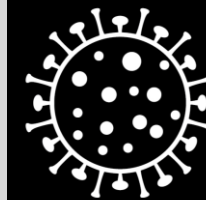


IEMAG briefing

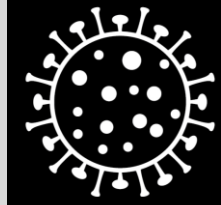
14 January 2021



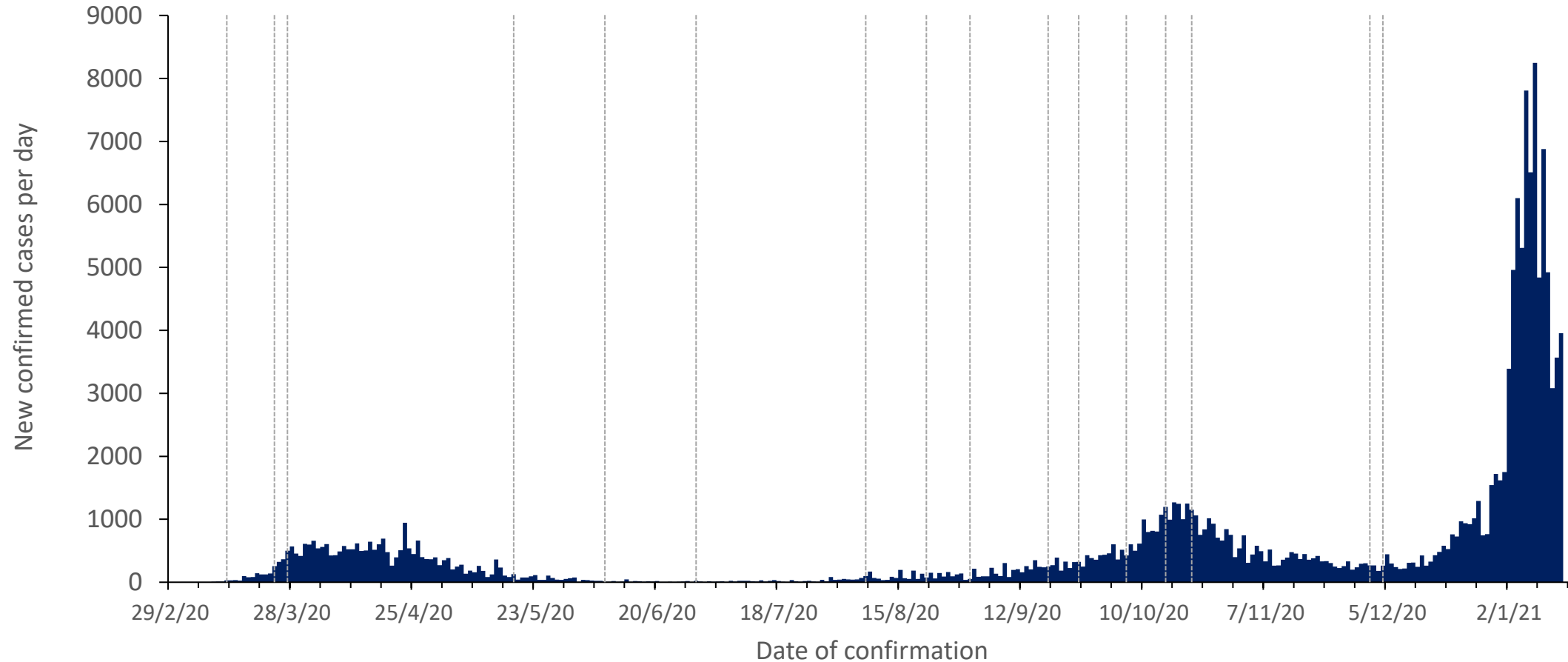
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Confirmed cases each day

Daily case count since the beginning of the epidemic



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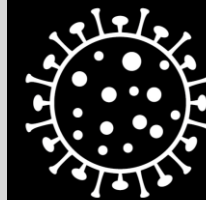
Daily count of the number of laboratory confirmed new cases by date on which they were confirmed by HPSC. Tests outsourced to German laboratory in April backdated, using the specimen collection date, to the date they would have been confirmed if tested in a timely manner. The vertical dashed lines indicate the dates of escalation and de-escalation of public health restrictions



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Cases, numbers in hospital and intensive care

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



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	16 Apr	24 Jun	29 Jul	21 Oct	9 Dec	16 Dec	23 Dec	31 Dec	6 Jan	13 Jan	Daily count 14 Jan
Cases confirmed per day	547	10	18	1160	266	330	711	1243	4420	5436	3955
14-day incidence <i>per 100,000 population</i>	157	4.0	5.6	288	79	88	153	297	818	1449	
Hospital in-patients	858	42	11	279	288	198	222	365	676	1414	1838
<i>Hospital admissions per day</i>	56	2	2	23	14	14	22	43	94	146	188
ICU confirmed cases	147	15	5	32	30	33	29	31	63	133	169
<i>ICU admissions per day</i>	8	< 1	< 1	3	3	1	2	5	11	20	14
Deaths confirmed per day	32	< 1	< 1	5	4	5	6	7	11	23	28

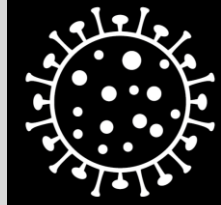
Data are 7-day averages (the indicated day and the preceding 6 days, rounded to the nearest whole number) with the exception of 14 day cumulative incidence, which is the total number of cases in the preceding 14 days per 100,000 population. NPHE monitors 5-day moving average and 14-day cumulative incidence 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.



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Testing

The demand for tests remains very high; positivity rate has started to decrease.



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7-day average	15 Apr	23 Jun	28 Jul	20 Oct	8 Dec	15 Dec	22 Dec	29 Dec	5 Jan	12Dec
Tests done per day	5579	2607	6494	16030	11003	11870	14483	14814	24562	23858
% tests positive	18%	0.5%	0.4%	7.1%	2.5%	2.8%	5.1%	10.9%	21.9%	17.5%

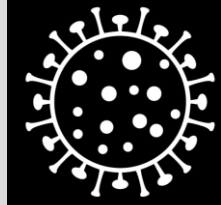
Data are 7-day averages (the indicated day and the preceding 6 days). The aggregate positivity rate should be interpreted with caution, as it includes community referrals, close contacts, mass and serial testing, and hospital testing, and changes in numbers of tests done in these different settings will alter the overall positivity rate.



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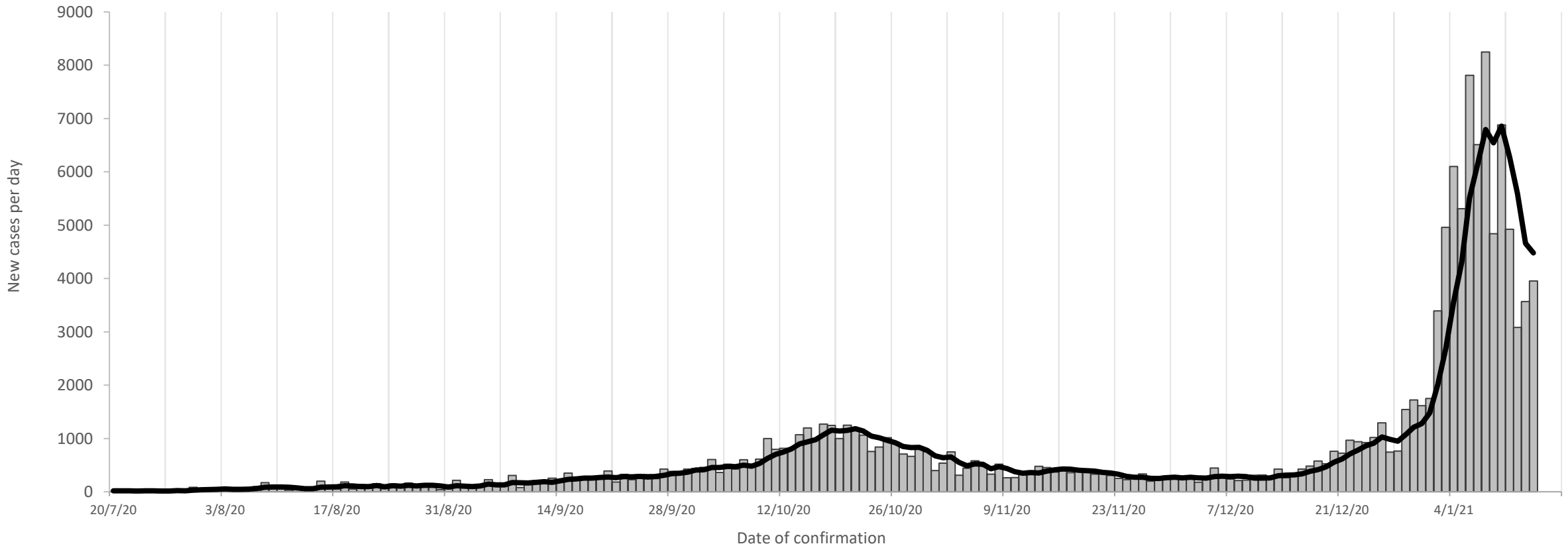
Confirmed cases each day

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 6860 on 10 January and is now **4473**



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Cases per week	119	284	540	546	711	796	912	1303	1947	2060	3031	4457	7398	7073	4838	3424	2583	2580	1799	2028	1965	3368	6609	15747	45698
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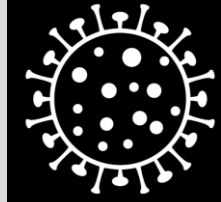
Daily count (bars) 5-day average (line) and weekly counts of the number of laboratory confirmed new cases by date on which they were confirmed by HPSC. Case counts may change due to denotification of cases. Weekly case counts are by event date from midnight Saturday to midnight Saturday.



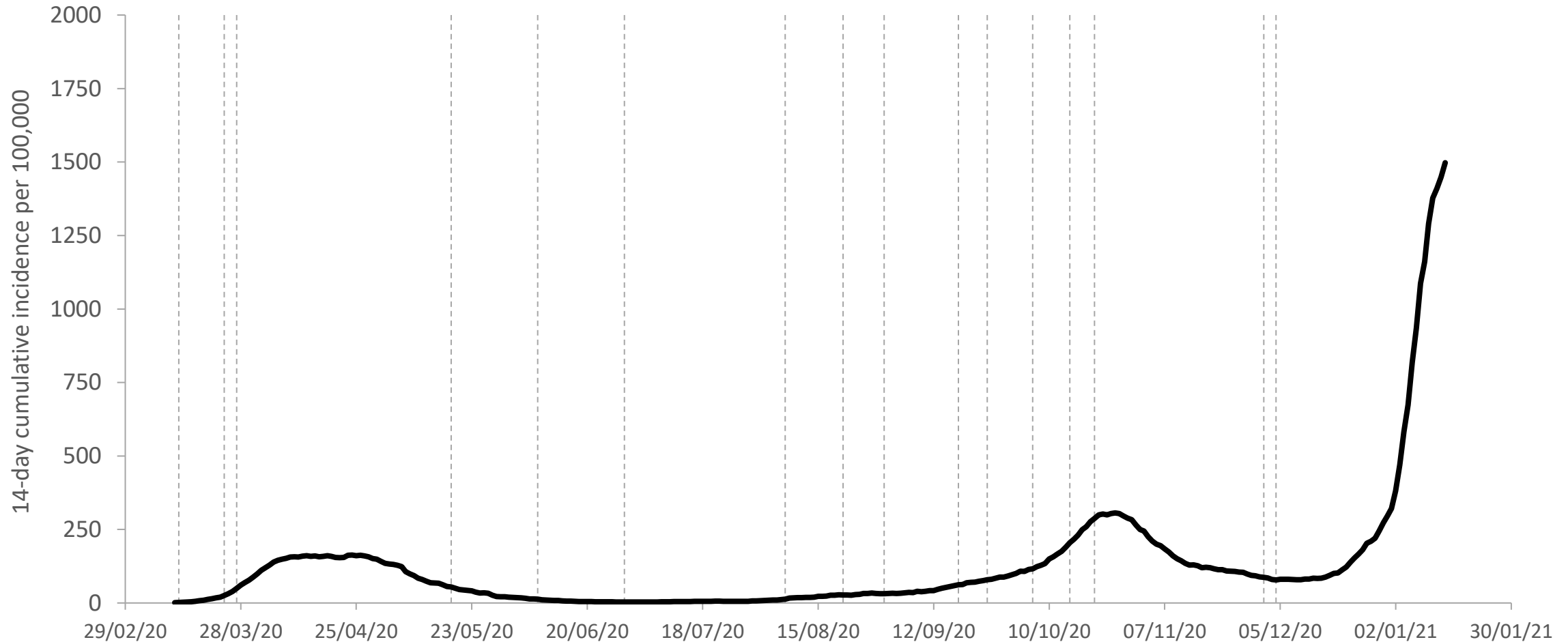
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14-day cumulative incidence

14-day cumulative incidence peaked at 170 per 100,000 in late April, declined to 3 per 100,000 in late June, peaked again on 26 October at 307 per 100,000, reached a low of 78 per 100,000 on 4 December, and is now **1497 per 100,000**



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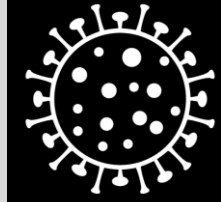
14-day cumulative incidence by date of confirmation. Tests outsourced to German laboratory in April backdated, using the specimen collection date, to the date they would have been confirmed if tested in a timely manner. The vertical dashed lines indicate the dates of escalation and de-escalation of public health restrictions



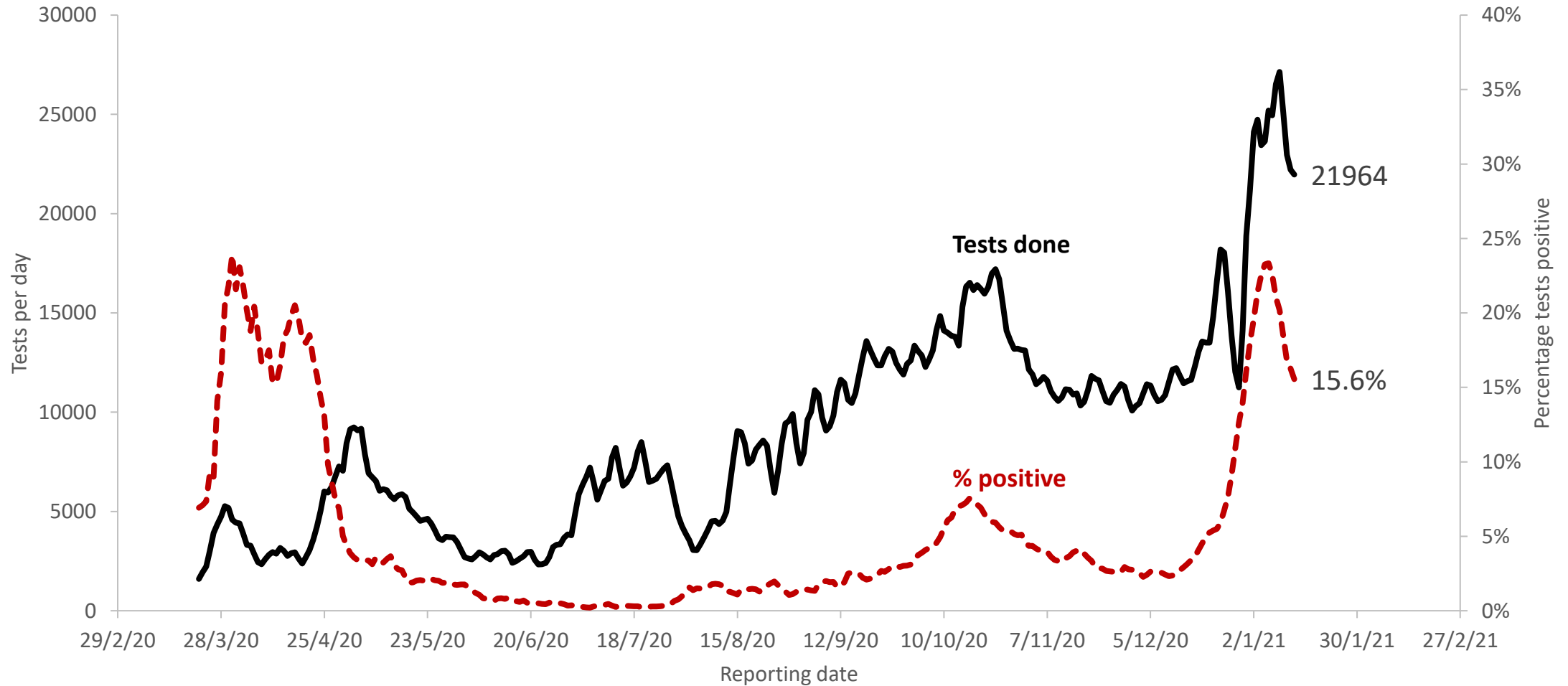
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Testing and test positive rate

The demand for tests remains very high. However, positivity rate is now starting to decline, overall positivity rate peaked at 23% on 7 January, and is now 16%



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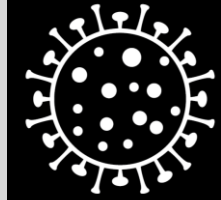
Data 5-day rolling averages, tests outsourced to German laboratory in April backdated using specimen collection date. The aggregate positivity rate should be interpreted with caution, as it includes community referrals, close contacts, mass and serial testing, and hospital testing, and changes in numbers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



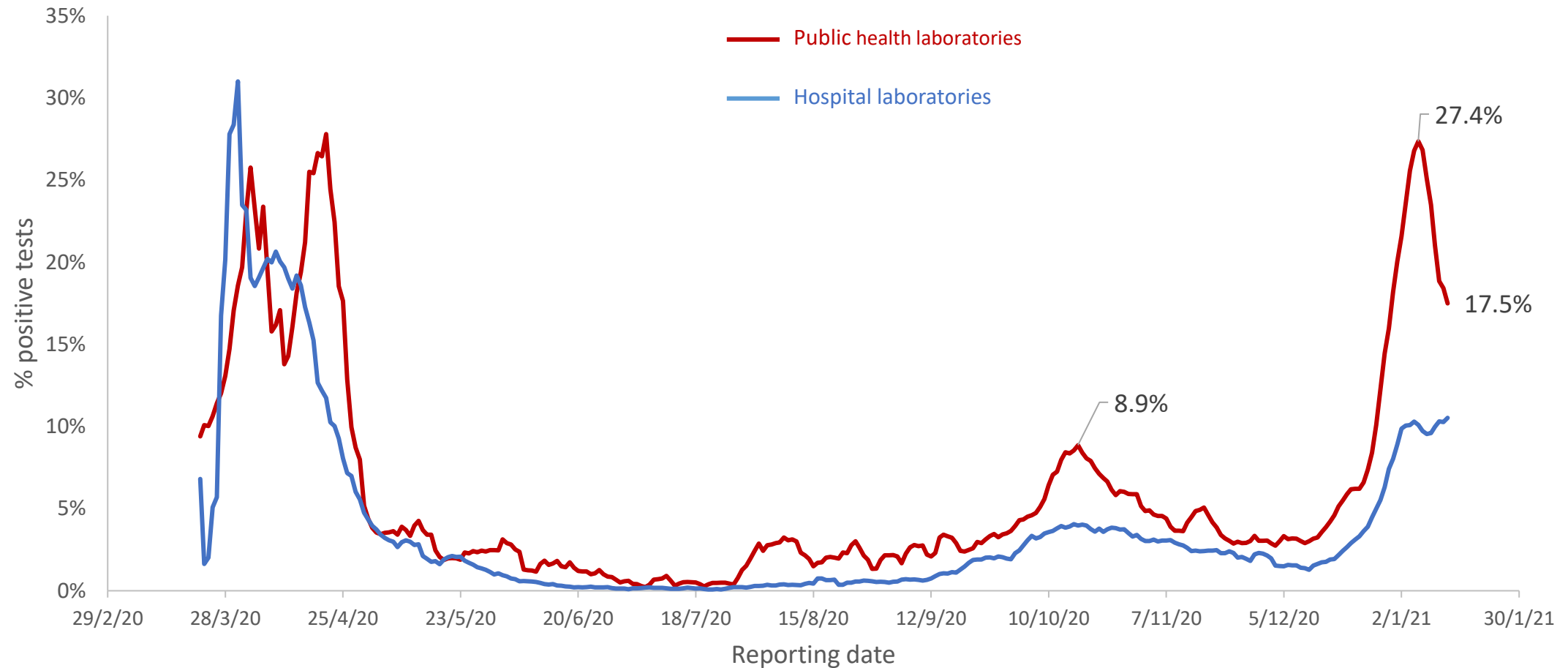
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Test positivity: public health laboratories

The positivity rate is higher for tests conducted in public health laboratories (NVRL, associated laboratories and Cherry Orchard) compared with tests conducted in hospitals. Positivity rates in public health laboratories remain very high, but has decreased from a peak 5-day average positivity of 27.4% on 6 January to 17.5% now; note the positivity rate in hospital laboratories remains elevated



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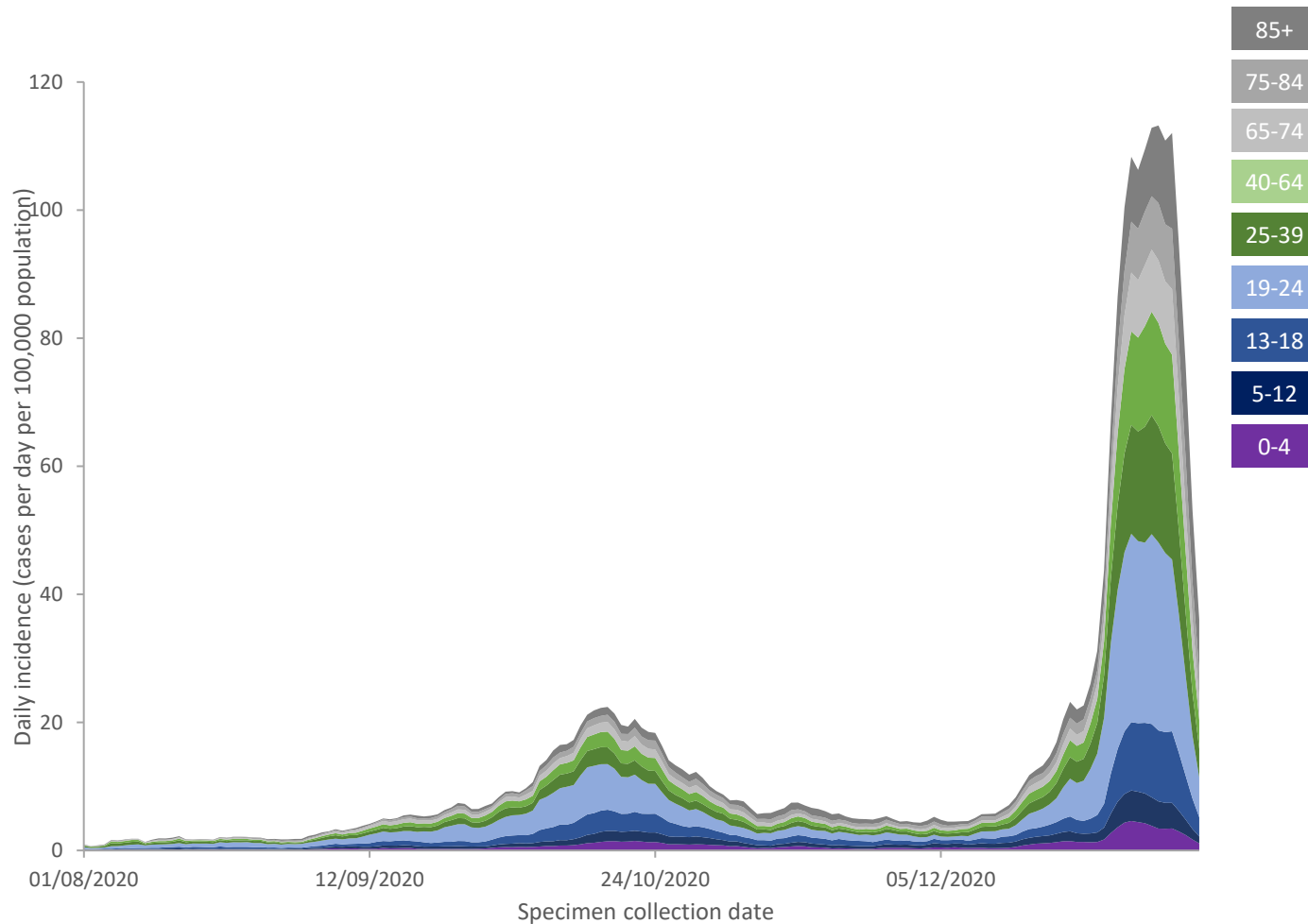
Data 5-day rolling averages of percentage of tests reported positive per day. NVRL+ is NVRL and associated laboratories, plus Cherry Orchard
Backlog tests outsourced to German laboratory in April are not backdated and are assigned to date reported



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Incidence across different age groups (excluding HCW and LTRC)

Incidence is very high across all age groups in all age groups, with a very concerning level of disease in those aged 65 and older, where incidence continues to rise. A number of cases in those aged 65 and older will be linked in the coming days to outbreaks in LTRC.



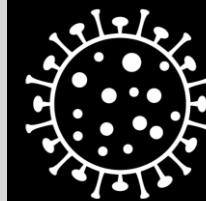
Week	Age band								
	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
26	0.6	0.2	0.3	1.8	1.5	0.7	0.8	1.5	3.0
27	1.5	0.4	0.3	1.8	1.9	0.9	0.0	1.0	0.0
28	0.9	1.1	1.1	10.9	2.0	1.1	1.9	1.0	3.0
29	1.2	0.4	0.8	3.0	3.3	1.9	2.4	1.5	3.0
30	1.8	0.5	1.6	3.6	4.3	0.9	1.9	0.0	1.5
31	4.8	2.6	7.3	11.2	8.6	4.6	2.1	2.5	1.5
32	4.5	3.8	6.7	19.9	16.7	10.9	4.8	2.5	3.0
33	6.6	10.4	12.9	28.7	20.5	12.5	8.6	2.5	5.9
34	6.6	6.9	16.7	34.4	15.3	10.5	5.6	5.1	1.5
35	6.0	9.5	13.2	36.2	17.9	10.7	4.8	8.7	5.9
36	13.3	13.7	17.8	48.6	22.6	13.9	11.0	12.2	14.8
37	17.5	17.5	29.9	64.3	28.3	24.5	22.5	8.7	7.4
38	21.4	26.2	44.1	90.3	44.3	34.8	32.9	19.8	14.8
39	12.4	22.8	42.8	148.2	50.1	42.0	33.2	31.0	17.8
40	29.9	28.6	63.2	167.3	67.8	57.7	34.3	26.0	19.2
41	44.0	47.4	134.8	322.2	116.6	91.6	62.1	51.9	53.3
42	78.1	90.9	196.7	430.8	155.2	142.6	91.8	67.7	57.7
43	82.7	93.5	175.5	304.9	122.7	121.6	84.6	82.9	69.6
44	54.0	66.9	93.9	152.8	74.4	76.5	54.3	54.5	45.9
45	34.4	39.7	57.9	83.9	58.0	46.1	42.8	44.3	41.4
46	41.9	37.2	65.9	89.7	45.5	45.2	32.7	43.3	57.7
47	22.0	34.1	59.5	79.7	34.8	33.2	28.6	39.2	54.8
48	23.2	31.5	45.5	66.7	33.9	29.8	22.2	36.1	31.1
49	28.4	36.6	37.7	40.5	33.3	30.0	25.4	30.0	32.6
50	21.4	39.7	44.1	57.4	40.1	35.2	22.5	31.0	17.8
51	51.6	58.5	74.5	128.6	88.4	81.9	54.9	55.5	45.9
52	77.2	76.7	120.0	331.8	183.8	142.1	98.3	100.8	103.6
53	217.5	234.7	510.2	1468.3	821.7	699.2	441.0	373.0	429.3
1	184.0	209.6	572.9	1395.2	866.4	797.7	522.9	500.2	703.1

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). 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 date of specimen collection. 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 is very high across all age groups in all age groups, with a very concerning level of disease in those aged 65 and older, where incidence continues to rise. A number of cases in those aged 65 and older will be linked in the coming days to outbreaks in LTRC.



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Week	Age band								
	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
46	41.9	37.2	65.9	89.7	45.5	45.2	32.7	43.3	57.7
47	22.0	34.1	59.5	79.7	34.8	33.2	28.6	39.2	54.8
48	23.2	31.5	45.5	66.7	33.9	29.8	22.2	36.1	31.1
49	28.4	36.6	37.7	40.5	33.3	30.0	25.4	30.0	32.6
50	21.4	39.7	44.1	57.4	40.1	35.2	22.5	31.0	17.8
51	51.6	58.5	74.5	128.6	88.4	81.9	54.9	55.5	45.9
52	77.2	76.7	120.0	331.8	183.8	142.1	98.3	100.8	103.6
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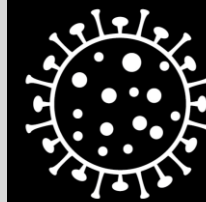
Heat map shows age-specific incidence (cases per week per 100,000 population) Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated by date of specimen collection.



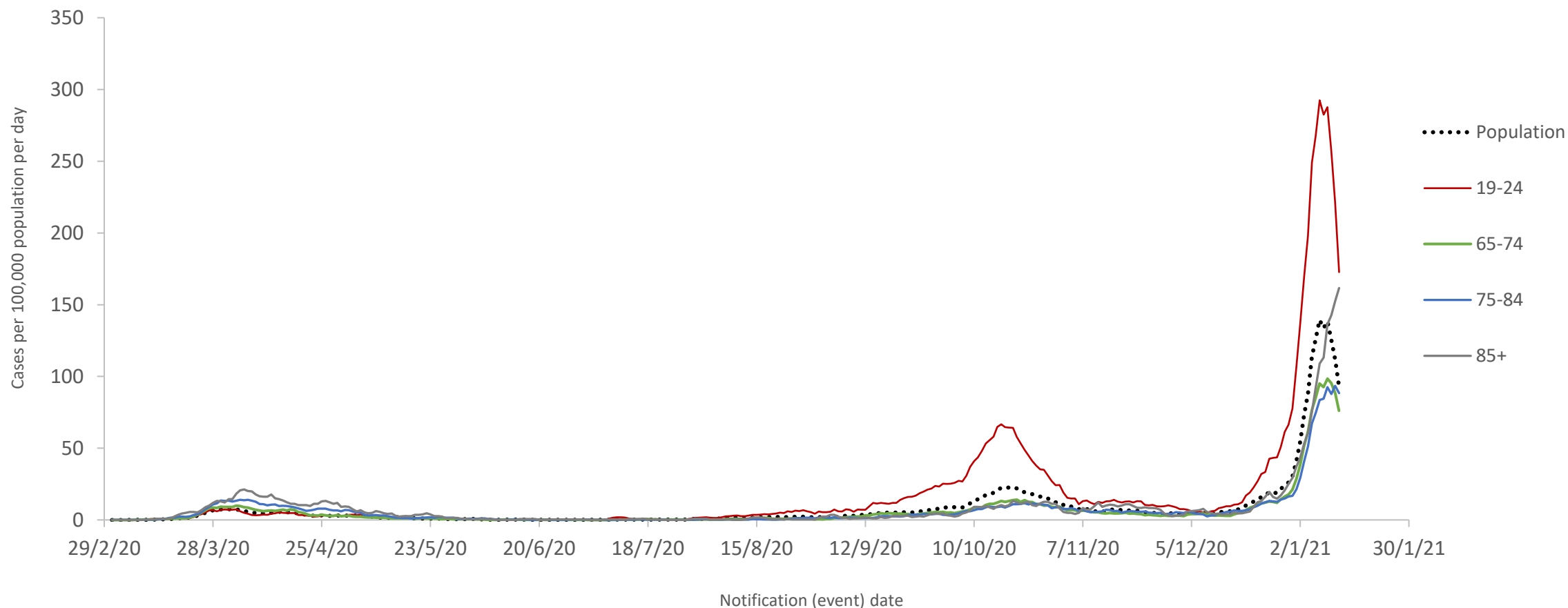
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Incidence by age group (excl. HCW and LTRC)

This analysis compares incidence in those aged 65 and older with the population average and with young adults (aged 19-24). While in the second wave there is a delay of several weeks between increasing incidence in young people and an attenuated increase in older persons, in the third wave incidence is rose early and rapidly in those aged 65 and older., and is continuing to increase in those aged 85 and older



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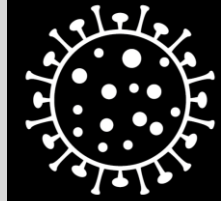
Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated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



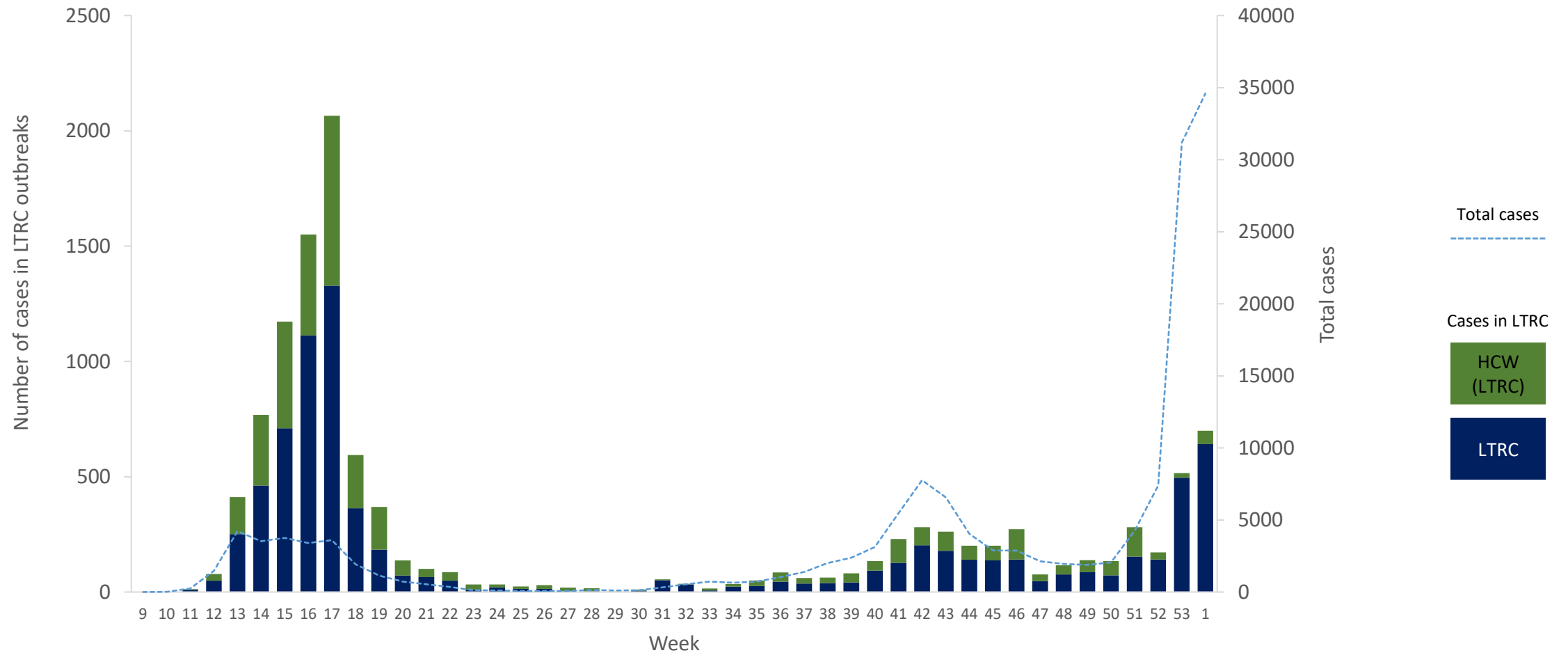
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Cases in long-term residential settings

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 is now increasing rapidly following the unprecedented levels of infection in the community



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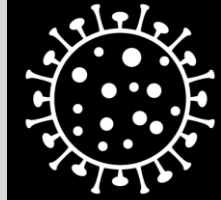
Weekly cases by setting. LTRC: cases amongst residents of long-term residential settings where outbreaks have occurred. HCW (LTRC): Cases in healthcare workers associated with outbreaks in LTRC. The dashed blue line shows the total number of newly confirmed cases each week, referred to the secondary y-axis



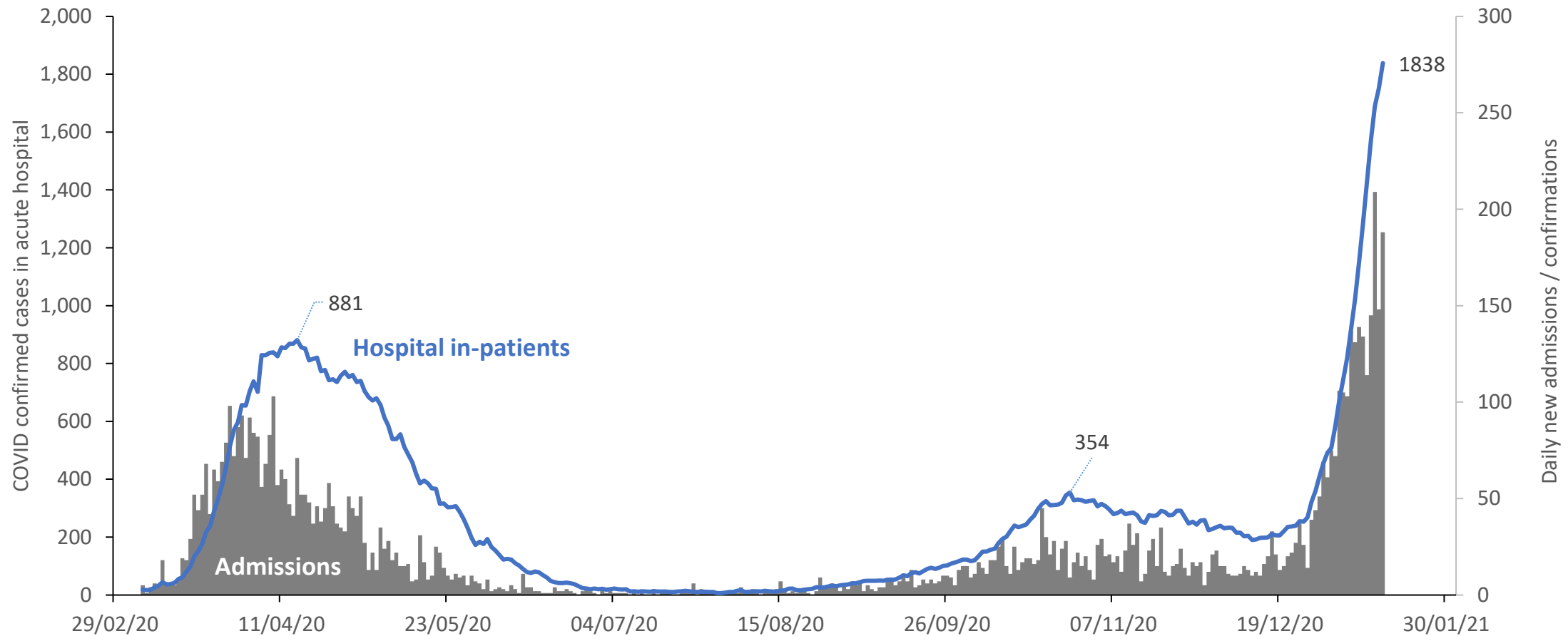
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Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection is twice that at the peak of the April wave



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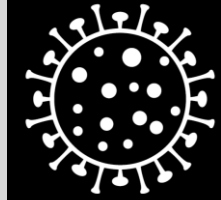
Hospital in-patients: Daily count of number of COVID-19 confirmed cases in acute hospitals. Daily admissions: New COVID-19 confirmed admissions and new laboratory confirmations of suspected cases in preceding 24 hours. Data from HSE PMIU-SDU, 8am census.



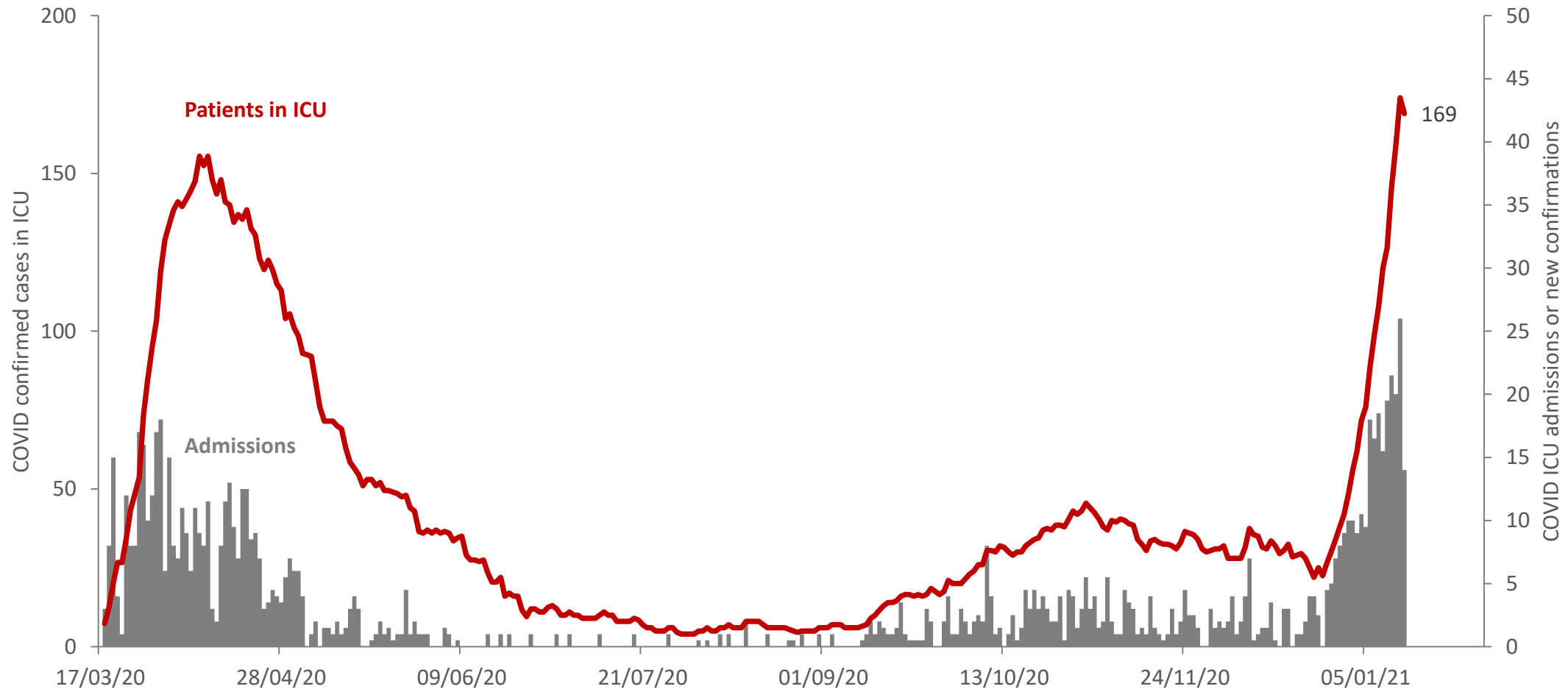
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Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection has now exceeded the levels seen in April.



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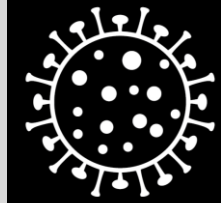


Patients in ICU: Daily count of number of COVID-19 confirmed cases in ICU. Daily admissions: new COVID-19 confirmed admissions to ICU and new laboratory confirmations of suspected cases in ICU. Average of morning and evening census from NOCA

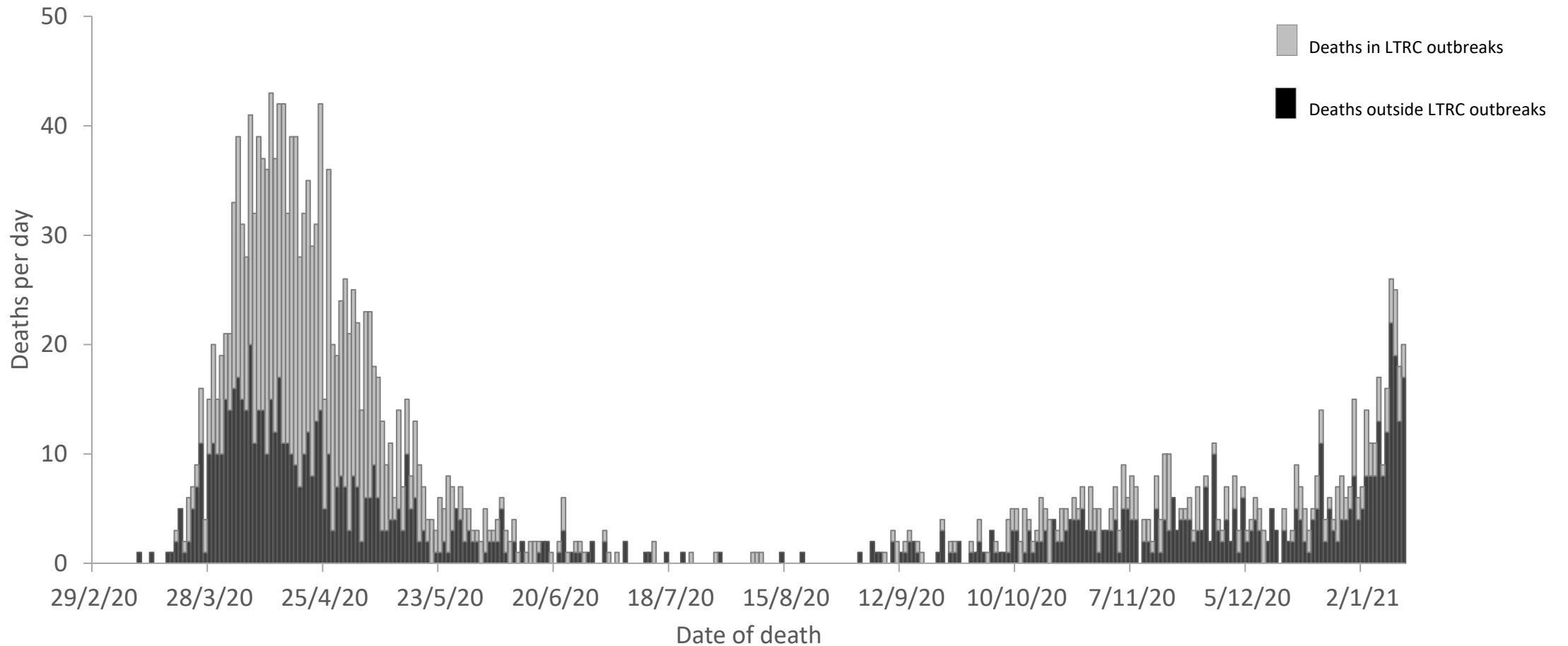


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Deaths per day



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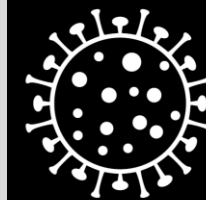
Deaths per day, separated into those associated with outbreaks in long-term residential care and those not associated with such outbreaks. Deaths with laboratory confirmed SARS-CoV-2 only



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New (B.1.1.7) variant – S gene target failure

S gene target failure (SGTF) is a marker for the new B.1.1.7 variant. The data are compatible with this variant being introduced, with a number of separate introductions in November and December, and spreading rapidly in late December, at which point it is likely to have begun to contribute to increased transmission

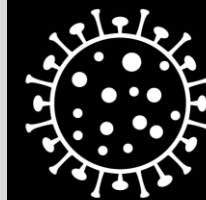


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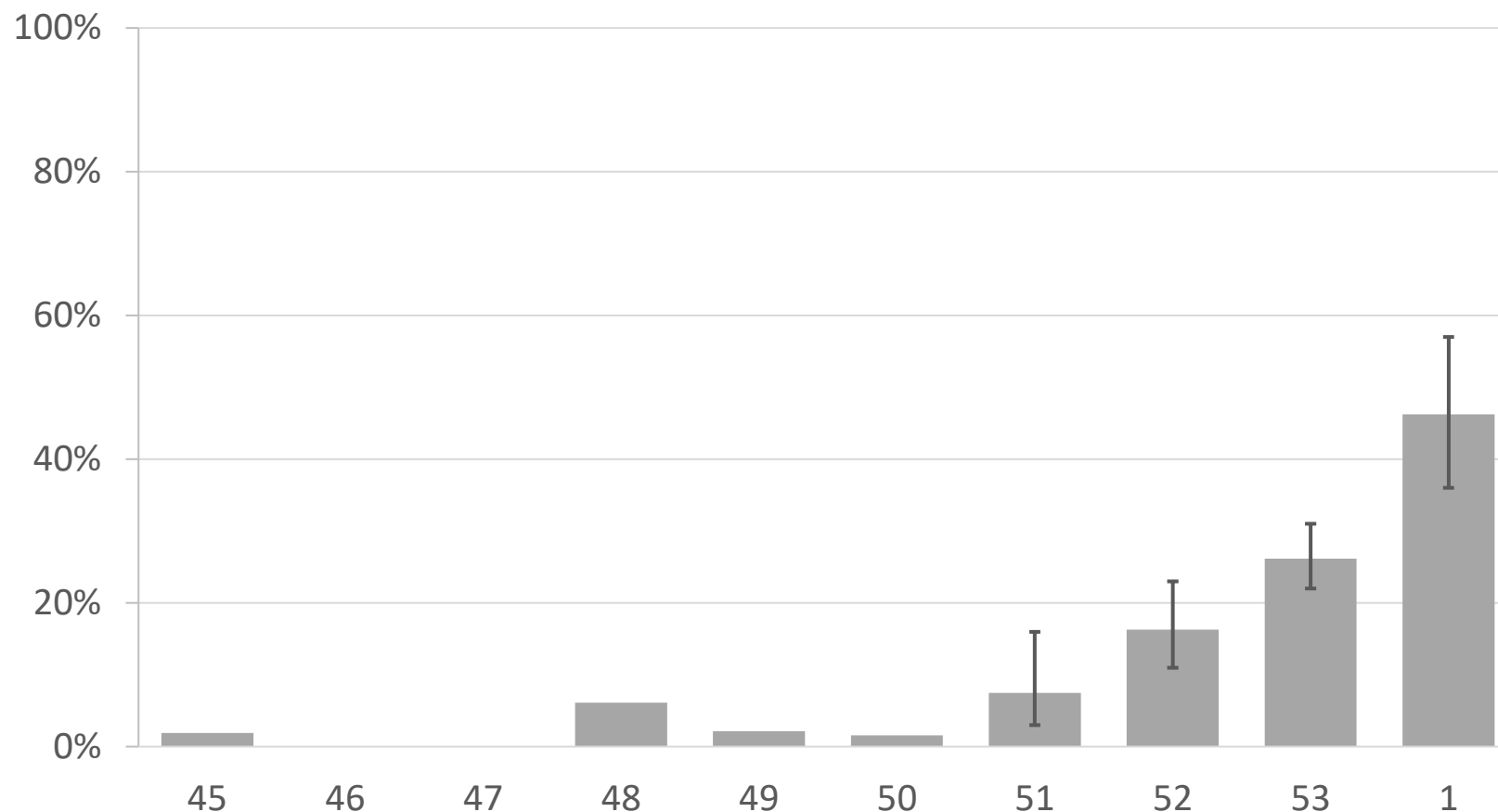
Week (ending)		SGTF proportion	Confidence interval	
45	8-Dec	1/52		
46	15-Dec	0/35		
47	22-Dec	0/32		
48	29-Dec	3/49		
49	6-Dec	1/46		
50	13-Dec	2/128		
51	20-Dec	6/80	7.5%	3-16%
52	27-Dec	29/178	16%	11-23%
53	3-Jan	111/424	26%	22-31%
1	10-Jan	43/93	46%	36-57%

New (B.1.1.7) variant – S gene target failure

S gene target failure (SGTF) is a marker for the new B.1.1.7 variant. The data are compatible with this variant being introduced, with a number of separate introductions in November and December, and spreading rapidly in late December, at which point it is likely to have begun to contribute to increased transmission



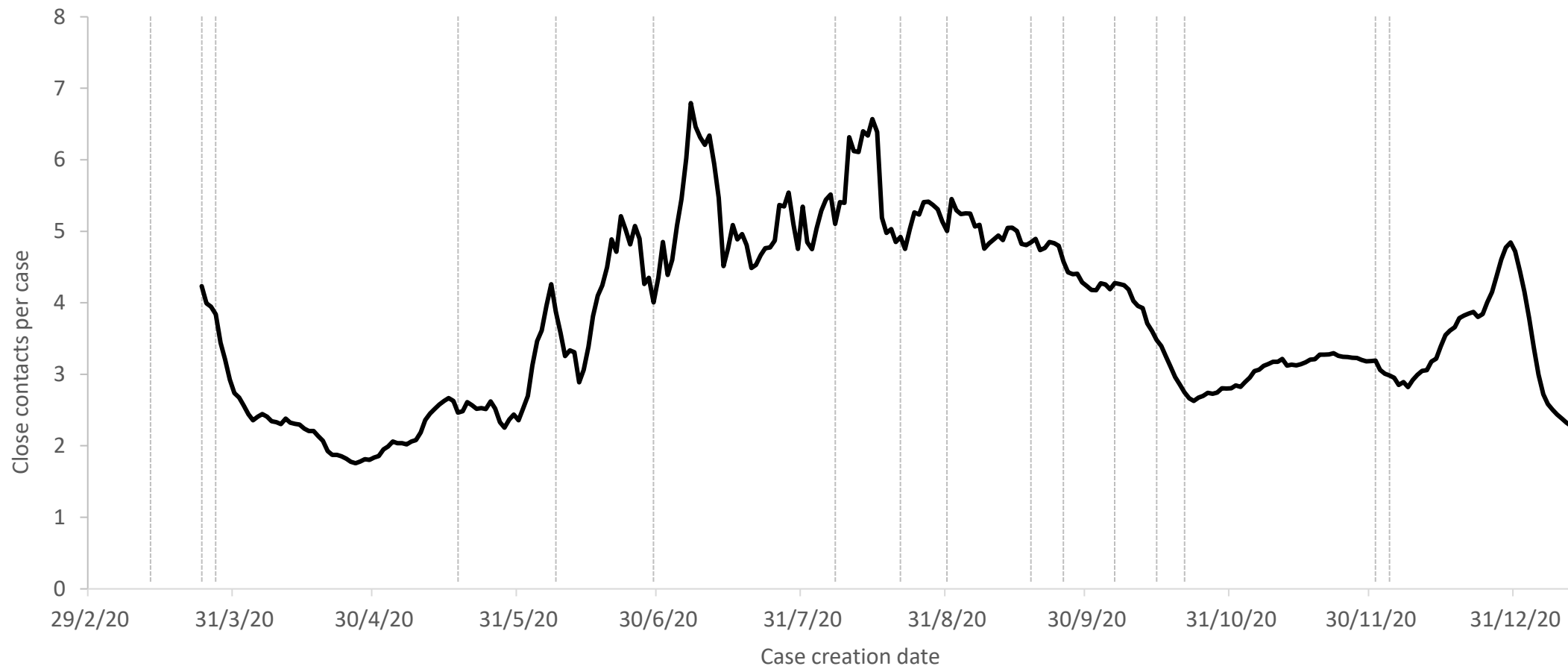
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Close contacts of adult confirmed cases

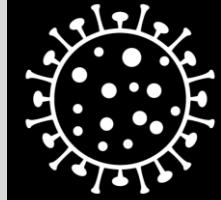
The mean number of close contacts per confirmed case. The number of contacts was very low (2 or less) during April, but increased to 5-6 per case during the summer. The progressive escalation of public health measures during October was associated with a progressive reduction in close contacts, to below 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 decreasing rapidly; it is currently 2.3



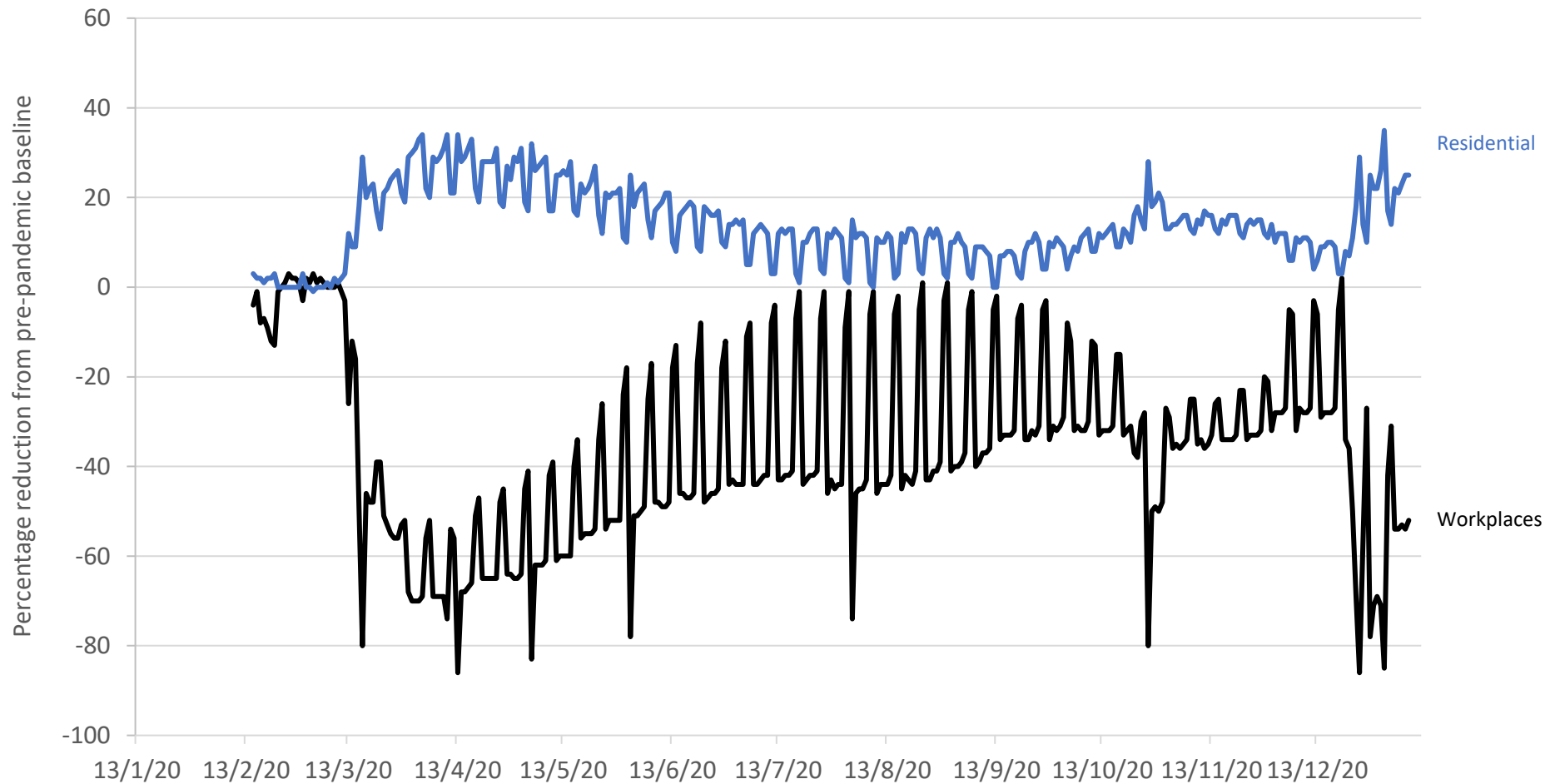
The average number of close contacts per confirmed case. Data from COVID-19 Care Tracker (CCT). Cases dated by case creation date. Cases (but not contacts) aged 18 and younger are excluded. Data are 7-day trailing averages except for the months of June – August where a 21-day trailing average is used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

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.

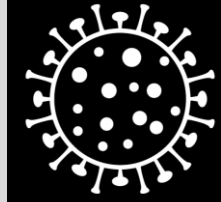


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Situation analysis 14 January 2021



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- Incidence is **exceptionally high (20 times that in early December)** but is **starting to fall**
 - Cases (5-day average) **4473 cases per day**; 14-day incidence **1497 per 100,000**
 - Incidence very high across **all age groups, especially young adults**
 - Incidence in those 65 and older continues to increase and a cause for concern
 - Incidence in those aged 18 and younger remains at or below population average
 - Growth rate starting to decrease, **R estimated as 1.0 - 1.3** using methods focused on the last seven days
- **Numbers in hospital and ICU continue to increase**
- **Rapidly increasing incidence in long-term care settings and vulnerable groups**
- **Mortality increasing**: there will be a large number of deaths in the coming weeks
- Scenario models suggest a peak of 2000 - 2400 people in hospital including 250-300 people in ICU and 650-800 people in hospital and 110-120 in ICU at the end of January 2020
- There is some evidence that the rate of growth may be slowing
 - The average number of close contacts of adult confirmed cases peaked at 4.7 on 28 December and is now falling rapidly (2.3 on 12 Jan) – even lower when household contacts are excluded
 - Concern that indicators of mobility, especially attendance at workplaces, not as low as in April and May 2020
 - The test positivity rate and the number of positive tests per day is decreasing
 - Average daily case counts have peaked at 6500 per day and should now start to fall
- This is a signal to maintain our efforts: we have a long way to go, and we **must maintain suppression** to protect each other from serious illness, and to protect our health services and healthcare workers.