IEMAG briefing

25 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 the number of people requiring hospital care remain high. The numbers of people in hospital and ICU continue to decrease slowly. The number of deaths per day is stable.

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	Apr 2020	Summer 2020	Oct 2020	Dec 2020	Jan 2021	24 Feb	3 Mar	10 Mar	17 Mar	24 Mar	Daily count 25 Mar
Cases confirmed per day	859 18-04	8.7 25-06	1158 21-10	262 12-12	6520 10-01	737	620	487	520	564	606
14-day incidence *per 100,000 population*	212 19-04	3.0 04-07	306 26-10	79 09-12	1532 15-01	231	199	163	148	159	160
Hospital in-patients	862 17-04	9 02-08	333 01-11	198 16-12	1949 24-01	723	542	415	351	345	312
Hospital admissions per day	*85* *04-04*	*<1* *10-07*	*27* *26-10*	*11* *13-12*	*158* *15-01*	*40*	*23*	*24*	*23*	*24*	*24*
ICU confirmed cases	150 14-04	4 04-08	43 04-11	26 27-12	217 28-01	149	127	100	86	81	74
ICU admissions per day	*14* *31-03*	*<1* *03-06*	*4* *03-11*	*1* *16-12*	*20* *17-01*	*6*	*4*	*4*	*3*	*3*	*4*
Deaths confirmed per day	46 22-04	<1 30-07	7 01-12	4 17-12	57 03-02	29	18	20	10	9	3

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.

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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, reached a low of 476 on 8 March, and is now increasing at 589

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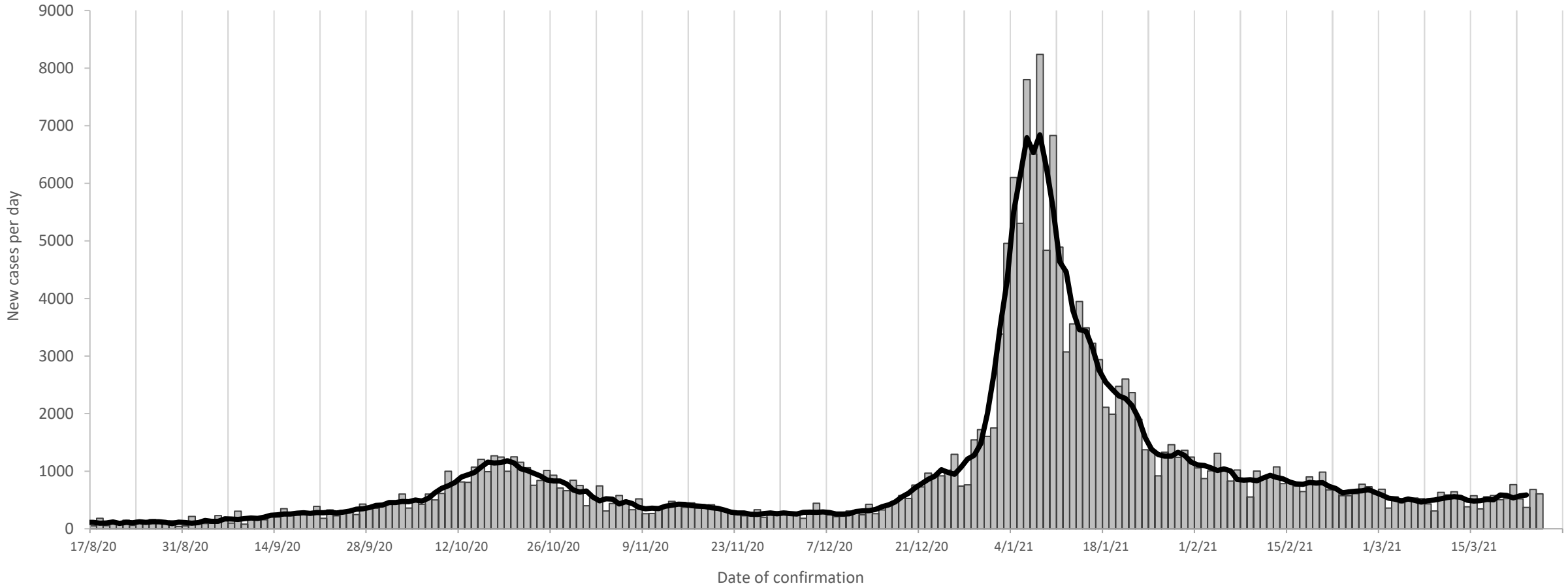
Cases per week																														
	711	796	912	1303	1947	2059	3031	4457	7398	7073	4838	3424	2583	2580	1798	2028	1964	3368	6597	15729	45621	25123	14815	8931	7147	6031	5530	4554	3632	3536	3859



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.

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Daily incidence

Daily incidence is currently twice what it was in early December, and approximately 50 times what it was in late June 2020. Incidence is plateaued at approximately 550-600 cases per day.

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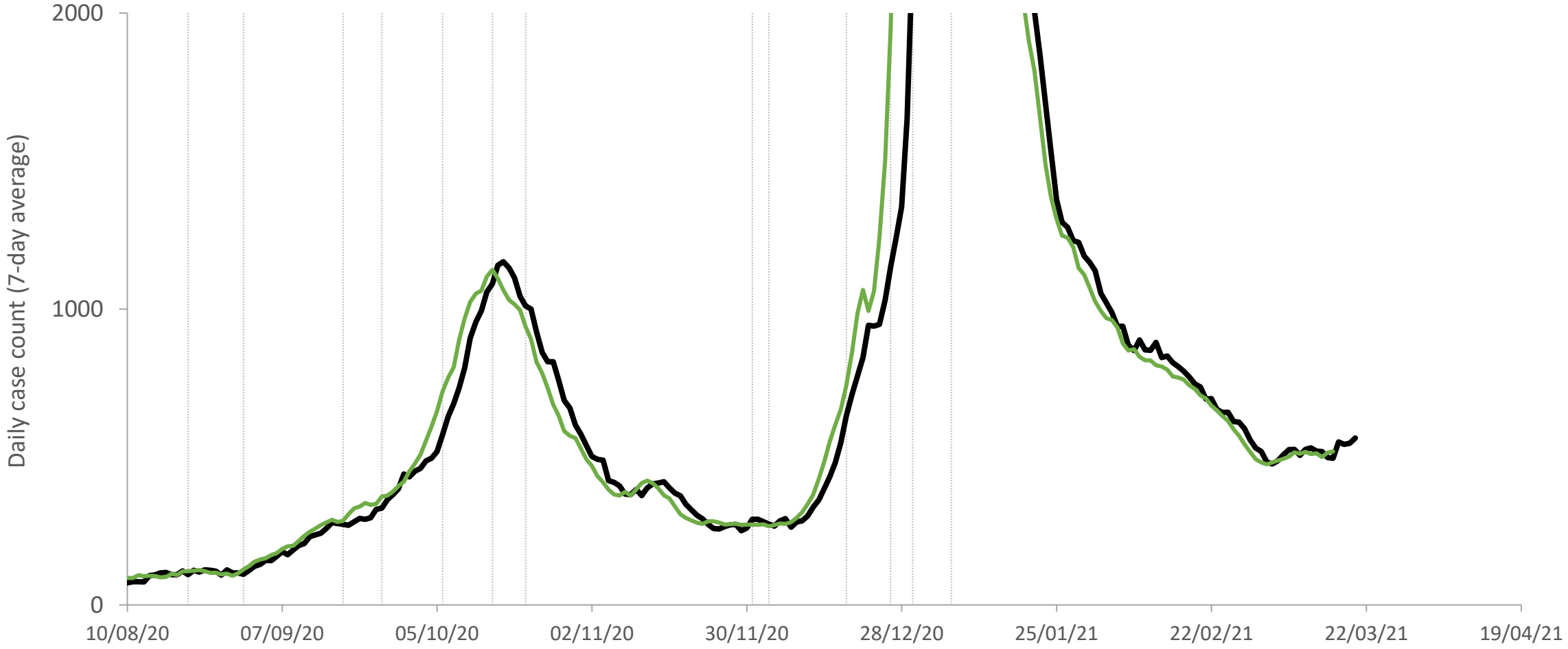

Daily cases by notification (event) date (black, the date the case was entered on the CIDR database) and specimen collection date (green). The vertical dashed lines indicate the dates of escalation and de-escalation of public health restrictions. Data are 7-day moving averages.

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Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection. The number of people in hospital is decreasing slowly, but The number of admissions and newly confirmed cases in hospital per day is plateaued at 20-25 per day.

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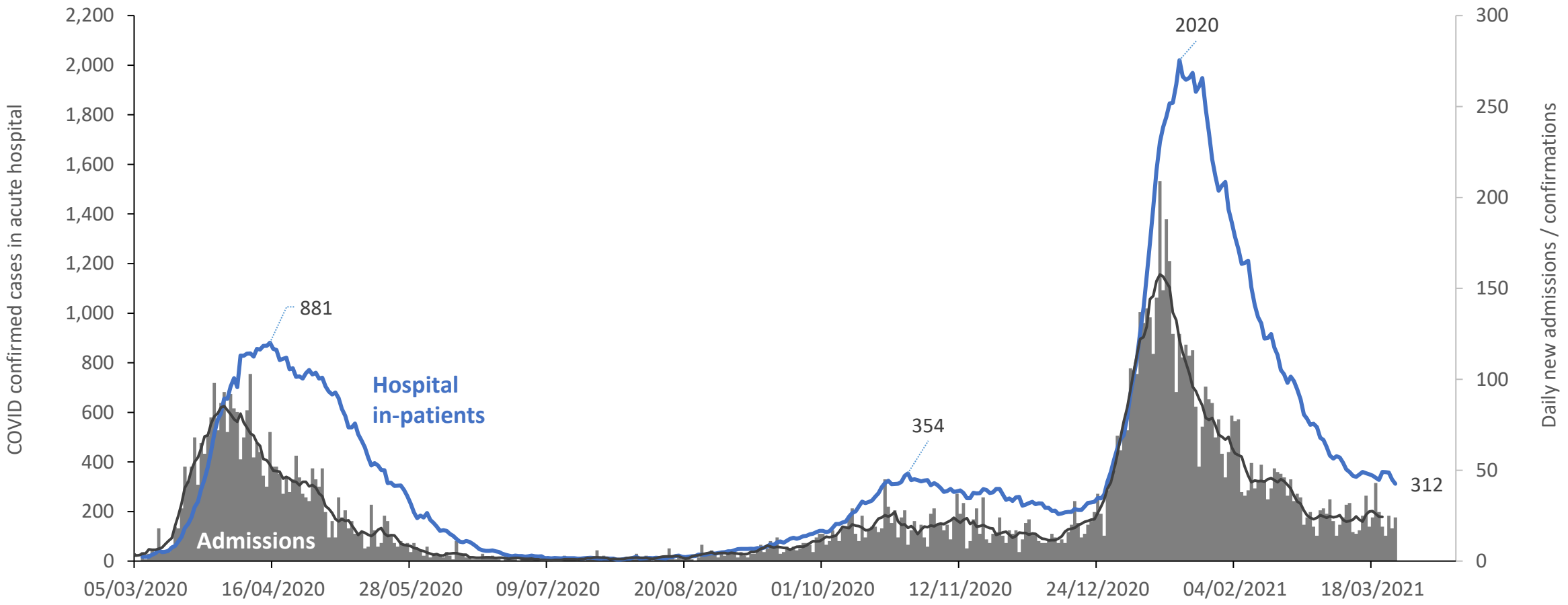

Hospital in-patients: Daily count of number of COVID-19 confirmed cases in acute hospitals. Admissions: New COVID-19 confirmed admissions and new laboratory confirmations of suspected cases in preceding 24 hours (7-day moving average also shown). Data from HSE PMIU-SDU, 8am census.

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Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection remains high and is decreasing very slowly.

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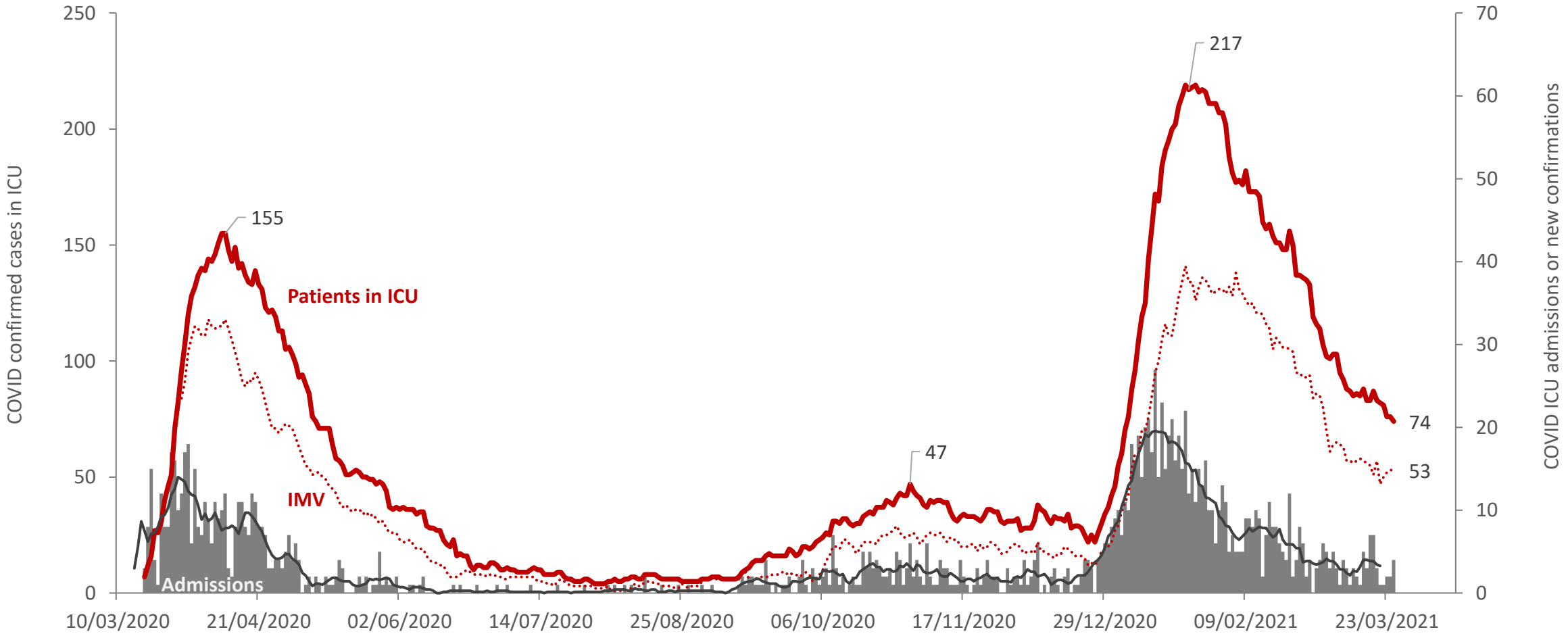

Patients in ICU: Daily count of number of COVID-19 confirmed cases in ICU. IMV: Daily count of number of COVID-19 patients requiring invasive mechanical ventilation. Admissions: daily new COVID-19 confirmed admissions to ICU and new laboratory confirmations of suspected cases in ICU (7-day average also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

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Cases in long-term residential settings

The number of cases linked to outbreaks in LTRC, following the unprecedented levels of infection in the community in January 2021, was very high, similar to the numbers seen in April and May 2020. Nonetheless, when compared to the total burden of disease in the community (total cases per week) the level of infection in LTRC is significantly less than in April-May 2020. Cases in LTRC have decreased rapidly, and moreso than would be expected given the level of disease in the the wider community

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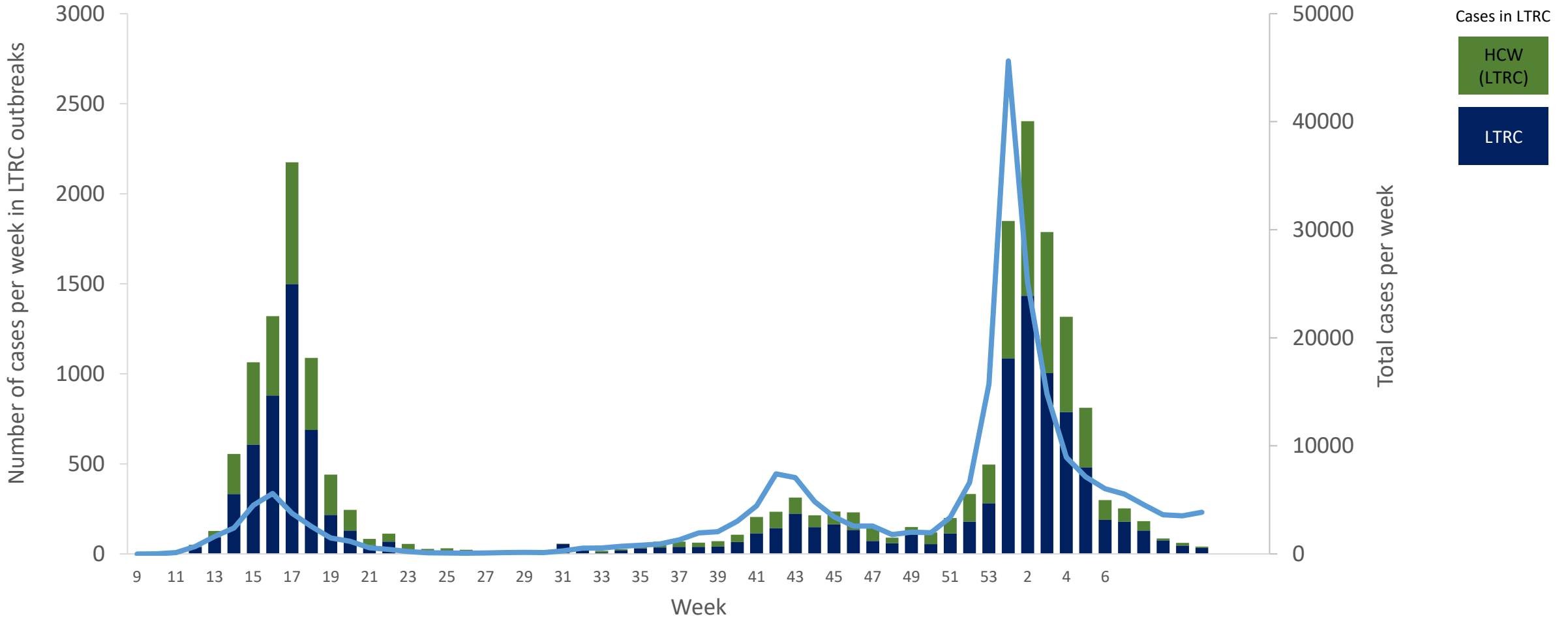

Number of cases per week linked to outbreaks in long-term residential care (bars) compared to the total number of cases per week (dotted line, referred to the secondary y-axis). LTRC: cases amongst residents in outbreaks in long-term residential settings.
HCW (LTRC): Cases in healthcare workers associated with outbreaks in LTRC.

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Deaths by setting

The number of deaths per week. This has been stable for 3 weeks. Deaths associated with outbreaks in LTRC appear to have decreased earlier and more rapidly than in the wider community, which is likely due to the protective effect of vaccination.

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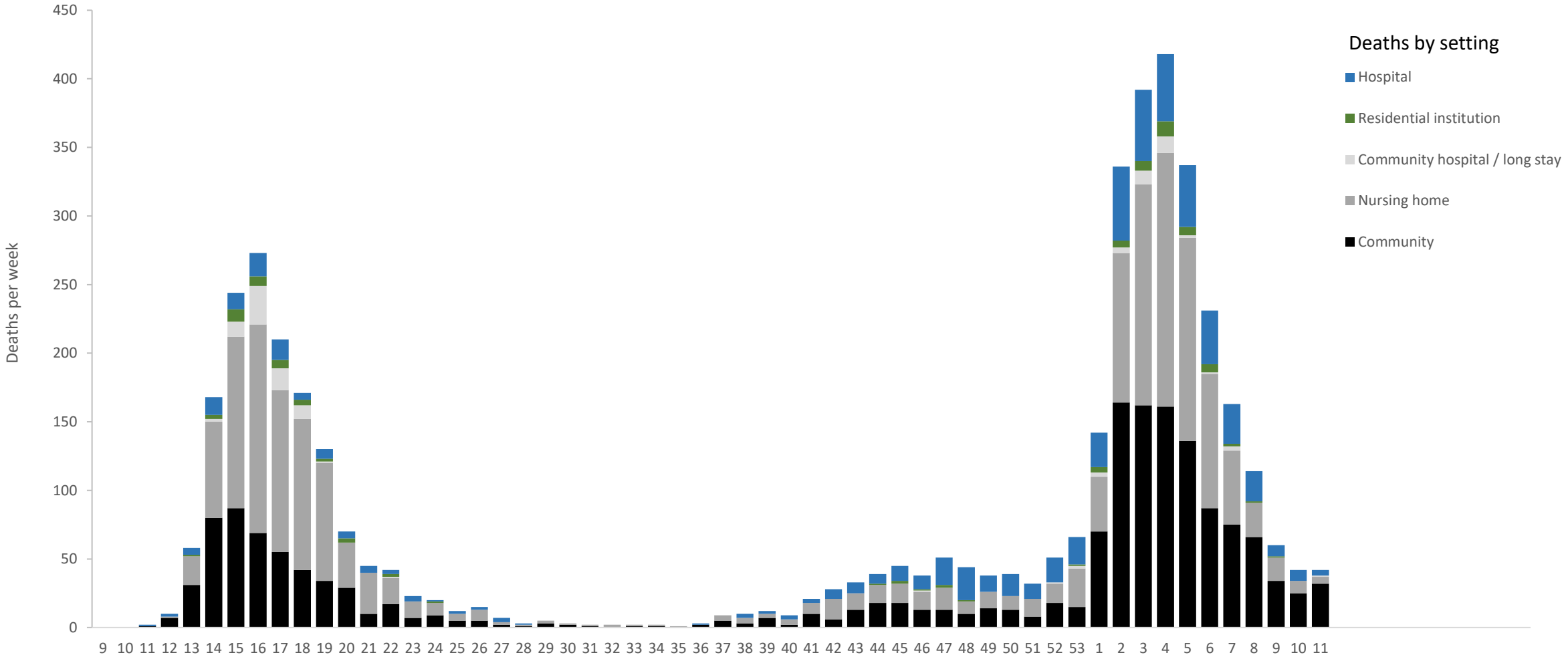

Deaths per week by week of death and the setting in which the death occurred. Deaths with laboratory confirmed SARS-CoV-2 only. Deaths in hospital outbreaks refers to deaths within a cluster of linked cases where the infectionhas been transmitted in the hospital setting, other deaths in hospitals are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

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Age-specific incidence in recent weeks

There has been a four- to six-fold increase in referrals for testing amongst those aged 12 and under, an indication of the level of vigilance in families, general practice, schools and public health.

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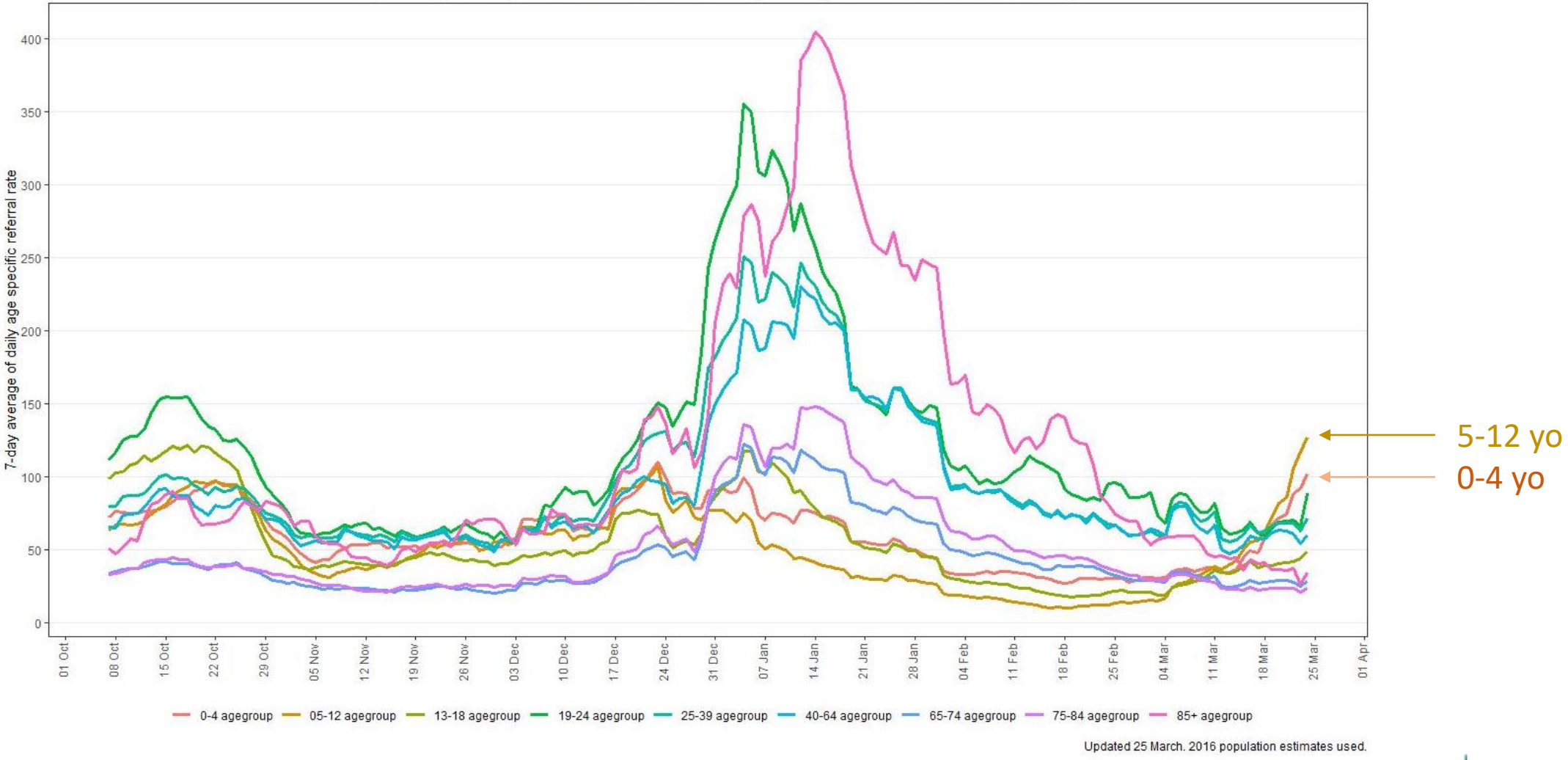

Age-specific referral for community testing (referrals per day per 100,000 population within each age cohort, excluding those referred as close contacts, population from CSO 2016 census data).

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Age-specific incidence in recent weeks

Incidence in those aged 12 and under has increased during March 2021, from 10 per 100,000 population to 14-16 per 100,000. While the level of testing in those aged 0-12 years has increased four- to six-fold, the number of cases detected has increased 40-60%.

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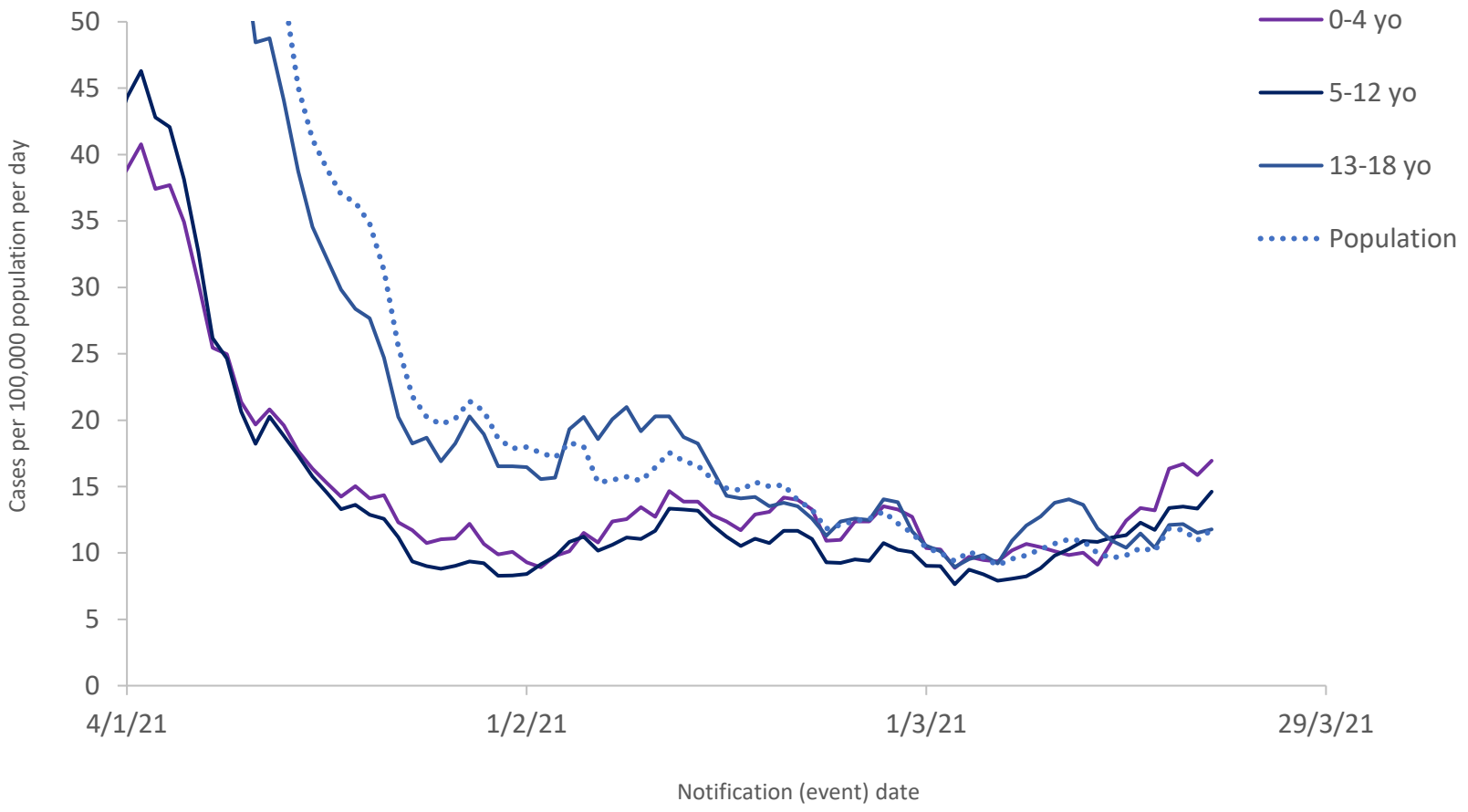

Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated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

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Age-specific incidence in recent weeks

Incidence in those aged 19-24 years has decreased significantly in recent weeks

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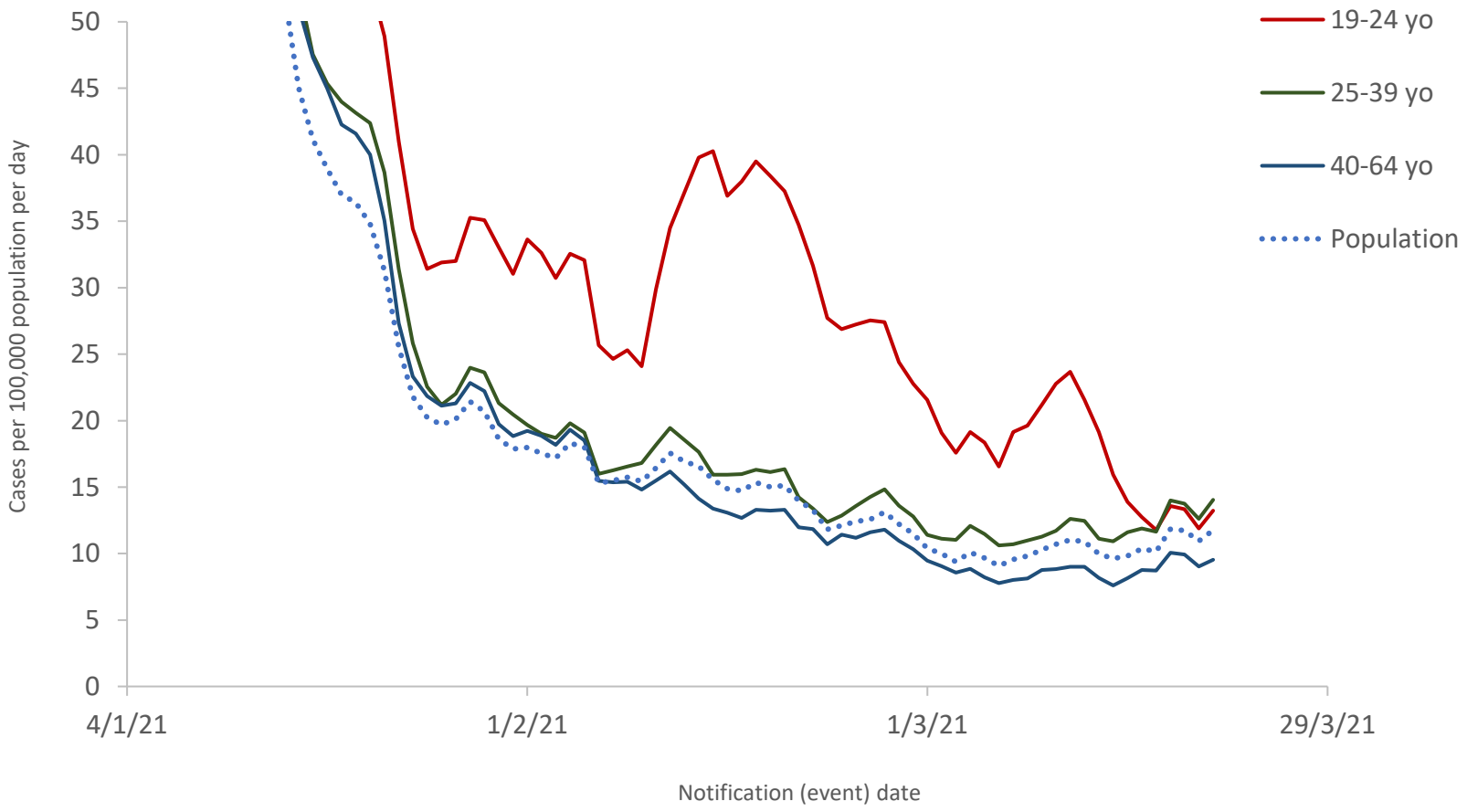

Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated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

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Age-specific incidence in recent weeks

Incidence in those aged 65 and older remains below the population average

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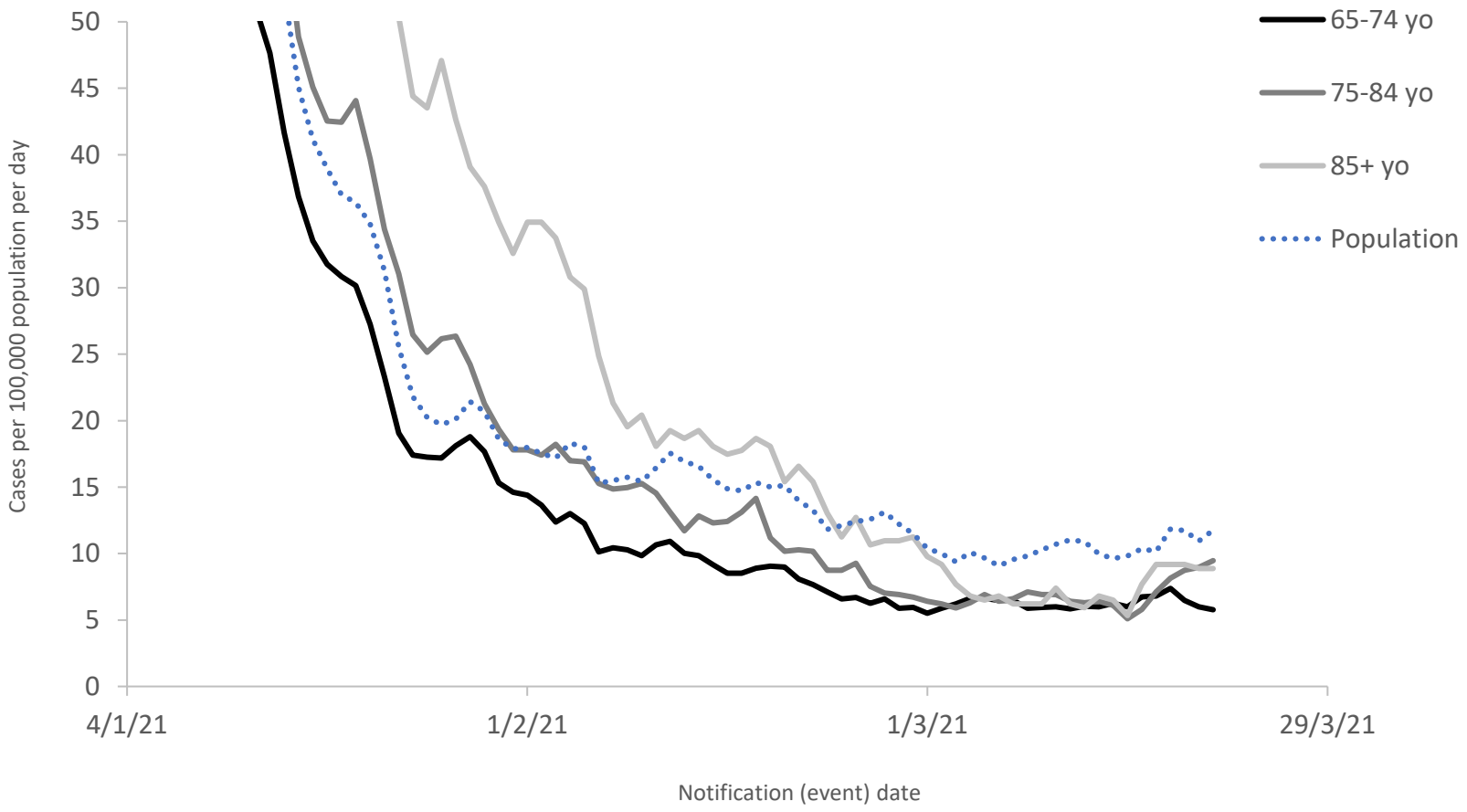

Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated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

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Cases in childcare facilities and schools

The number of cases in school outbreaks is less than 10% of the total number of cases in children of school-going age, whereas outbreaks are a greater contributor to the number of cases detected in children under 5 years of age. Note that detection of a case or declaration of an outbreak in a school does not imply that transmission has occurred in the school setting.

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Week	0-4 years		5-12 years		13-18 years	
	Total cases aged 0-4 years	Cases in children in childcare facility outbreaks	Total cases aged 5-12 years	Cases aged 5-12 in school outbreaks	Total cases aged 13-18 years	Cases aged 13-18 in school outbreaks
6	251	29	534	< 5	494	< 10
7	230	48	507	< 5	374	0
8	225	49	436	0	321	< 5
9	177	43	390	< 5	276	0
10	165	29	403	18	311	10
11	245	78	582	55	309	< 10

Cases per week in those aged 18 and under, giving total cases, and cases linked to outbreaks in childcare facilities and schools. Cases dated by notification (event) date. The numbers for recent weeks may change slightly in future reports, due to delayed linkage of cases to outbreaks .

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Cases in outbreaks in schools

The number of cases in school outbreaks is a small fraction of the total number of cases in children of school-going age. Note that detection of a case or declaration of an outbreak in a school does not imply that transmission has occurred in the school setting.

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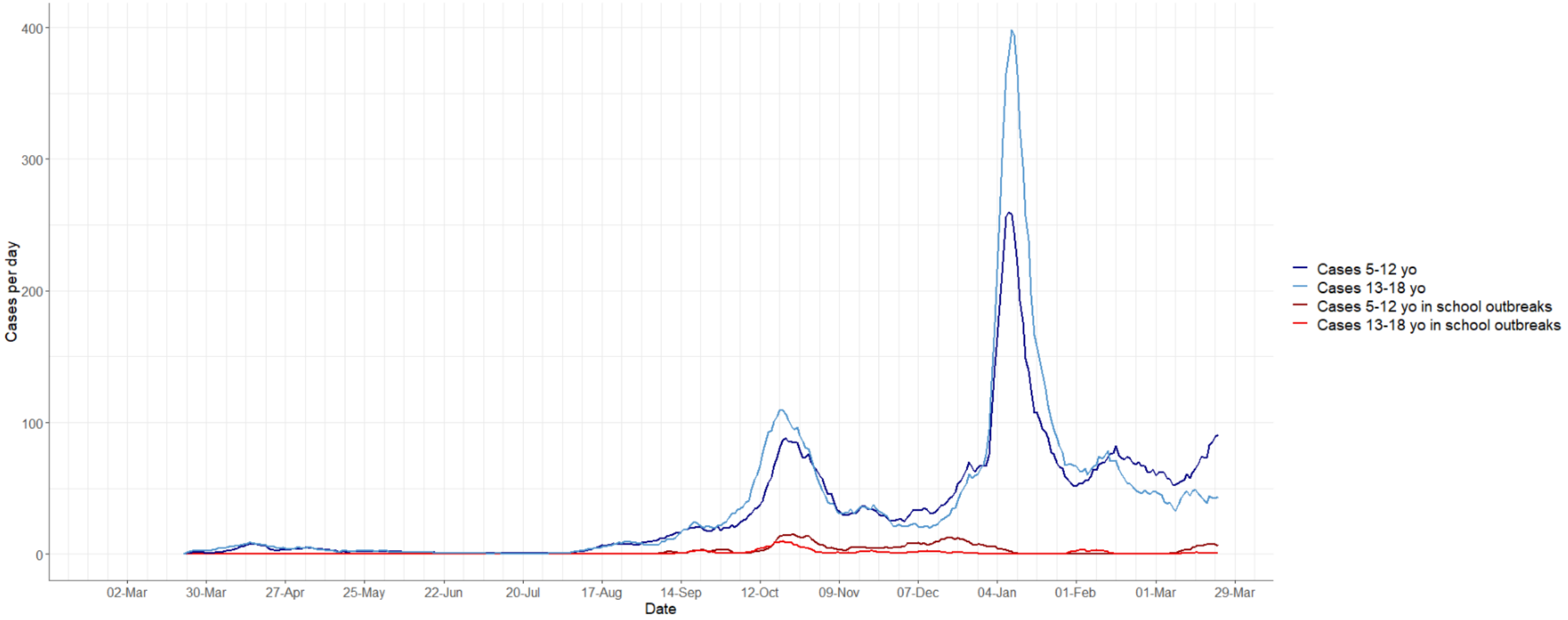

Total cases per day in those aged 5-12 years, and 13-18 years, and those cases in those age bands associated with outbreaks in schools.
Data are averaged using a window that is 7 days or 1000 cases in duration, whichever is longer. Cases dated by notification (event) date.

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Cases in outbreaks in childcare facilities

The number of cases in outbreaks in children in childcare facilities remains less than 25% of all cases in children aged 0-4 years.
Note that detection of a case or declaration of an outbreak in a childcare facility does not imply that transmission has occurred in that setting.

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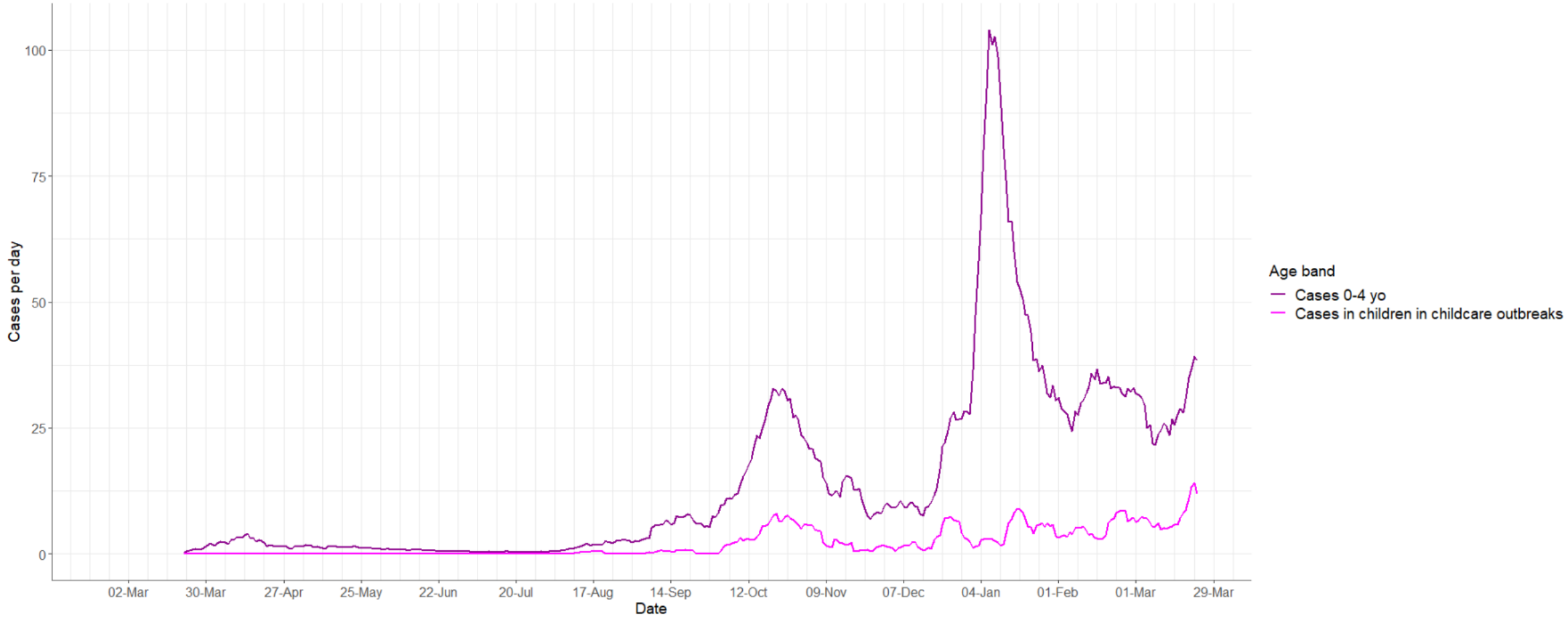

Total cases per day in those aged 0-4 years years, and cases aged 0-4 years associated with outbreaks in childcare facilties.
Data are averaged using a window that is 7 days or 1000 cases in duration, whichever is longer. Cases dated by notification (event) date.

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Google community mobility

These data show time spent in residential areas and attendance at workplaces for those who enable location sharing on their Google account; each day of the week is compared with the average for that day of the week over January and February 2020. The attendance at workplaces has increased significantly since 1 March 2021

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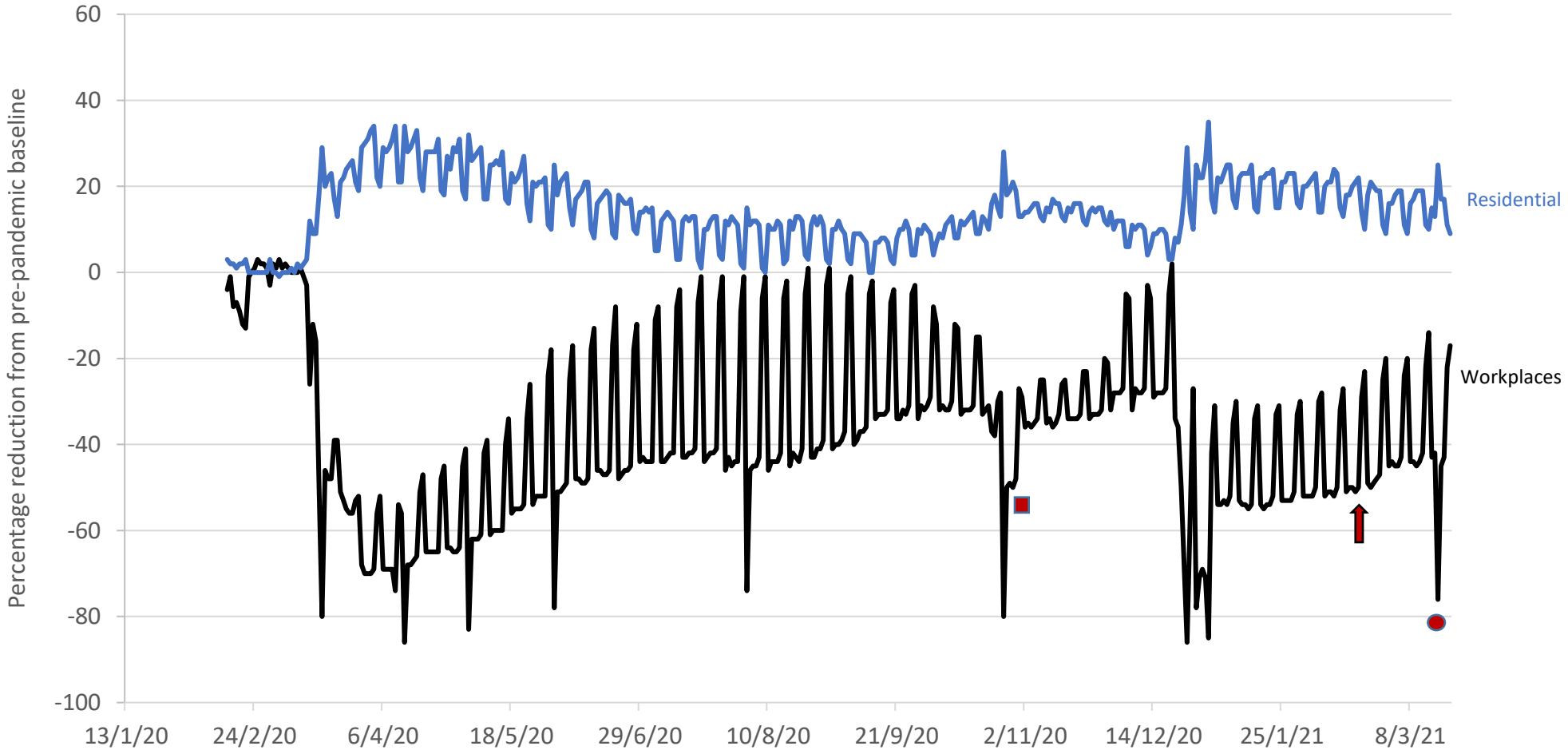

Increased attendance at workplaces from 23/2/21 (arrow); note bank holiday 17/3/20 (dot) and impact of October 2020 mid-term break on workplace attendance (square)

These data show time spent in residential areas and attendance at workplaces for those who enable location sharing on their Google account; each day of the week is compared with the average for that day of the week over January and February 2020. The attendance at workplaces compared to pre-pandemic baseline *increases* on weekends (people working on weekends less likely to be able to work from home, and decreases to very low levels on bank holidays

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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 and fell to 2.1 in January. It has increased in since late February 2021 to ≈ 2.6

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Increased contacts from 14/2/21

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.

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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 rapildly in January (-6 to -10% per day) case numbers are have been decreasing more slowly. The growth rate is currently estimated at at 0% to +2% per day.

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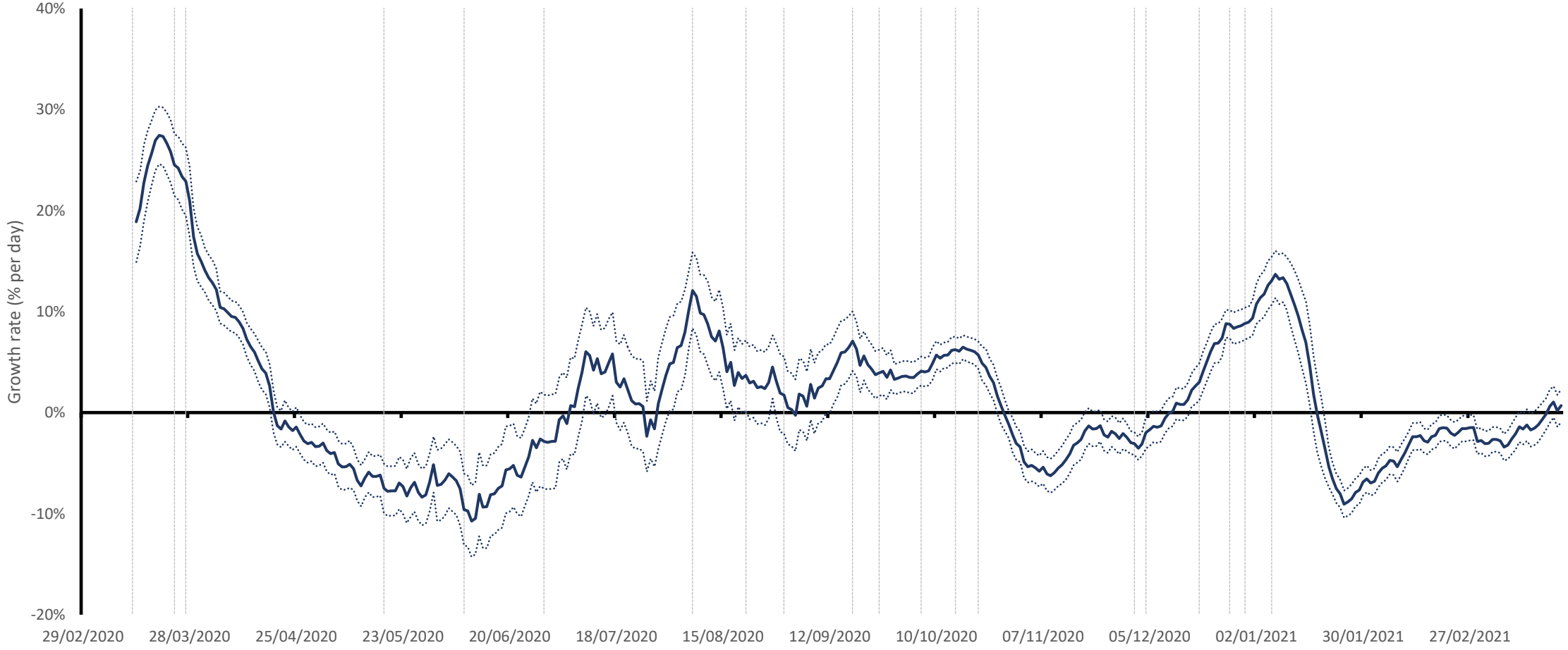

Growth rate calculated as the average growth rate over a 21-day trailing window,with 95% credible interval; cases dated by notification (event) date.

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Estimates of effective reproduction number (R)

Reproduction number is above 1.0 with high levels of uncertainty in its estimation; it is currently estimated at 1.0 – 1.3

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Method	Estimate	95% confidence interval
SEIR model-inferred	1.29	0.98 – 2.15
Bayesian model	1.08	0.71 – 1.59
Time-dependent R	0.88	0.80 – 0.95
GAM estimate 15 Mar 2021	1.06	0.89 – 1.23
GAM estimate 23 Mar 2021	1.22	0.95 – 1.49

Estimates generated 24 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.

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Situation analysis 25 March 2021

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- Incidence has plateaued, remains high, and may be starting to increase
  - Cases (5-day average) 589 cases per day; 14-day incidence 160 per 100,000
  - Reproduction number (R) is uncertain and estimated at 1.0 – 1.3, growth rate in case numbers 0 to +2% per day; if epidemic is growing again doubling time estimated at 35 days or longer
- Incidence has increased in those aged 0-12 years
  - not clear to what extent this is due to increased infection, increased ascertainment, or both
- Number of cases detected, positivity rates, and numbers of cases associated with outbreaks in schools remain low despite intense oversight and increased testing
  - less than 10% of cases
  - note that detection of a case or declaration of an outbreak in a school does not imply that transmission has occurred in the school setting
- While evidence of protective effect of vaccination in LTRC and HCW the population is not protected, situation is volatile and we remain at high risk