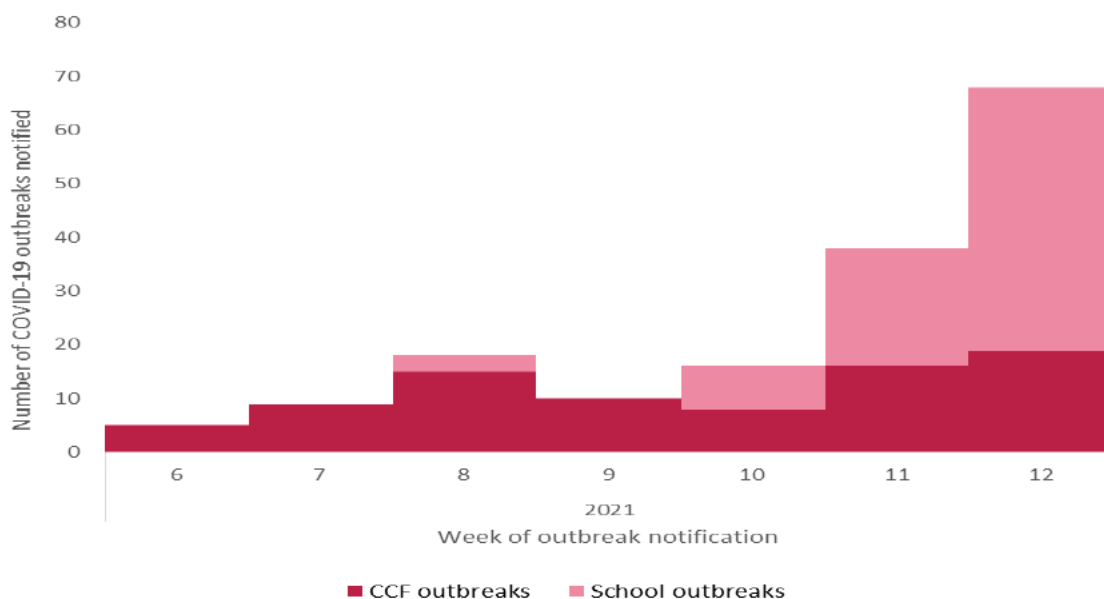


Figure 2. Number of outbreaks associated with children and staff in childcare facilities or schools, by week of outbreak creation, since week 6 2021, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30

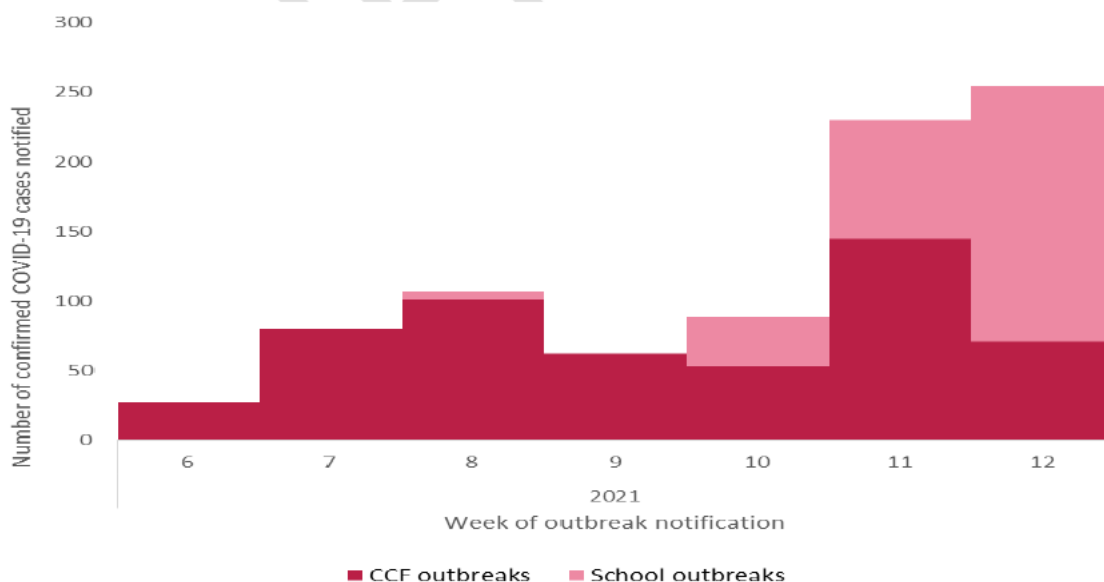
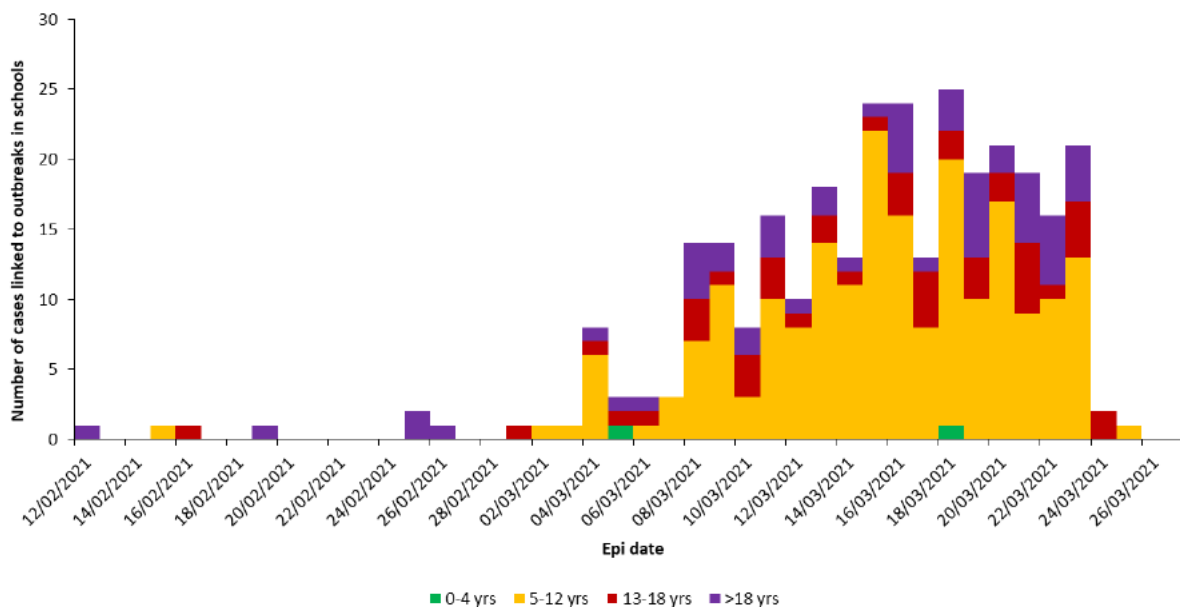


Figure 3. Number of cases linked to outbreaks associated with children and staff in childcare facilities or schools, by week of outbreak creation, since week 6 2021, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30

Figures 4a and 4b provide epi curves of all cases linked to the 82 school outbreaks (Figure 4a) and 82 childcare facility outbreaks (Figure 4b) by school age groups: pre-school (0-4 years); primary school (5-12 years); secondary school (13-18 years) and adults (≥ 18 years).

Epidemic curves are presented in the figures below by epi date.

Epi date refers to the epidemiological date. It is based on the earliest of dates available on the case and taken from date of onset of symptoms, date of diagnosis, laboratory specimen collection date, laboratory received date, laboratory reported date or event creation date/notification date on CIDR.



*Excludes cases with epi dates prior to 01/01/2021 resulting from delayed notification of school outbreaks (n=6)

Figure 4a. Epidemic curve of cases linked to all outbreaks associated with school students and staff by age group since week 6 2021, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30

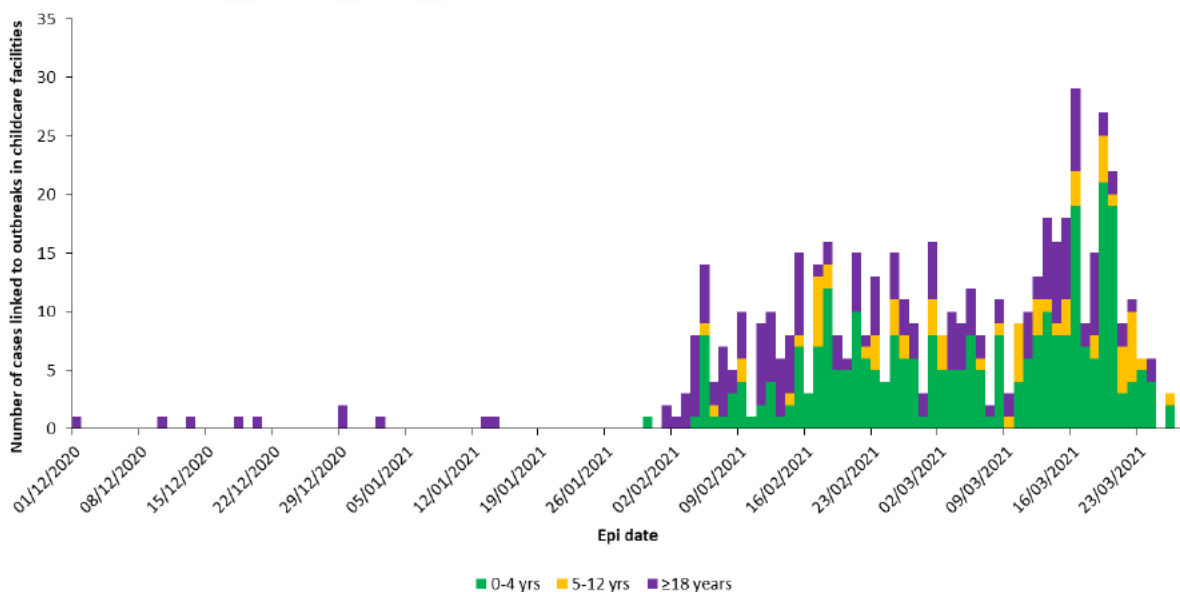


Figure 4b. Epidemic curve of cases linked to all outbreaks associated with children and staff of childcare facilities by age group since week 6 2021, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30

SECTION 2.2: SCHOOL OUTBRAKS - Epidemiological findings

Data presented below are based on cases reported on the Computerised Infectious Disease Reporting (CIDR) system up to midnight on 27/03/2021 and extracted on 29/03/2021 at 08:30am.

Summary data are provided on 10 of the largest outbreaks associated with school students and staff reported on CIDR since week 6 2021 and up to midnight 27/03/2021.

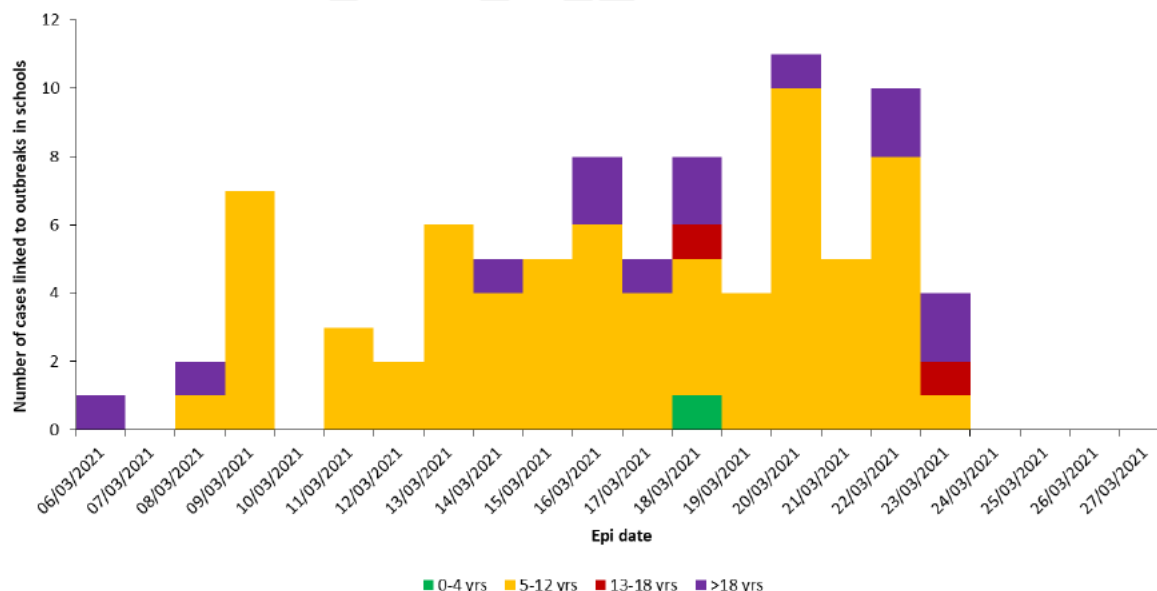
Please note that the size of the school outbreaks was determined based either on the number of linked confirmed cases or the aggregate number of lab confirmed cases provided as enhanced outbreak data. The following summary, figures and table are based on linked case-based data only.

- A total of 88 cases were linked to these 10 outbreaks (range: 4-14 linked cases)
- The largest outbreak is SC [redacted] involving 14 cases, followed by SC [redacted] and SC [redacted], both involving 11 cases each
- 43% of cases linked to these outbreaks reside in Dublin (n=38), followed by 13% (n=11) who reside in Donegal
- 85% (n=75) of cases are aged 18 years or younger, indicating they are school students; 15% (n=13) are aged over 18 years, indicating they are likely school staff
- 55% of cases are female
- 48% (n=42) of cases were symptomatic and 15% (n=13) reported underlying conditions
- There have been no hospitalisations, ICU admissions or deaths reported among cases linked to these outbreaks

Epidemic curves are presented in the figures below by epi date.

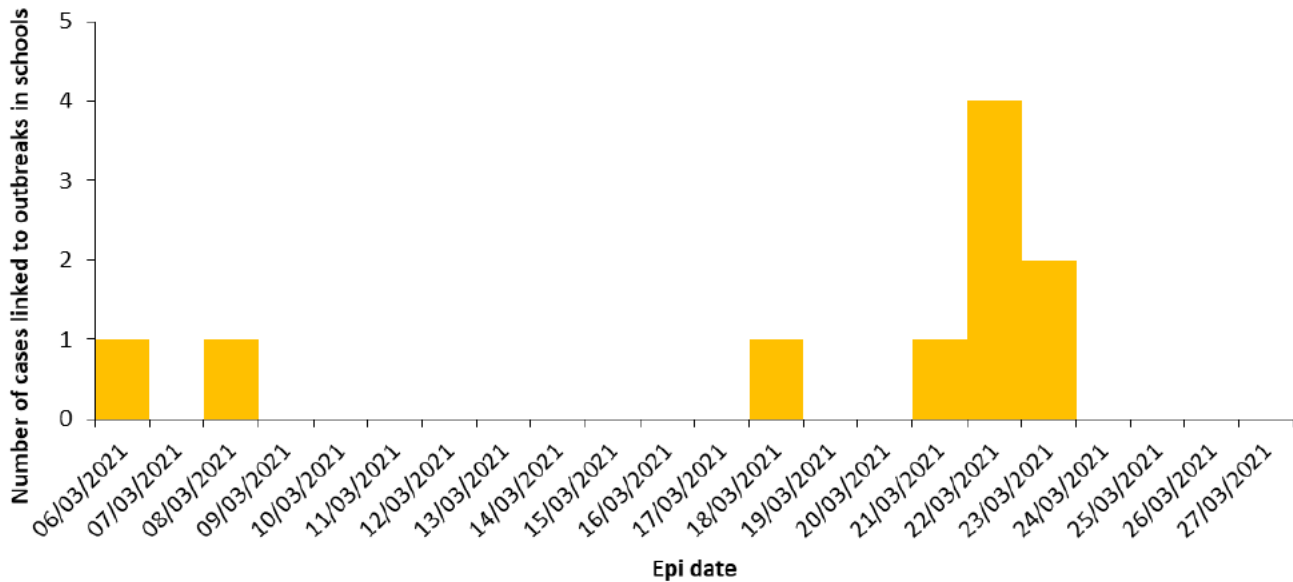
Epi date refers to the epidemiological date. It is based on the earliest of dates available on the case and taken from date of onset of symptoms, date of diagnosis, laboratory specimen collection date, laboratory received date, laboratory reported date or event creation date/notification date on CIDR.

Individual outbreak epi curves are presented for outbreaks involving 10 cases or more; where outbreak status remains open on CIDR.



*Excludes cases with epi dates prior to 01/01/2021 (n=2)

Figure 5. Epidemic curve of cases linked to ten of the largest outbreaks associated with school students and staff by age group since week 6 2021, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30



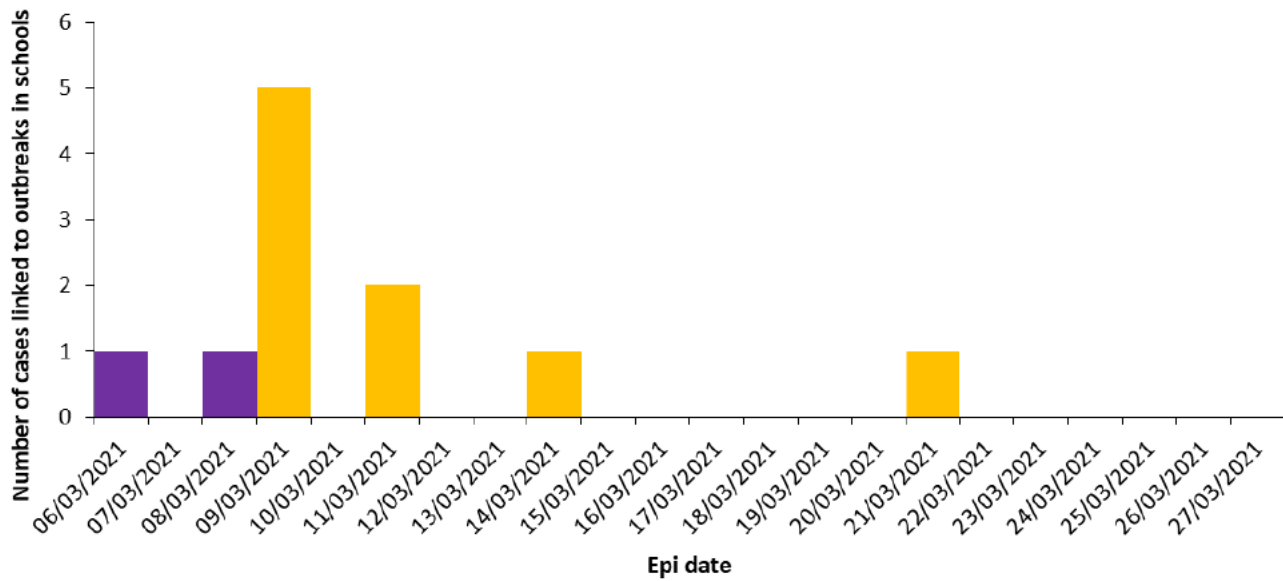
SC137

■ 5-12 yrs

*Excludes cases with epi dates prior to 01/01/2021 (n=2)

Figure 6a. Epidemic curve of cases linked to the outbreak in School SC [redacted] (n=10), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021.

Data source: CIDR Mar 29th 08:30



SC322

■ 5-12 yrs ■ >18 yrs

Figure 6b. Epidemic curve of cases linked to the outbreak in School SC [redacted] (n=11), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021.

Data source: CIDR Mar 29th 08:30

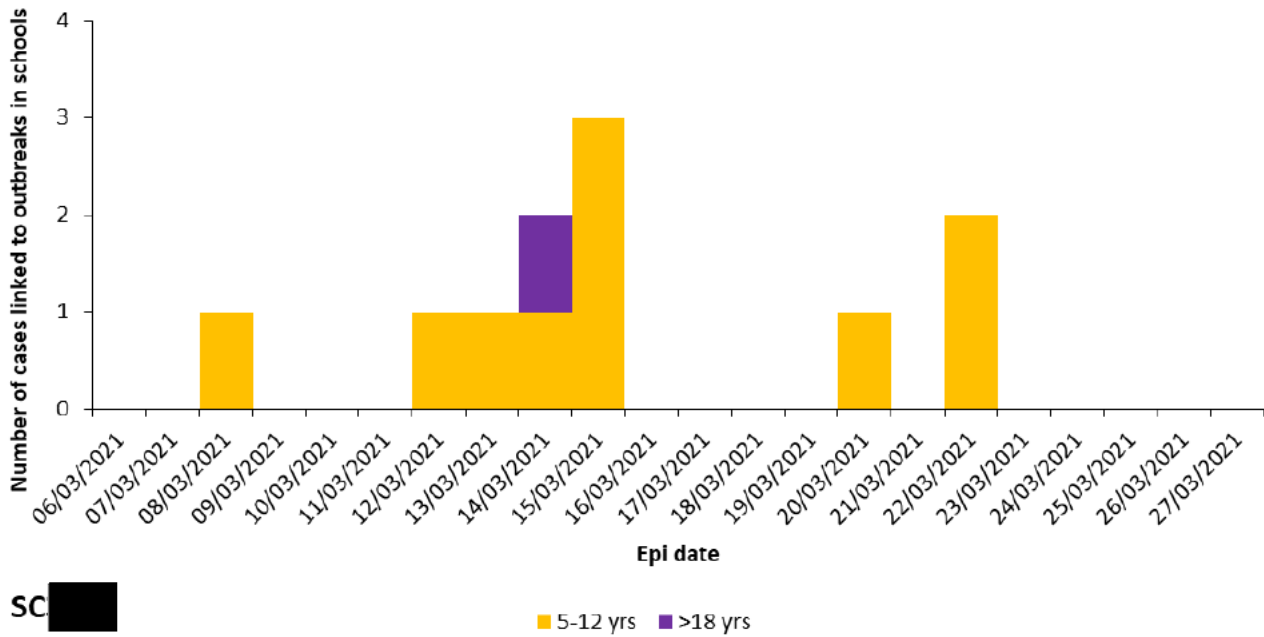


Figure 6c. Epidemic curve of cases linked to the outbreak in School SC [redacted] (n=11), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021.
Data source: CIDR Mar 29th 08:30

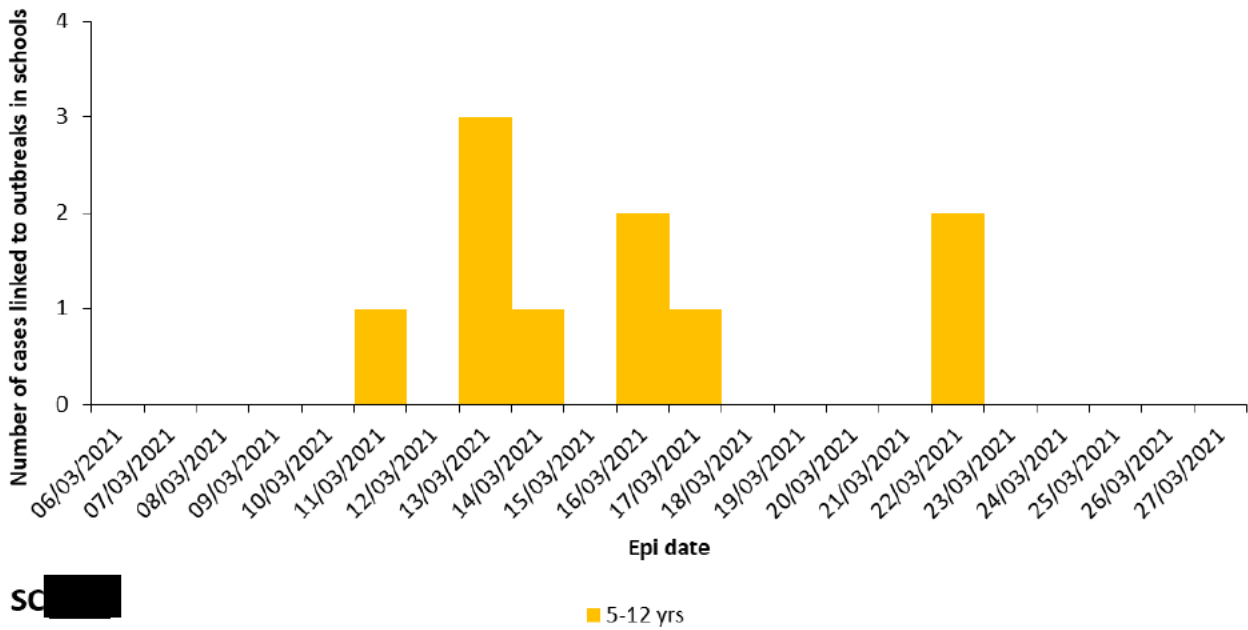


Figure 6d. Epidemic curve of cases linked to the outbreak in School SC [redacted] (n=10), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021.
Data source: CIDR Mar 29th 08:30

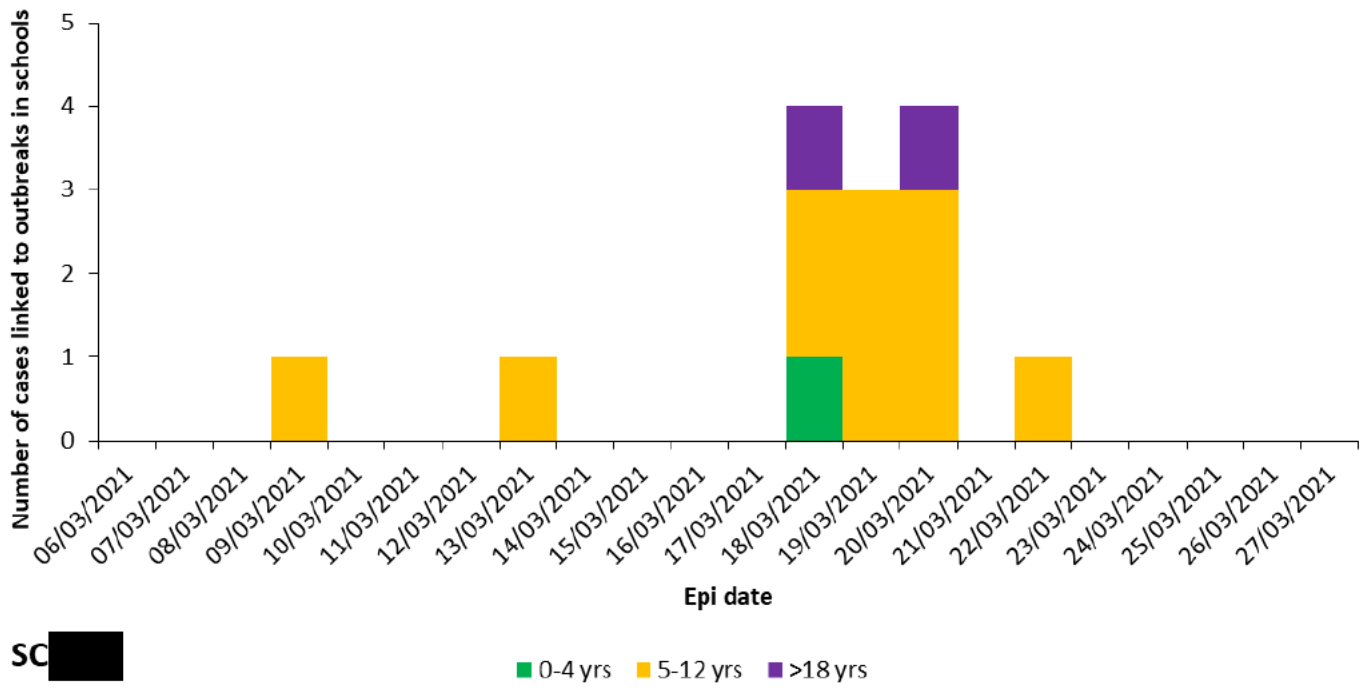


Figure 6e. Epidemic curve of cases linked to the outbreak in School SC [redacted] (n=14), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021.

Data source: CIDR Mar 29th 08:30

Table 1: Characteristics of cases linked to ten outbreaks of note associated with school students and staff reported since week 6 2021, Ireland

[Based on data reported on CIDR up to midnight March 27th 2021]

	█	█	█	█	█	█	█	█	█	█	Total
Number of cases	10	11	11	10	6	9	4	5	14	8	88
Symptomatic	4	5	6	5	3	2	1	5	5	6	42
Underlying clinical conditions	0	4	2	0	2	2	2	0	1	0	13
Hospital Inpatient	0	0	0	0	0	0	0	0	0	0	0
Admitted to ICU	0	0	0	0	0	0	0	0	0	0	0
Died	0	0	0	0	0	0	0	0	0	0	0
Sex											
F	6	7	7	1	3	8	2	3	8	3	48
M	4	4	4	9	3	1	2	2	6	5	40
Unk	0	0	0	0	0	0	0	0	0	0	0
Age group											
0-4 yrs	0	0	0	0	0	0	0	0	1	0	1
5-12 yrs	10	9	10	10	6	8	1	0	11	7	72
13-18 yrs	0	0	0	0	0	0	2	0	0	0	2
25-34 yrs	0	0	0	0	0	0	1	2	1	0	4
35-44 yrs	0	0	1	0	0	1	0	1	0	1	4
45-54 yrs	0	1	0	0	0	0	0	2	1	0	4
55-64 yrs	0	1	0	0	0	0	0	0	0	0	1
County of residence											
█	0	0	0	10	6	9	0	0	9	4	38
█	0	0	11	0	0	0	0	0	0	0	11
█	0	11	0	0	0	0	0	0	0	0	11
█	9	0	0	0	0	0	0	0	0	0	9
Other	1	0	0	0	0	0	4	5	5	4	19
Outbreak vulnerable population*											
People with disabilities	0	0	0	0	0	0	4	0	0	0	4
Not a vulnerable population	10	11	11	10	6	9	0	5	14	8	84

*Outbreak vulnerable population is an enhanced outbreak variable that describes a vulnerable population at risk from the outbreak but may not describe all individuals linked to the outbreak

Data source: CIDR Mar 29th 08:30

Section 2.3: Childcare facility (CCF) outbreaks - Epidemiological findings

Data presented below are based on cases reported on the Computerised Infectious Disease Reporting (CIDR) system up to midnight on 27/03/2021 and extracted on 29/03/2021 at 08:30am.

Summary data are provided on 10 of the largest outbreaks associated with children and staff in childcare facilities reported on CIDR since week 6 2021 and up to midnight 27/03/2021.

- A total of 207 cases were linked to these 10 outbreaks (range: 13-48 linked cases)
- The largest outbreak is CC [redacted] involving 48 cases, followed by CC [redacted], involving 23 cases and CC [redacted], involving 21 cases
- 42% of cases linked to these outbreaks reside in Dublin (n=86), followed by 25% (n=51) who reside in Offaly
- 74% (n=154) of cases are children aged 12 years or younger; 26% (n=53) are adults aged over 18 years
- 60% of cases are female
- 54% (n=111) of cases were symptomatic and 14% (n=28) reported underlying conditions
- There have been no hospitalisations, ICU admissions or deaths reported among cases linked to these outbreaks

Epidemic curves are presented in the figures below by epi date.

Epi date refers to the epidemiological date. It is based on the earliest of dates available on the case and taken from date of onset of symptoms, date of diagnosis, laboratory specimen collection date, laboratory received date, laboratory reported date or event creation date/notification date on CIDR.

Individual outbreak epi curves are presented for outbreaks involving 19 cases or more; where outbreak status remains open on CIDR. One of the ten largest outbreaks (C200) is “closed” on CIDR and an individual epi curve is not provided for this outbreak.

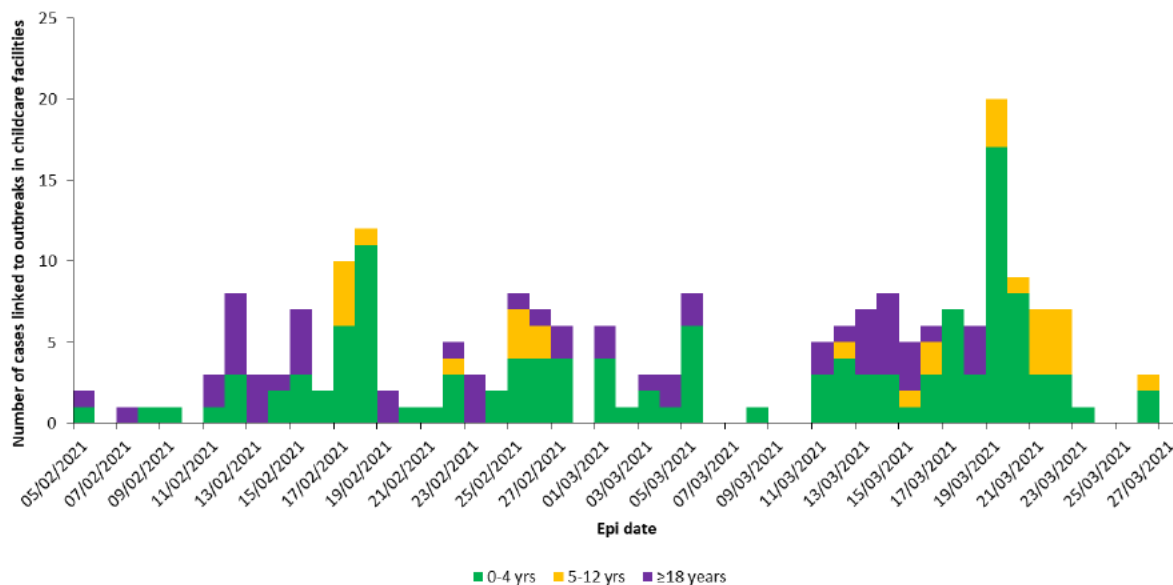


Figure 7. Epidemic curve of cases linked to ten of the largest outbreaks associated with children and staff of childcare facilities by age group since week 6 2021, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30

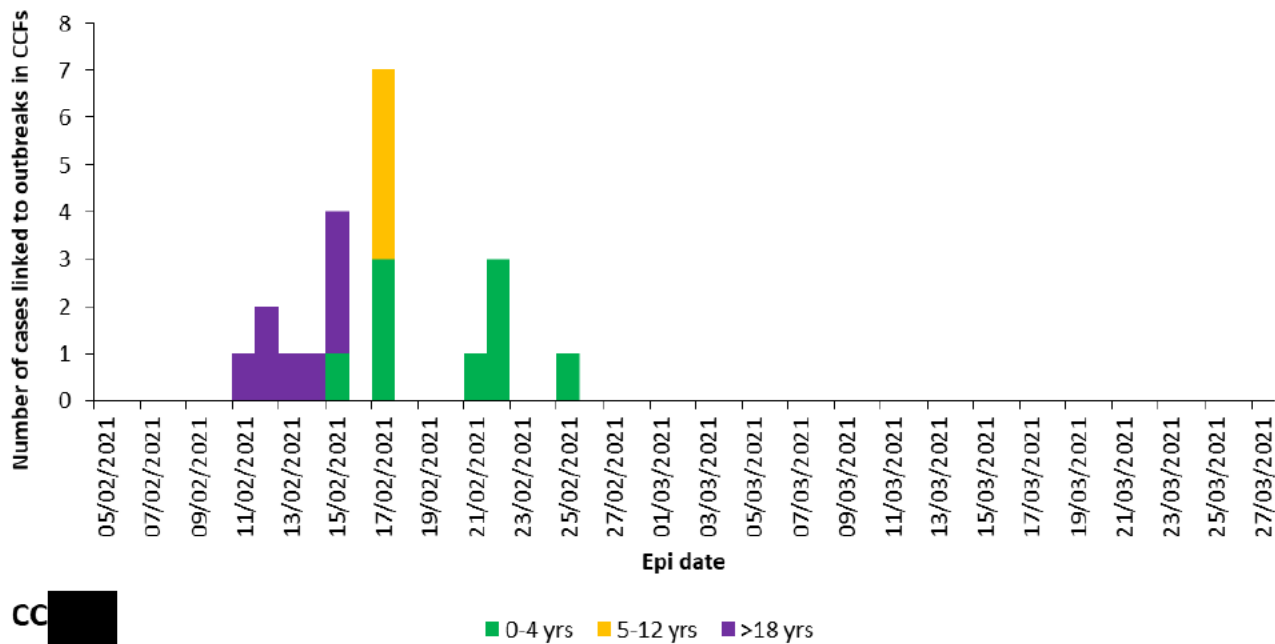


Figure 8a. Epidemic curve of cases linked to the outbreak in School CC (n=21), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021.

Data source: CIDR Mar 29th 08:30

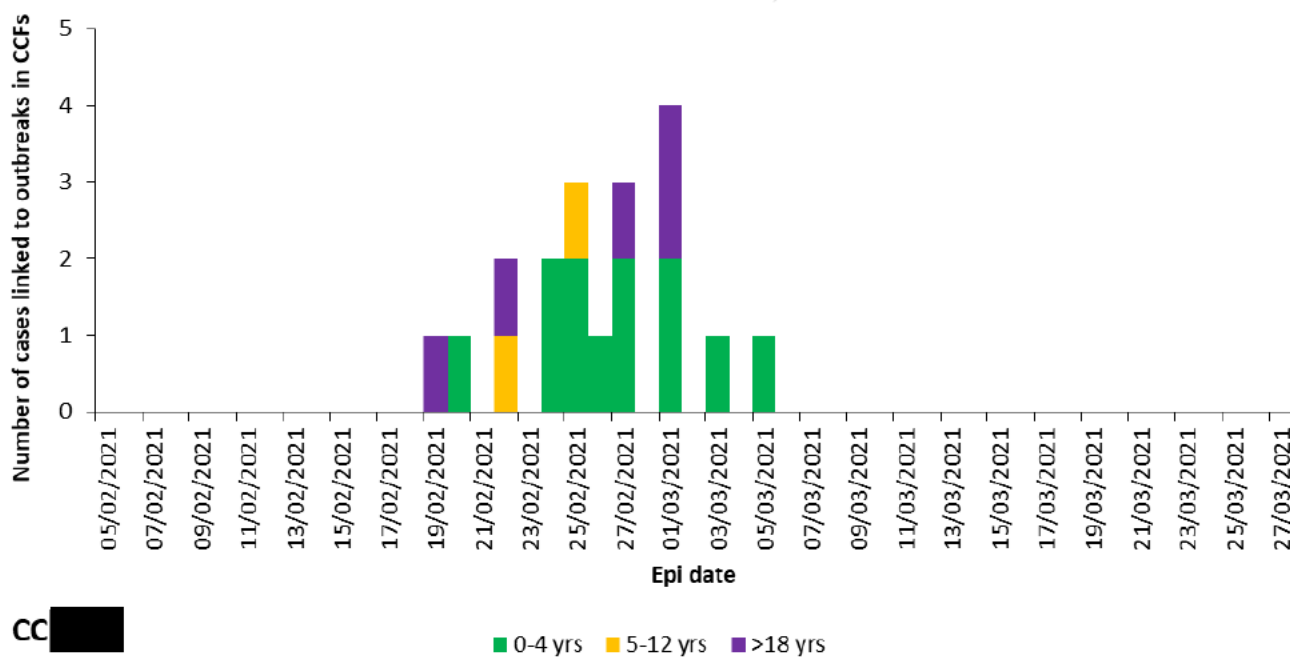


Figure 8b. Epidemic curve of cases linked to the outbreak in School CC (n=19), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021.

Data source: CIDR Mar 29th 08:30

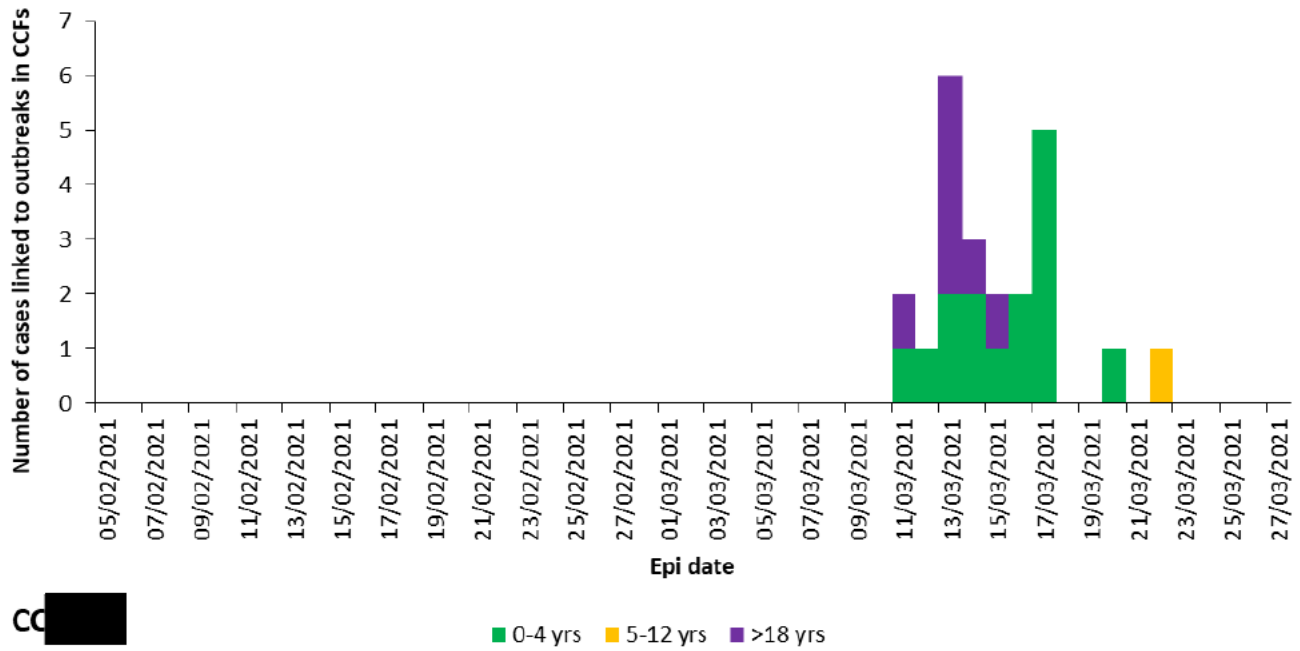


Figure 8c. Epidemic curve of cases linked to the outbreak in School CC (n=23), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30

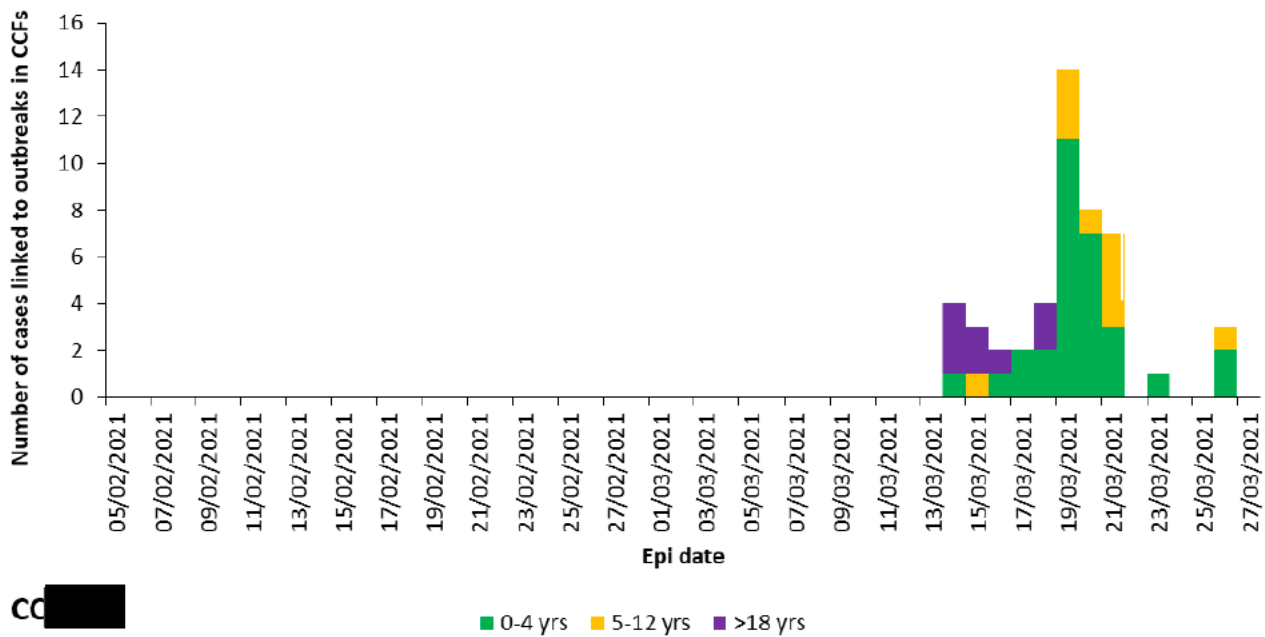


Figure 8d. Epidemic curve of cases linked to the outbreak in School CC (n=48), by age group, since week 6 2020, Ireland. Based on data reported on CIDR up to midnight on Mar 27th 2021. Data source: CIDR Mar 29th 08:30

Table 2: Characteristics of cases linked to ten outbreaks of note associated with children and staff of childcare facilities reported since week 6 2021, Ireland

[Based on data reported on CIDR up to midnight March 27th 2021]

	█	█	█	█	█	█	█	█	█	█	Total
Number of cases	16	21	19	16	19	13	14	18	23	48	207
Symptomatic	8	11	14	8	9	6	9	6	20	20	111
Underlying clinical conditions	2	4	1	6	1	0	0	3	4	7	28
Hospital Inpatient	0	0	0	0	0	0	0	0	0	0	0
Admitted to ICU	0	0	0	0	0	0	0	0	0	0	0
Died	0	0	0	0	0	0	0	0	0	0	0
Sex											
F	8	14	14	8	14	5	8	13	16	24	124
M	8	7	5	8	5	8	6	5	7	24	83
Unk	0	0	0	0	0	0	0	0	0	0	0
Age group											
0-4 yrs	10	9	14	7	12	7	10	12	15	30	126
5-12 yrs	1	4	0	4	2	4	0	2	1	10	28
19-24 yrs	0	0	0	2	0	0	2	0	3	2	9
25-34 yrs	4	2	2	1	4	1	2	3	3	3	25
35-44 yrs	0	2	3	1	1	0	0	1	1	3	12
45-54 yrs	1	3	0	0	0	1	0	0	0	0	5
55-64 yrs	0	1	0	1	0	0	0	0	0	0	2
County of residence											
█	16	0	18	0	0	12	0	18	22	0	86
█	0	6	0	0	0	0	0	0	0	45	51
█	0	0	0	0	19	0	0	0	0	0	19
█	0	0	0	16	0	0	0	0	0	0	16
█	0	15	0	0	0	0	0	0	0	0	15
Other	0	0	1	0	0	1	14	0	1	3	20

Data source: CIDR Mar 29th 08:30

Section 3: Close Contact positivity

Cases and outbreaks of Covid-19 have occurred in school settings throughout the academic year. The experiences of Public Health schools teams is that, largely, what occurs in the community has been reflected in the school setting ie where there is an increase in community transmission, an increase in cases attending educational facilities is identified. Onward spread of infection and outbreaks are limited if all mitigation measures are in place and public health is swiftly aware and involved. There have been several instances recently which have led to spread within facilities, where the source of infection has been social gatherings outside of schools. These social gatherings have then had reach in to several schools / child care facilities as households are affected and children attend different schools. There have also been several instances where children have attended symptomatic to school, or when parents have been symptomatic.

3.1: Term 1 data, August – December 2020

The table below provides a summary of the testing completed from 23rd August to 31st December 2020 for each educational facility type based on data extracted up to 10.00am on 18th January 2021.

Table 3 Summary of Primary School Testing Completed by Month

Month	No. Tested	No. Detected	Detected %
August	0	0	0%
September	2624	49	1.9%
October	7961	233	2.9%
November	5345	117	2.2%
December	7961	311	3.9%
Total	23,891	710	3.0%

For staff at primary level: 2,413 contacts were identified over the term. There were 67 positives identified with a close contact positivity of 2.8%

Table 4 Summary of Post-Primary School Testing Completed by Month

Month	No. Tested	No. Detected	Detected %
August	0	0	0%
September	845	13	1.5%
October	4463	91	2.0%
November	1568	23	1.5%
December	2333	45	1.9%
Total	9,209	172	1.9%

For staff at post primary level: 1,457 contacts were identified over the term. There were 40 positives identified with a close contact positivity of 2.7%

Table 5 Summary of Special Education Testing Completed by Month

Month	No. Tested	No. Detected	Detected %
August	93	0	0%
September	265	10	3.8%
October	468	20	4.3%
November	122	2	1.6%
December	379	16	3.4%
Total	1,327	48	3.6%

For staff at SEN: 1,113 contacts were identified over the term. There were 31 positives identified with a close contact positivity of 2.8%

Table 6 Summary of Childcare Facility Testing Completed by Month

Month	No. Tested	No. Detected	Detected %
August	0	0	0%
September	913	13	1.4%
October	2695	159	5.9%
November	2023	54	2.7%
December	3,003	163	5.4%
Total	8,634	389	4.5%

For staff in the CCF sector: 1,334 contacts were identified over the term. There were 92 positives identified with a close contact positivity of 6.9%

3.2: Term 2 data, January – March 2021

The table below provides a summary of the testing completed to date in Schools facilities since the phased re-opening of schools on 8th February 2021 (SEN) to 27th March 2021; Primary and post – primary, March 2021.

Table 7: Results Summary for Schools Testing from 08/02/2021 – 27/03/2021

Facility Type	No. Facilities	No. Tested	No. Detected	Detected %	No. Not Detected
Primary	244	10,065	216	2.1%	9,678
Post Primary	85	2,516	49	1.9%	2,462
Special Education	22	615	21	3.4%	591
Total	351	13,196	286	2.2%	12,731

For staff in the educations sector:

Primary sector: 1,075 contacts were identified over the term. There were 16 positives identified with a close contact positivity of 1.5%.

Post-primary sector: 230 close contacts, 4 positive staff - 1.7% close contact positivity

SEN sector: 240 close contacts, 4 positive staff - 1.7% close contact positivity

The table below provides a summary of the testing completed to date in Childcare facilities since the beginning of 2021, 4th January 2021 to 27th March 2021.

Table 8: Results Summary for Childcare Facility Testing from 04/01/2021 – 27/03/2021

Facility Type	No. Facilities	No. Tested	No. Detected	Detected %	No. Not Detected
Childcare	349	7,885	725	9.2%	7,117
Total	349	7,885	725	9.2%	7,117

For staff in the CCF sector: 1,615 close contacts, 154 positive staff - 9.5% close contact positivity