Coronavirus **COVID-19**

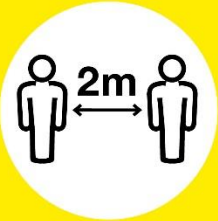
Coronavirus
COVID-19
Public Health
Advice

Stay safe. Protect each other.

Continue to:

Wash
your hands well and often to avoid contamination.

Cover
your mouth and nose with a tissue or sleeve when coughing or sneezing and discard used tissue safely



Distance
yourself at least 2 metres (6 feet) away from other people, especially those who might be unwell

Wear
face coverings on public transport, in shops, crowded streets, busy indoor workplaces and when in close contact with people

Avoid
crowds and crowded places

Know
the symptoms. If you have them self isolate and contact your GP immediately

COVID-19 symptoms include

> high temperature
> cough
> breathing difficulty
> sudden loss of sense of smell or taste
> flu-like symptoms

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IEMAG briefing

10 December 2020

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Cases, numbers in hospital and intensive care

Case numbers are less than a quarter of what they were in late October, but in recent weeks have been almost static. The number of people in hospital is decreasing slowly, numbers in ICU and deaths per day are not decreasing.

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	16 Apr	24 Jun	29 Jul	26 Aug	30 Sept	21 Oct	11 Nov	18 Nov	25 Nov	2 Dec	9 Dec
Cases confirmed per day	547	10	18	117	356	1160	403	412	303	273	269
14-day incidence *per 100,000 population*	157	4.0	5.6	32	92	288	144	120	105	85	80
Hospital in-patients	858	42	11	22	108	279	288	270	284	244	228
Hospital admissions per day	*56*	*2*	*2*	*3*	*10*	*23*	*21*	*20*	*18*	*14*	*14*
ICU confirmed cases	147	15	5	6	18	32	39	34	33	32	31
ICU admissions per day	*8*	*< 1*	*< 1*	*< 1*	*2*	*3*	*3*	*2*	*2*	*2*	*3*
Deaths confirmed per day	32	< 1	< 1	< 1	1	5	5	6	6	7	4

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.

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Testing

The numbers of tests remains high, the positivity rate is stable.

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7-day average	15 Apr	23 Jun	28 Jul	25 Aug	29 Sept	20 Oct	10 Nov	17 Nov	24 Nov	1 Dec	8 Dec
Tests done per day	5579	2607	6494	7742	12624	16030	10929	11042	11119	10663	11003
% tests positive	18%	0.5%	0.4%	1.7%	3.0%	7.1%	3.5%	3.8%	2.7%	2.7%	2.5%

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. Case counts are much lower than in late October. The 5-day average peaked at 1186, and is now 258; it has been essentially static since 28 November

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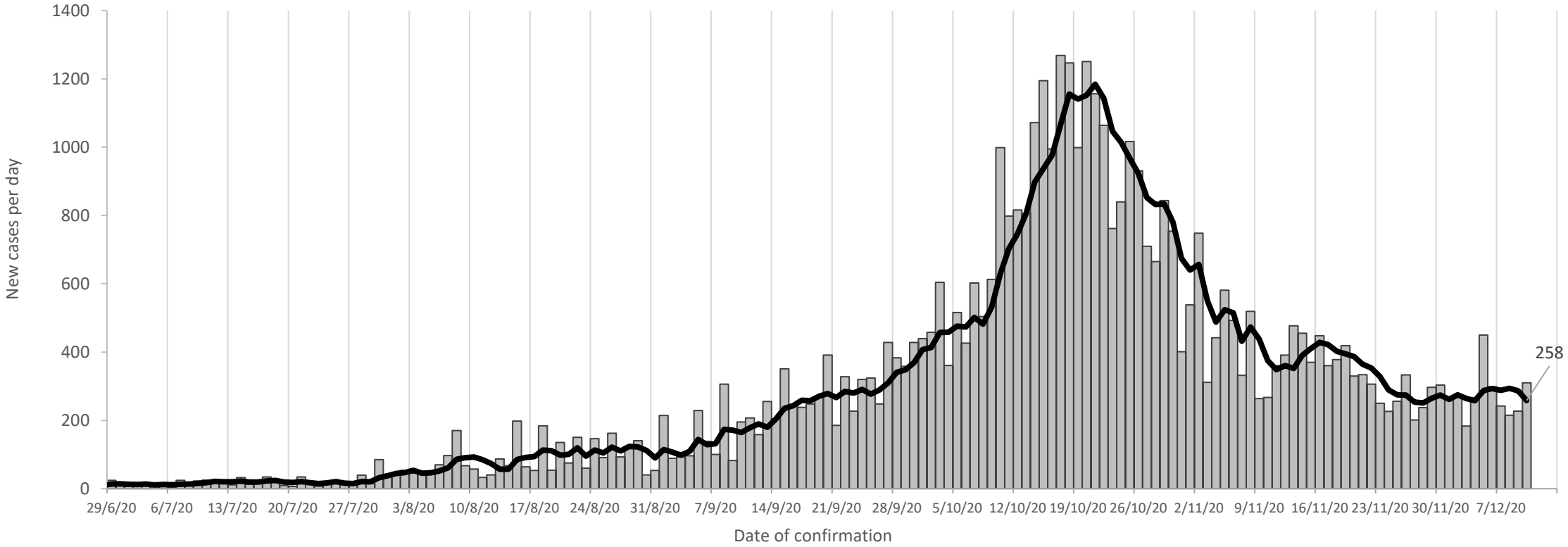
Cases confirmed each week	93	125	140	119	284	540	546	711	796	912	1303	1947	2060	3031	4458	7400	7090	4843	3426	2584	2575	1800	2036
Sporadic cases	36	37	65	36	52	44	141	124	149	176	290	345	376	506	862	1776	2385	1250	679	489	484	466	521
	39%	30%	46%	30%	18%	8%	26%	17%	19%	19%	22%	18%	18%	17%	19%	24%	34%	26%	20%	19%	19%	26%	26%



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. Sporadic cases are those cases not associated with outbreaks, nor close contacts of confirmed cases, nor acquired in the healthcare setting.

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Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection is decreasing slowly

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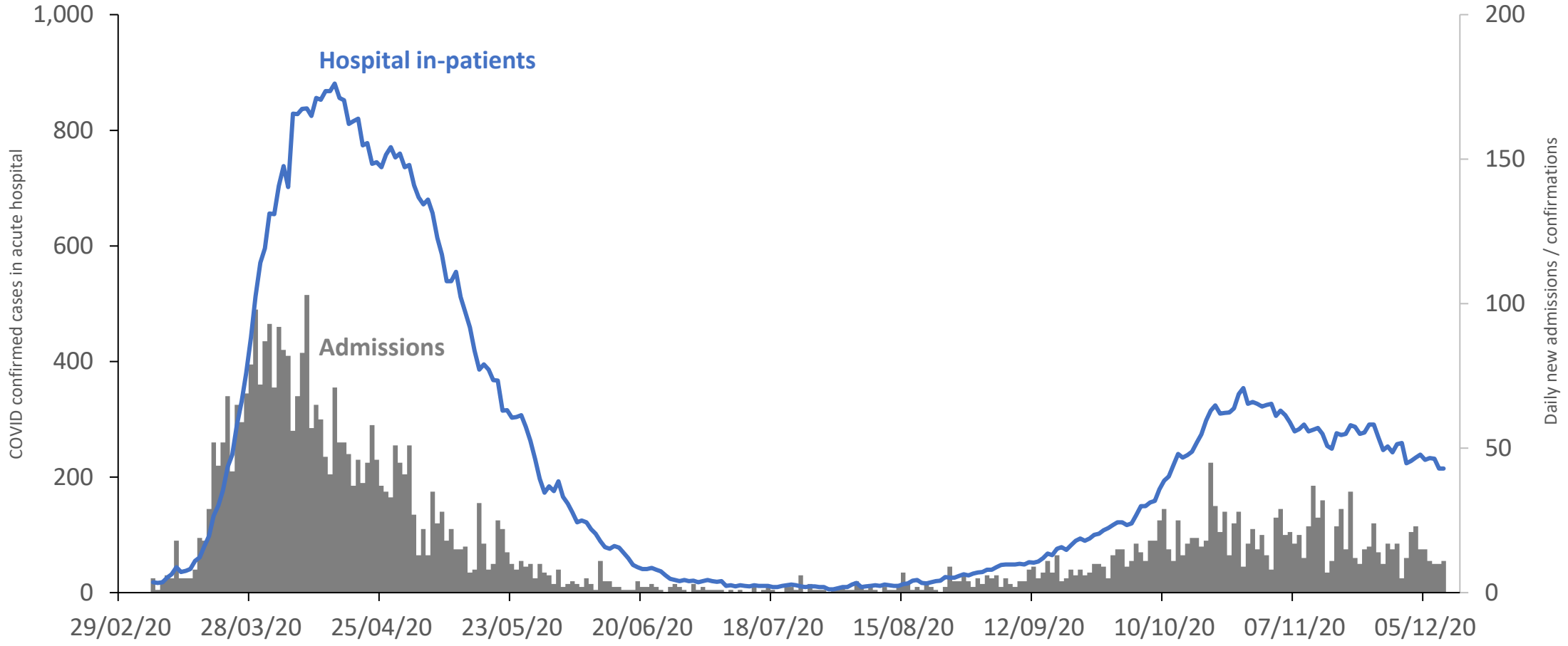

Hospital in-patients: Daily count of number of COVID-19 confirmed cases in acute hospitals. Daily admissions: New COVID-19 confirmed admissions and new laboratory confirmations of suspected cases in preceding 24 hours. Data from HSE PMIU-SDU, 8am census.

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Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection was static or decreasing very slowly; there were 8 admissions to ICU on 9 December 2020 bringing the number in ICU back up to 38

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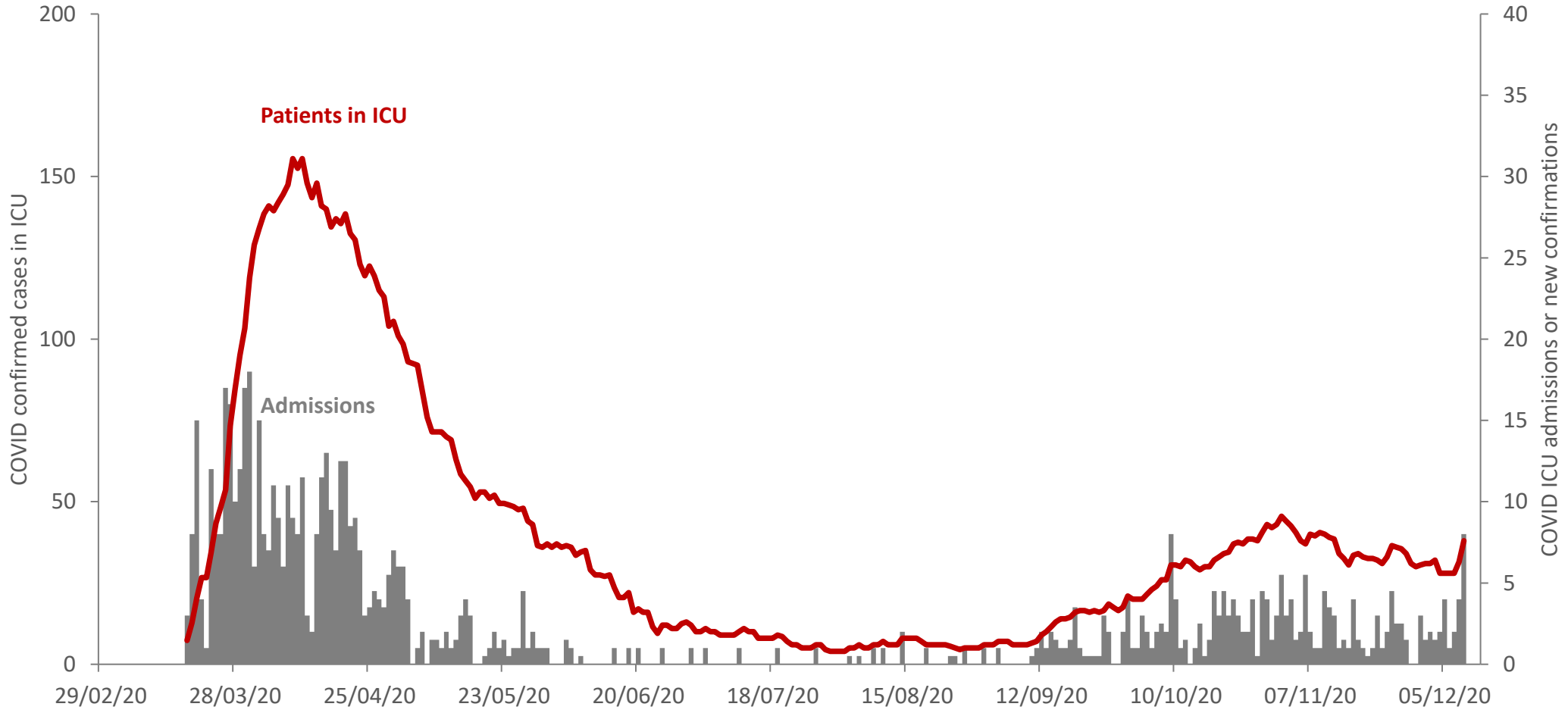

Patients in ICU: Daily count of number of COVID-19 confirmed cases in ICU. Daily admissions: new COVID-19 confirmed admissions to ICU and new laboratory confirmations of suspected cases in ICU. Average of morning and evening census from NOCA

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Deaths per day

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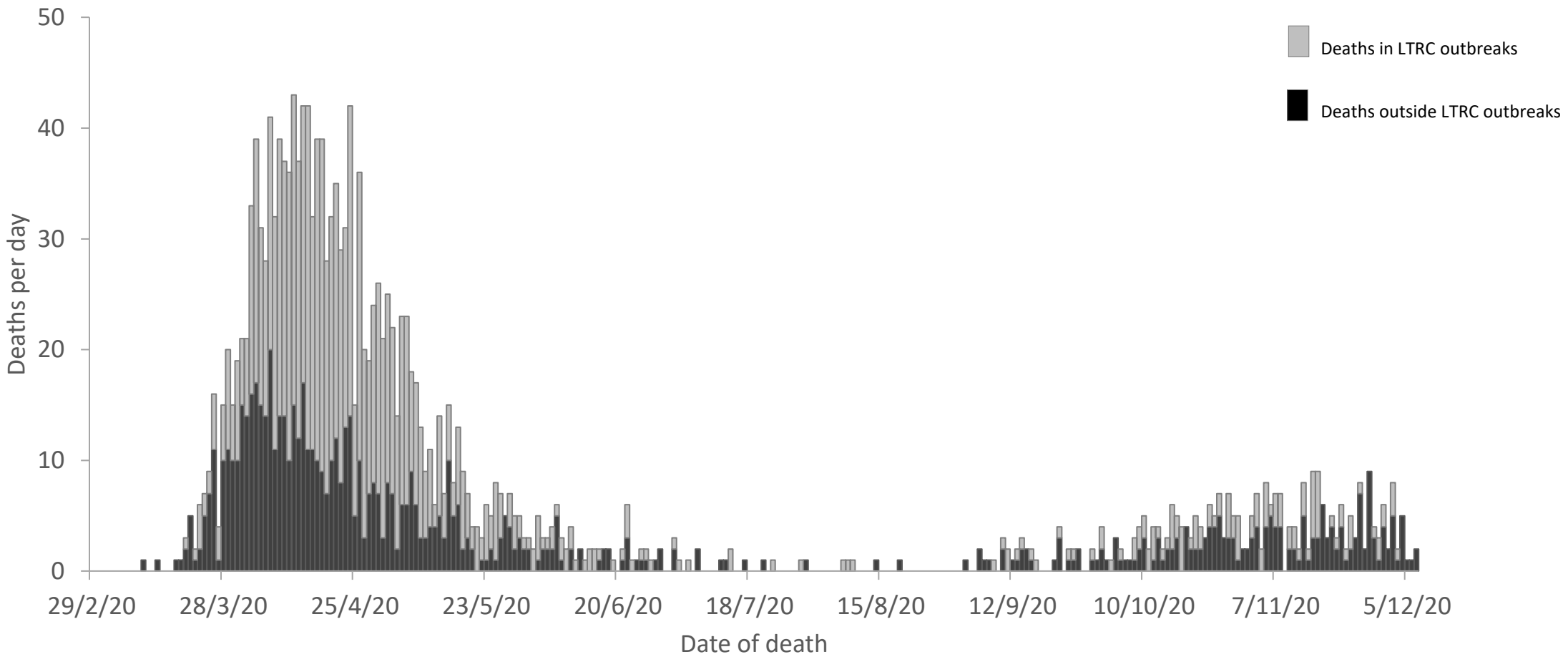

Deaths per day, separated into those associated with outbreaks in long-term residential care and those not associated with such outbreaks. Deaths with laboratory confirmed SARS-CoV-2 only

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Incidence across different age groups (excluding HCW and LTRC)

When incidence started to rise again in July, cases increased first in younger age groups, especially in the 19-24 age group, with a delayed increase in incidence in older (65+) adults. There has been a very significant decrease in incidence in younger adults in recent weeks. While incidence in the 65-84 age group has decreased from the peak, it remains high in the 85+ age group.

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Heat map of 7-day incidence by age

Week	Age band								
	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
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	10.9	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	34.9	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	67.9	57.9	34.3	26.0	19.2
41	44.0	47.2	135.4	324.6	116.7	91.7	62.1	52.4	53.3
42	78.1	90.9	196.7	432.1	155.4	142.9	91.8	67.7	57.7
43	82.7	93.5	176.0	306.5	123.0	121.9	85.1	82.9	69.6
44	54.0	67.3	93.9	153.7	74.4	76.5	54.6	54.5	45.9
45	34.4	39.7	58.4	84.2	58.3	46.2	43.1	44.3	41.4
46	41.9	37.2	65.4	90.0	45.5	45.4	32.7	43.3	57.7
47	22.0	34.1	59.2	79.4	34.9	33.4	28.9	39.7	54.8
48	23.2	31.3	45.5	66.7	34.0	29.9	22.8	36.6	34.0
49	28.7	36.5	37.4	40.5	33.3	29.8	25.7	30.5	42.9

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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Case-fatality rates increase steeply with age

Case-fatality rates by age cohort for cases in the general population and cases in residents in outbreaks in long-term residential care (LTRC), for cases notified July-November 2020. Mortality is low, but significant under 65 years of age, but rises steeply with age, and is not significantly different in LTRC and community.

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Age (years)	Case fatality rate (excl HCW and LTRC)	Case-fatality rate (LTRC)
0-19	< 0.01%	
20-39	< 0.01%	
40-59	0.10%	
60-64	0.54%	
65-69	1.09%	
70-74	3.74%	2.70%
75-79	5.52%	6.85%
80-84	8.71%	10.38%
85+	13.84%	15.22%
All ages	**0.47%**	

The percentage of those with confirmed SARS-CoV-2 infection notified between 1 July 2020 and 22 November 2020 who have died. This analysis excludes healthcare workers separates out those cases associated with outbreaks in long-term residential care

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Where are cases arising?

We have seen an increasing number of infections in healthcare workers in recent weeks, with approximately 13% of cases over the last 14 days being HCW. The majority of these HCW (~80%) are in settings other than LTRC

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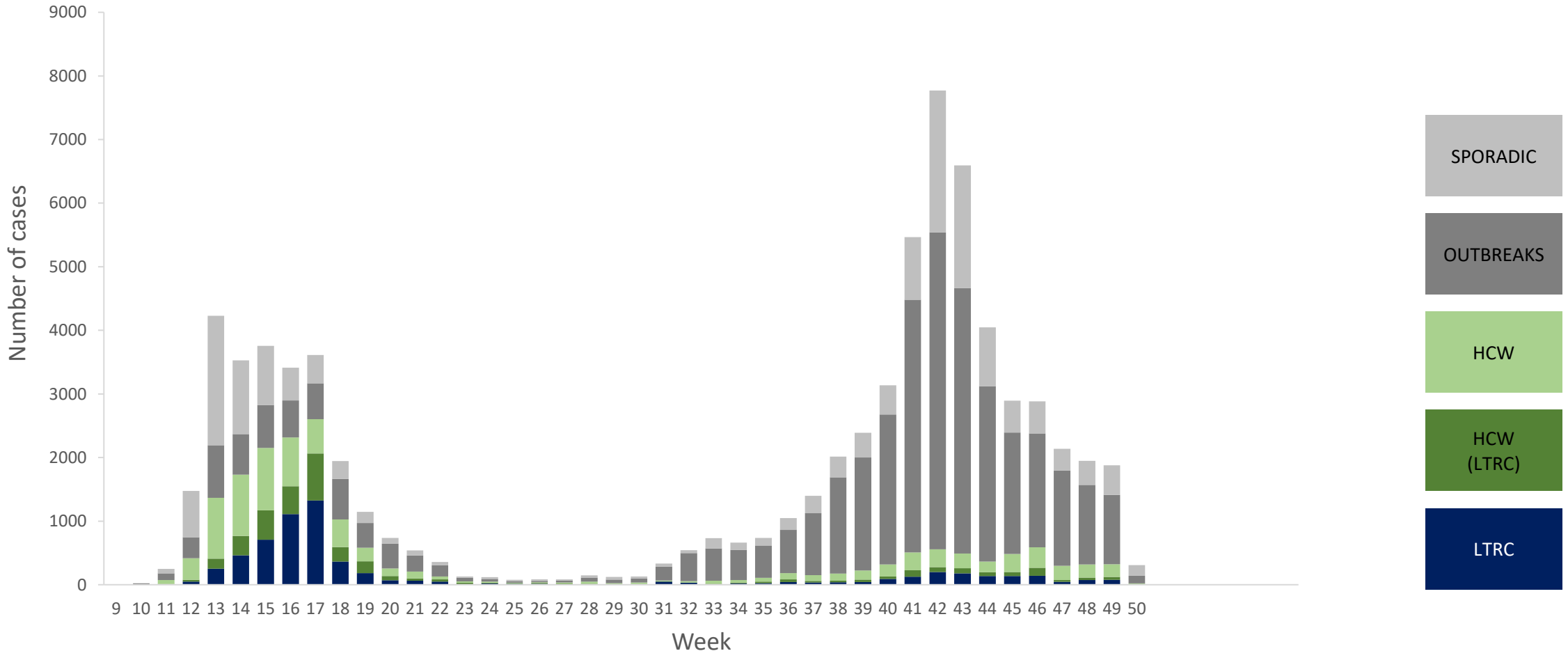

Weekly total cases by setting. LTRC: residents of long-term residential care. HCW (LTRC): Healthcare workers associated with outbreaks in long-term residential care. HCW: healthcare workers in other settings. Outbreaks: all other outbreaks. Sporadic: cases not associated with outbreaks or healthcare work. Date of specimen collection

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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; nonetheless, the very high levels of infection in the wider community led to 200-300 cases per week associated with outbreaks in LTRC in weeks 41-46. The incidence has been lower in recent weeks.

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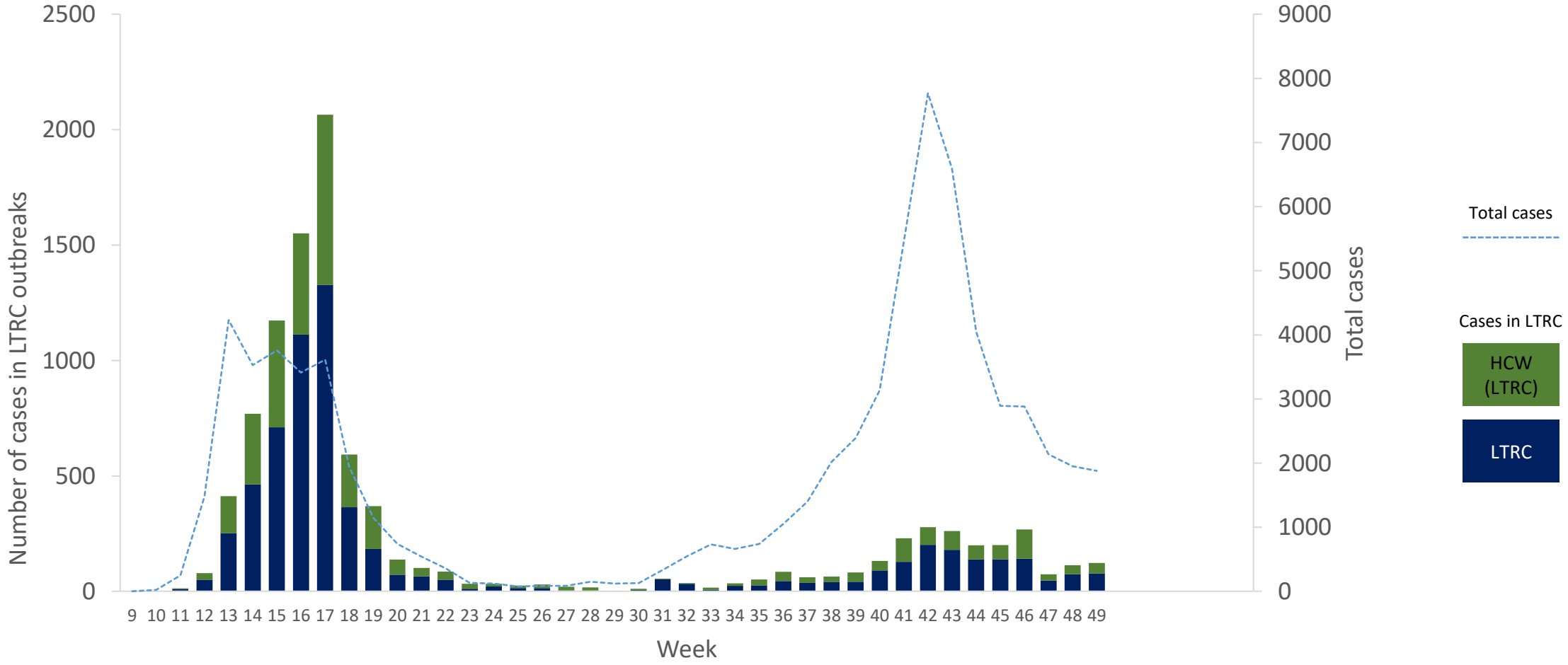

Weekly cases by setting. LTRC: cases amongst residents of long-term residential settings where outbreaks have occurred.
HCW (LTRC): Cases in healthcare workers associated with outbreaks in LTRC.

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Close contacts

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 period immediately after the mid-term break was associated with an increase in close contacts. The number of close contacts per case in recent days is low.

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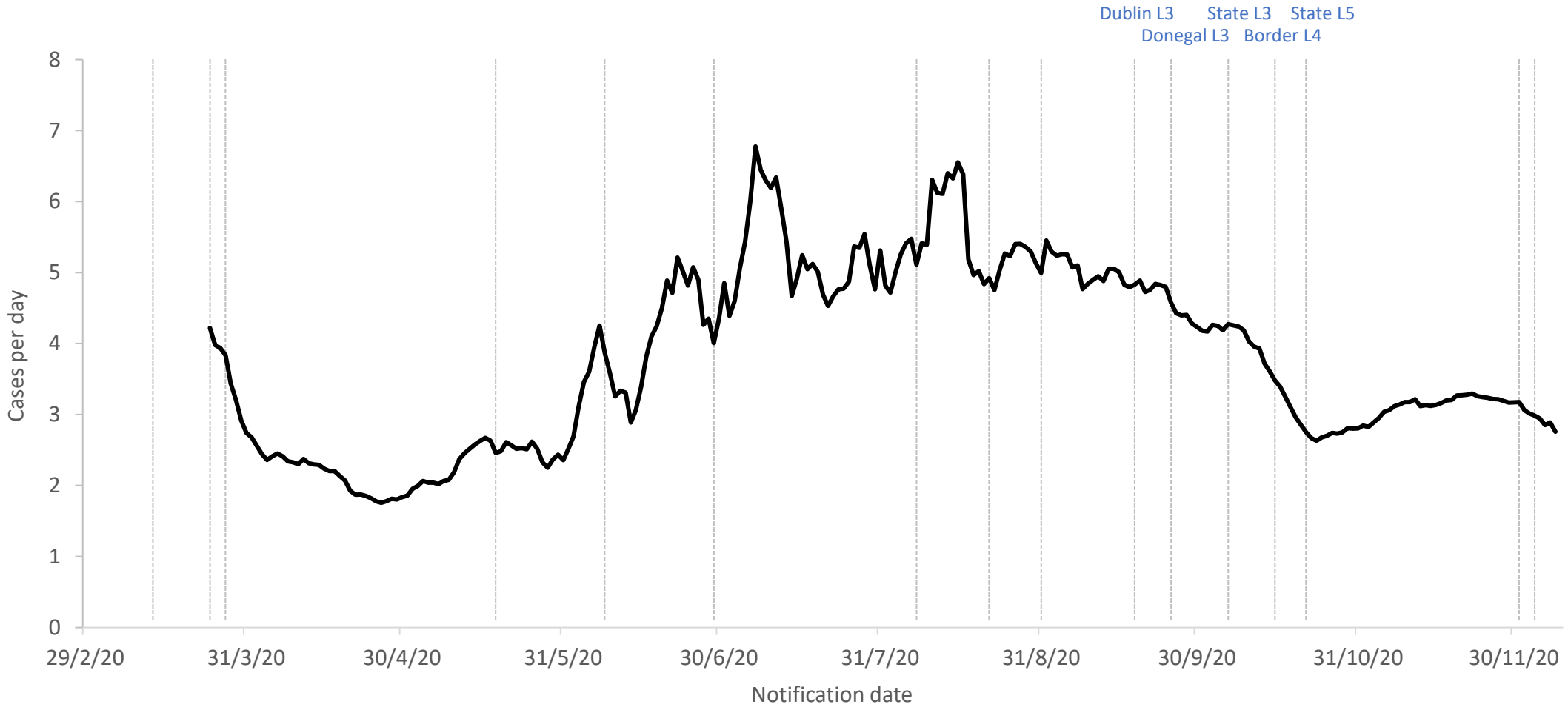

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Estimates of effective reproduction number (R)

Reproduction number is difficult to estimate as it is probably increasing – it is currently estimated at 0.9 to 1.0.

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Method	Estimate	95% confidence interval
SEIR model-inferred	0.94	0.77 – 1.12
Bayesian model	0.91	0.76 – 1.10
Time-dependent R	1.03	0.85 – 1.21
GAM estimate 1 Dec 2020	0.94	0.77 – 1.11
GAM estimate 8 Dec 2020	1.00	0.75 – 1.25

Estimates generated 9 December 2020, 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. 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 10 December 2020

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- The level of infection is static
  - growth rate close to 0%
  - R estimated at 0.9 - 1.0
    - caution in interpreting R number – it's an *estimate* that *lags* changes in viral transmission
- Persistent delayed incidence in healthcare workers and outbreaks
- Numbers in hospital decreasing slowly, numbers in intensive care and deaths per day are not decreasing
- A persistently high incidence in older persons
- This infection has high mortality, especially in vulnerable and older people
- Mobility has increased, but the number of close contacts per case is stable
- Models show high risk of surge in January unless R remains close to 1.0
- Remain extremely cautious, limiting our number of contacts per week, taking every precaution during such contacts, and protecting the vulnerable

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