IEMAG briefing

25 January 2021

Coronavirus
COVID-19
Public Health
Advice

Cases, numbers in hospital and intensive care

Case numbers remain very high. The number of people in hospital and ICU, and the number of admissions per day, increased very quickly to unprecedented levels. The numbers in hospital have plateaued. The number of deaths per day is increasing.

Coronavirus **COVID-19** Public Health Advice

	16 Apr	29 Jul	21 Oct	16 Dec	23 Dec	31 Dec	6 Jan	13 Jan	20 Jan	25 Jan	Daily count 25 Jan
Cases confirmed per day	547	18	1160	330	711	1243	4420	5436	2891	2017	1372
14-day incidence *per 100,000 population*	157	5.6	288	88	153	297	818	1449	1223	766	
Hospital in-patients	858	11	279	198	222	365	676	1414	1901	1938	1948
Hospital admissions per day	*56*	*2*	*23*	*14*	*22*	*43*	*94*	*146*	*132*	*96*	*74*
ICU confirmed cases	147	5	32	33	29	31	63	133	194	215	219
ICU admissions per day	*8*	*< 1*	*3*	*1*	*2*	*5*	*11*	*20*	*19*	*16*	*13*
Deaths confirmed per day	32	< 1	5	5	6	7	11	23	44	52	*7*

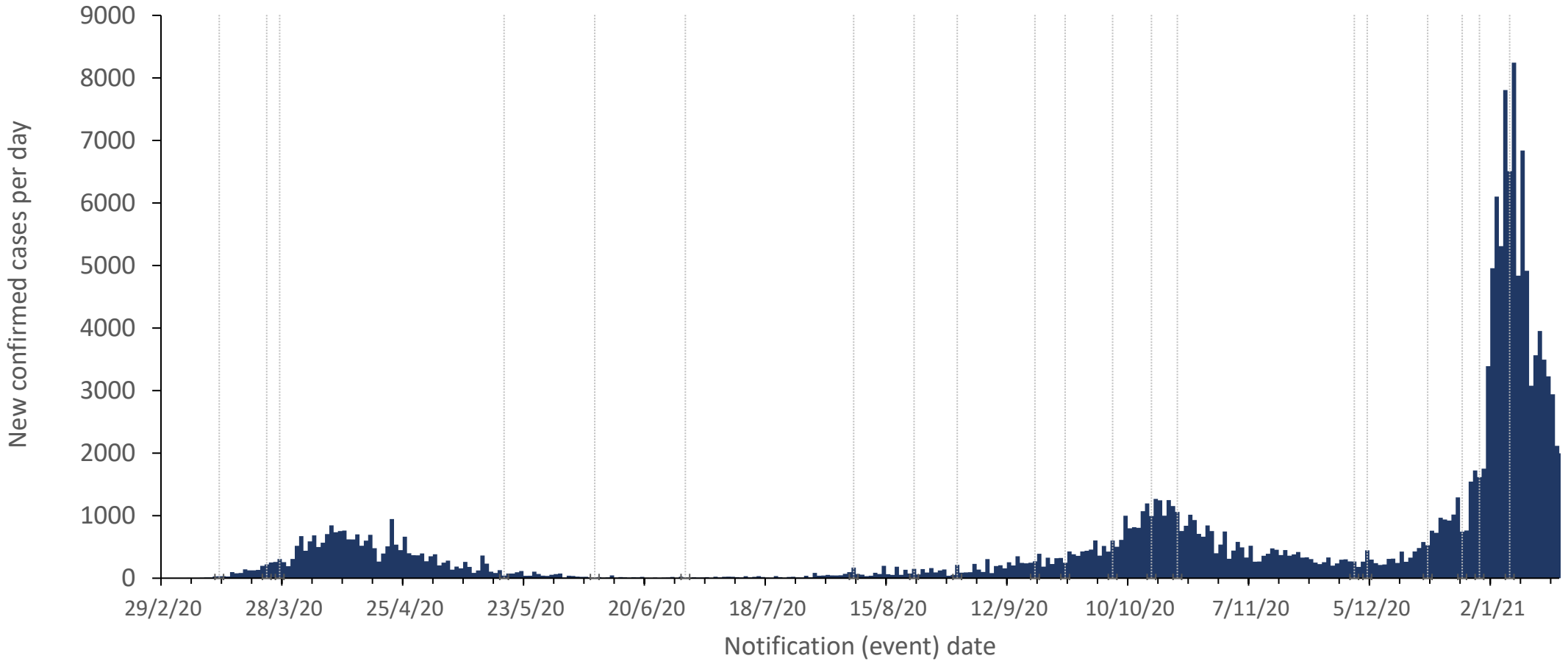
Data are 7-day averages (the indicated day and the preceding 6 days, rounded to the nearest whole number) with the exception of 14 day cumulative incidence, which is the total number of cases in the preceding 14 days per 100,000 population. NPHET monitors 5-day moving average and 14-day cumulative incidence on a day-by-day basis, as indicators of rate of change of incidence and overall burden of infection. 7-day averages are used here to limit day-of-week effects. The historic incidence data may change due to denotification of cases.

Rialtas na hÉireann
Government of Ireland

Confirmed cases each day

Daily case count since the beginning of the epidemic

Coronavirus
COVID-19
Public Health
Advice



Daily count of the number of laboratory confirmed new cases by date on which they were notified to HPSC. 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. The vertical dashed lines indicate the dates of escalation and de-escalation of public health restrictions

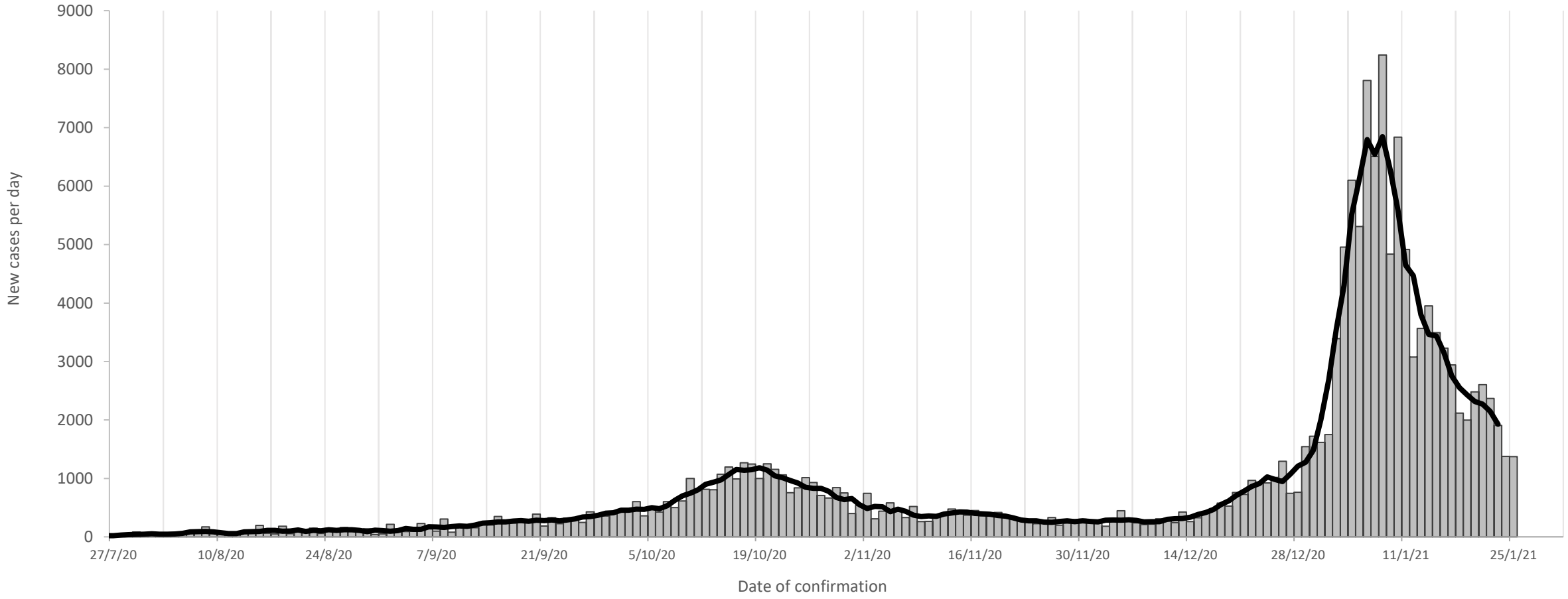
Rialtas na hÉireann
Government of Ireland

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 6847on 8 January and is now 1926

Coronavirus **COVID-19** Public Health Advice

Cases per week	119	284	540	546	711	796	912	1303	1947	2060	3031	4457	7398	7073	4838	3424	2583	2580	1798	2028	1965	3369	6609	15748	45648	25176	14854



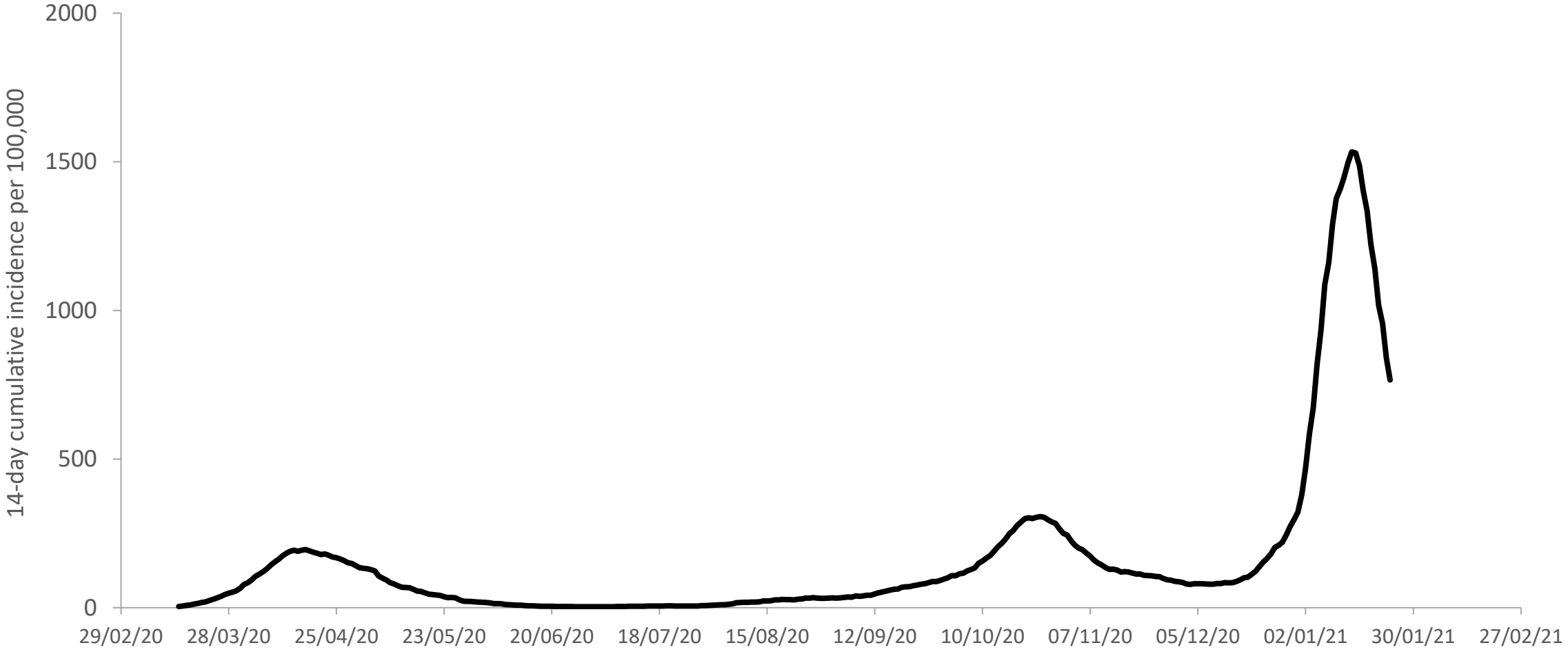
Daily count (bars) 5-day average (line) and weekly counts of the number of laboratory confirmed new cases by date on which they were confirmed by HPSC. Case counts may change due to denotification of cases. Weekly case counts are by event date by epidemiological week.

Rialtas na hÉireann
Government of Ireland

14-day cumulative incidence

14-day cumulative incidence peaked at 170 per 100,000 in late April 2020, declined to 3 per 100,000 in late June, peaked again on 26 October 2020 at 307 per 100,000, reached a low of 78 per 100,000 on 4 December2020 , peaked again at 1530 per 100,000 on 15 January 2021 and is now 766 per 100,000

Coronavirus
COVID-19
Public Health
Advice



14-day cumulative incidence by date of confirmation. 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. The vertical dashed lines indicate the dates of escalation and de-escalation of public health restrictions

Rialtas na hÉireann
Government of Ireland

Incidence across different age groups (including HCW and LTRC)

Incidence is very high across all age groups, with a very concerning level of disease in those aged 65 and older, and an exceptionally high incidence in those aged 85 and older.

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	34.7	39.2	72.1	98.7	56.7	52.2	32.9	45.3	100.7
48	23.2	29.7	40.9	72.2	37.3	36.7	24.1	44.8	74.0
49	28.7	38.1	43.1	60.7	45.0	40.9	30.3	46.3	114.0
50	24.7	36.5	40.9	55.3	47.8	42.9	24.9	34.6	68.1
51	35.3	51.4	65.1	111.7	81.1	77.1	44.2	62.6	100.7
52	72.1	74.9	110.9	287.1	169.8	144.4	89.2	103.3	182.1
53	118.2	125.6	250.0	807.3	415.6	347.7	232.1	201.0	371.5
1	266.7	299.8	759.7	1965.5	1229.9	1092.3	671.2	669.7	1120.6
2	152.9	146.0	377.6	828.2	611.8	632.5	427.3	654.9	1413.7
3	97.1	91.5	197.3	458.0	377.9	366.2	234.5	405.1	974.0

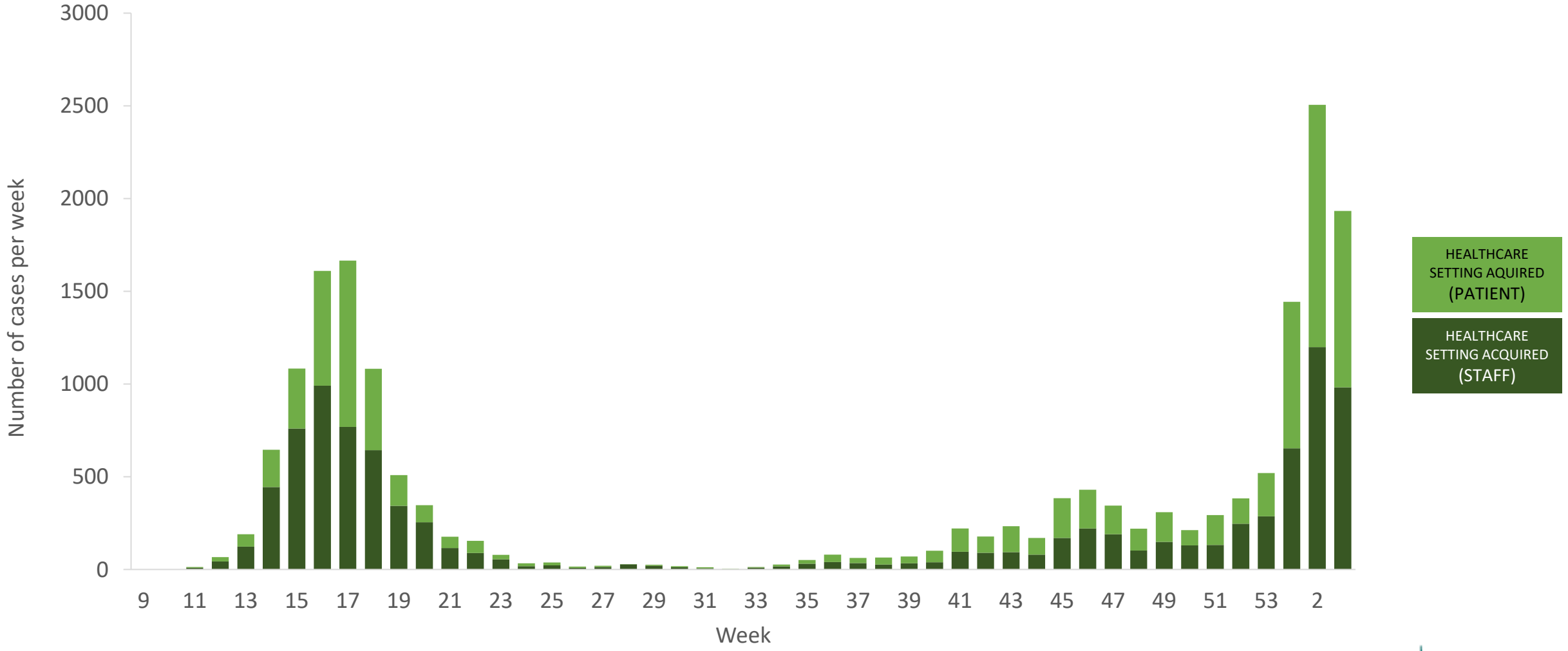
Heat map shows age-specific incidence (cases per week per 100,000 population. Cases dated by event date

Rialtas na hÉireann
Government of Ireland

Infections in the healthcare setting

The number of healthcare-setting-acquired infections had decreased from the peak in October, but is now very high. 5.8% of all cases in the last 14 days are reported as 'healthcare setting acquired: patient' and 5.5% as 'healthcare setting acquired: staff'

Coronavirus **COVID-19** Public Health Advice



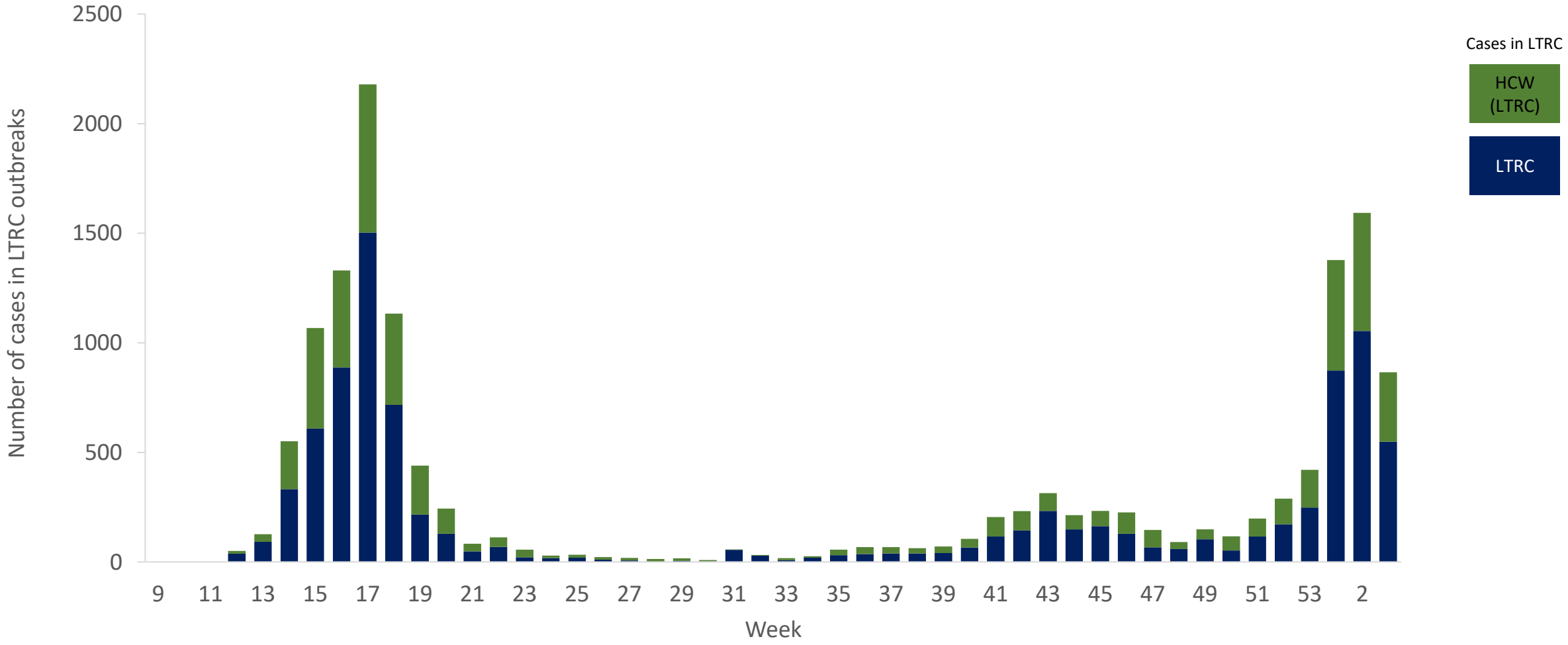
Weekly total number of cases recorded in CIDR as 'healthcare setting acquired' Cases dated by event date

Rialtas na hÉireann
Government of Ireland

Cases in long-term residential settings

The number of cases in LTRC was less in the second wave compared to the first; however, the number of cases linked to outbreaks in LTRC, following the unprecedented levels of infection in the community, is now very high, similar to the numbers seen in April and May 2020. These numbers are an underestimate, as some cases under investigation will be linked, in the coming days, to outbreaks in LTRC

Coronavirus
COVID-19
Public Health
Advice



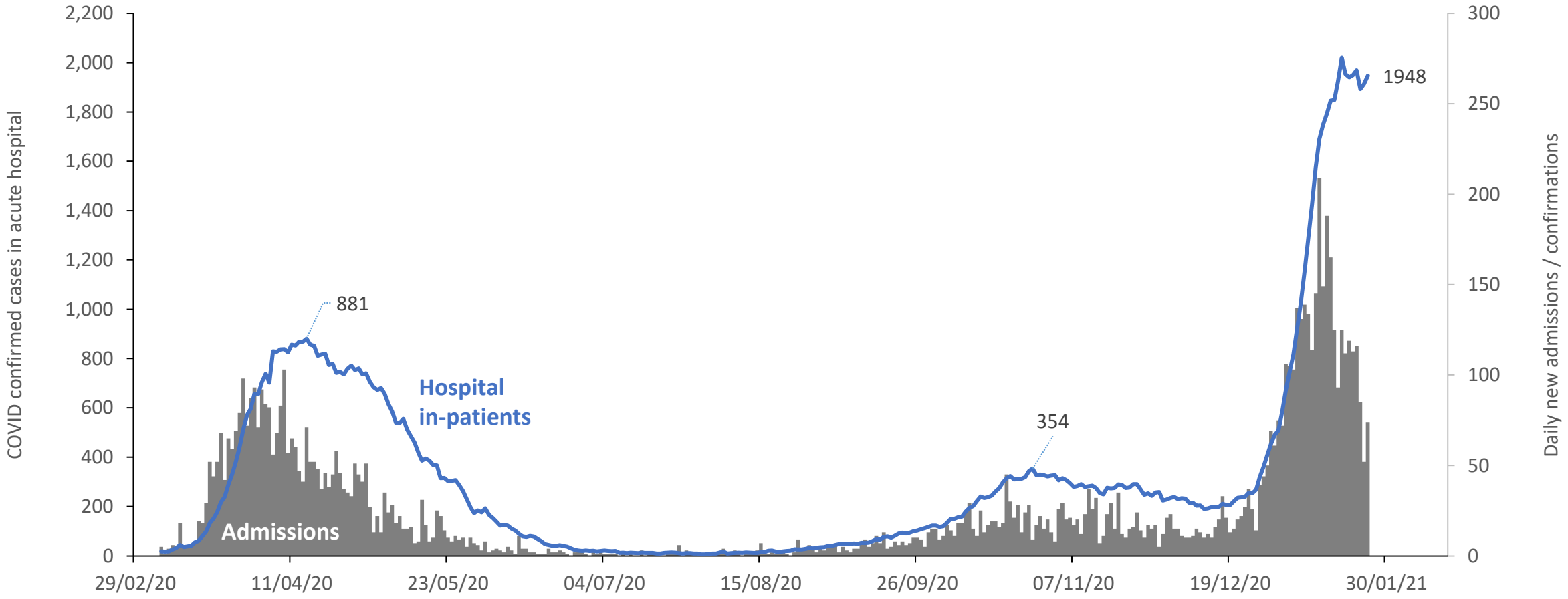
Weekly cases by setting. LTRC: cases amongst residents of long-term residential settings where outbreaks have occurred.
HCW (LTRC): Cases in healthcare workers associated with outbreaks in LTRC.

Rialtas na hÉireann
Government of Ireland

Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection has plateaued at a very high level.

Coronavirus
COVID-19
Public Health
Advice



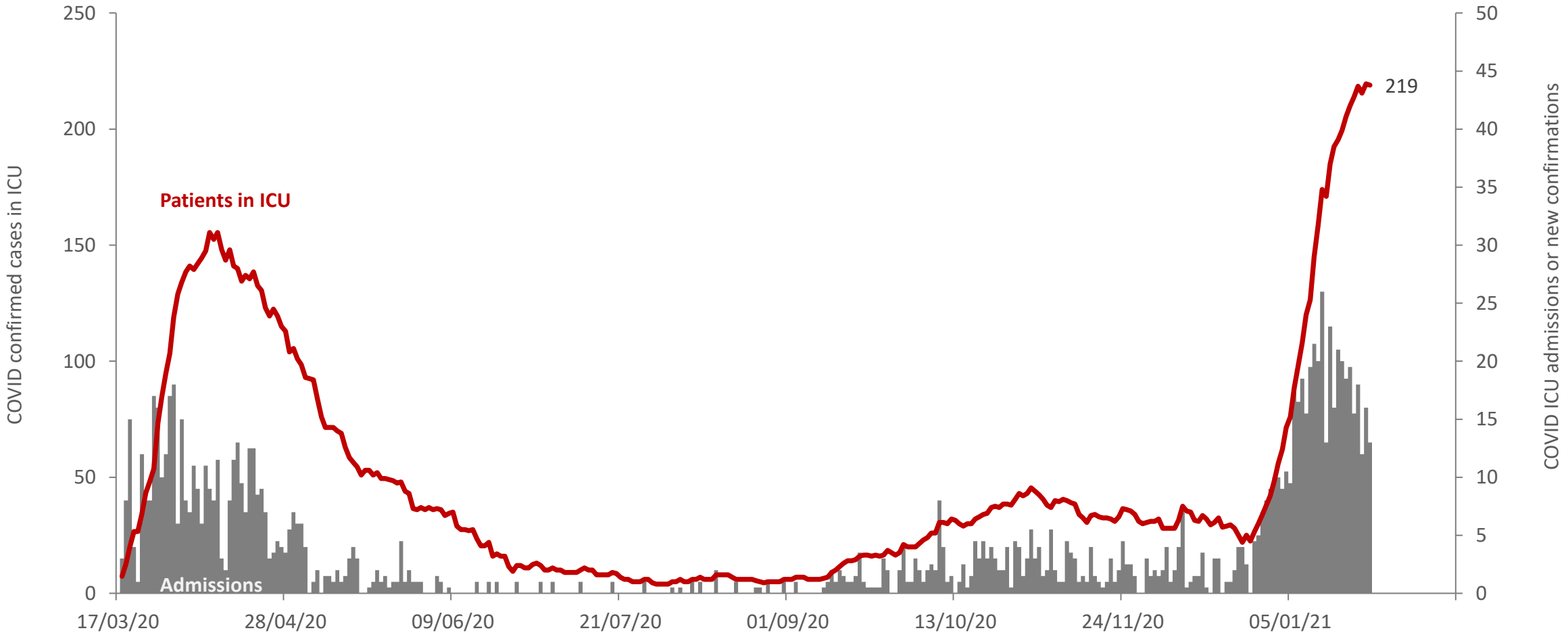
Hospital in-patients: Daily count of number of COVID-19 confirmed cases in acute hospitals. Daily admissions: New COVID-19 confirmed admissions and new laboratory confirmations of suspected cases in preceding 24 hours. Data from HSE PMIU-SDU, 8am census.

Rialtas na hÉireann
Government of Ireland

Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection has significantly exceeded the levels seen in April; it may now be starting to plateau at this high level

Coronavirus **COVID-19** Public Health Advice

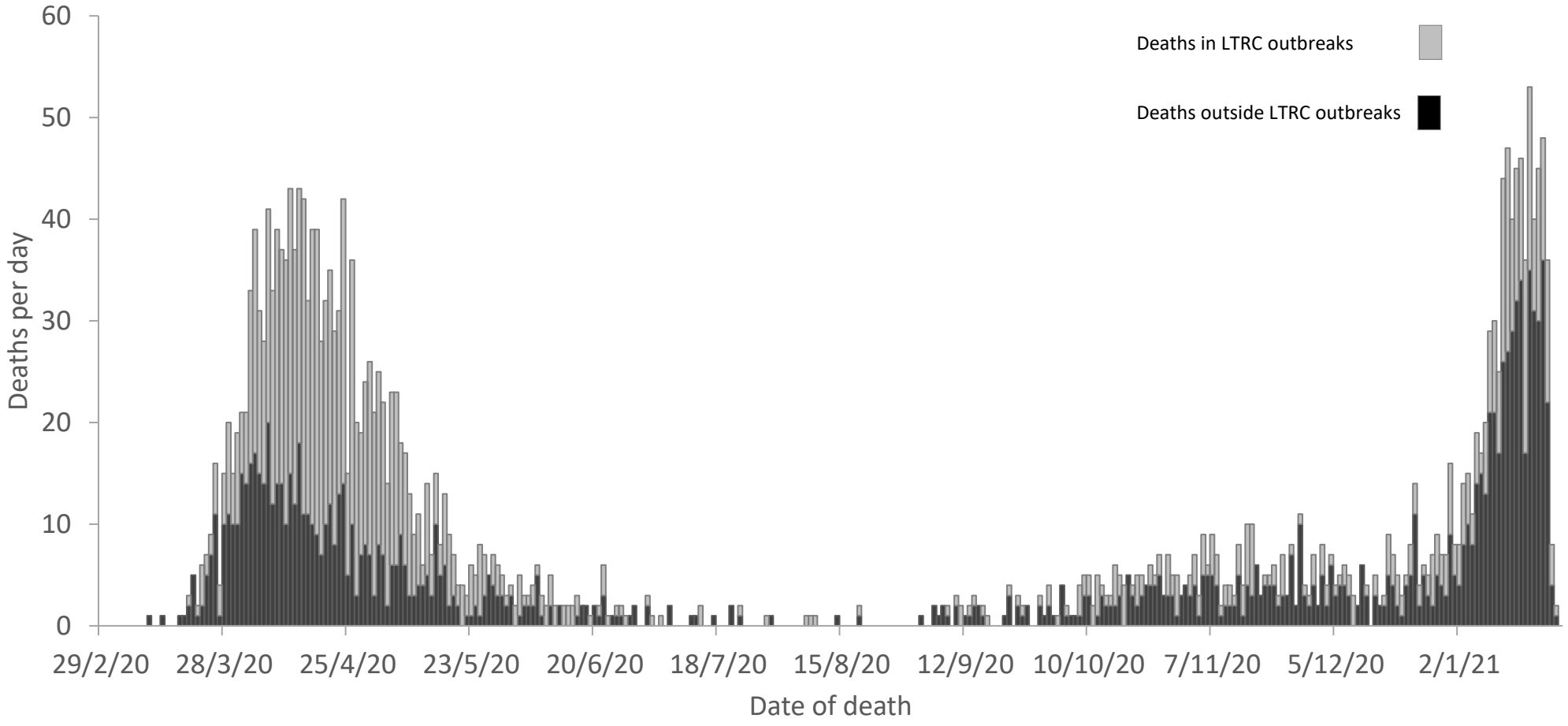


Patients in ICU: Daily count of number of COVID-19 confirmed cases in ICU. Daily admissions: new COVID-19 confirmed admissions to ICU and new laboratory confirmations of suspected cases in ICU. Average of morning and evening census from NOCA

Rialtas na hÉireann
Government of Ireland

Deaths per day

Coronavirus
COVID-19
Public Health
Advice



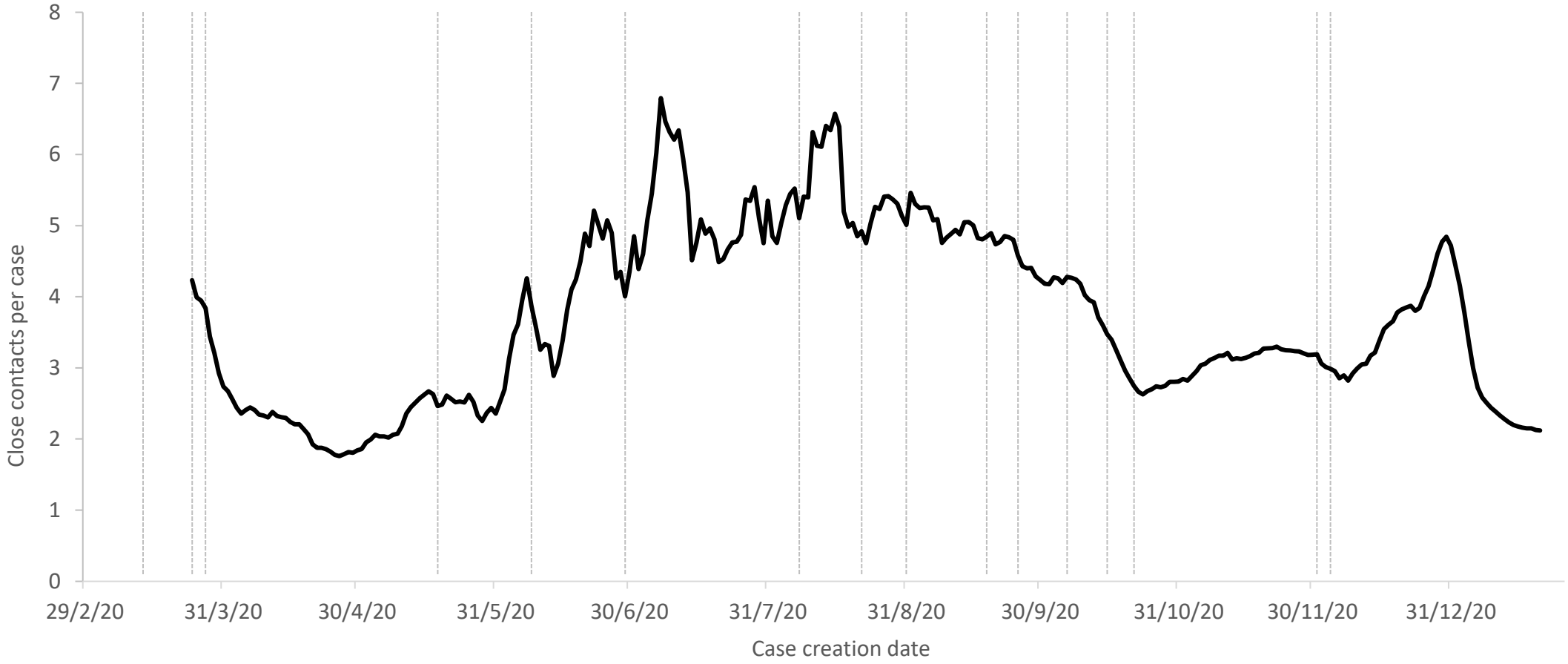
Deaths per day, separated into those associated with outbreaks in long-term residential care and those not associated with such outbreaks. Deaths with laboratory confirmed SARS-CoV-2 only

Rialtas na hÉireann
Government of Ireland

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 progressive escalation of 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 is now at a very low level (2.1 contacts)

Coronavirus
COVID-19
Public Health
Advice



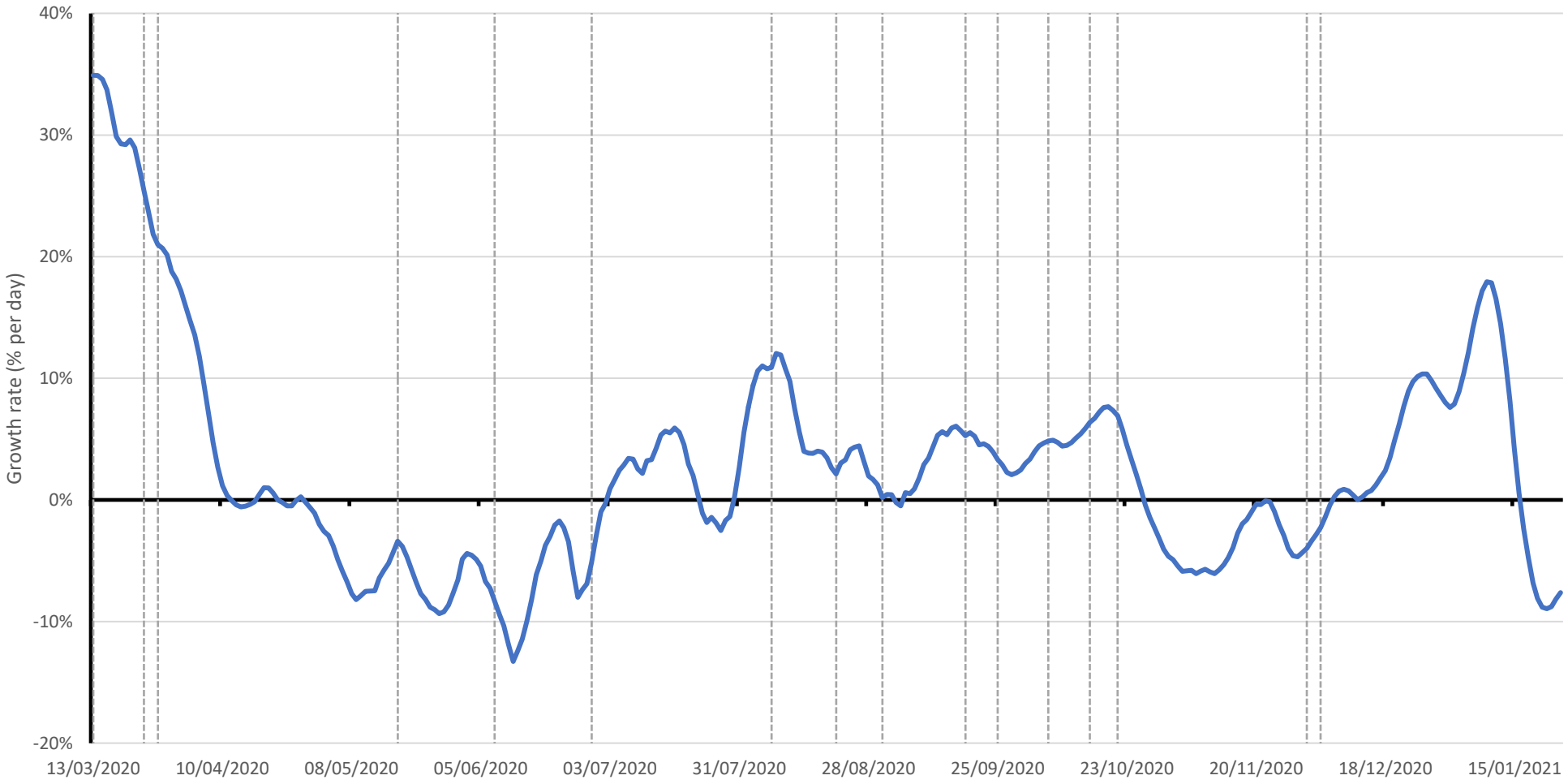
The average number of close contacts per confirmed case. Data from COVID-19 Care Tracker (CCT). Cases dated by case creation date. Cases (but not contacts) aged 18 and younger are excluded. Data are 7-day trailing averages except for the months of June – August where a 21-day trailing average is used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

Rialtas na hÉireann
Government of Ireland

Growth rate for case numbers

Growth rate peaked at almost 18% per day over the 14-day period up to 10 January 2021; case numbers are now decreasing at -7% to -9% per day

Coronavirus
COVID-19
Public Health
Advice



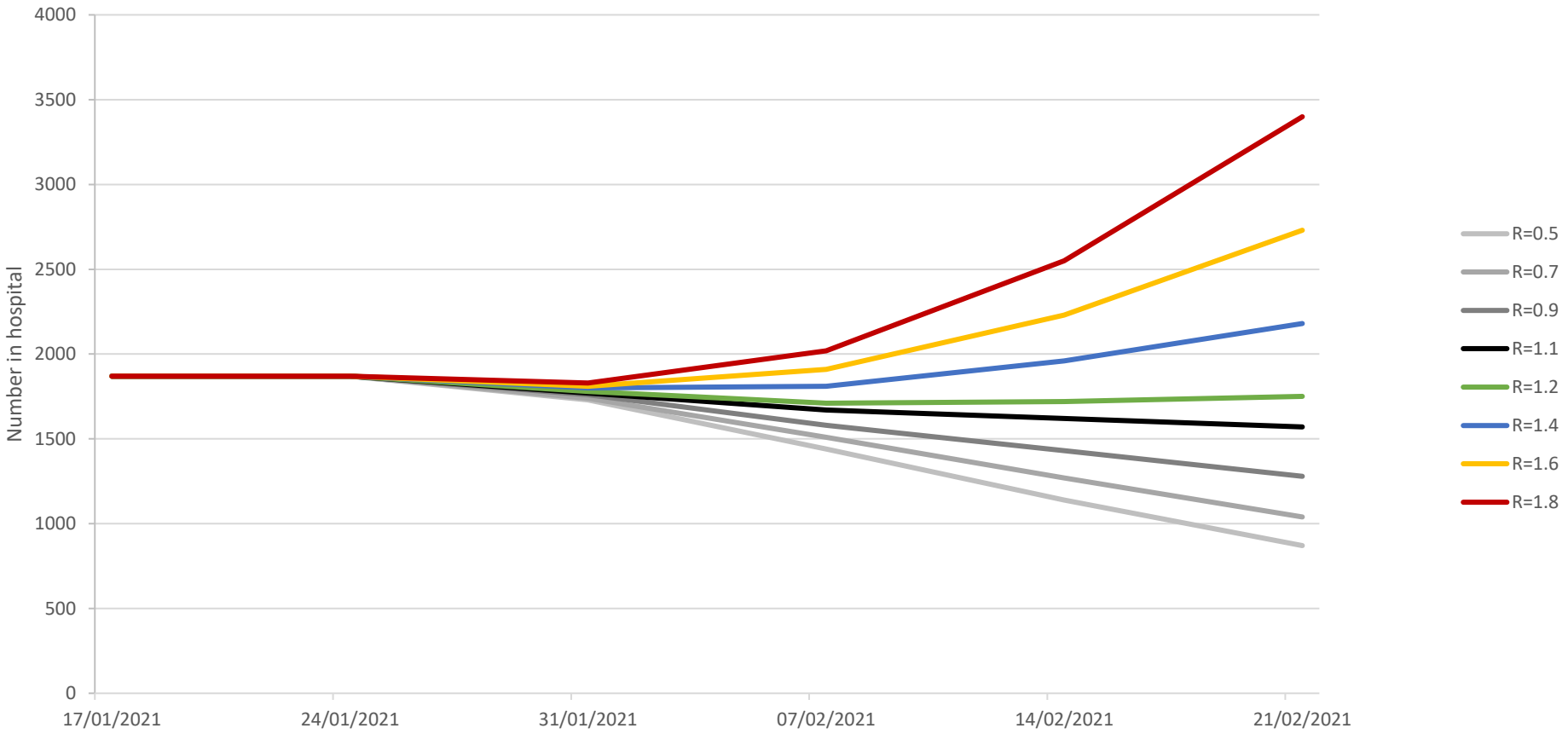
Growth rate calculated as the average growth rate over a 14-day trailing window; cases dated by notification (event) date.

Rialtas na hÉireann
Government of Ireland

Model projections of numbers in general hospital beds

Model outputs for numbers of people in general hospital (non-critical care beds) with COVID-19. Model calibrated to 20January 2021, and R then varies between 0.5 and 1.8.

Coronavirus
COVID-19
Public Health
Advice



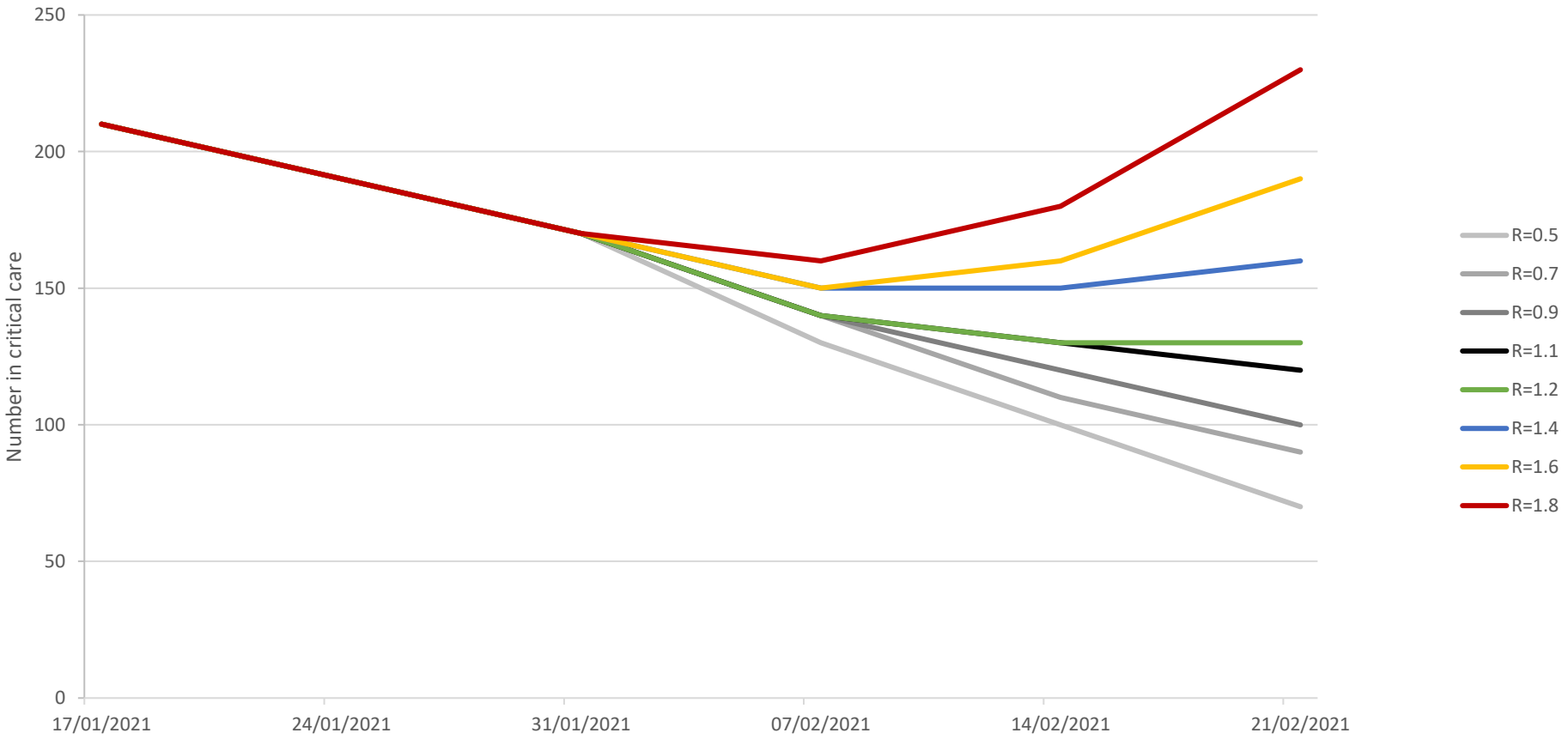
Model outputs and actual numbers in hospital with COVID-19. The model is calibrated using the CHUP model developed by ESRI; see IEMAG technical notes for details. The model is calibrated to 20 January 2021, and R varies from 0.5 to 1.8 thereafter.

Rialtas na hÉireann
Government of Ireland

Model projections of numbers in critical care

Model outputs for numbers of people in critical care with COVID-19. Model calibrated to 20 January 2021, and R then varies between 0.5 and 1.8. Given that R has been greater than 1.8 for a period, R=1.2-1.8 gives a transient reduction in numbers in hospital.

Coronavirus **COVID-19** Public Health Advice



Model outputs and actual numbers in critical care with COVID-19. The model is calibrated using the CHUP model developed by ESRI; see IEMAG technical notes for details. The model is calibrated to 20 January 2021, and R varies from 0.5 to 1.8 thereafter.

Rialtas na hÉireann
Government of Ireland

Situation analysis 25 January 2021

Coronavirus COVID-19 Public Health Advice

- Incidence is falling but remains very high
- Cases (5-day average) 1926 cases per day; 14-day incidence 766 per 100,000
  - Incidence in those 65 and older continues to be a cause for concern
- We, collectively, have achieved suppression of transmission
  - Rate of decline continues at -7 to -9%, halving time 8-10 days
- Numbers in hospital and ICU have plateaued and will decrease very slowly
- Very high incidence in long-term care settings and vulnerable groups
- High mortality: there will be a large number of deaths in the coming weeks
- This remains a signal to maintain our efforts: we have a long way to go, and the B.1.1.7 is becoming dominant, but we must maintain suppression to protect each other from serious illness, and to protect our health services and healthcare workers.