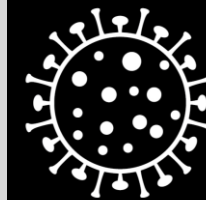


IEMAG briefing

4 March 2021



Coronavirus
COVID-19
Public Health
Advice

Cases, numbers in hospital and intensive care

There is progress against all indicators of disease, though cases and number of people requiring hospital care remain high. The number of people in hospital and ICU is decreasing. The number of deaths per day remains high but is decreasing



	Apr 2020	Summer 2020	Oct 2020	Dec 2020	Jan 2021	3 Feb	10 Feb	17 Feb	24 Feb	3 Mar	Daily count 4 Mar
Cases confirmed per day	859 <small>18-04</small>	8.7 <small>25-06</small>	1158 <small>21-10</small>	262 <small>12-12</small>	6520 <small>10-01</small>	1188	943	816	737	620	462
14-day incidence <i>per 100,000 population</i>	212 <small>19-04</small>	3.0 <small>04-07</small>	306 <small>26-10</small>	79 <small>09-12</small>	1532 <small>15-01</small>	424	312	261	231	199	190
Hospital in-patients	862 <small>17-04</small>	9 <small>02-08</small>	333 <small>01-11</small>	198 <small>16-12</small>	1949 <small>24-01</small>	1499	1188	907	723	542	460
<i>Hospital admissions per day</i>	85 <small>04-04</small>	<1 <small>10-07</small>	27 <small>26-10</small>	11 <small>13-12</small>	158 <small>15-01</small>	68	52	45	40	23	26
ICU confirmed cases	150 <small>14-04</small>	4 <small>04-08</small>	43 <small>04-11</small>	26 <small>27-12</small>	217 <small>28-01</small>	209	179	163	149	127	107
<i>ICU admissions per day</i>	14 <small>31-03</small>	<1 <small>03-06</small>	4 <small>03-11</small>	1 <small>16-12</small>	20 <small>17-01</small>	11	6	8	6	4	6
Deaths confirmed per day	46 <small>22-04</small>	<1 <small>30-07</small>	7 <small>01-12</small>	4 <small>17-12</small>	57 <small>03-02</small>	57	41	35	29	18	39

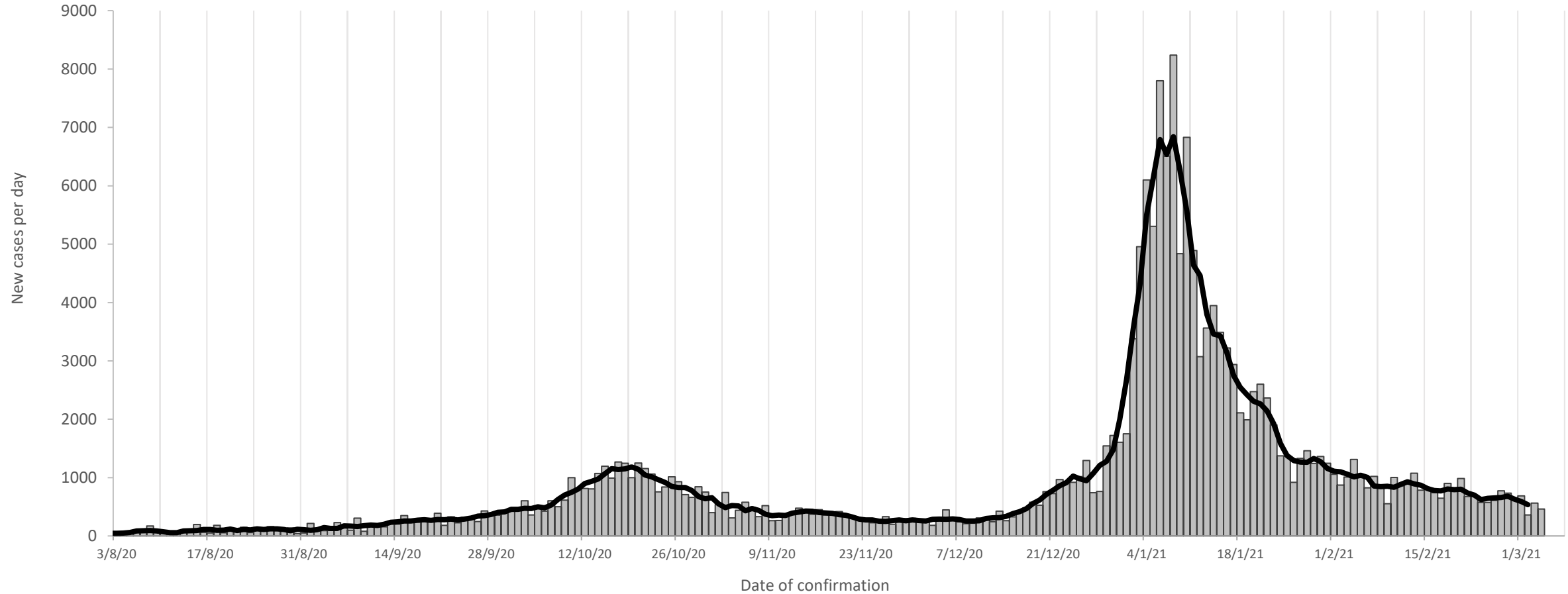
Data are 7-day averages (the indicated day and the preceding 6 days, rounded to the nearest whole number) with the exception of 14 day cumulative incidence, which is the total number of cases in the preceding 14 days per 100,000 population. The highest and lowest values of each indicator are given for each wave of the pandemic, along with the date on which that value was recorded, as well as the data for recent weeks. The historic incidence data may change due to denotification of cases.

Confirmed cases each day

Daily and weekly count and 5-day rolling average. The 5-day average peaked at 1186 on 21 October, reached a low of 251 on 28 November, peaked again at 6847 on 8 January and is now **536**



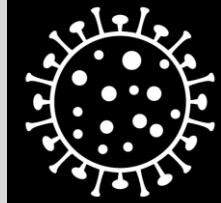
Cases per week	540	546	711	796	912	1303	1947	2059	3031	4457	7398	7073	4838	3424	2583	2580	1798	2028	1964	3368	6597	15729	45621	25123	14815	89313	7146	6031	5531	4561
----------------	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------	-------	-------	-------	-------	------	------	------	------



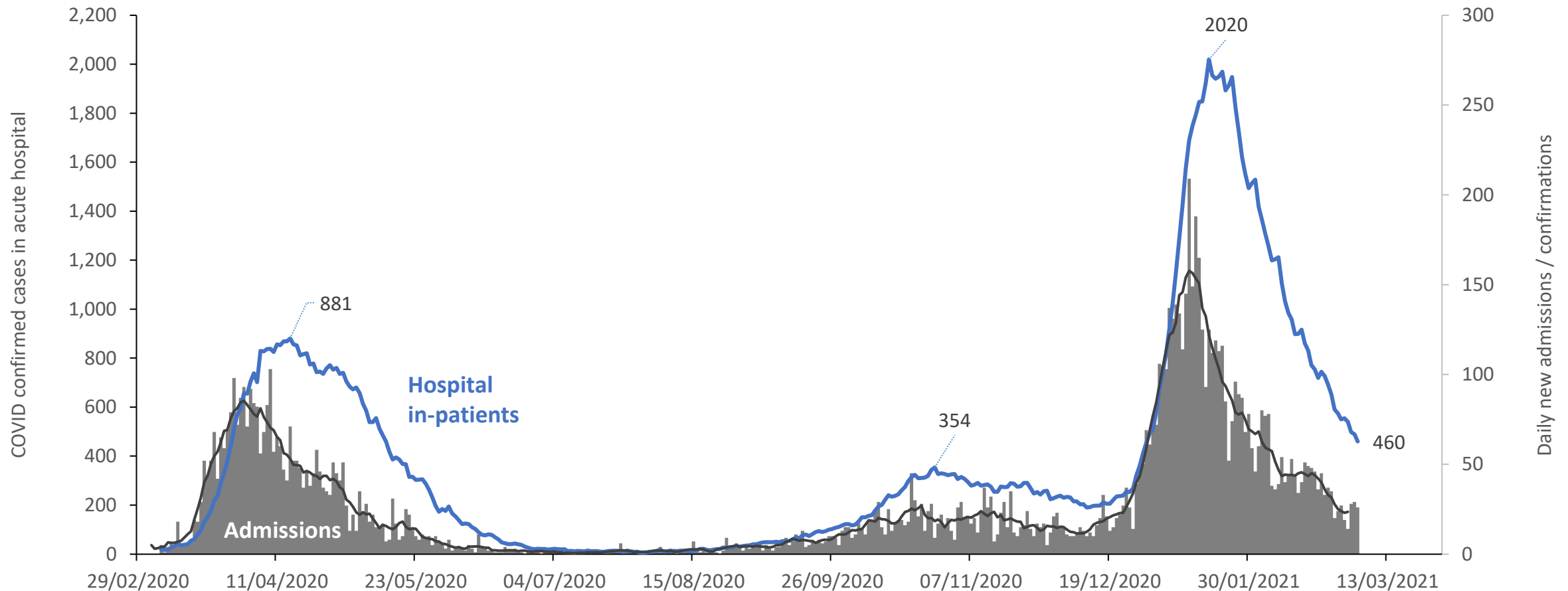
Daily count (bars) 5-day average (line) and weekly counts of the number of laboratory confirmed new cases by date on which they were confirmed by HPSC. Case counts may change due to denotification of cases. Weekly case counts are by notification (event) date and standard epidemiological week.

Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection. The number of people in hospital continues to fall, and the number of admissions and newly confirmed cases in hospital per day has also decreased in the last 10 days



Coronavirus
COVID-19
Public Health
Advice



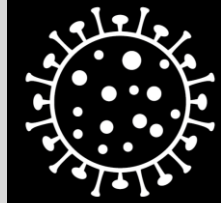
Hospital in-patients: Daily count of number of COVID-19 confirmed cases in acute hospitals. Admissions: New COVID-19 confirmed admissions and new laboratory confirmations of suspected cases in preceding 24 hours (7-day moving average also shown). Data from HSE PMIU-SDU, 8am census.



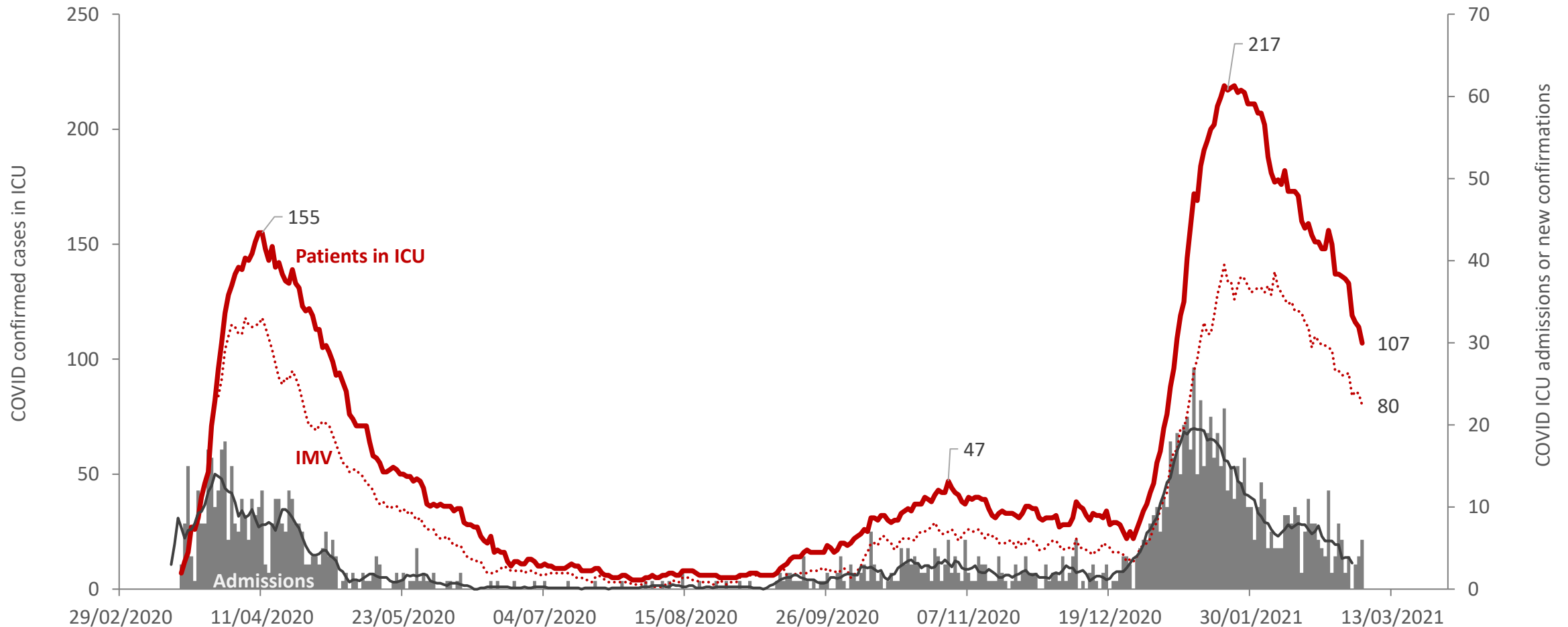
Rialtas na hÉireann
Government of Ireland

Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection remains high but is now decreasing.



Coronavirus
COVID-19
Public Health
Advice



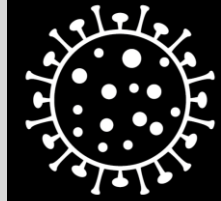
Patients in ICU: Daily count of number of COVID-19 confirmed cases in ICU. IMV: Daily count of number of COVID-19 patients requiring invasive mechanical ventilation. Admissions: daily new COVID-19 confirmed admissions to ICU and new laboratory confirmations of suspected cases in ICU (7-day average also shown). Data from morning census from NOCA



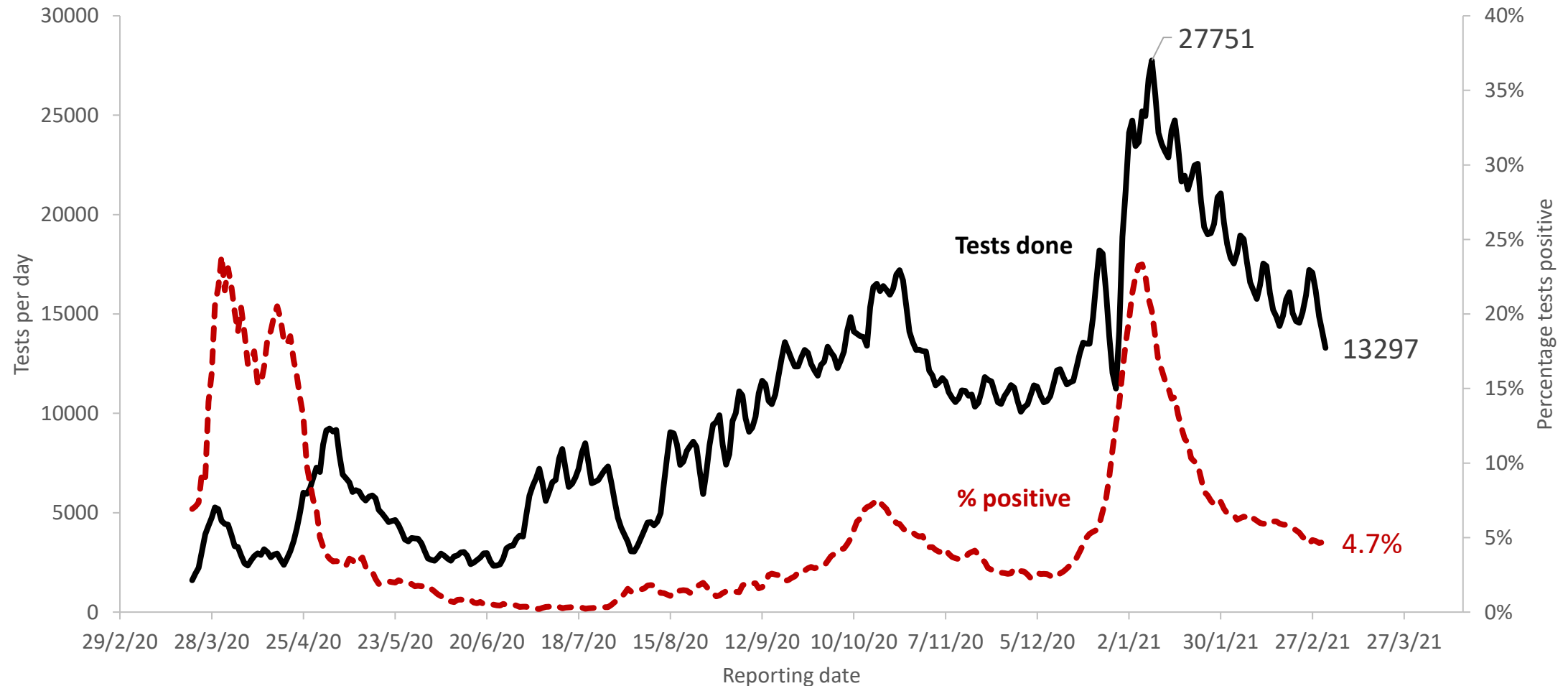
Rialtas na hÉireann
Government of Ireland

Testing and test positive rate

The demand for tests has fallen. Positivity rate has fallen significantly: overall positivity rate peaked at 23% on 7 January; it had been plateaued near 6%, but may be decreasing again.



Coronavirus
COVID-19
Public Health
Advice



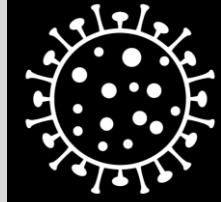
Data 5-day rolling averages, tests outsourced to German laboratory in April backdated using specimen collection date. The aggregate positivity rate should be interpreted with caution, as it includes community referrals, close contacts, mass and serial testing, and hospital testing, and changes in numbers of tests done in these different settings will alter the overall positivity rate.



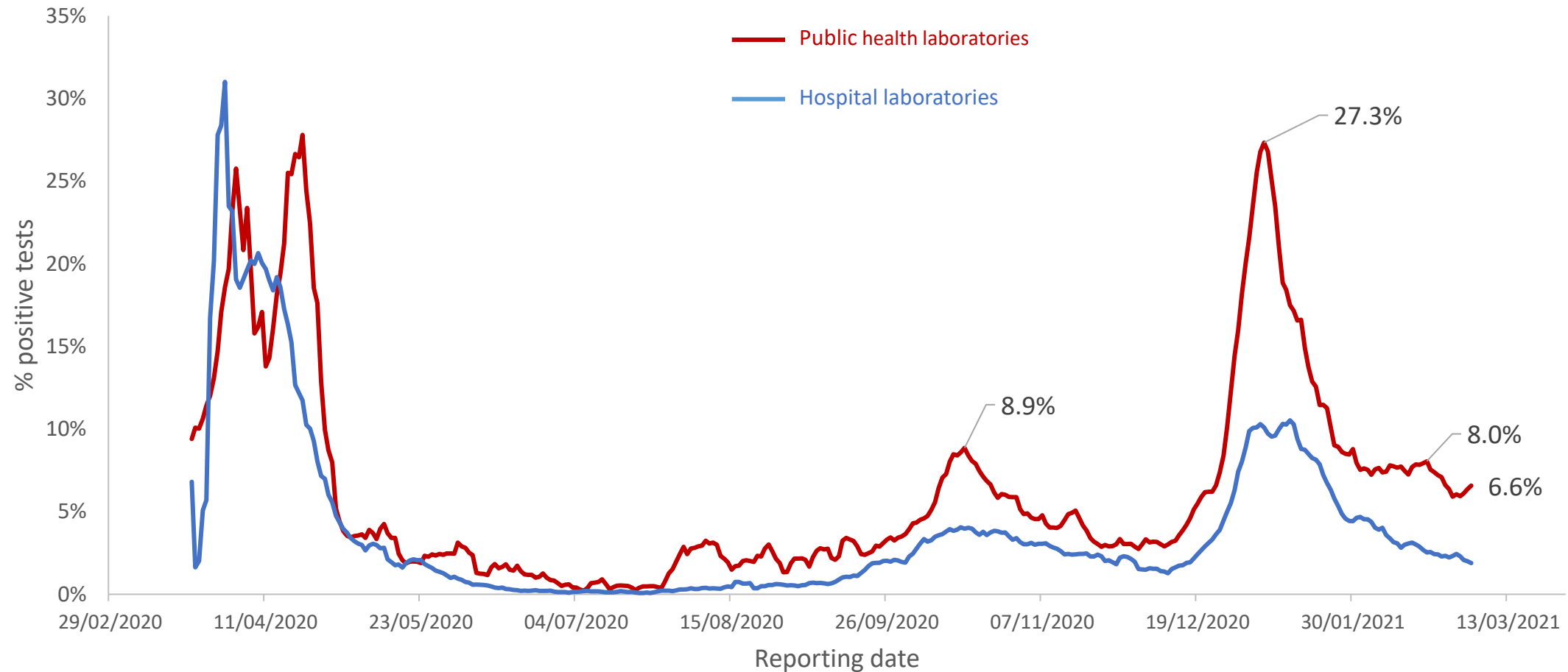
Rialtas na hÉireann
Government of Ireland

Test positivity: public health laboratories

The positivity rate is higher for tests conducted in public health laboratories (NVRL, associated laboratories and Cherry Orchard) compared with tests conducted in hospitals. The test positivity in hospital laboratories continues to fall (2.3%). Positivity rates in public health laboratories have decreased from a peak 5-day average positivity of 27.4% on 6 January; it had been plateaued at 7-8%, but now appears to be decreasing again



Coronavirus
COVID-19
Public Health
Advice



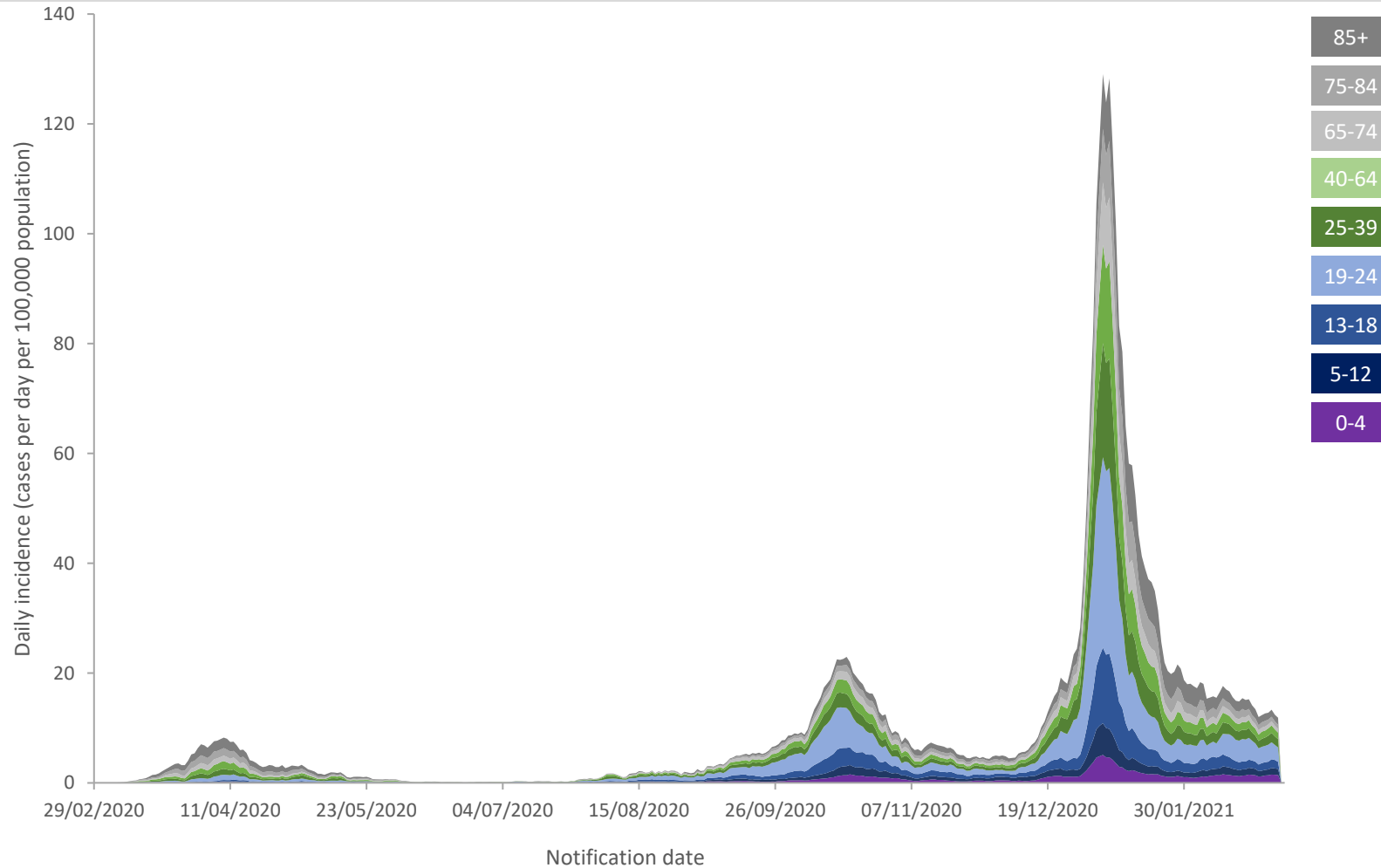
Data 5-day rolling averages of percentage of tests reported positive per day. Public health laboratories are NVRL and associated laboratories, plus Cherry Orchard
Backlog tests outsourced to German laboratory in April are not backdated and are assigned to date reported



Rialtas na hÉireann
Government of Ireland

Incidence across different age groups (excluding HCW and LTRC)

Incidence has decreased across all age groups except those aged 0-4 years, and is relatively evenly spread across age groups

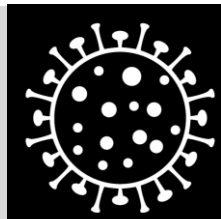


Week	Age band								
	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
9	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.0
10	0.0	0.2	0.3	0.0	0.2	0.7	0.5	1.0	0.0
11	0.6	0.2	0.5	5.4	5.0	4.4	4.6	6.6	7.4
12	4.5	2.4	7.5	22.9	27.8	31.1	25.2	24.9	37.0
13	6.9	4.2	14.5	58.3	73.3	86.5	72.6	88.5	94.7
14	4.5	4.4	6.7	28.1	40.1	50.9	50.9	91.1	125.8
15	5.7	5.6	9.1	31.4	29.2	47.4	46.9	71.8	118.4
16	3.0	5.3	10.8	19.3	20.8	32.1	29.2	50.4	75.5
17	3.3	4.2	7.8	21.1	23.6	26.5	21.2	50.4	77.0
18	4.5	6.4	9.4	20.2	26.0	21.0	18.7	37.7	53.3
19	2.1	2.7	4.6	13.3	15.2	14.3	10.4	18.8	37.0
20	3.6	1.6	5.1	12.1	16.4	12.1	6.7	9.2	13.3
21	3.3	2.7	4.6	8.5	6.3	8.2	7.5	15.3	22.2
22	2.1	2.4	2.2	4.2	5.1	6.8	4.0	4.6	5.9
23	1.2	0.5	1.3	3.0	0.8	1.9	1.6	5.6	3.0
24	2.7	0.7	1.3	1.5	1.3	1.4	1.6	2.0	1.5
25	0.0	0.4	0.5	1.8	1.4	1.0	0.8	0.5	1.5
26	0.6	0.2	0.3	1.8	1.5	0.7	0.8	1.5	3.0
27	1.5	0.4	0.3	1.8	1.9	0.9	0.0	1.0	0.0
28	0.9	1.1	1.1	10.3	2.0	1.0	1.3	1.0	3.0
29	1.2	0.4	0.8	3.6	3.3	2.0	2.9	1.5	3.0
30	1.8	0.5	1.6	3.6	4.3	0.9	1.9	0.0	1.5
31	4.8	2.6	7.3	11.2	8.5	4.6	2.1	2.5	3.0
32	4.5	3.6	6.7	18.4	16.4	10.5	4.6	2.5	3.0
33	6.0	10.0	12.1	27.2	19.5	12.1	8.3	2.5	7.4
34	7.2	7.5	17.5	37.4	16.6	11.4	5.9	5.1	4.4
35	6.3	9.7	13.5	37.1	18.5	11.1	4.8	9.2	5.9
36	13.0	13.1	17.2	47.7	21.6	13.3	11.0	11.7	14.8
37	17.2	17.9	30.1	63.4	28.7	24.4	22.2	8.7	10.4
38	21.7	26.2	43.9	90.6	44.0	34.9	33.2	19.8	19.2
39	12.1	22.6	42.8	147.0	49.9	41.8	32.9	31.0	20.7
40	29.6	28.8	63.2	167.9	68.0	57.8	34.5	26.0	20.7
41	42.8	46.8	132.9	316.7	115.3	89.7	61.6	51.9	60.7
42	78.1	90.4	197.3	434.2	154.4	142.8	90.2	67.2	69.6
43	81.7	93.9	174.7	302.2	123.3	121.7	85.4	82.4	84.4
44	55.8	67.3	96.1	155.8	75.5	77.7	55.2	55.5	59.2
45	34.7	40.1	57.9	83.9	57.9	46.0	42.8	44.3	47.4
46	41.9	37.2	65.4	89.4	45.4	45.1	32.4	42.7	69.6
47	22.0	34.1	60.0	79.4	34.6	33.0	29.2	39.7	62.2
48	23.2	31.3	45.5	66.7	33.8	29.6	22.2	36.1	38.5
49	28.4	37.0	37.7	40.5	33.2	30.1	25.4	29.0	44.4
50	21.4	39.9	44.1	57.4	39.9	35.1	22.5	31.0	22.2
51	51.9	58.5	74.5	128.3	87.9	81.0	54.3	54.5	51.8
52	77.5	76.9	120.0	325.8	176.1	135.1	96.7	95.2	121.4
53	217.8	236.7	514.0	1403.0	762.6	637.0	424.1	350.1	361.2
1	183.7	208.7	568.9	1331.2	792.4	722.6	499.3	446.8	559.5
2	130.3	127.0	301.7	583.9	416.7	421.4	301.5	409.7	578.8
3	93.8	80.9	169.8	327.9	255.7	245.5	170.8	253.9	418.9
4	73.6	60.7	127.8	229.8	154.1	146.5	120.5	163.4	273.9
5	77.8	72.9	126.5	208.6	127.1	123.6	85.1	118.6	216.1
6	91.7	85.3	124.6	224.0	118.2	101.9	68.5	89.6	125.8
7	87.5	76.4	95.5	254.5	107.6	90.0	59.2	80.4	121.4
8	87.5	70.0	90.4	186.3	96.5	78.9	43.4	57.5	93.3

Chart shows 5-day rolling average of total incidence (cases per day per 100,000 population) with coloured bands showing the contribution of each age cohort to the total incidence, having adjusted for the number of people in that age cohort (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 date. A number of cases in those aged 65 and older will be linked in the coming days to outbreaks in LTRC.

Incidence across different age groups (excluding HCW and LTRC)

Incidence has decreased across all age groups except those aged 0-4, and is relatively evenly spread across age groups with highest incidence in those aged 19-24 years and lowest in those aged 65-74 years



Coronavirus
COVID-19
Public Health
Advice

Week	Age band								
	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
47	22.0	34.1	60.0	79.4	34.6	33.0	29.2	39.7	62.2
48	23.2	31.3	45.5	66.7	33.8	29.6	22.2	36.1	38.5
49	28.4	37.0	37.7	40.5	33.2	30.1	25.4	29.0	44.4
50	21.4	39.9	44.1	57.4	39.9	35.1	22.5	31.0	22.2
51	51.9	58.5	74.5	128.3	87.9	81.0	54.3	54.5	51.8
52	77.5	76.9	120.0	325.8	176.1	135.1	96.7	95.2	121.4
53	217.8	236.7	514.0	1403.0	762.6	637.0	424.1	350.1	361.2
1	183.7	208.7	568.9	1331.2	792.4	722.6	499.3	446.8	559.5
2	130.3	127.0	301.7	583.9	416.7	421.4	301.5	409.7	578.8
3	93.8	80.9	169.8	327.9	255.7	245.5	170.8	253.9	418.9
4	73.6	60.7	127.8	229.8	154.1	146.5	120.5	163.4	273.9
5	77.8	72.9	126.5	208.6	127.1	123.6	85.1	118.6	216.1
6	91.7	85.3	124.6	224.0	118.2	101.9	68.5	89.6	125.8
7	87.5	76.4	95.5	254.5	107.6	90.0	59.2	80.4	121.4
8	87.5	70.0	90.4	186.3	96.5	78.9	43.4	57.5	93.3

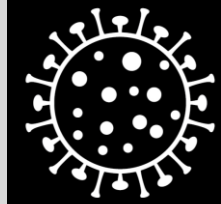
Heat map shows age-specific incidence (cases per week per 100,000 population). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated by specimen collection date.



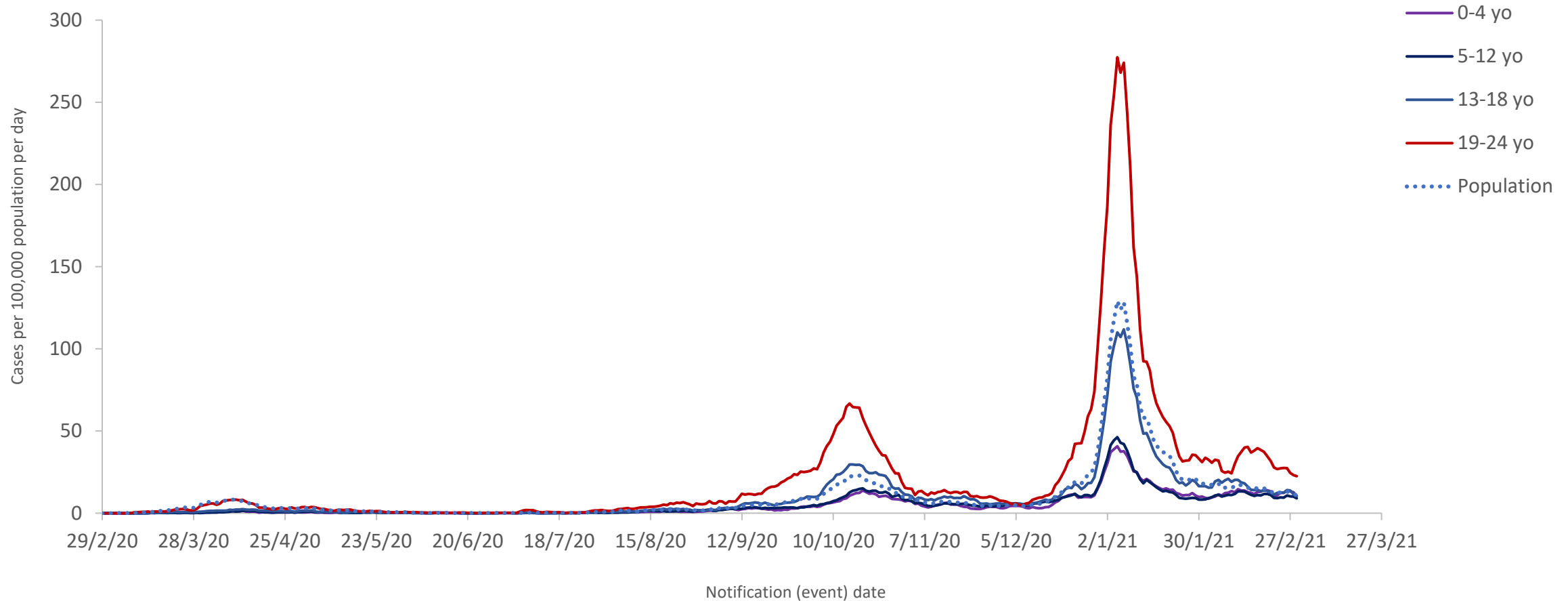
Rialtas na hÉireann
Government of Ireland

Incidence in younger cohorts

The incidence per 100,000 population in those aged under 25, compared with the population as a whole. The incidence in those aged 18 and under has been lower than the population average, but is now converging on the population average, as it did at the end of the October 2020 surge. While incidence in those aged 19-24 increased in early February 2021, it stabilised and is now decreasing.



Coronavirus
COVID-19
Public Health
Advice



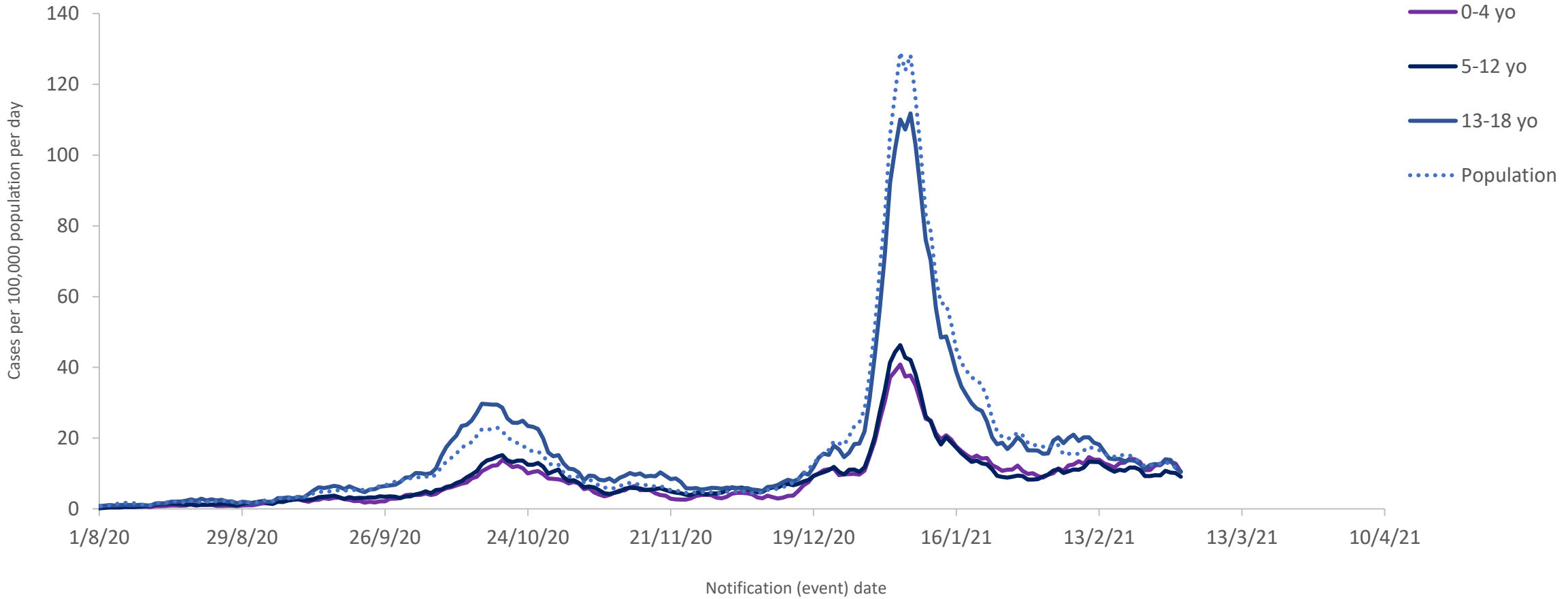
Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated 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 in a timely manner.



Rialtas na hÉireann
Government of Ireland

Incidence in younger cohorts

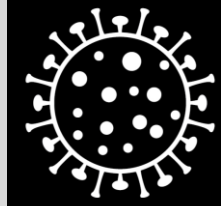
There are patterns in incidence in those aged 18 and under. The incidence in those aged 13-18 years follows the population average incidence. The incidence in those aged 0-12 is normally lower, but changes over the course of a surge in disease, being lower in the early part of a surge, and converging to the population average as the surge comes to an end. There is some under-ascertainment due to children with asymptomatic infection not being tested during periods of very high demand for testing, and there may also be changes in the pattern of exposure and transmission for children during strict stay-at-home measures.



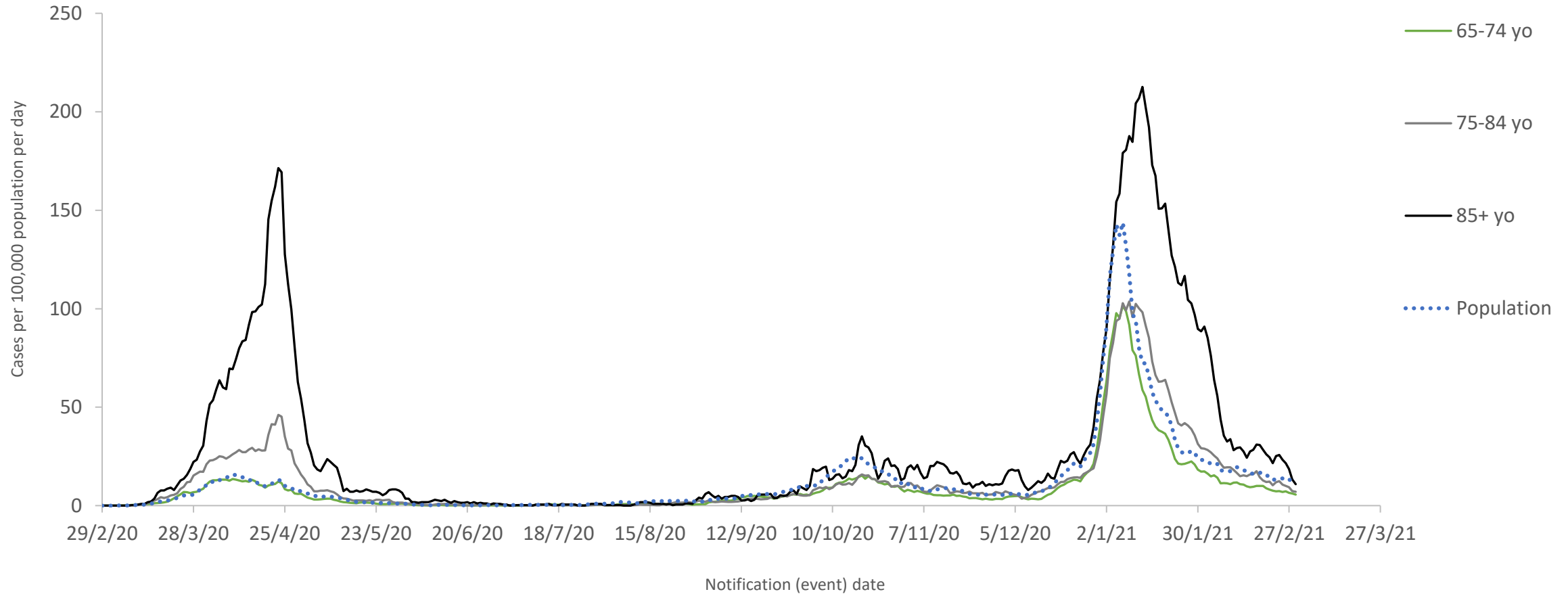
Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated 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.

Incidence in older persons (incl. HCW and LTRC)

The incidence in older persons is now at or below the population average.



Coronavirus
COVID-19
Public Health
Advice

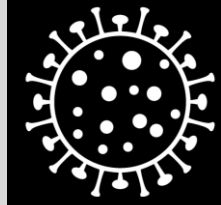


Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are included. Tests outsourced to German laboratory in April backdated, using the specimen collection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

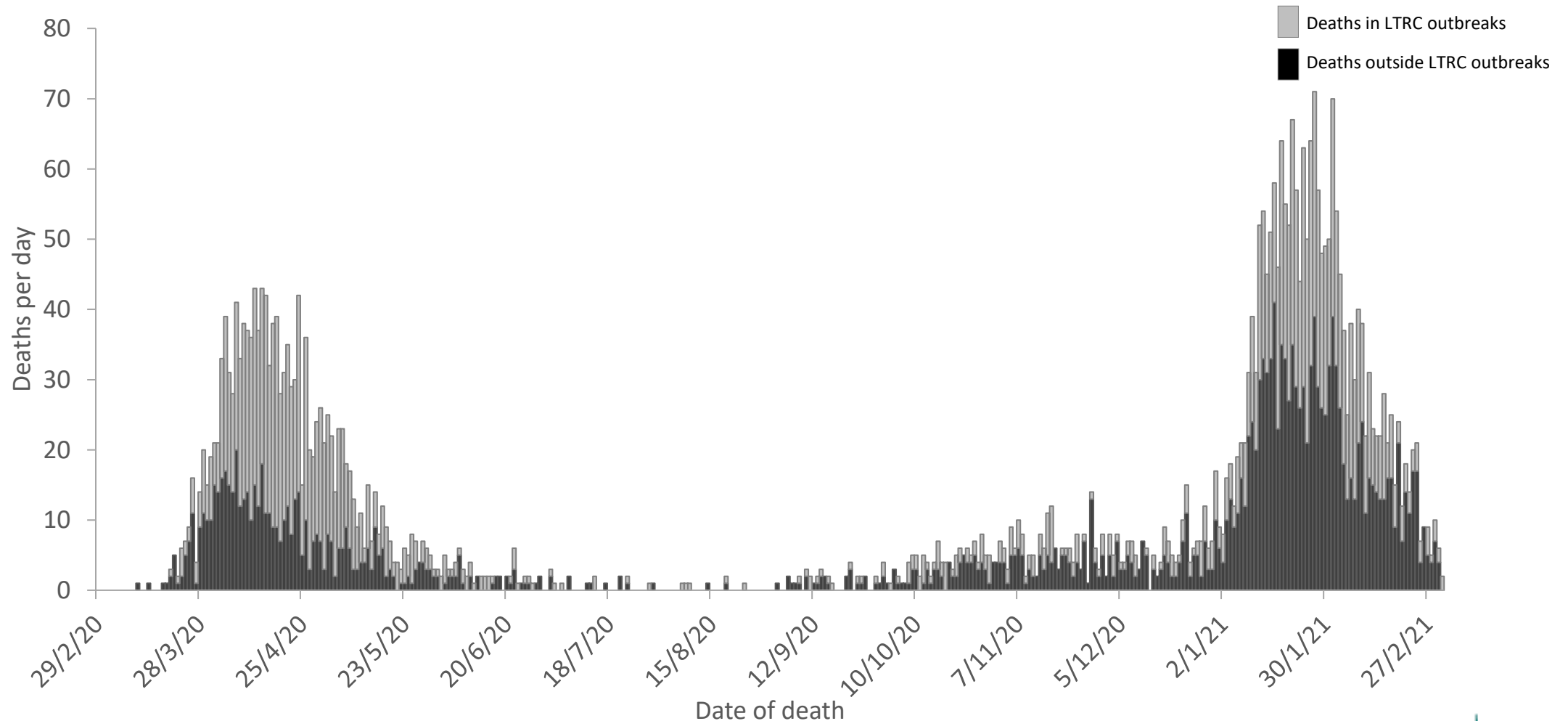


Rialtas na hÉireann
Government of Ireland

Deaths per day



Coronavirus
COVID-19
Public Health
Advice



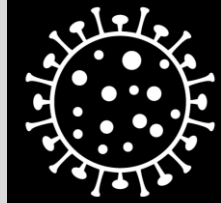
Deaths per day, separated into those associated with outbreaks in long-term residential care and those not associated with such outbreaks. Deaths with laboratory confirmed SARS-CoV-2 only



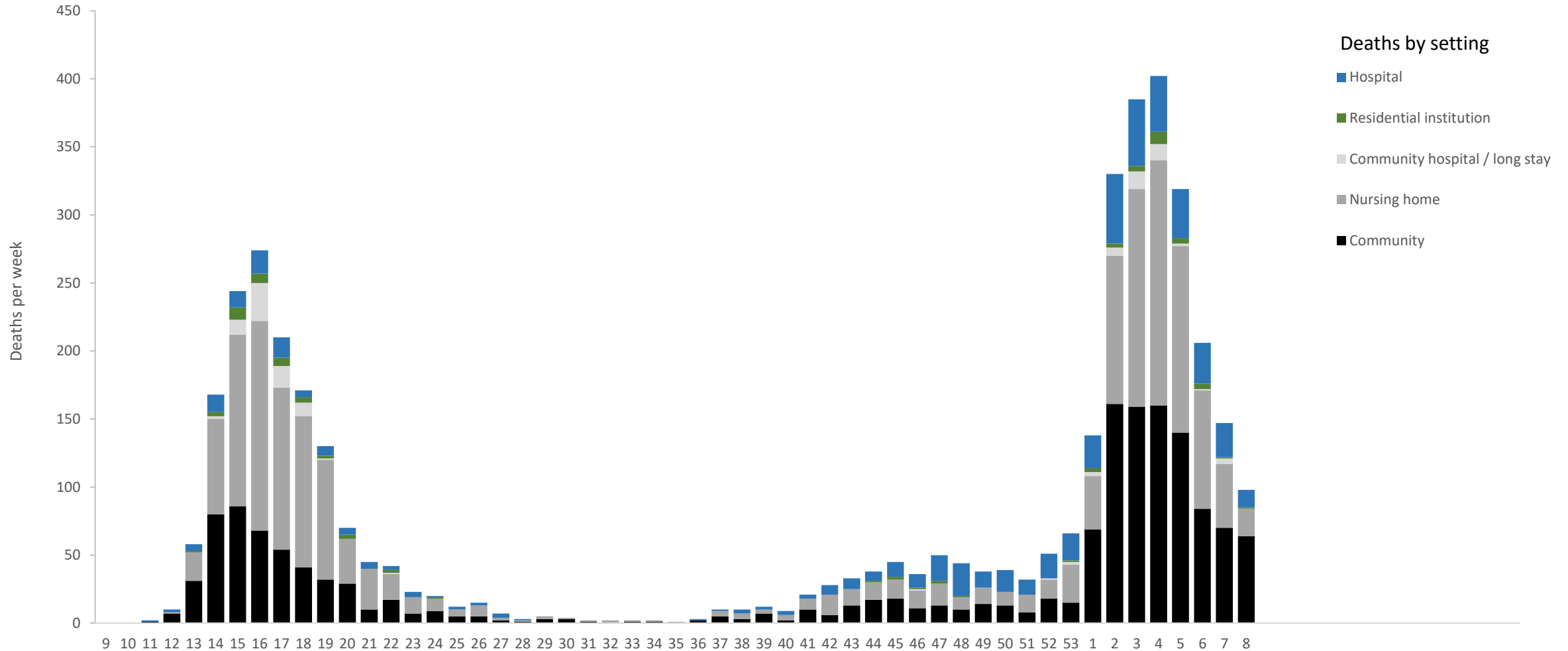
Rialtas na hÉireann
Government of Ireland

Deaths by setting

There were over 100 deaths per week in recent weeks in long-term residential facilities, although deaths in LTRC constituted a smaller proportion of all deaths. Deaths in hospital outbreaks were significant in the period after the October surge. Deaths associated with outbreaks in LTRC appear to be decreasing, which may be due to the protective effect of vaccination



Coronavirus
COVID-19
Public Health
Advice



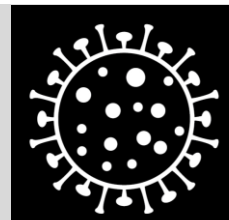
Deaths per week by week of death and the setting in which the death occurred. Deaths with laboratory confirmed SARS-CoV-2 only. Deaths in hospital outbreaks refers to deaths within a cluster of linked cases where the infection has been transmitted in the hospital setting, other deaths in hospitals are recorded as 'community' as the infection occurred in the community.



Rialtas na hÉireann
Government of Ireland

Close contacts of adult confirmed cases

The mean number of close contacts per confirmed case. The number of contacts was very low (2 or less) during April, but increased to 5-6 per case during the summer. The public health measures during October was associated with a progressive reduction in close contacts, to below 3. The number of close contacts remained below 3.3 on average until early December, rose to almost 5 on average by 28 December, fell to 2.1 in January, and while there has been some recent increase, remains stable at ≈ 2.6



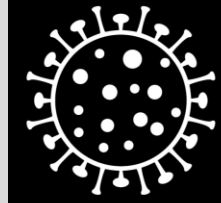
Coronavirus
COVID-19
Public Health
Advice



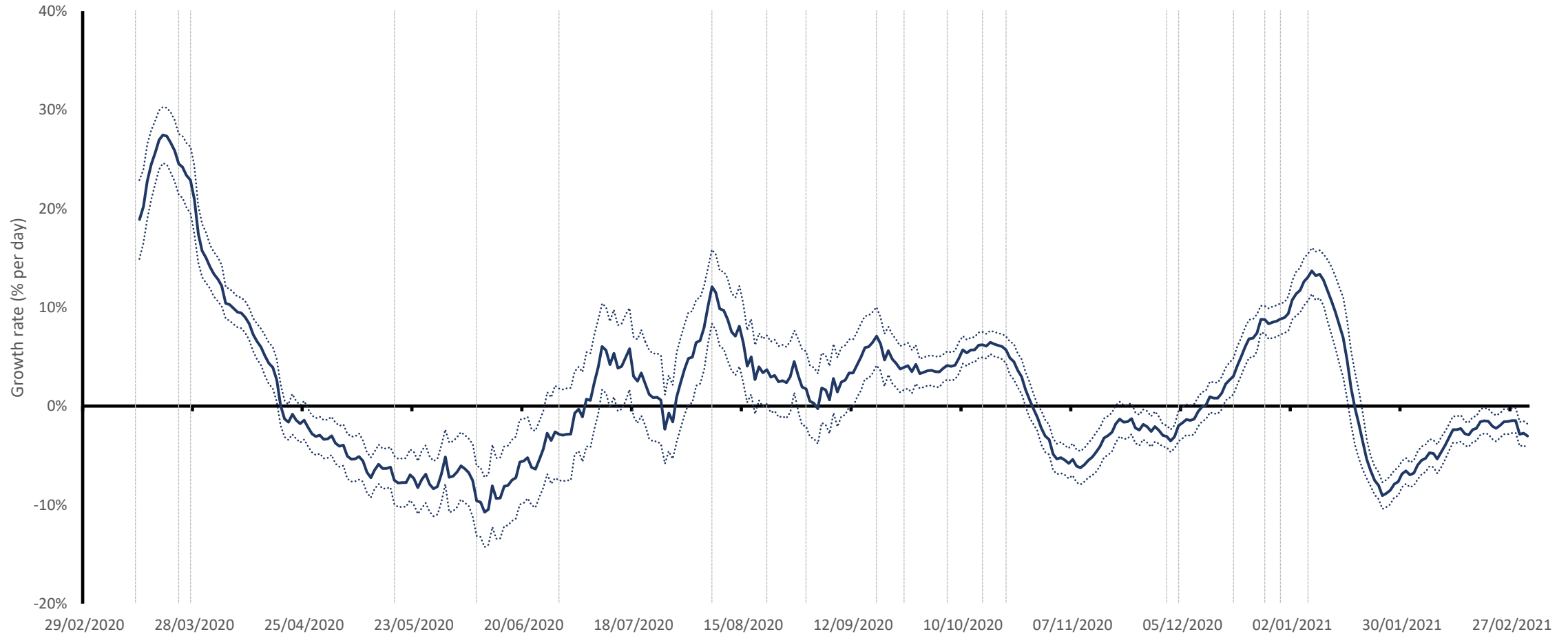
The average number of close contacts per confirmed case. Data from COVID-19 Care Tracker (CCT). Cases dated by case creation date. Cases (but not contacts) aged 18 and younger are excluded. Data are 7-day trailing averages except for the months of June – August where a 21-day trailing average is used due to very low case counts.

Growth rate for case numbers

Growth rate peaked at 13% per day over the 21-day period up to 10 January 2021. While case numbers decreased very rapidly in January (-6 to -10% per day) case numbers are now decreasing more slowly at -2% to -4% per day; this rate of decline has been stable for two weeks



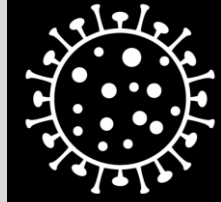
Coronavirus
COVID-19
Public Health
Advice



Growth rate calculated as the average growth rate over a 21-day trailing window, with 95% credible interval; cases dated by notification (event) date.

Week-on-week decline in cases

The effect of resumed testing of close contacts is seen in weeks 6 and 7; the data are compatible with a constant rate of decline in rates of infection of between 10 and 20% per week



Coronavirus
COVID-19
Public Health
Advice

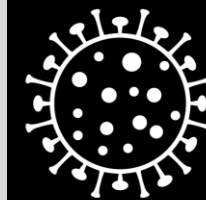
Week	Cases	Week-on week change
2021 - 1	45,621	
2	25,123	-45 %
3	14,815	-41 %
4	8,931	-40 %
5	7,146	-20 %
6	6,031	-16 %
7	5,531	-8 %
8	4,561	-18 %



Rialtas na hÉireann
Government of Ireland

Estimates of effective reproduction number (R)

Reproduction number is below 1.0 with increased uncertainty in its estimation; R is stable or decreasing
it is currently estimated at 0.6 – 0.9



Coronavirus
COVID-19
Public Health
Advice

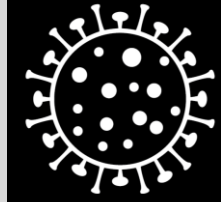
Method	Estimate	95% confidence interval
SEIR model-inferred	0.91	0.63 – 1.29
Bayesian model	0.76	0.40 – 1.16
Time-dependent R	0.73	0.66 – 0.81
GAM estimate 23 Feb 2021	0.83	0.69 – 0.98
GAM estimate 2 Mar 2021	0.83	0.63 – 1.02

Estimates generated 3 March 2021, refer to IEMAG technical notes for methodology. Estimates are unreliable when case numbers are low or variable. SEIR-inferred estimate is slow to respond to changes in R. The time-dependent R estimate lags behind other estimates. These R estimates relate to viral transmissions and infections that occurred approximately 7-14 days ago. The estimate of R is influenced by different patterns of transmission in large outbreaks, smaller clusters, and individual transmission.



Rialtas na hÉireann
Government of Ireland

Situation analysis 4 March 2021



Coronavirus
COVID-19
Public Health
Advice

- We are seeing **continued, slower, but constant progress** against **all indicators of disease**
- **Incidence remains high**
- Cases (5-day average) **536 cases per day**; 14-day incidence **190 per 100,000**
 - Incidence decreasing across most age groups
 - Recent increase in young adults aged 19-24 has reversed
 - Numbers on hospital and ICU decreasing
 - Test positivity remains high, but may be starting to decrease
- We are **maintaining suppression** of transmission **stable rate of decline**
 - Rate of decline now at -2 to -4%, halving time 18 - 36 days
 - **R estimated as stable or decreasing at 0.6 – 0.9**
- Indicators of **mobility and contact** remain low
- Emerging **evidence of protective effect of vaccination**