



An Roinn Sláinte  
Department of Health

# COVID Update for NPHET

17<sup>th</sup> December 2020

# Current situation



	01-Oct	26-Oct (peak 14 day inc.)	28-Nov	01-Dec	04-Dec	07-Dec	10-Dec	13-Dec	16-Dec
14-day incidence	96.12	307.23	93.51	86.96	78.25	80.28	78.79	84	87.89
5-day average cases	407.2	924.0	250.6	261.2	257.2	286.6	256.6	302.8	339
Total weekly cases	2608	7034	1809	1895	1820	1971	1996	1968	2317

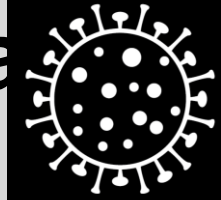
	01-Oct	26-Oct (peak 14 day inc.)	28-Nov	01-Dec	04-Dec	07-Dec	10-Dec	13-Dec	16-Dec
No. Hospital (8.A.M)	122	344	243	224	239	232	203	192	199
No. in ICU (6.30 P.M)	22	40	33	30	32	28	37	32	32

	01-Oct	26-Oct (peak 14 day inc.)	28-Nov	01-Dec	04-Dec	07-Dec	10-Dec	13-Dec	16-Dec
Positivity rate (7 day average)	3.0%	6.1%	2.7%	2.7%	2.6%	2.5%	2.5%	2.5%	2.9%

	August	September	October	November	December
<b>Total Deaths</b>	<b>5</b>	<b>37</b>	<b>123</b>	<b>151</b>	<b>48</b>
<b>Deaths associated with Nursing Home outbreaks</b>	<b>3</b>	<b>12</b>	<b>50</b>	<b>50</b>	<b>11</b>
<b>Deaths associated with Hospital outbreaks</b>	<b>0</b>	<b>7</b>	<b>24</b>	<b>52</b>	<b>19</b>

# Cases, numbers in hospital and intensive care

Case numbers are less than a quarter of what they were in late October, but now appear to be rising again. 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	18 Nov	25 Nov	2 Dec	9 Dec	16 Dec
Cases confirmed per day	547	10	18	117	356	1160	412	303	273	269	331
14-day incidence <i>per 100,000 population</i>	157	4.0	5.6	32	92	288	120	105	85	80	88
Hospital in-patients	858	42	11	22	108	279	270	284	244	228	198
<i>Hospital admissions per day</i>	56	2	2	3	10	23	20	18	14	14	14
ICU confirmed cases	147	15	5	6	18	32	34	33	32	31	33
<i>ICU admissions per day</i>	8	< 1	< 1	< 1	2	3	2	2	2	3	1
Deaths confirmed per day	32	< 1	< 1	< 1	1	5	6	6	7	4	5

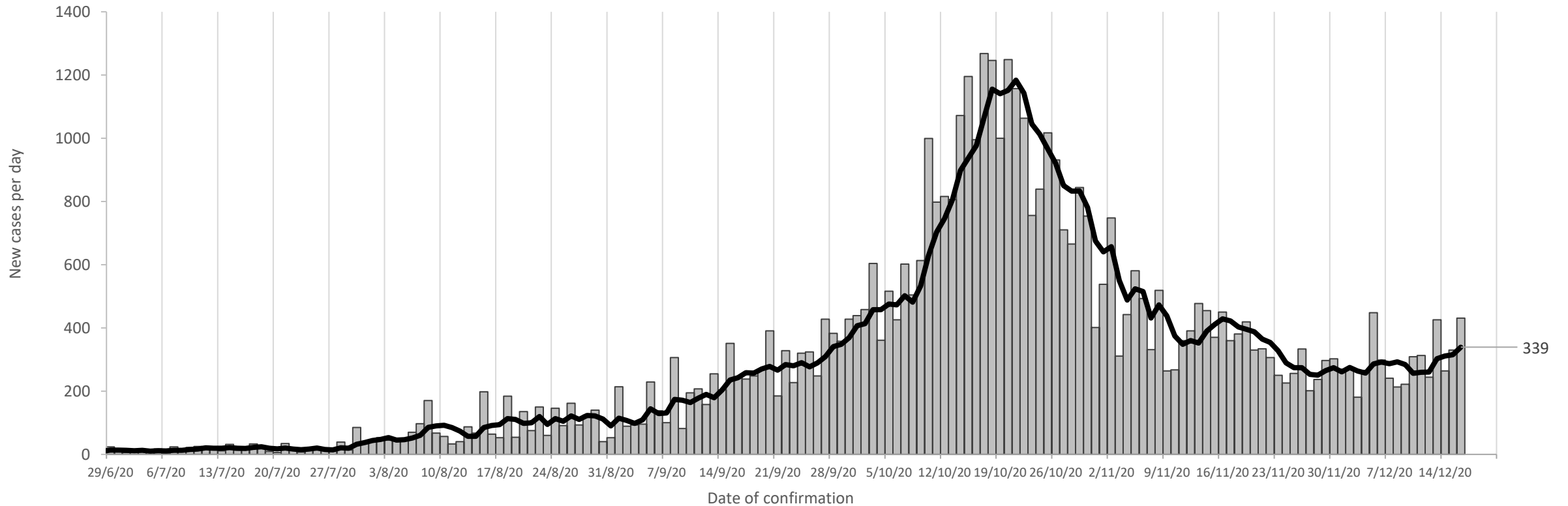
Data are 7-day averages (the indicated day and the preceding 6 days, rounded to the nearest whole number) with the exception of 14 day cumulative incidence which is the total number of cases in the preceding 14 days per 100,000 population. NPHET monitors 5-day moving average and 14-day cumulative incidence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

# 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 on 21 October, reached a low of 251 on 28 November, and is now 339



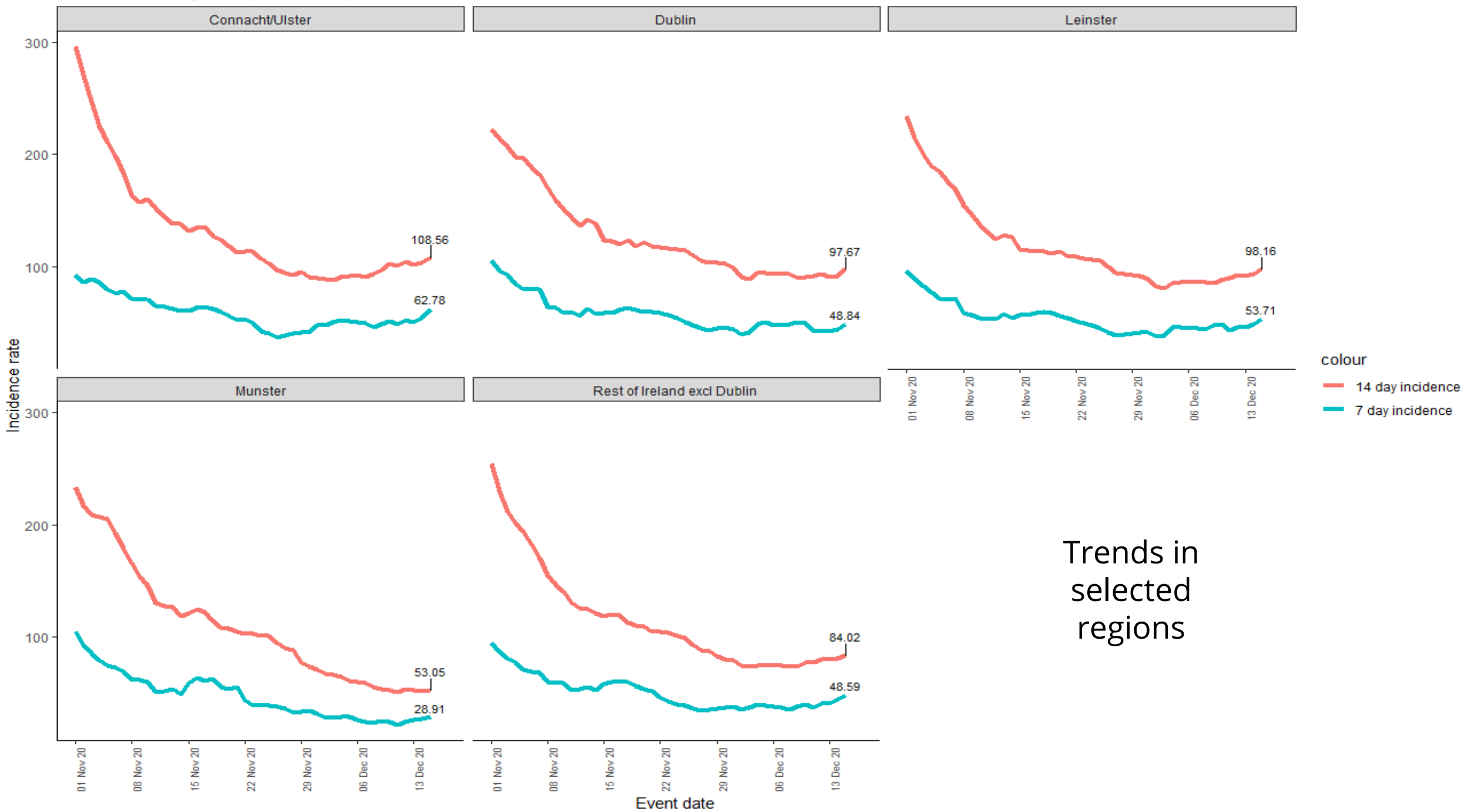
Cases per week	93	125	140	119	284	540	546	711	796	912	1303	1947	2060	3031	4458	7400	7090	4843	3426	2584	2580	1800	2034	1978
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National 7 and 14 day Incidence rates



# Incidence in regions (16 Dec 20)



Trends in  
selected  
regions



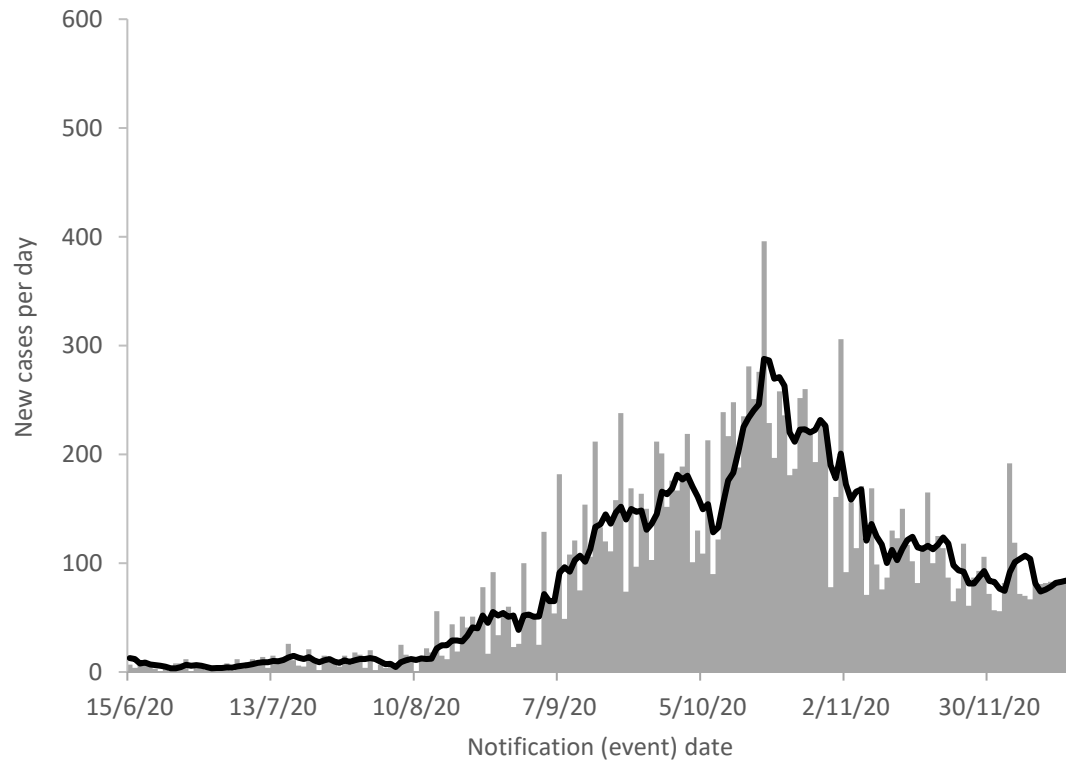
## Trends in Border counties

# Confirmed cases each day

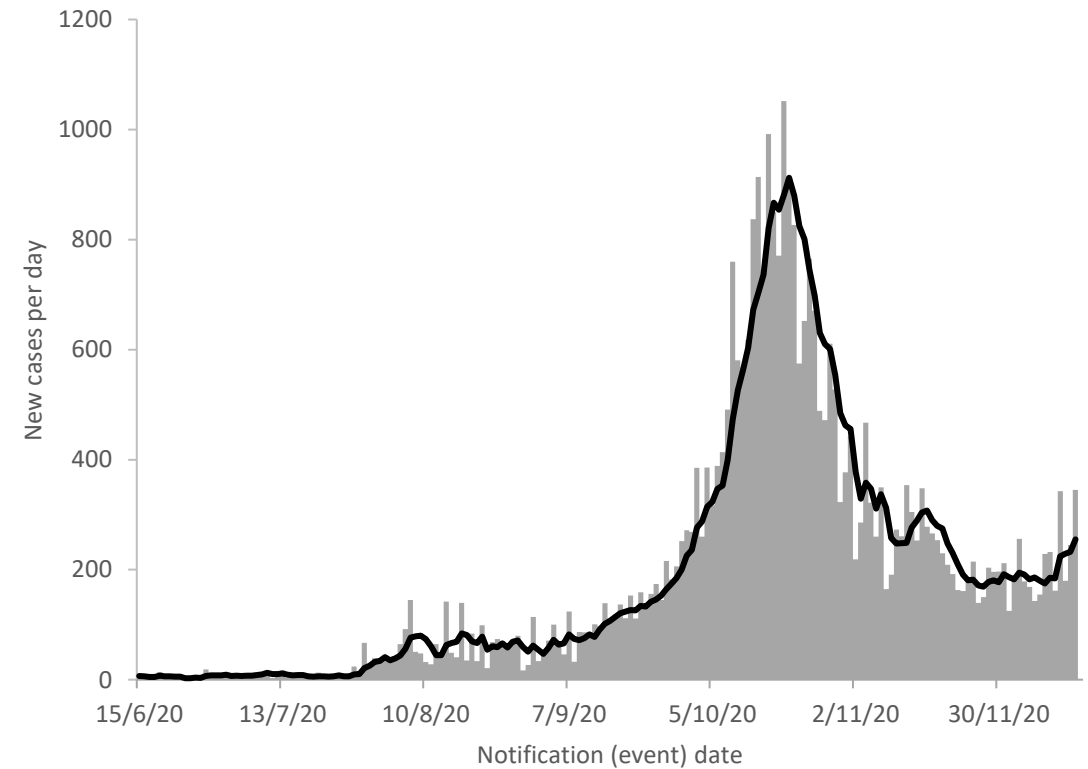
Daily case count and 5-day rolling average for Dublin alone and for the other 25 counties. While average daily new cases has clearly increased outside Dublin, the trend in Dublin is not yet clear



## Dublin



## 25 counties

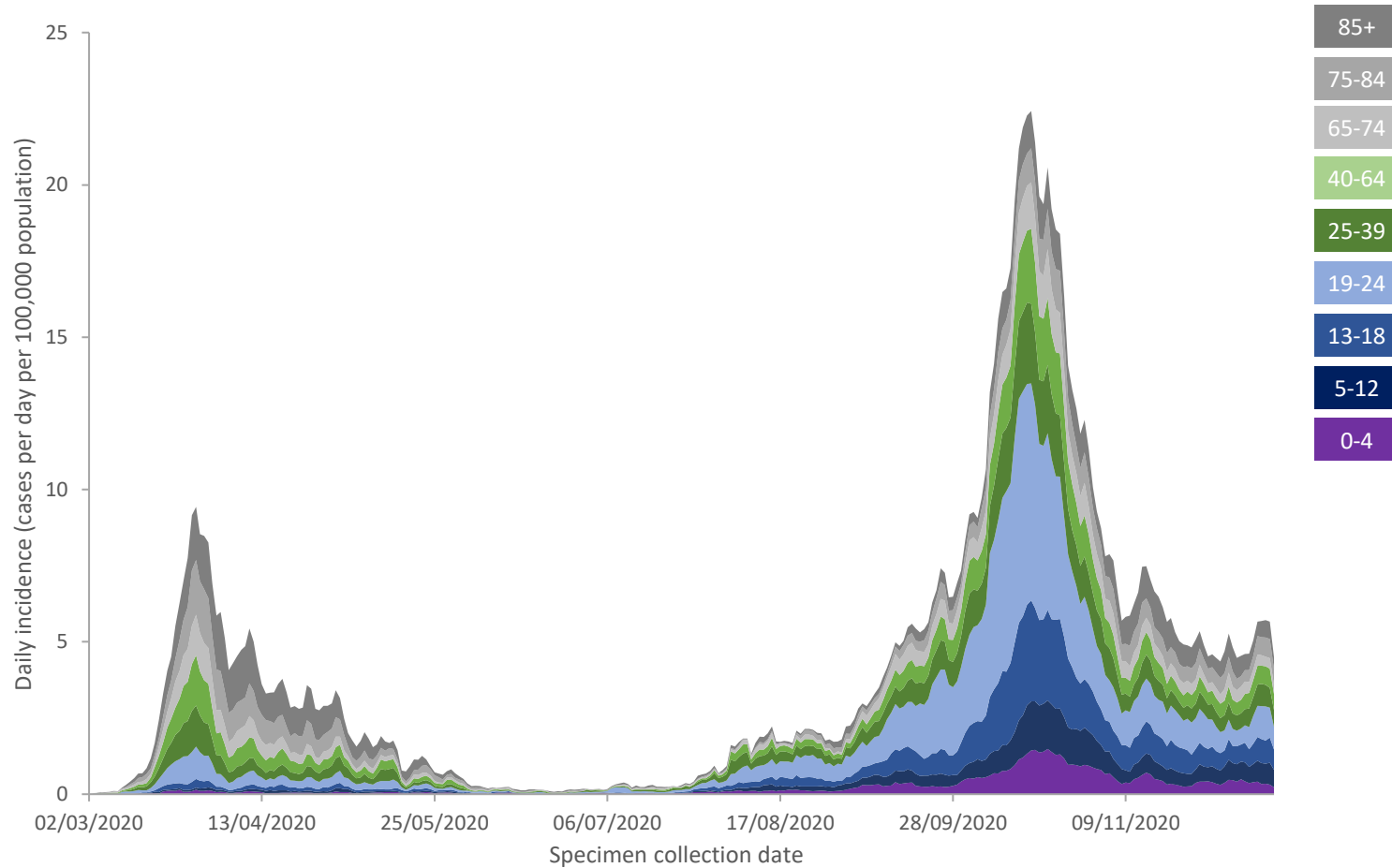


Daily count (bars) 5-day average (line) new cases by date on which they were notified to HPSC and created as an event on the CIDR database



# 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 across all age groups in recent weeks. Incidence has increased in the last week in young and working age adults.



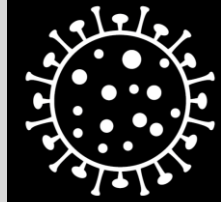
Heat map of 7-day incidence by age

Week	Age band								
	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
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	5.9
12	4.5	2.4	7.5	23.6	27.8	31.1	25.4	24.9	28.1
13	6.9	4.2	14.5	58.0	73.4	86.5	72.3	88.5	84.4
14	4.5	4.4	6.7	28.1	40.1	50.9	51.1	92.1	109.5
15	5.7	5.6	9.1	32.0	29.2	47.7	46.9	71.8	108.1
16	3.0	5.3	10.8	18.7	20.8	31.9	28.9	50.9	69.6
17	3.3	4.2	7.8	21.1	23.7	26.5	21.2	50.4	60.7
18	4.5	6.4	9.4	20.2	25.9	21.0	18.7	37.7	44.4
19	2.1	2.7	4.8	13.3	15.3	14.5	10.4	18.8	31.1
20	3.6	1.6	4.8	12.1	16.4	12.0	6.7	9.2	10.4
21	3.3	2.7	4.6	8.5	6.3	8.2	7.5	15.3	20.7
22	2.1	2.4	2.2	4.2	5.1	6.8	4.0	4.6	4.4
23	1.2	0.5	1.3	3.0	0.7	1.9	1.6	5.6	3.0
24	2.7	0.7	1.3	1.5	1.4	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	10.9	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	67.9	57.8	34.3	26.0	19.2
41	44.0	47.4	134.8	322.2	116.7	91.6	62.1	51.9	53.3
42	78.1	90.9	196.7	430.8	155.2	142.9	92.1	67.7	57.7
43	82.7	93.5	176.0	305.5	122.9	121.7	84.9	82.9	69.6
44	54.0	67.1	93.9	153.7	74.3	76.4	54.3	54.5	45.9
45	34.4	39.7	58.1	83.9	57.9	46.1	42.8	44.3	41.4
46	41.9	37.2	65.9	90.0	45.5	45.3	32.7	43.3	57.7
47	22.0	34.1	59.5	79.7	34.8	33.2	28.6	39.7	54.8
48	23.2	31.5	45.5	66.7	33.9	29.9	22.2	36.1	32.6
49	28.4	36.6	37.7	40.5	33.4	30.4	25.7	30.5	37.0
50	21.1	39.9	44.1	57.4	39.9	35.0	22.5	32.1	25.2

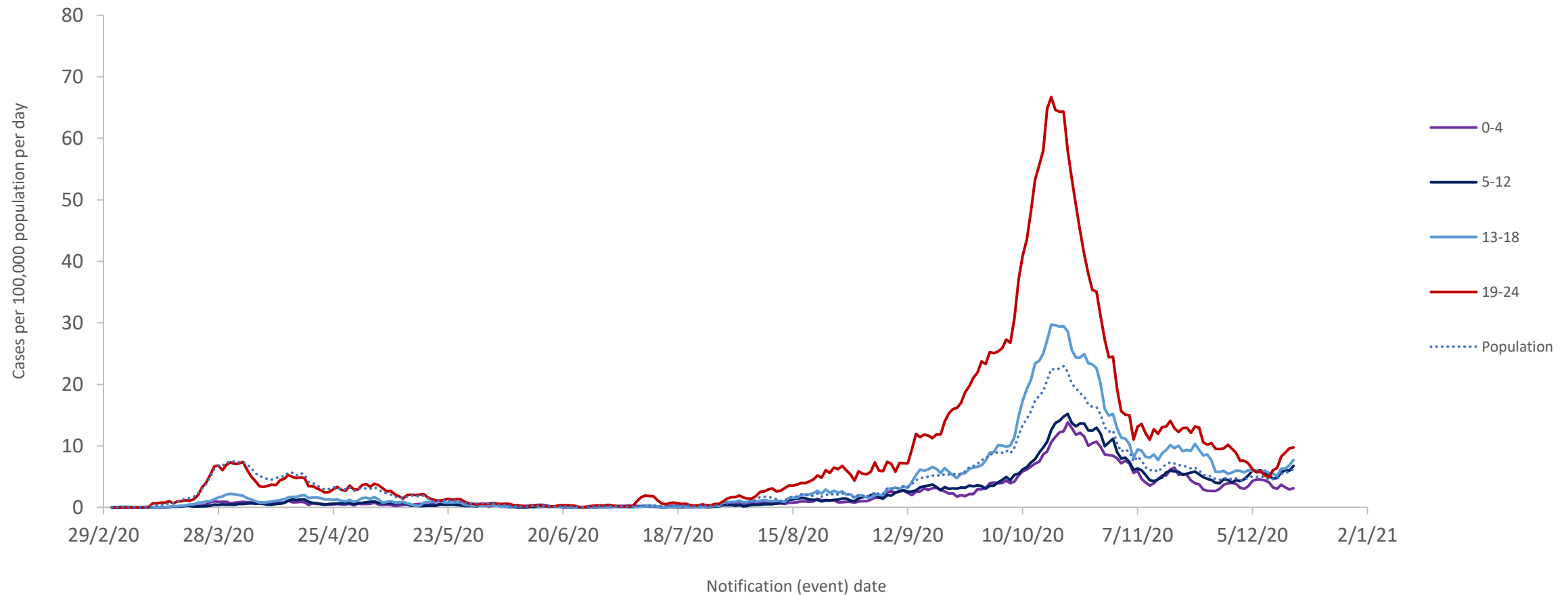
Chart shows 5-day rolling average of total incidence (cases per day per 100,000 population) with coloured bands showing the contribution of each age cohort to the total incidence, having adjusted for the number of people in that age cohort (CSO 2016 census data). Heat map shows age-specific incidence (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.

# Incidence by age

Age-specific incidence for those aged under 25, compared with the overall population.



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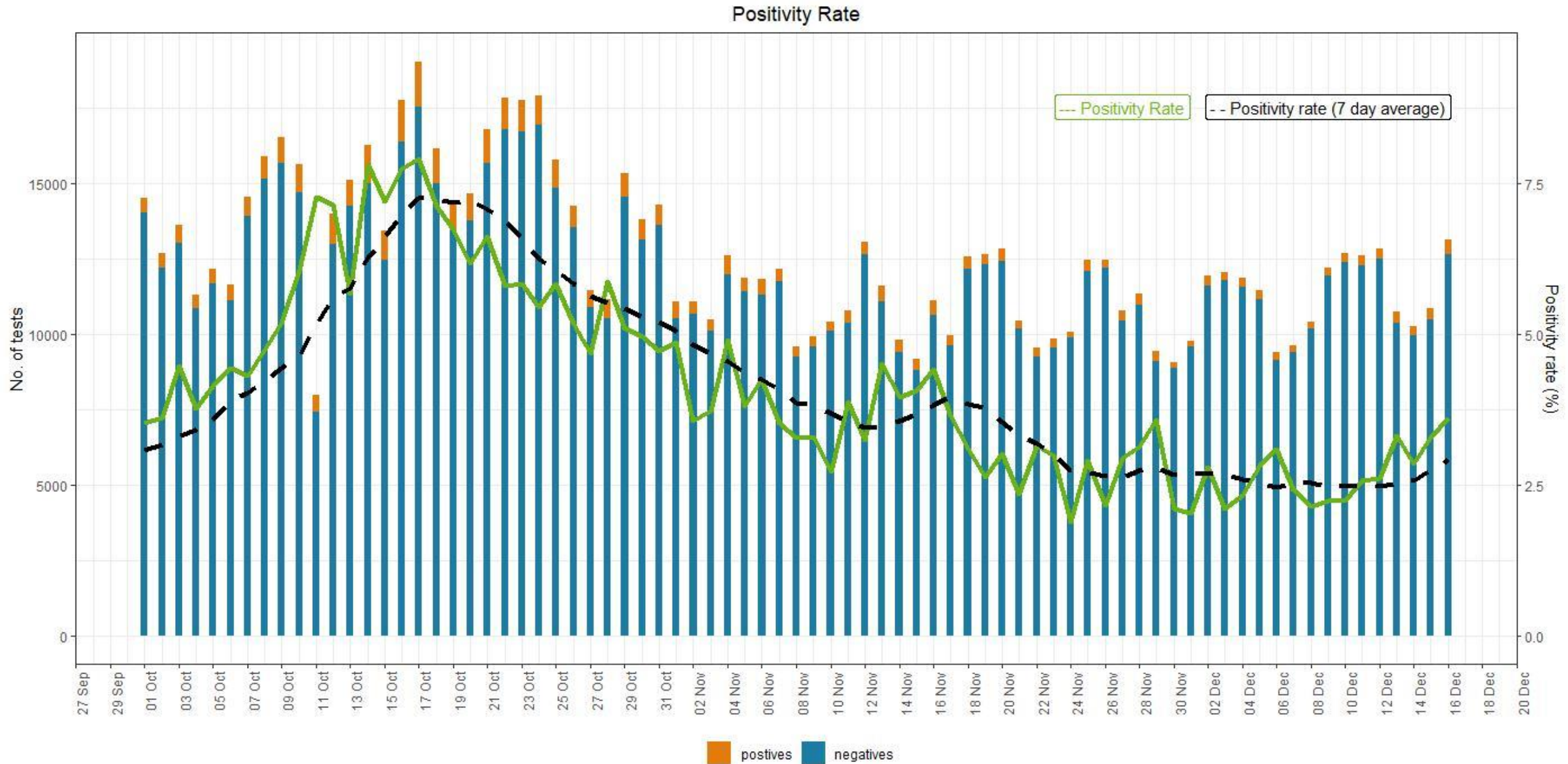


Age-specific incidence (cases per day per 100,000 population within each age cohort, population from CSO 2016 census data). Healthcare workers and cases associated with outbreaks in long-term residential care are excluded, so that the analysis reflects the pattern of cases in the community. Cases dated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



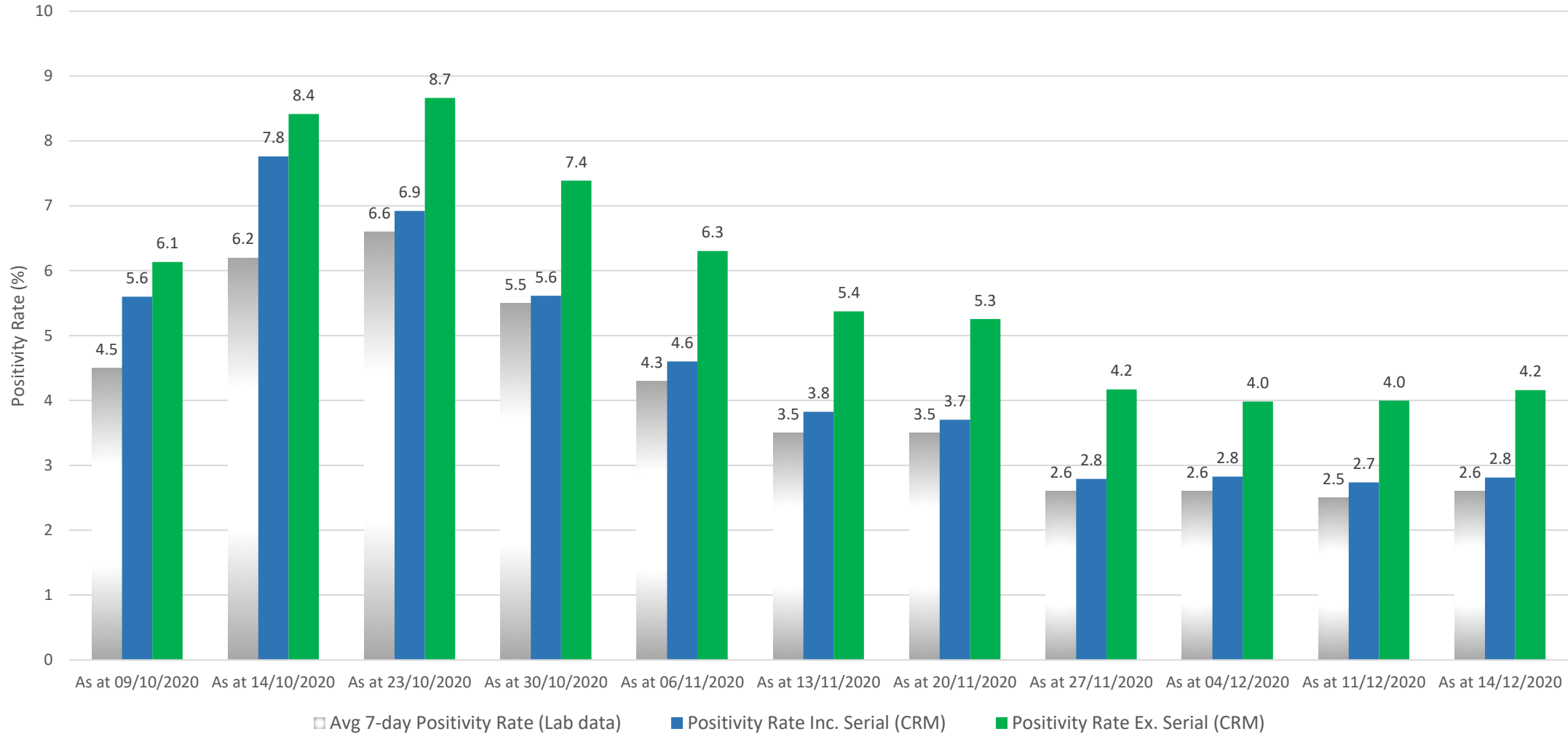
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# Recent trend in positivity rate

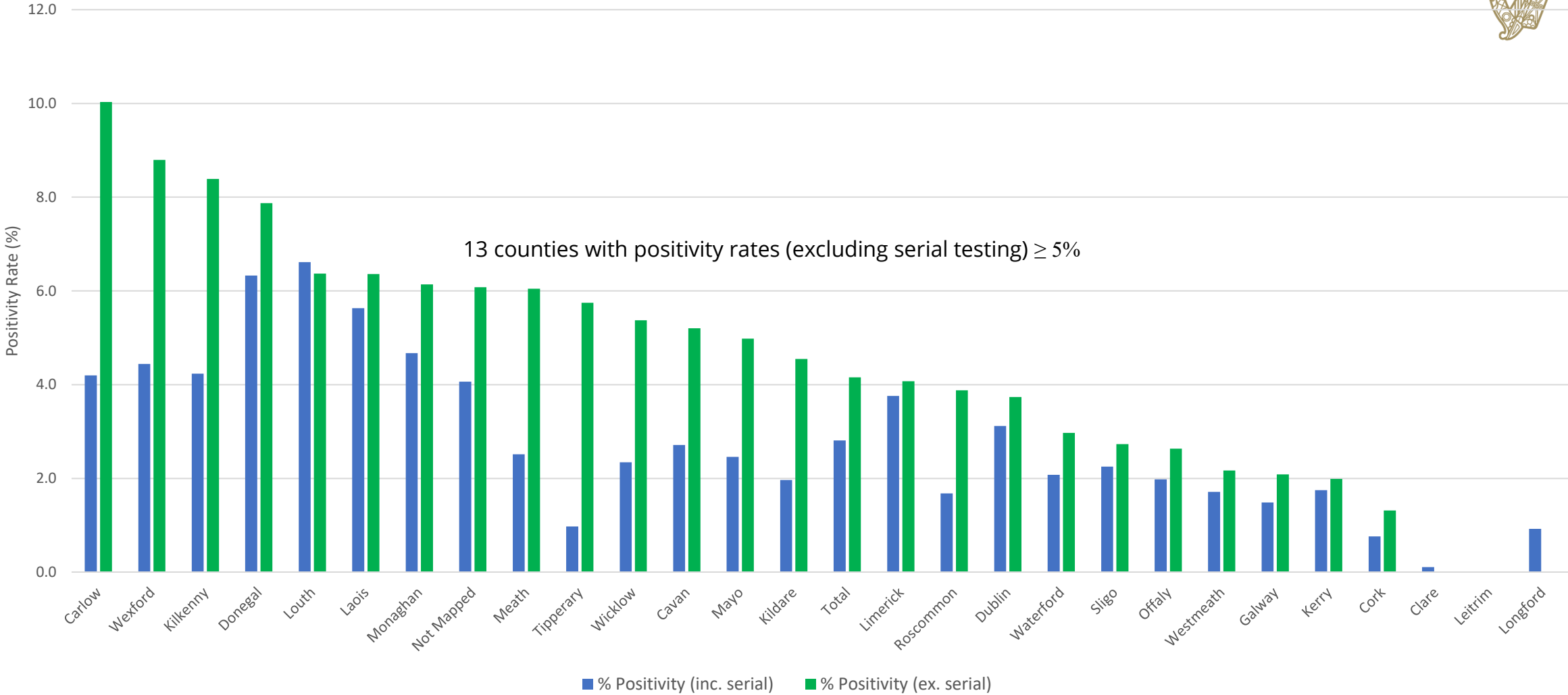




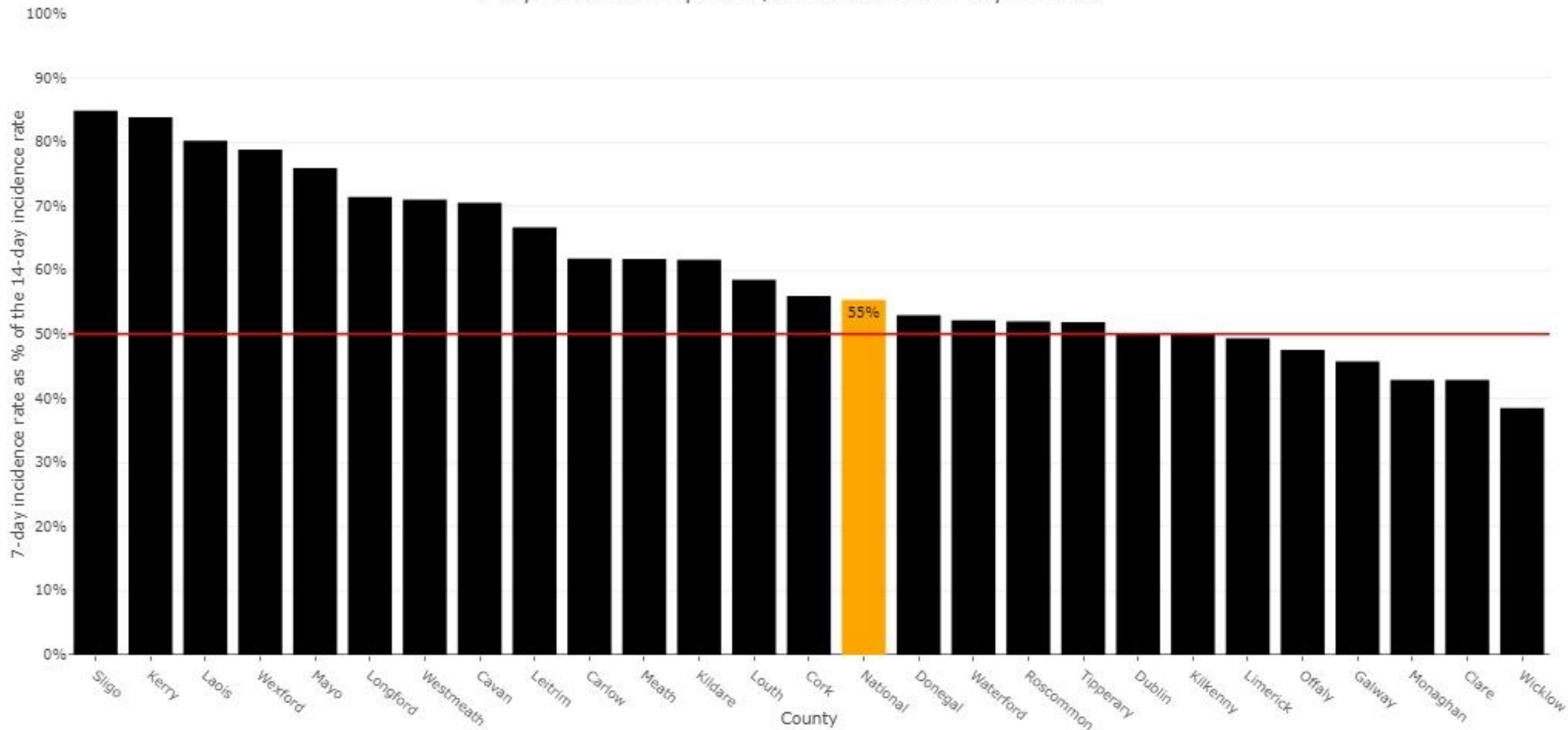
### 7-day Avg Positivity Rate (Lab data) and % Positivity Rate in Past 7 Days inc. and ex. Serial Testing (CRM)



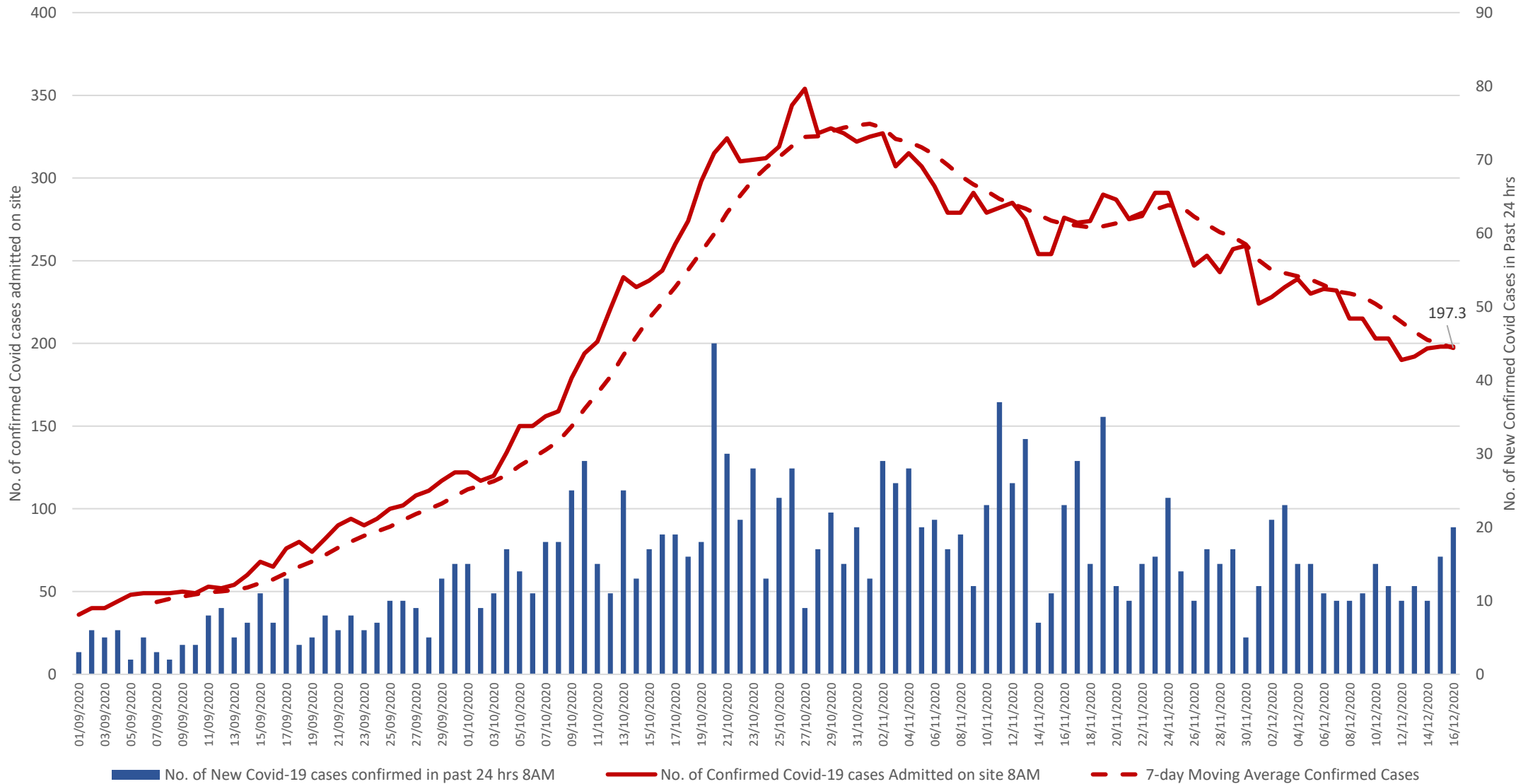
**% Positivity Rate Past 7 Days (inc./ex. serial testing) by County as at 14/12/20**  
 (data from County Positivity Rate data provided by HSE Contact and Tracing Team)



7-day incidence rate per 100,000 as % of the 14-day incidence

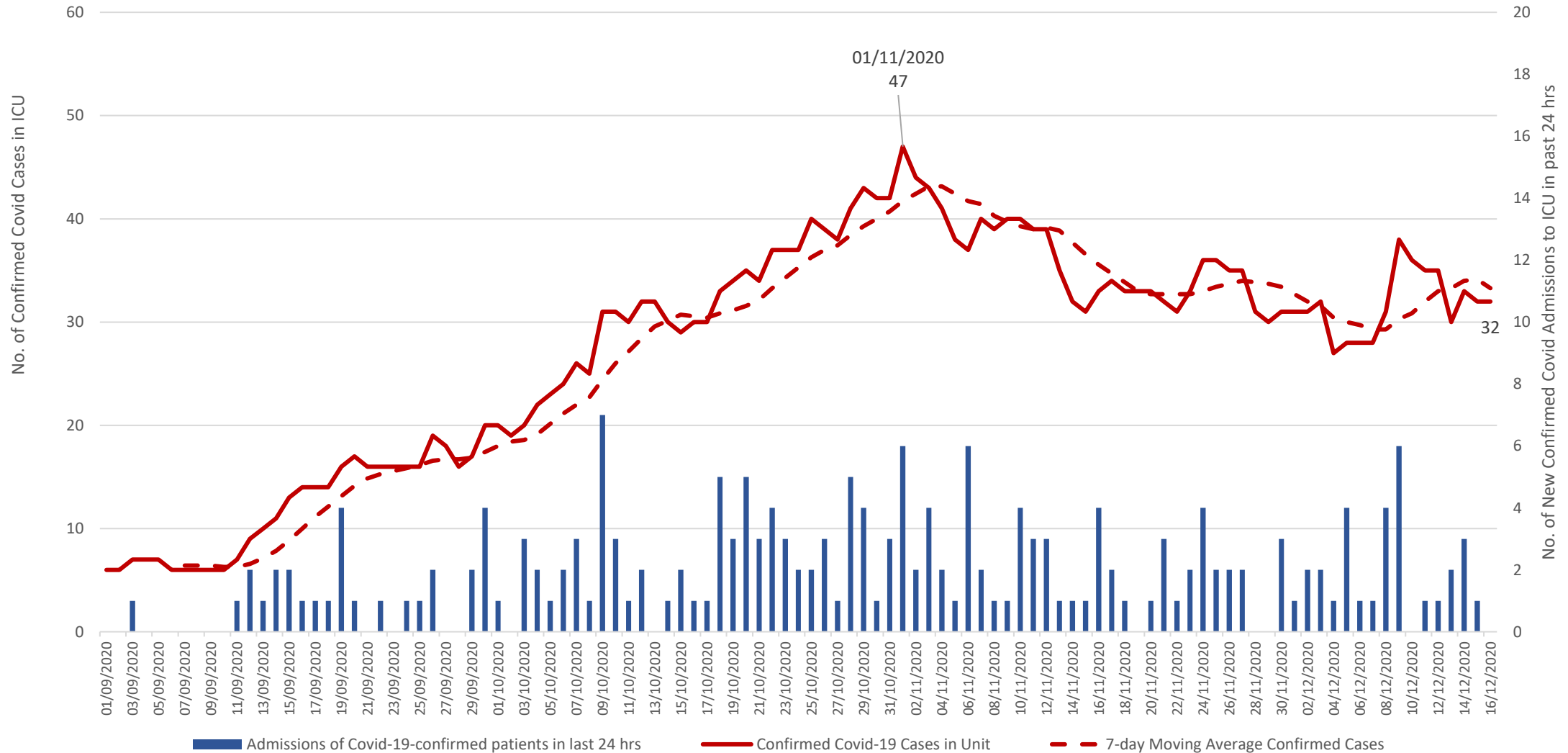


## Total No. of Confirmed Covid Cases in Hospital at 8AM & No. of New Confirmed Covid Cases in Past 24 hrs since 01/09/2020



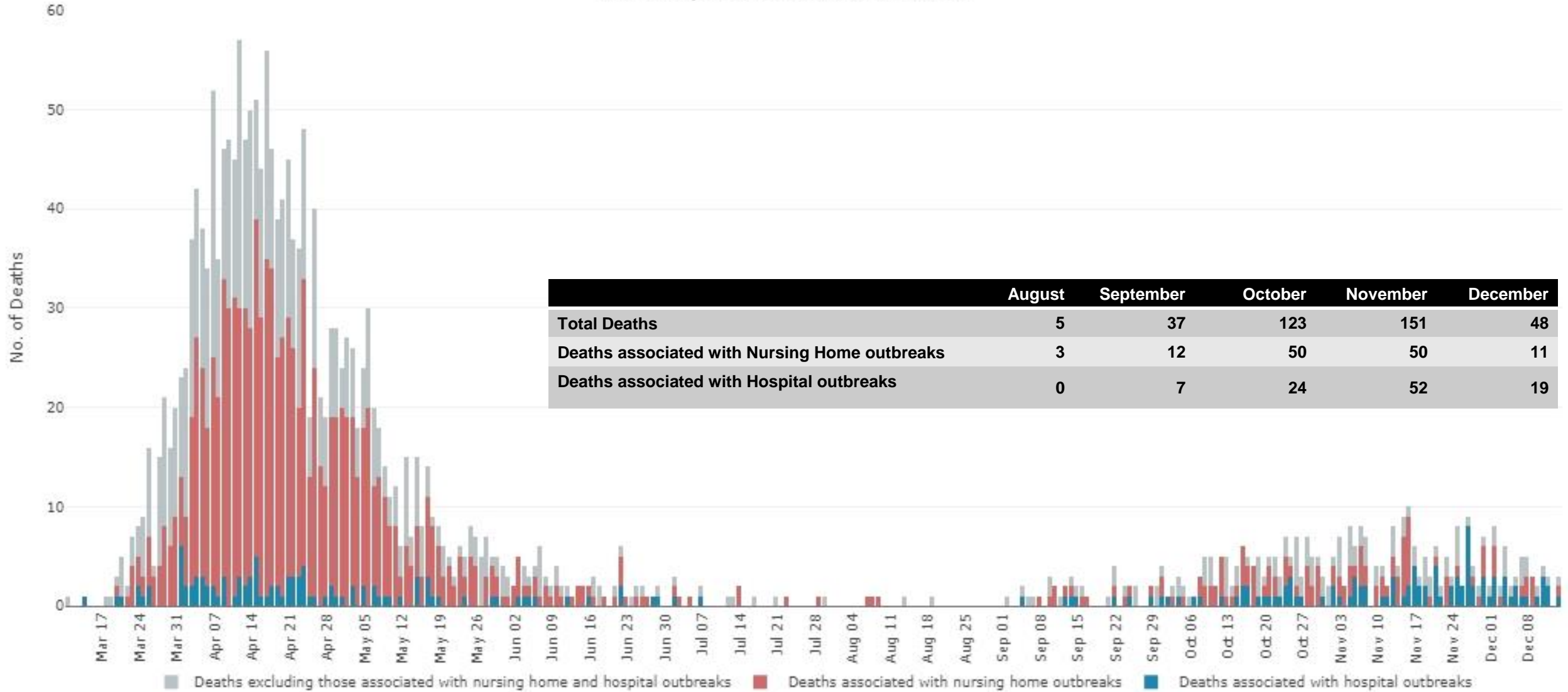


Total No. of Confirmed Covid Cases in ICU at 11.30AM &  
 No. of New Confirmed Covid Admissions to ICU in past 24 hrs since 01/09/20  
 (includes all reporting public and private hospitals and may differ from no. reported by HSE in public hospital ICUs)

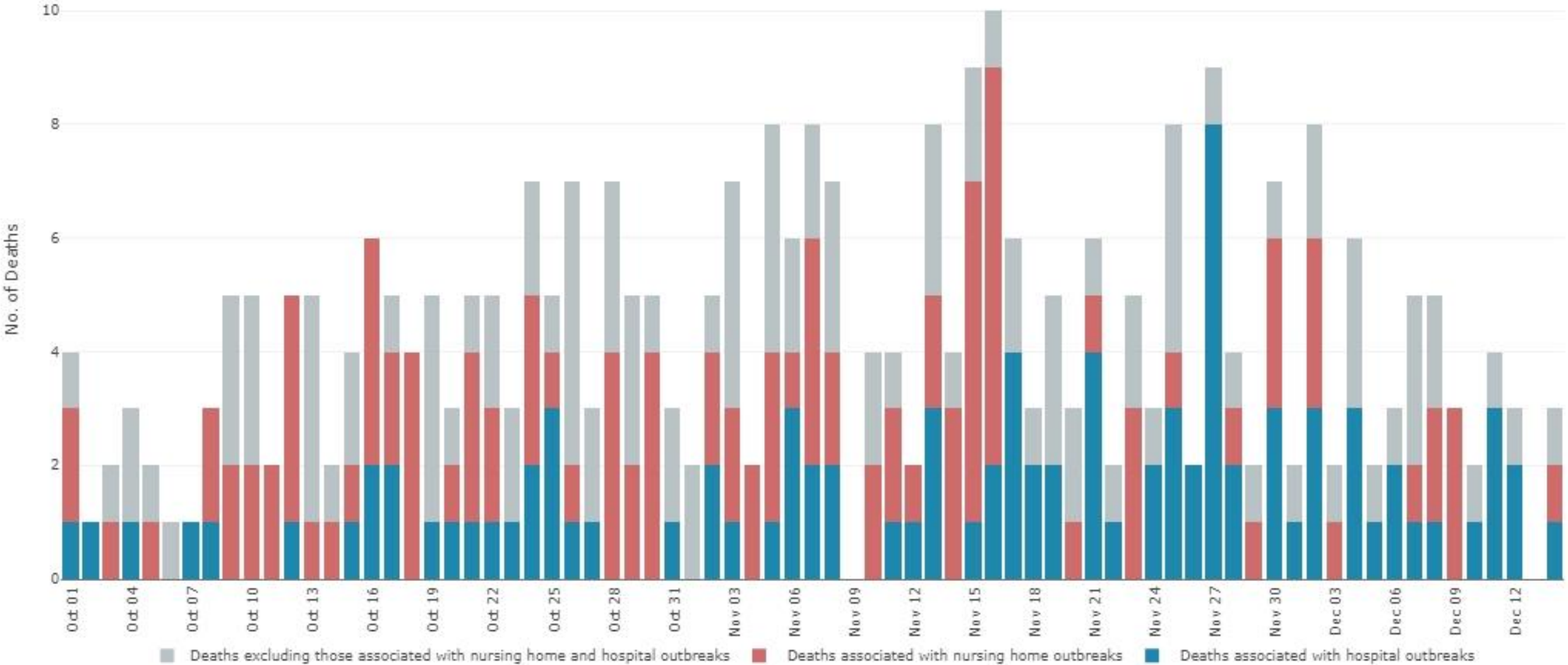




### Deaths by Date of Death since March



### Deaths by Date of Death



Source: HPSC CIDR Extract 16122020

## COVID-19 outbreaks by key outbreak locations, week 50 and overall, 2020 Ireland



- In week 50, 410 outbreaks were notified; 334 in private houses, 76 in other locations

Key outbreak locations	Week 50	Weeks 32-50
Workplace	9	279
Direct Provision Centre	0	15
Vulnerable groups*	2	90
Prisons	0	3
Nursing Home/Community Hospital	5	99
Acute hospitals	9	100
School^	19	246
Childcare facility	2	91

\*Includes Irish Travellers, Roma, homeless and addiction service population

^These outbreaks are associated with school children +/- school staff. Transmission of COVID-19 within the school has not necessarily been established in these outbreaks

Data source: CIDR December 15<sup>th</sup> 2020 – data to midnight 14/12/2020

# Weekly Summary



**Total** number of outbreaks week 50 n=410 vs week 49 n=352

## **Vulnerable groups**

Irish Traveller outbreaks (since 20/09/2020)

- 70 outbreaks, 1279 cases
- 2 new outbreaks - 20 linked cases
- 48 cases in week 50

*One new Roma outbreak*

*One new outbreak homeless setting*

*One new outbreak in a DPC*

## **Workplace outbreaks**

*Two new outbreaks in food production – with 18 linked cases*

*Two large active outbreaks in food processing in one town in HSE*

*W (>100 cases)*

## **Residential institution outbreaks**

19 outbreaks are 'open' with 134 linked cases

## **Nursing Homes & Community Hospitals**

39 open outbreaks - 998 linked cases

Four new outbreaks since last week's report

Five largest 'open' outbreaks have between 62-86 linked cases

122 deaths since August 1<sup>st</sup> linked to NH/CH outbreaks

## **Acute hospitals**

50 open outbreaks - 20 hospitals, 975 linked cases (range 1-138)

7 new outbreaks since last week's report - 31 linked cases

99 deaths since August 1<sup>st</sup> linked to acute hospitals outbreaks

## **Schools**

20 new outbreaks since last week's report with 84 linked cases

14 outbreaks ≥ 2 linked cases (range 2-14)

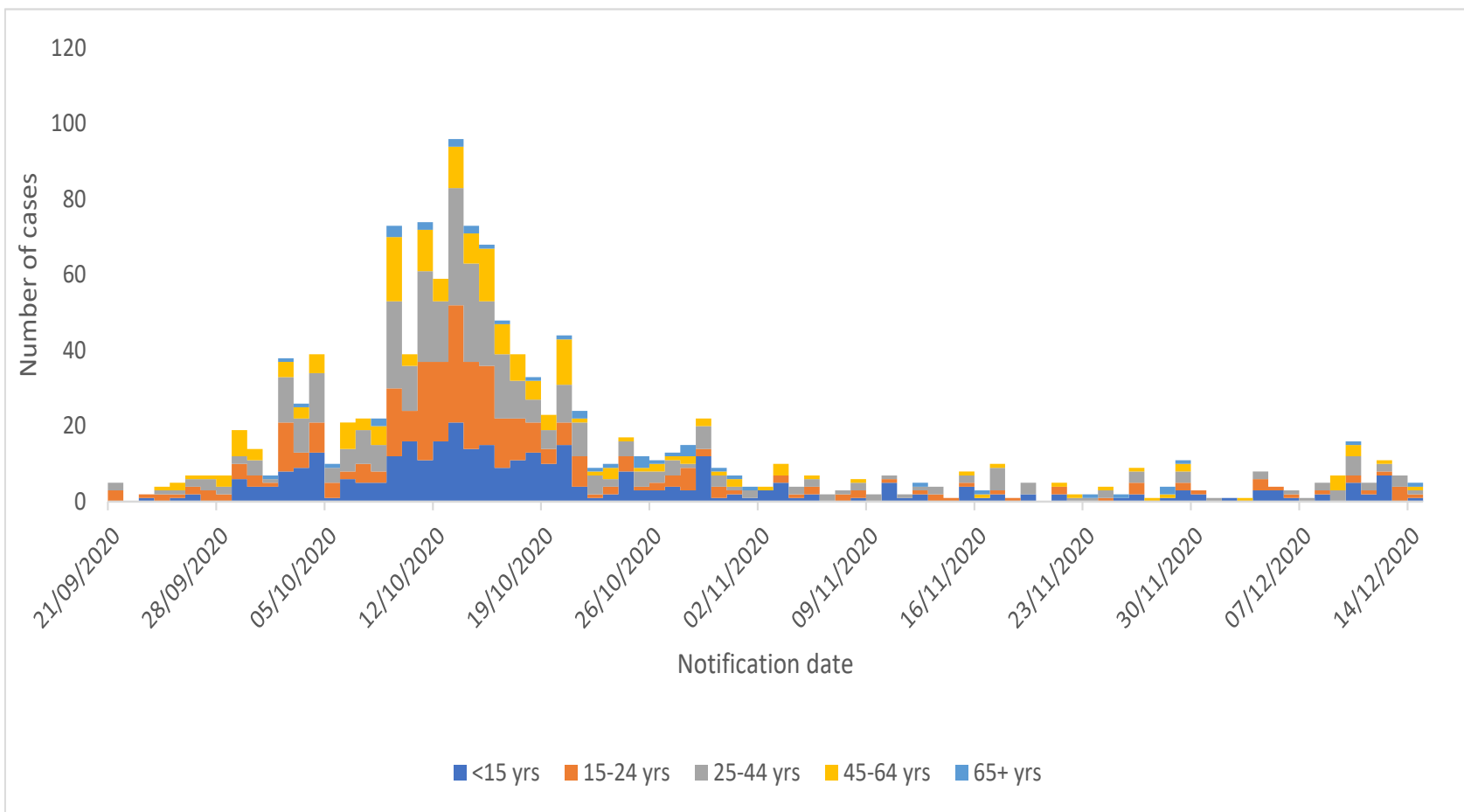
## **Childcare facilities**

2 new outbreaks since last week's report with 8 linked cases

## **Third level institutions**

87 outbreaks since 01/09/2020 – 1000 linked cases

# COVID-19 infections among Irish Travellers - September 20th-December 14<sup>th</sup> 2020



- 1279 confirmed cases
- Includes 293 in CHO3 (23%) & 289 in CHO9 (23%)
- 47% (597/1278) male
- Median age 24 years
- 26% (337/1279) <15yrs
- Among 70 associated outbreaks, 10 had >20 linked cases
- **Two new outbreaks in week 50**
- **48 cases in week 50, compared to average of 28 in previous 4 weeks**

Data source: CIDR December 15<sup>th</sup> 8:30 am

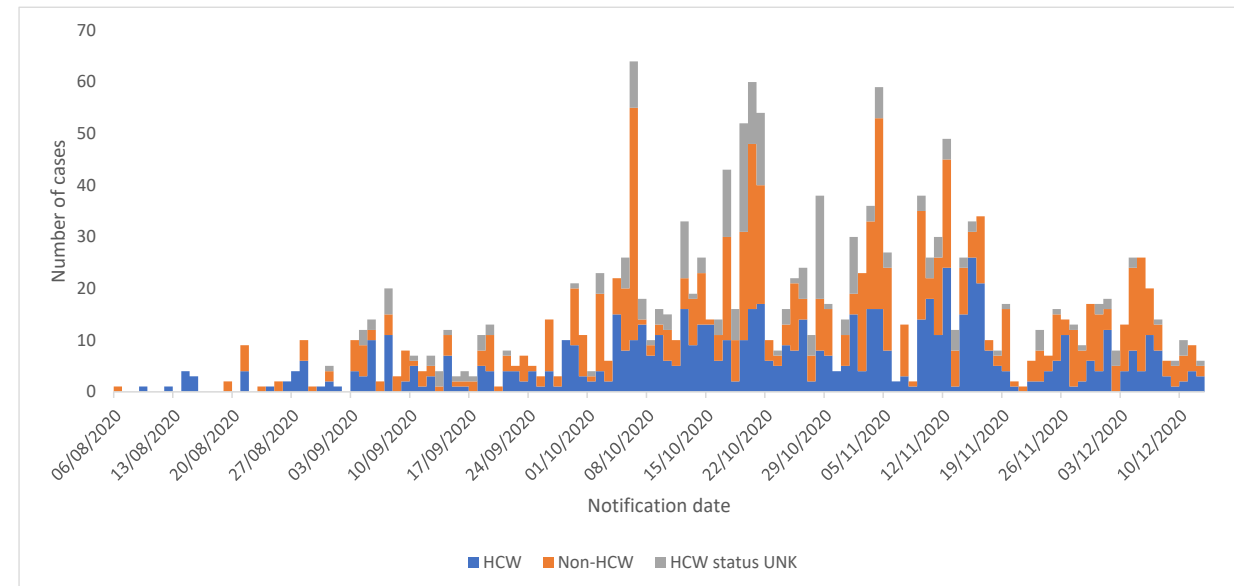
**Inclusion criteria**

Cases linked to outbreaks reported as affecting Irish Travellers OR whose ethnicity is reported as Irish Traveller, September 20<sup>th</sup> 2020 to midnight December 14<sup>th</sup> 2020

## Focus on 39 'OPEN' Nursing Homes and Community Hospital/Long Stay Units August 1<sup>st</sup> - December 12<sup>th</sup> 2020

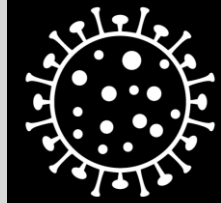


- 998 associated cases (395 HCW/staff cases, 485 client cases, 118 cases HCW status unknown)
- 7 outbreaks include only HCW/staff cases, 29 include both HCW/staff cases and client cases, two outbreaks include client cases only, and for one outbreaks the mix of cases is unclear
- 4 new outbreaks since last week's report – 7 linked cases
- 10 previously notified 'open' outbreaks – 55 additional cases since last week's report
- 25 previously notified 'open' outbreaks – no additional cases since last week's report
- 1-86 linked cases per 'open' outbreak – the five largest 'open' outbreaks have 62, 66, 72, 82 and 86 cases respectively

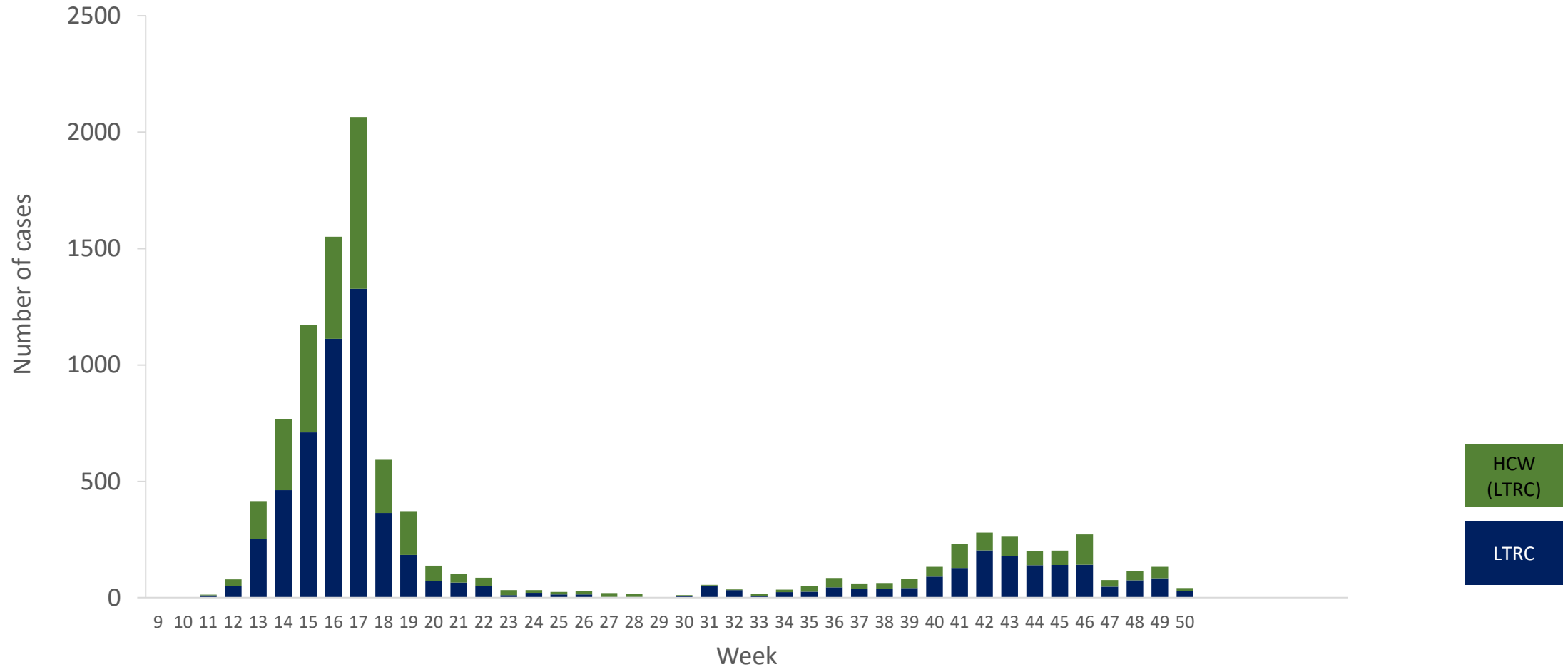


# Cases in long-term residential settings

The number of cases in LTRC was very much 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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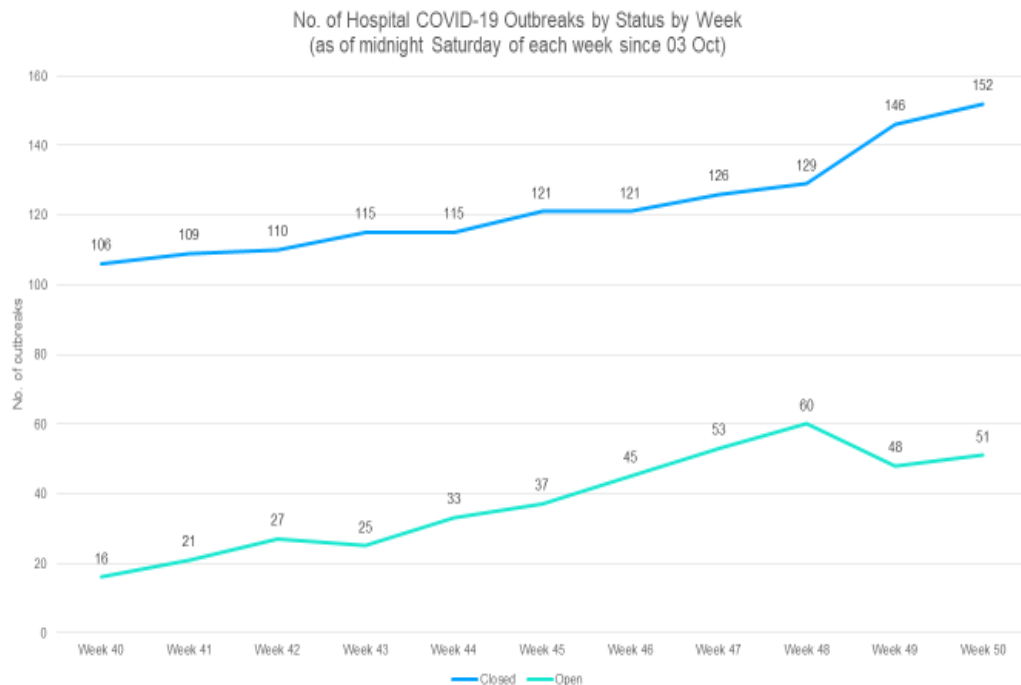


Weekly cases by setting. LTRC: cases amongst residents of long-term residential settings where outbreaks have occurred.  
HCW (LTRC): Cases in healthcare workers associated with outbreaks in LTRC.



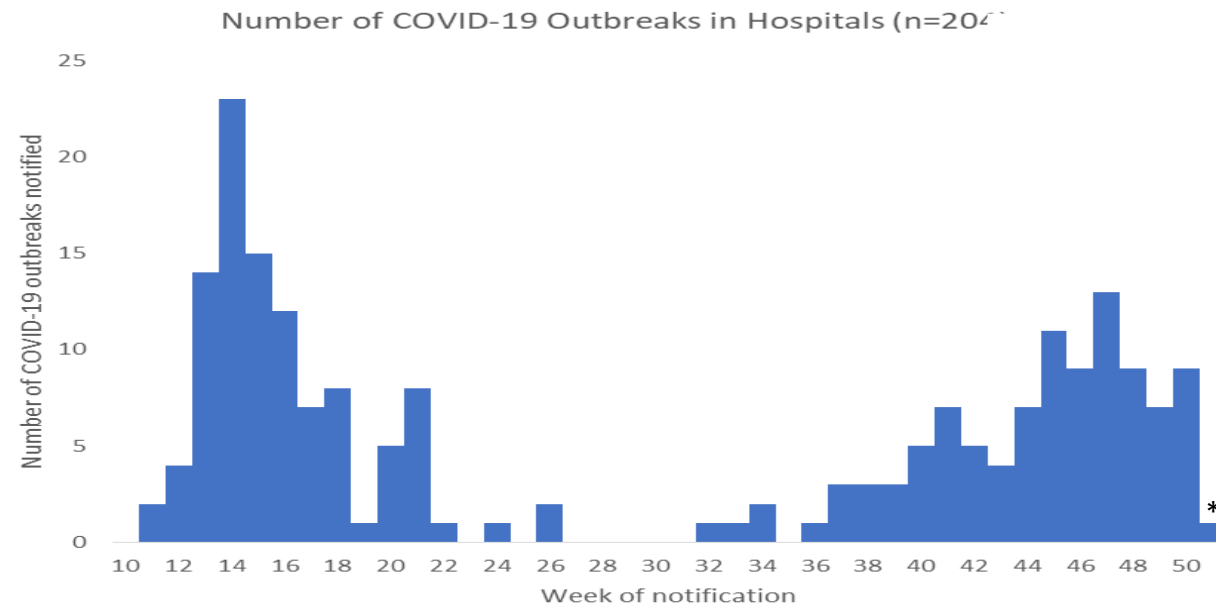
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# Acute Hospital outbreaks to midnight 14<sup>th</sup> December 2020



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Source: HPSC, Epidemiology of COVID-19 Outbreaks/Clusters in Ireland Weekly Reports



## Overview

- **204** outbreaks in acute hospitals
- **50** 'open' acute hospital outbreaks (all occurring since 1<sup>st</sup> September)
  - 20 acute hospitals
  - 975 cases linked to these (range 1-138)

## Update

- 7 new outbreaks since 8<sup>th</sup> December
- 31 confirmed cases linked to these outbreaks (range 2-13)
- 134 cases linked to 16 previously reported open hospital outbreaks
- 6 outbreaks were closed

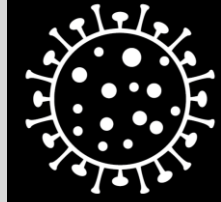
Outbreak status	Number of outbreaks	Confirmed linked cases	Number admitted to ICU	Number Died	Number HCWs
All	204	2,560	59	202	1,408
Open	50	975	16	56	491

Data source: CIDR December 15<sup>th</sup> 2020  
\*Data to midnight 14/12/2020

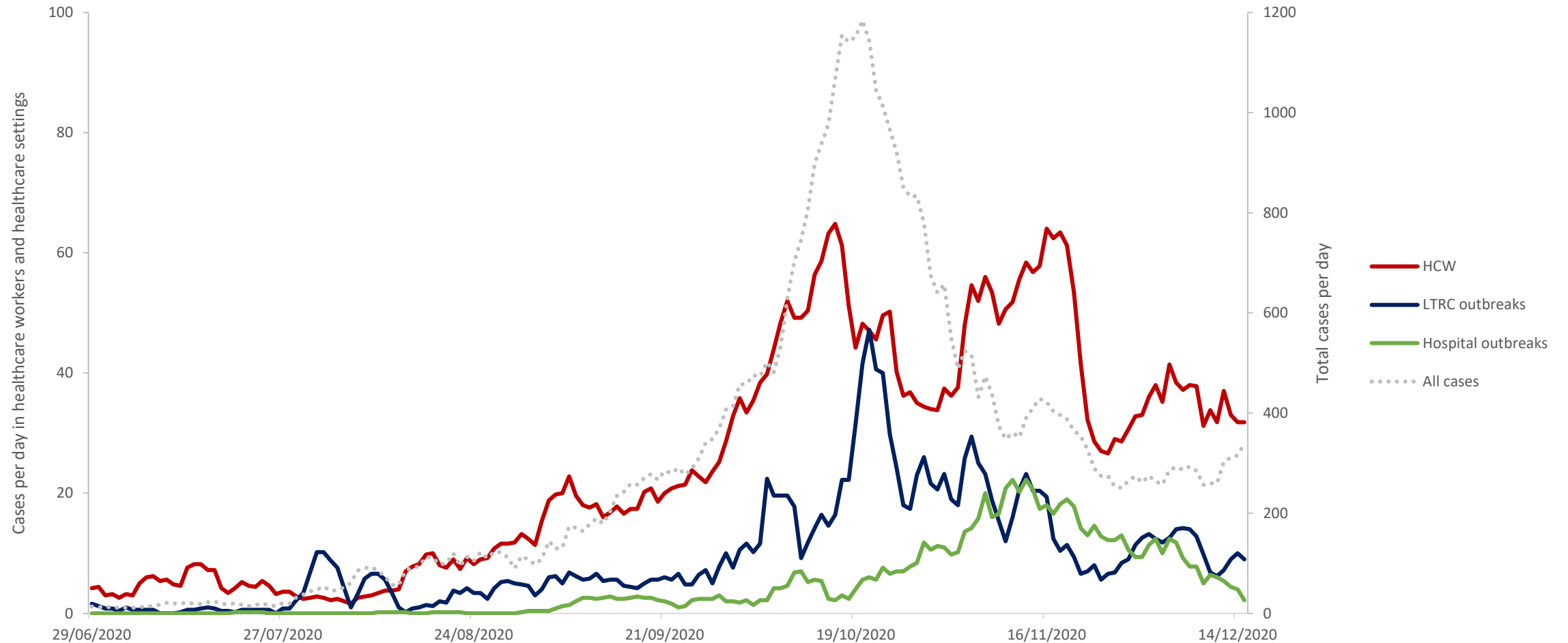


# Persistence in healthcare workers and settings

While overall incidence decreased rapidly, there has been persistent and delayed incidence in healthcare workers and in LTRC, hospital and other healthcare outbreaks.



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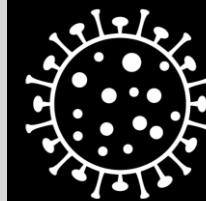
HCW: cases identified as healthcare workers. LTRC outbreaks: cases associated with outbreaks in long-term residential care that are not HCW. Hospital outbreaks: cases associated with hospital and other healthcare outbreaks that are not HCW. Cases dated by event date.



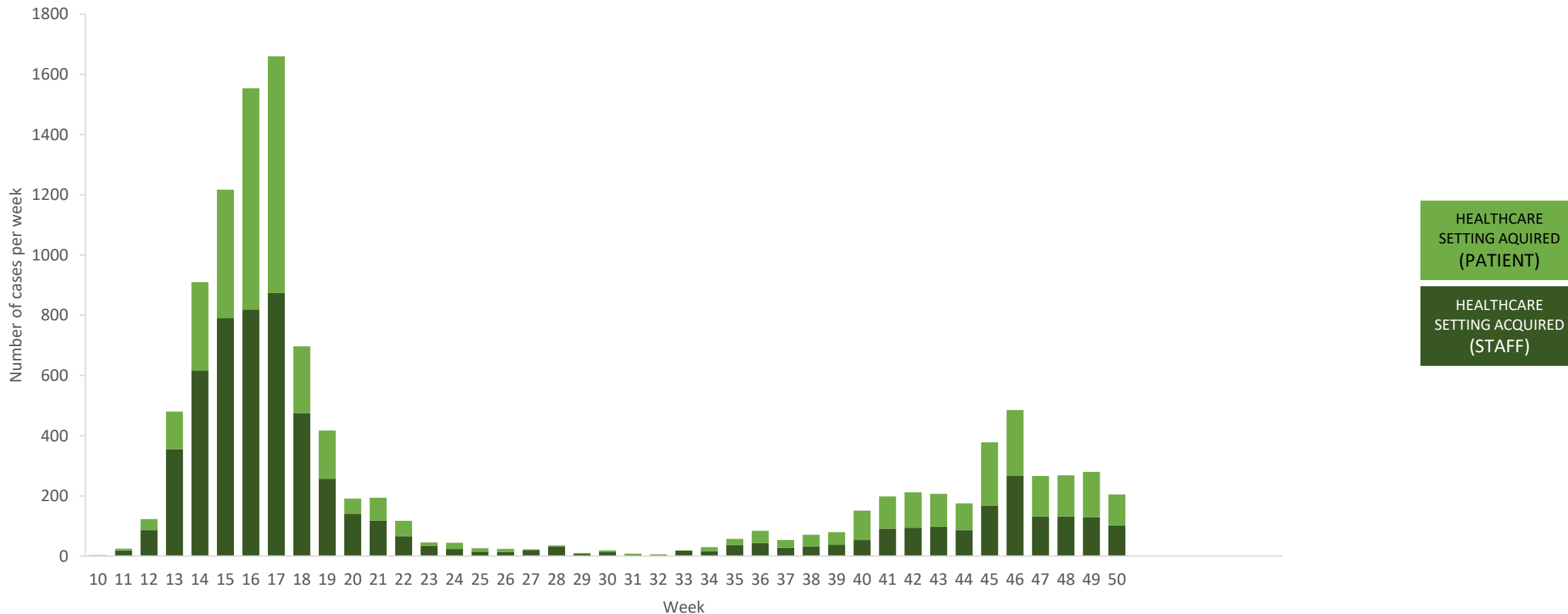
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# Infections in the healthcare setting

We have seen an increased number of infections acquired in the healthcare setting in recent weeks.



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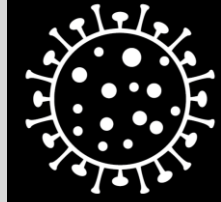
Weekly total number of cases recorded in CIDR as 'healthcare setting acquired' Cases dated by date of specimen collection



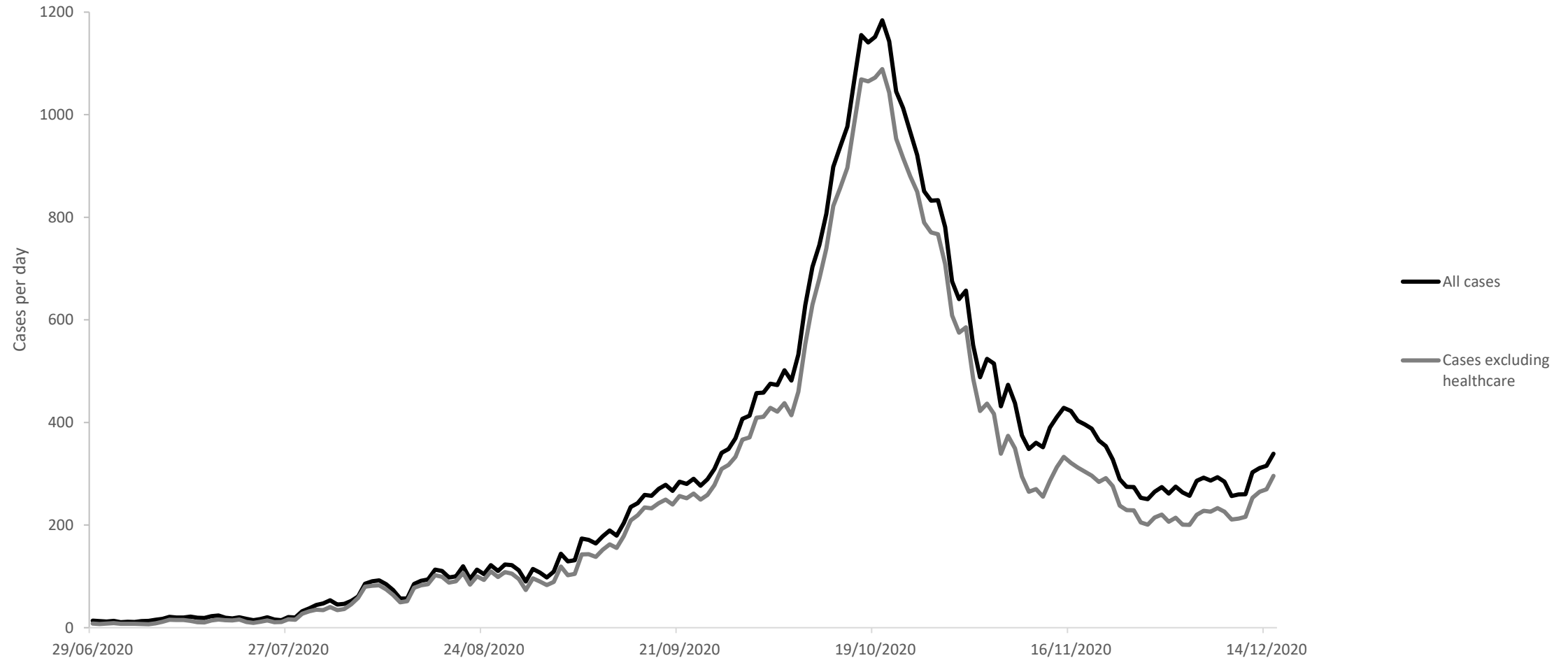
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# Persistence in healthcare workers and settings

Cases in healthcare workers and settings have increased from about 5% of cases to about 15% of cases – the 5 day moving average excluding these cases is 40-50 cases per day lower than the overall figure.



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Cases excluding healthcare excludes healthcare workers, cases associated with outbreaks in long-term residential care and cases associated with hospital and other healthcare outbreaks. Cases dated by event date

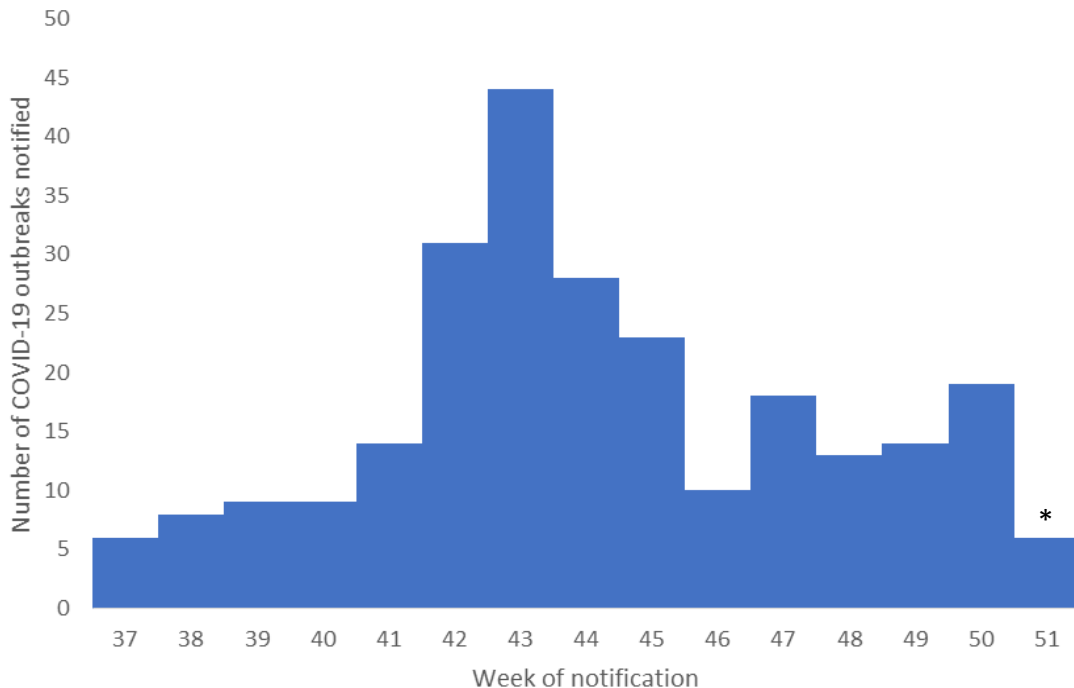


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# Outbreaks associated with school children and staff to 14<sup>th</sup> December 2020 (n=252)



Number of COVID-19 Outbreaks associated with school children and staff (n=252)



## Overview

- 252 outbreaks associated with school children and staff notified
- 1,022 linked confirmed cases in total
- 222 outbreaks have  $\geq 2$  linked cases (range 2- 30)
- 144 outbreaks have been closed; 108 remain open

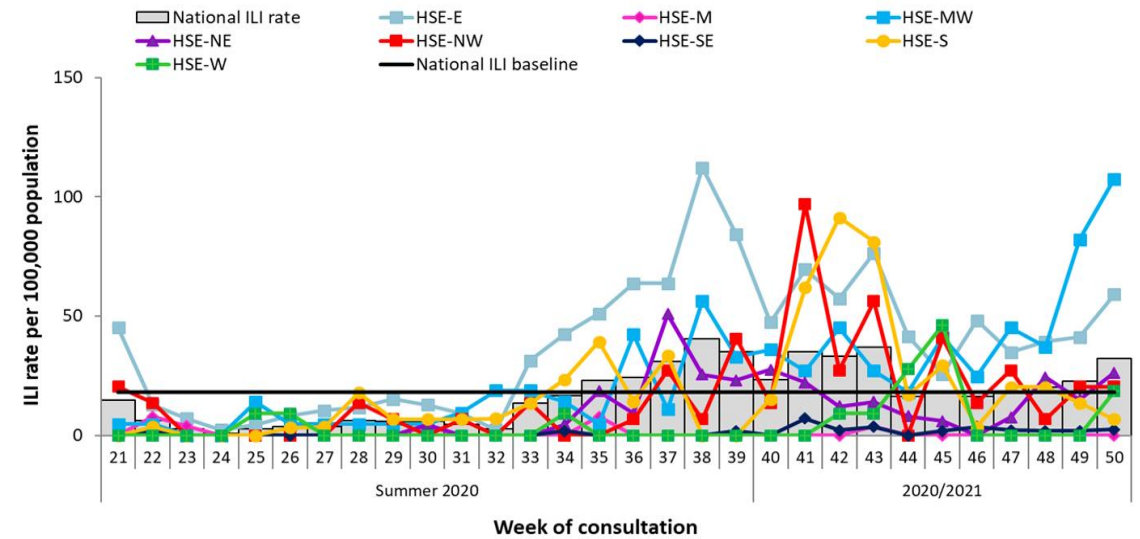
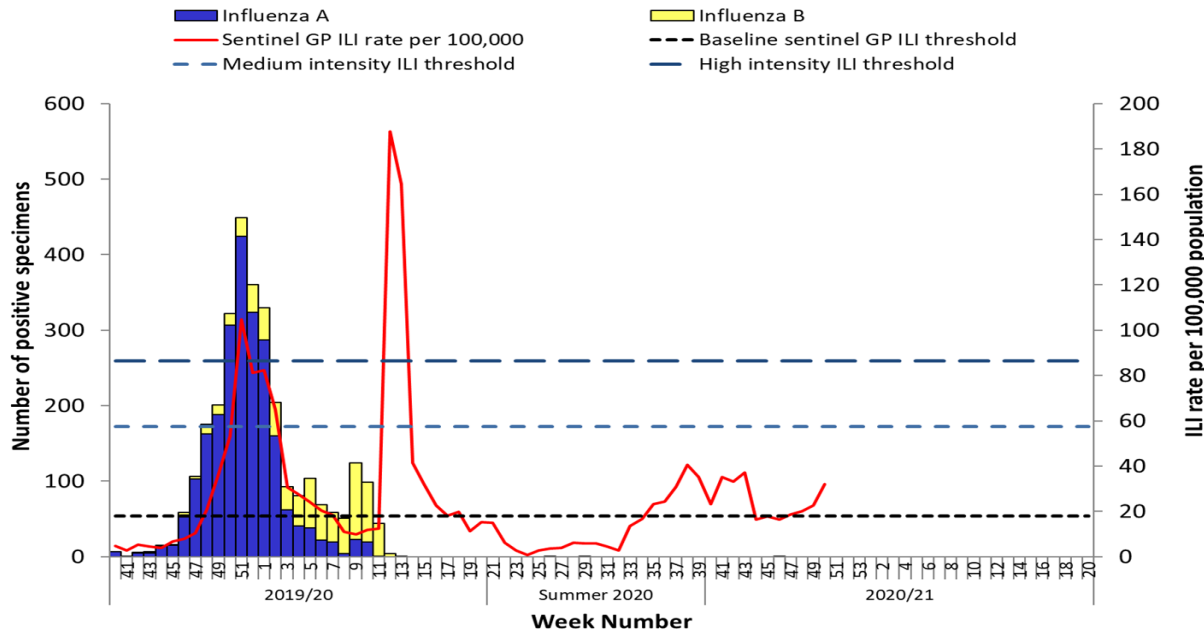
## Update

- 20 new outbreaks since last week
- 84 confirmed cases were linked to 19 of the outbreaks
- 14 of the outbreaks have  $\geq 2$  linked cases (range 2- 14)
- The two most notable outbreaks this week, with 13 and 14 linked cases, were notified in CHO8 and CHO4, respectively and cases were both adults and children
- 12 outbreaks were closed since last week

## Age specific sentinel GP ILI consultation rates per 100,000 population by week and age specific thresholds

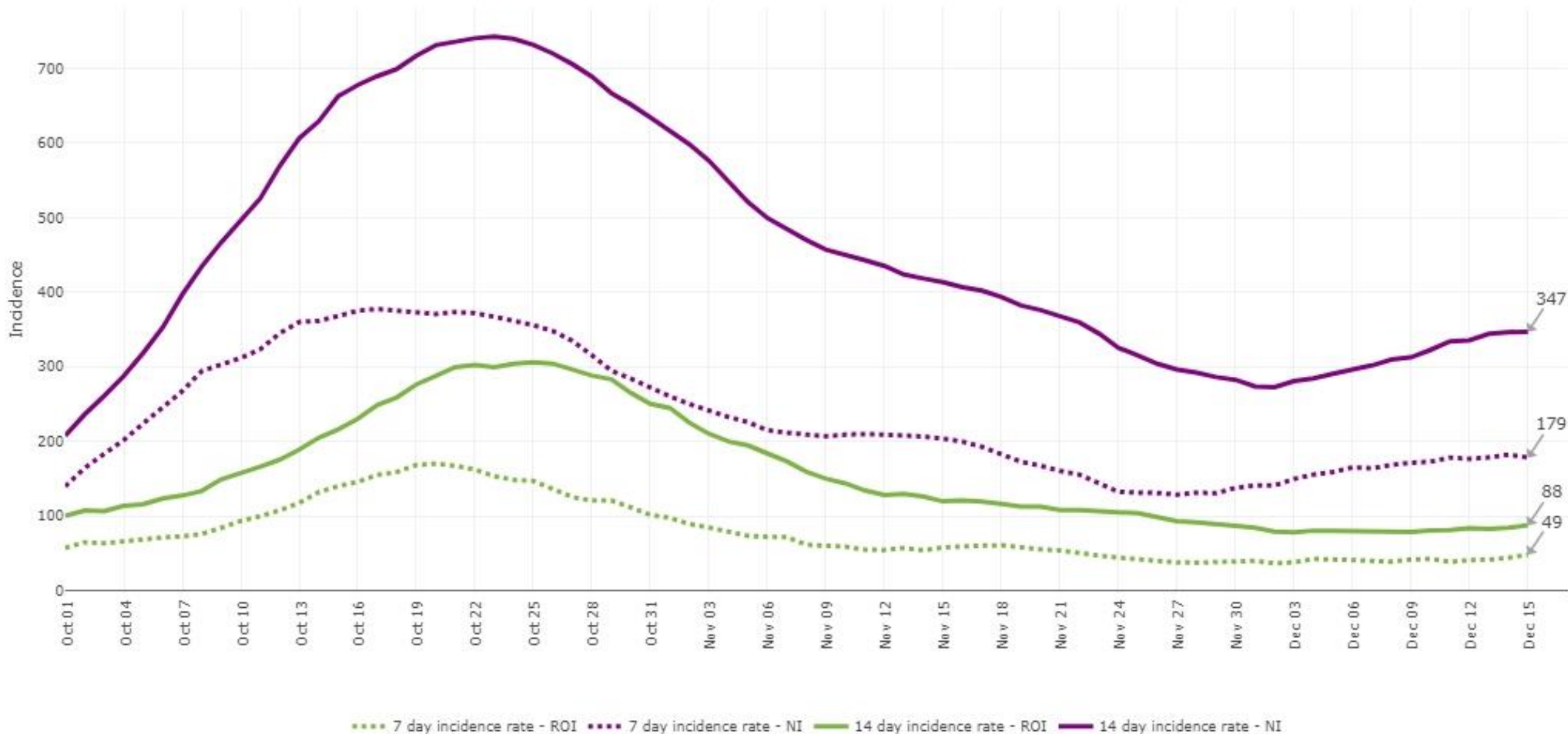


MEM Threshold Levels	Below Baseline	Low	Moderate	High	Extraordinary					
Sentinel GP ILI consultation/100,000 pop.	Week of consultation									
	41	42	43	44	45	46	47	48	49	50
All Ages	35.2	33.1	37.1	16.5	17.7	16.4	18.7	20.2	22.7	32.1
<15 yrs	25.8	27.8	31.8	10.0	16.1	24.7	18.7	28.0	24.8	34.8
15-64 yrs	42.2	37.1	40.5	18.8	19.0	13.3	19.7	19.1	22.4	31.3
≥65 yrs	16.3	22.0	29.1	15.7	14.1	18.2	13.4	13.0	20.9	31.8
Number of reporting practices (N=60)	55	55	56	57	54	58	57	58	58	53



Note: Moving Epidemic Method (MEM) threshold levels are colour coded – the MEM method is recommended internationally and by ECDC to establish thresholds for influenza-like illness (ILI)/influenza

7 and 14 day Incidence rates for ROI and NI



Note – calculated using the 2016 population estimates for both ROI and NI.

Source: HPSO CIDR Extract 16122020 and health-ni.gov.uk daily data 16/12/20.

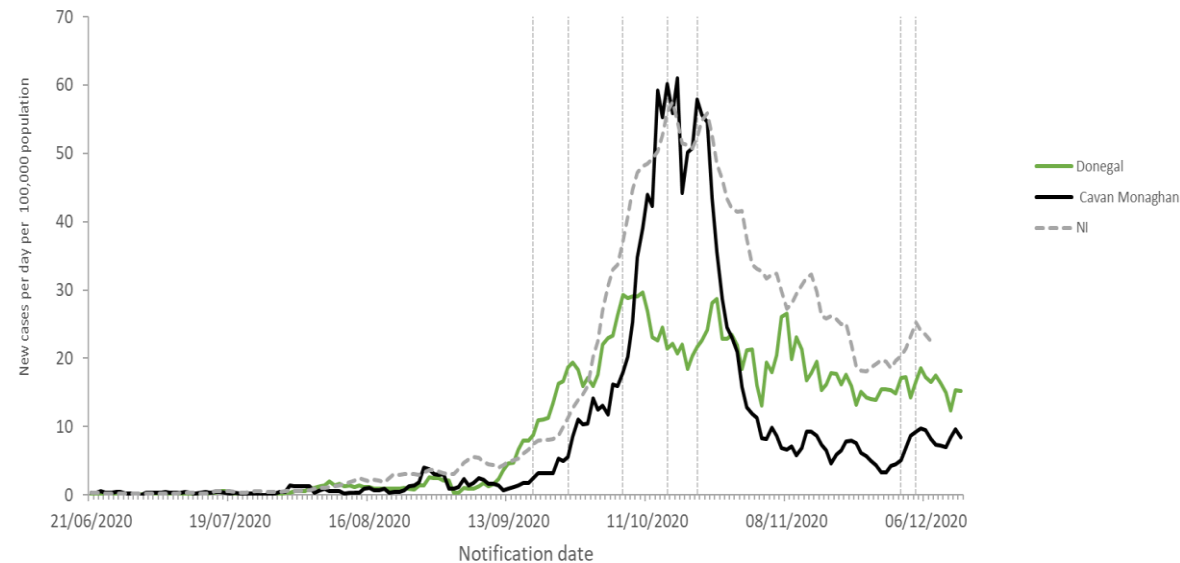
## Laboratory Completed Tests during Last 7 Days (9 - 15 Dec 2020) by LGD

Local Government District	+ve Cases Last 7 Days	Last 7 Day Rate per 100K	Individuals Tested Last 7 Days
Antrim and Newtownabbey	255	178.7	2,586
Ards and North Down	118	73.3	2,823
Armagh City, Banbridge and Crai...	417	195.2	3,696
Belfast	399	116.9	6,812
Causeway Coast and Glens	263	182.3	2,457
Derry City and Strabane	249	165.3	2,626
Fermanagh and Omagh	206	176.3	2,410
Lisburn and Castlereagh	193	132.9	3,039
Mid and East Antrim	378	272.7	2,635
Mid Ulster	299	202.7	2,855
Newry, Mourne and Down	416	230.9	3,916
Not Known	133		1,685
<b>Total</b>	<b>3,326</b>	<b>176.8</b>	<b>37,540</b>

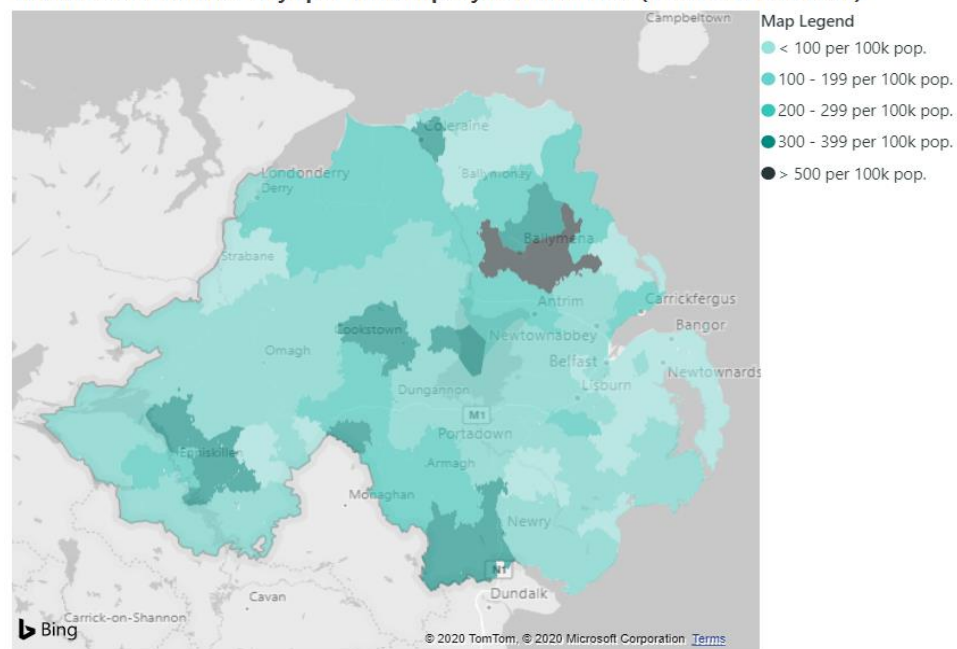
Monaghan 59 - 137  
Cavan 104 - 147

Donegal 130 - 246

Louth 118 -  
202



## Positive Cases in last 7 Days per 100K Pop. by Postal District (07 Dec-13 Dec 2020)



## COVID-19 deaths reported by date of death with 7 day rolling average



## **Testing and contact tracing NPHEt update**

### ***Testing***

Over the seven-day period, 7<sup>th</sup>-13<sup>th</sup> December, there has been approximately 85,374 swabs taken for COVID-19 testing.

Of these:

- 38,170 (45%) of these were taken in the community
- 24,716 (29%) swabs were taken in acute settings.
- 22,488 (26%) swabs taken were taken as part of the Serial Testing programmes of staff in residential care facilities and staff in food production facilities.

### ***Contact Tracing***

From 8<sup>th</sup> – 14<sup>th</sup> of December, a total of 10,016 calls were made in the Contact Tracing Centres. Over past seven days, the average number of close contacts per case was 3.8.

Additional activities ongoing in contact tracing include active surveillance calls daily or every second day in addition to daily active surveillance texts. Furthermore, the HSE is piloting Source Identification (Retrospective Tracing) with aim to implement this fully by mid-December.



## Turnaround Times (1<sup>st</sup> – 7<sup>th</sup> December)

### *End-to-end turnaround time*

- The median end-to-end turnaround time, from referral to SMS, for **not detected** tests in the community setting was **1.5 days**.
- The median turnaround time for time, from referral to communication of a **detected result** by SMS, in community settings was **1.8 days**.
- The median end-to-end turnaround time, from referral to the end of contact tracing, for **detected cases** in the community setting was **2.1 days**.

**Overall Swab to laboratory result communicated – Medians:** 26 hours in Acute , 30 hours in Serial Testing, 34 hours in Community

### *Referral to appointment*

In the community, the median time from referral to appointment was 0.2 days.

94% of GP referrals are provided with a COVID-19 test appointment within 24 hours.

### *Contact Tracing:*

The median time to complete all calls, from the 1<sup>st</sup> – 7<sup>th</sup> December was 0.8 days.

## SARS-CoV2 Day 0 Test Results by Circumstances – Contacts Created Last 4 Weeks (16/11 to 13/12)

### CMP close contact update (30/11-13/12)

#### Attendance at Testing

Of the close contacts created between 7th and 13th December, to date 84% have attended their Day 0 Test. Of those created between 30th November and 6th December 78% have, to date, attended for their Day 7 test.

#### Positivity Rates

The current positivity rates for close contacts created between 7<sup>th</sup> December and 13th December are 13% and 3% at day 0 and day 7 testing respectively.

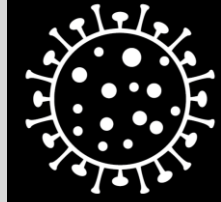
125,000 close contacts Day 0 test – 11% positive  
30,000 close contacts Day 7 test – 2.8%

<i>Circumstances of Contact</i>	Positive Results	Total Number of Results Reported	Positivity Rate
Household	1373	6475	21%
Social	326	3059	11%
Workplace	63	842	8%
Pre-School/Crèche	38	1281	3%
Primary School	133	3430	4%
Secondary School	22	1469	4%
Special School	1	76	1%
Third Level Education	10	52	19%
Healthcare Setting: Patient	15	123	12%
Healthcare Setting: Staff	11	91	12%
Sport	2	36	6%
Transport: Flight	44	604	7%
Transport: Other	14	163	9%
Other	29	275	11%
Not Recorded	291	2227	13%
<b>Total</b>	<b>2372</b>	<b>20203</b>	<b>12%</b>

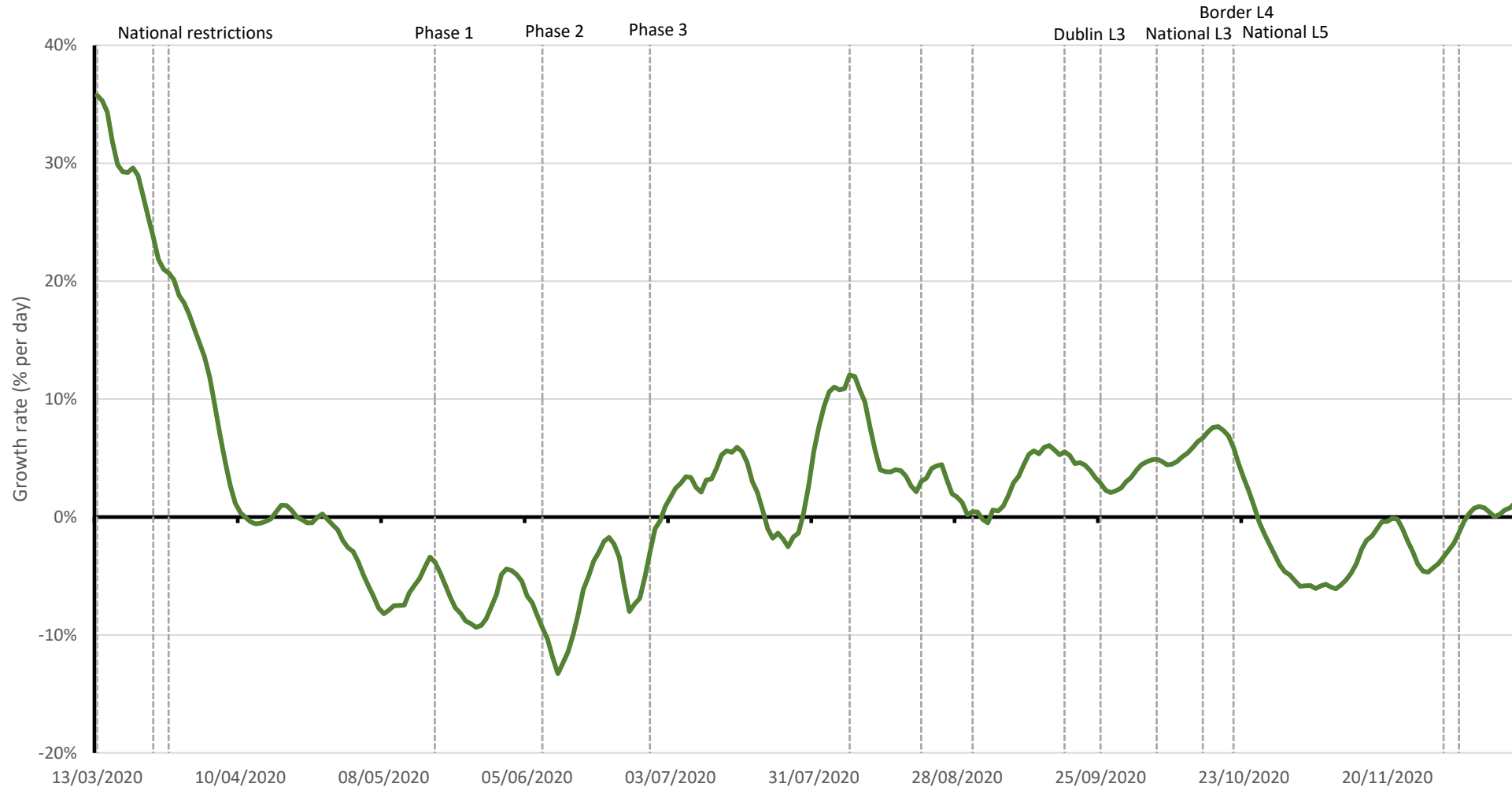
*Note: Circumstances of Contact with fewer than 5 positive results are indicated by an \*. Further details can be found in Appendix 3 of relevant report*

# Growth rate for case numbers

When the pandemic in Ireland grew very rapidly in early March, at over 30% per day. The national restrictions introduced in late March suppressed transmission, with daily incidence decreasing at -5% to -10% per day. This was sustained until the end of June, after which case numbers started to grow, on average at 4% to 5% per day. A period of very rapid growth can be seen in early August associated with the outbreaks in Kildare-Laois-Offaly. Level 3 measures in Dublin reduced growth rate to zero for a period (data not shown). Incidence was decreasing at -5% to -7% per day, but the average percentage change in case numbers over the last number of days is 1.5-2.0%



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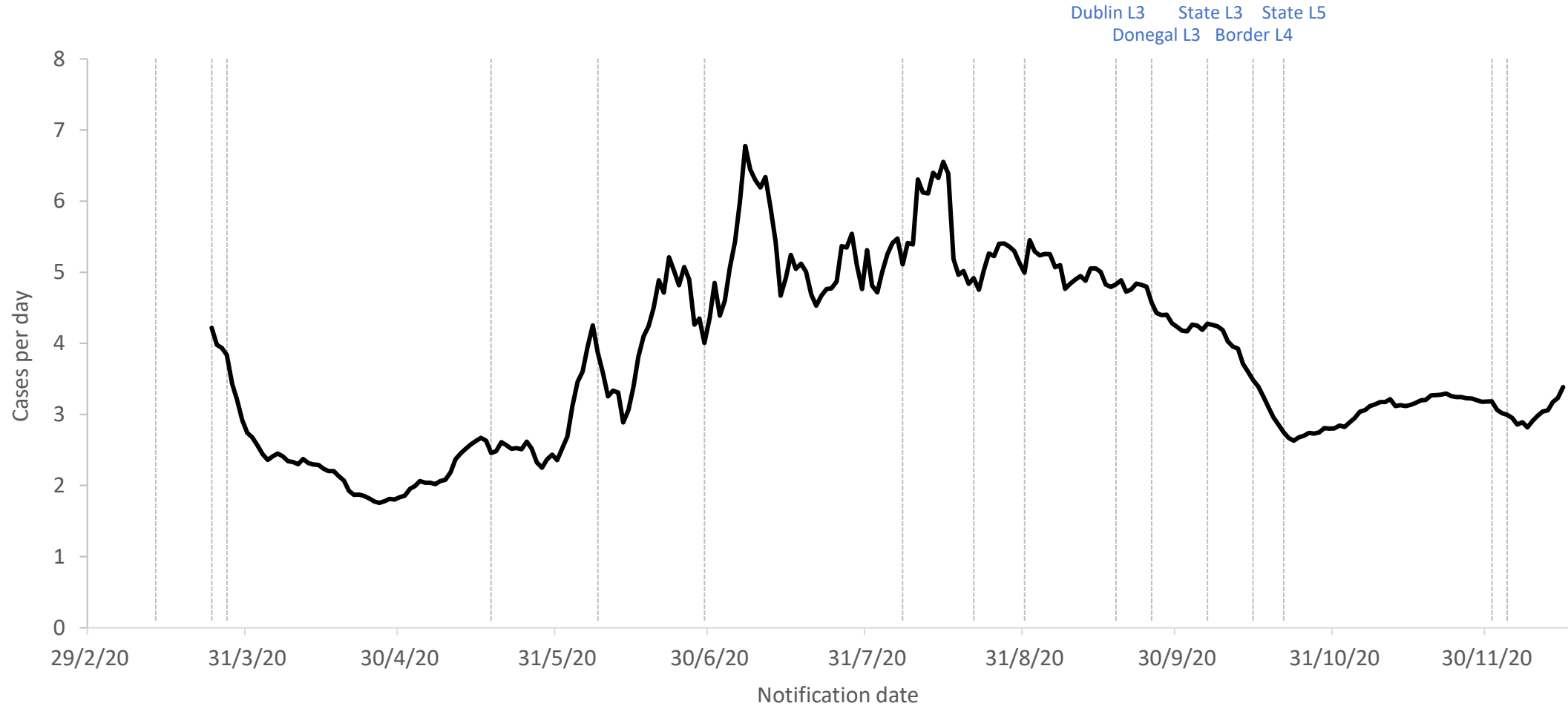
Growth rate calculated as the average growth rate over a 14-day trailing window; cases dated by notification (event) date.



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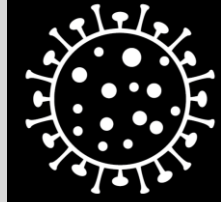
# Close contacts

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 has increased significantly over the last week



# Estimates of effective reproduction number (R)

Reproduction number is difficult to estimate as the situation is changing – it is currently estimated at 1.1 to 1.3.



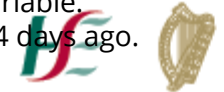
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Method	Estimate	95% confidence interval
SEIR model-inferred	1.25	1.06 – 1.48
Bayesian model	1.25	0.69 – 1.98
Time-dependent R	0.75	0.59 – 0.90
GAM estimate 8 Dec 2020	1.07	0.88 – 1.26
GAM estimate 15 Dec 2020	1.18	0.88 – 1.47

Estimates generated 16 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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## EU/UK ranked by 14 day incidence (15<sup>th</sup> December)

EU/EEA and the UK	14 day incidence	Previous 14 day incidence	% change in 14 day incidence
Lithuania	1237.8	933.6	33%
Croatia	1191.5	1045.6	14%
Luxembourg	1153.7	1185.7	-3%
Slovenia	1006.8	975.0	3%
Sweden	762.1	651.3	17%
Hungary	691.0	721.2	-4%
Netherlands	584.5	420.7	39%
Denmark	563.5	296.2	90%
Cyprus	557.7	374.5	49%
Czechia	539.6	539.5	0%
Bulgaria	521.6	626.5	-17%
Portugal	518.6	709.9	-27%
Slovakia	504.8	341.7	48%
Austria	472.9	819.9	-42%
Latvia	467.1	341.4	37%
Estonia	458.1	336.2	36%
Romania	437.8	572.6	-24%
Italy	420.4	654.4	-36%
Poland	395.7	679.1	-42%
United Kingdom	355.2	352.7	1%
Germany	343.0	301.2	14%
Malta	312.8	393.2	-20%
Belgium	275.0	340.6	-19%
France	243.5	357.9	-32%
Spain	221.8	323.7	-31%
Greece	190.9	277.0	-31%
Finland	111.9	99.1	13%
<b>Ireland</b>	<b>79.1</b>	<b>84.8</b>	<b>-7%</b>



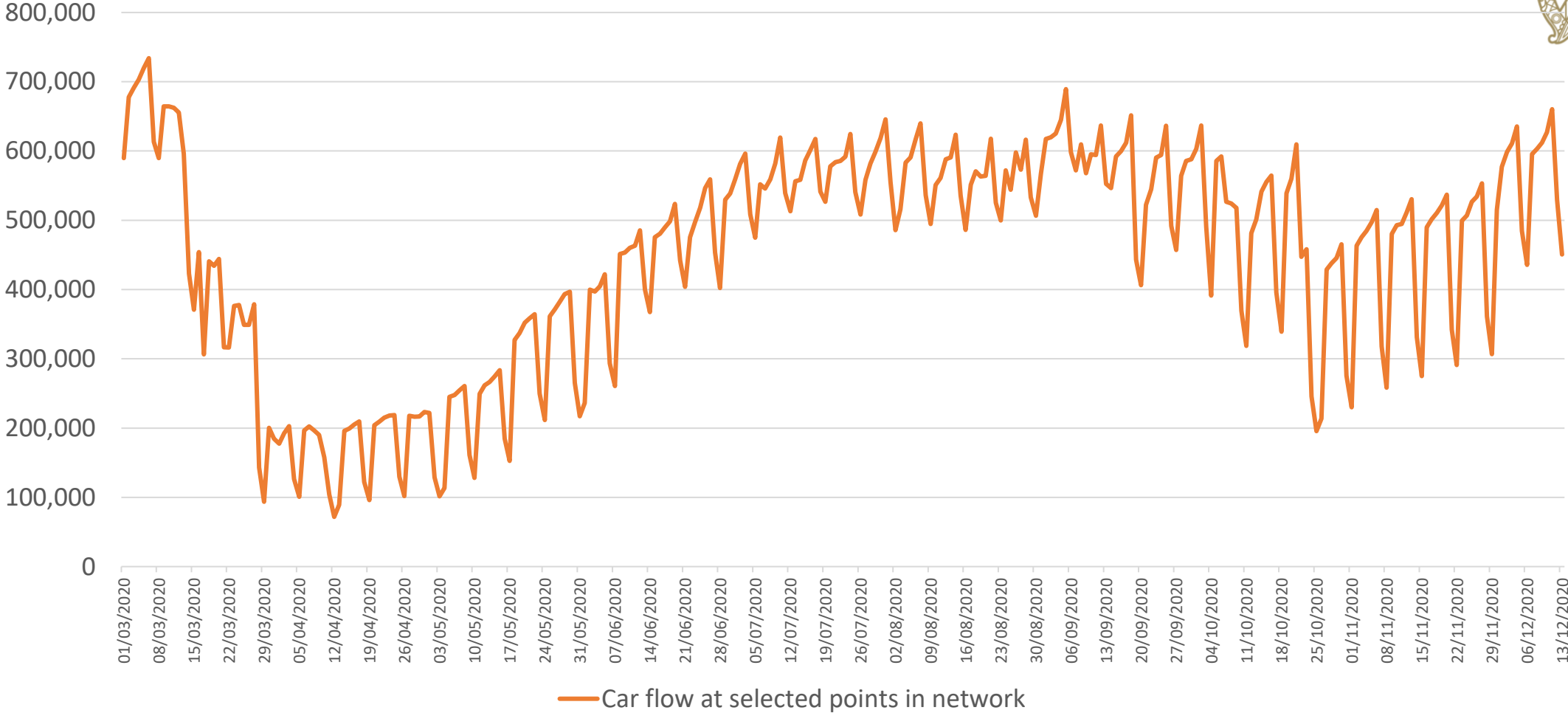


### EU/UK ranked by 7 day percentage change (15<sup>th</sup> December)

EU/EEA and the UK	7 day incidence	Previous 7 day incidence	% change in 7 day incidence
Denmark	353.3	210.2	68%
Czechia	319.8	219.8	46%
Slovakia	296.8	208.0	43%
Netherlands	340.5	244.1	39%
Lithuania	697.4	540.4	29%
United Kingdom	195.0	160.3	22%
Germany	187.7	155.3	21%
Sweden	407.8	354.3	15%
France	129.9	113.6	14%
Cyprus	294.9	262.8	12%
Finland	58.3	53.6	9%
Belgium	143.2	131.8	9%
Estonia	238.1	220.0	8%
Croatia	611.9	579.7	6%
<b>Ireland</b>	<b>40.1</b>	<b>39.0</b>	<b>3%</b>
Romania	220.2	217.7	1%
Slovenia	503.0	503.8	0%
Latvia	231.4	235.7	-2%
Portugal	253.7	264.9	-4%
Poland	192.1	203.6	-6%
Bulgaria	249.8	271.8	-8%
Spain	106.0	115.8	-8%
Luxembourg	547.0	606.7	-10%
Austria	214.9	258.0	-17%
Hungary	307.7	383.3	-20%
Italy	187.2	233.2	-20%
Malta	134.8	178.0	-24%
Greece	81.1	109.9	-26%

- As of 16<sup>th</sup> Dec, this daily data is now sourced from Our World In Data (OWID) instead of ECDC as they have switched to weekly reporting (Thursday evenings).
- OWID source their confirmed cases and deaths data from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU). <https://github.com/owid/covid-19-data/tree/master/public/data>

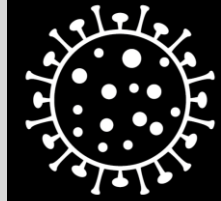
# Daily Traffic Flow



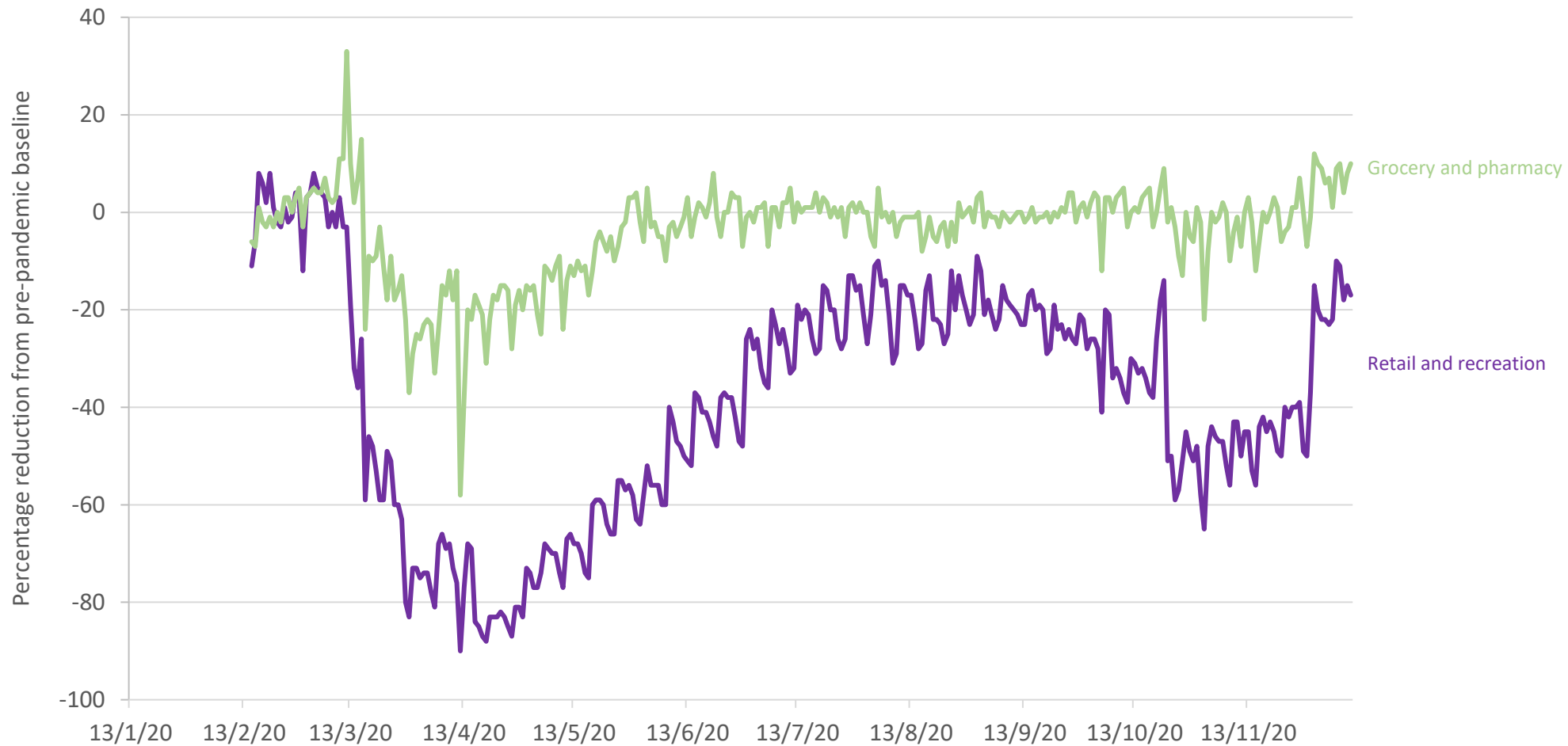


# Google community mobility

These data show numbers of people in grocery stores and pharmacies, and retail and indoor recreation settings, 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 numbers in retail and recreation settings reduced greatly on Level 5 and is back to summer levels now.

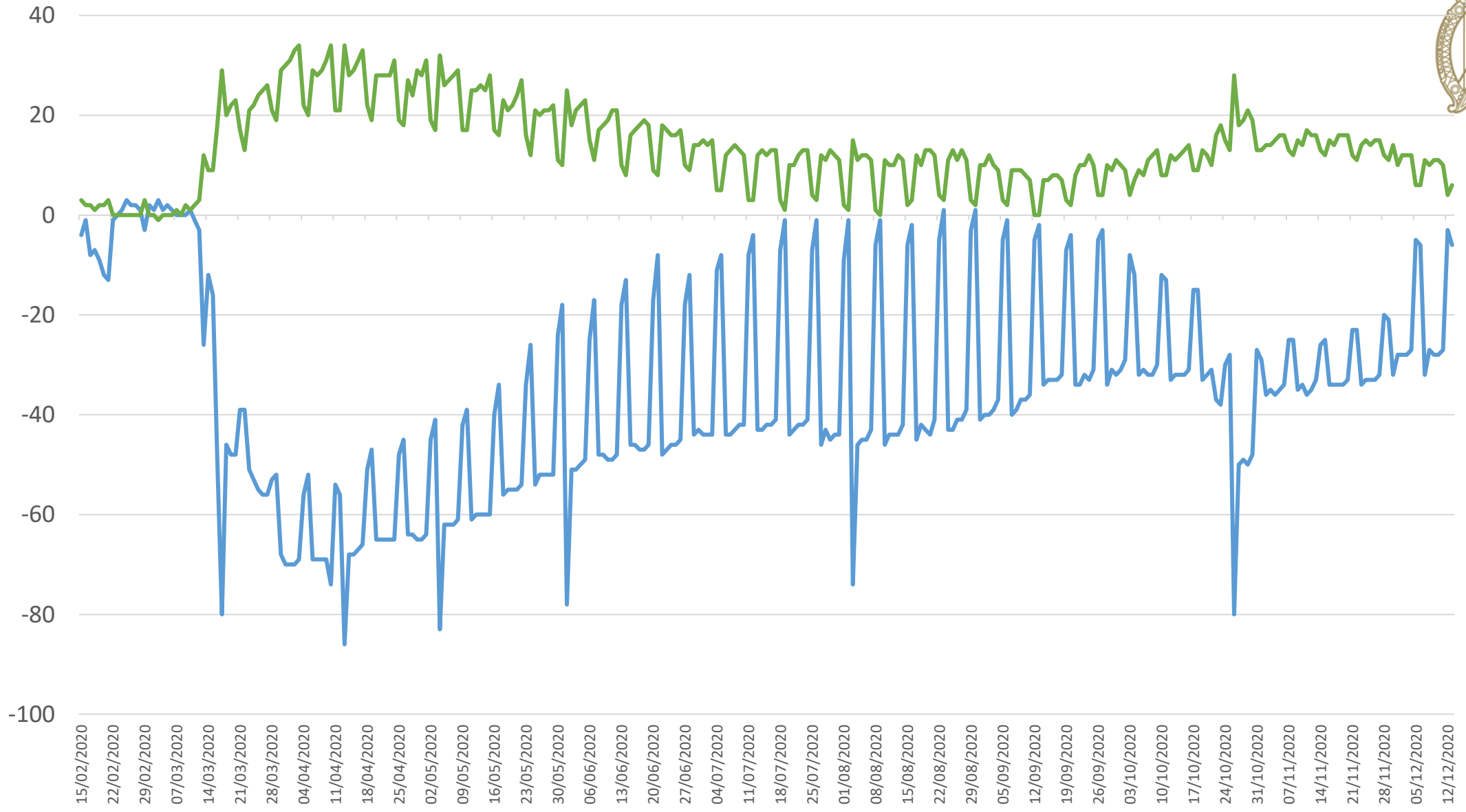


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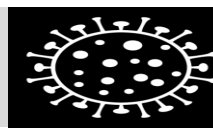
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# Google Mobility Ireland % change from baseline



workplaces

residential



Last week the situation was static

- growth rate close to 0%
- $R$  was estimated at 0.9-1.0\*
- measures of *mobility* had *increased* but *no. of close contacts/case* was *stable*

Persistent

- delayed incidence in *healthcare workers and outbreaks*
- numbers in hospital at approximately 200
- numbers in intensive care and deaths per day are not decreasing

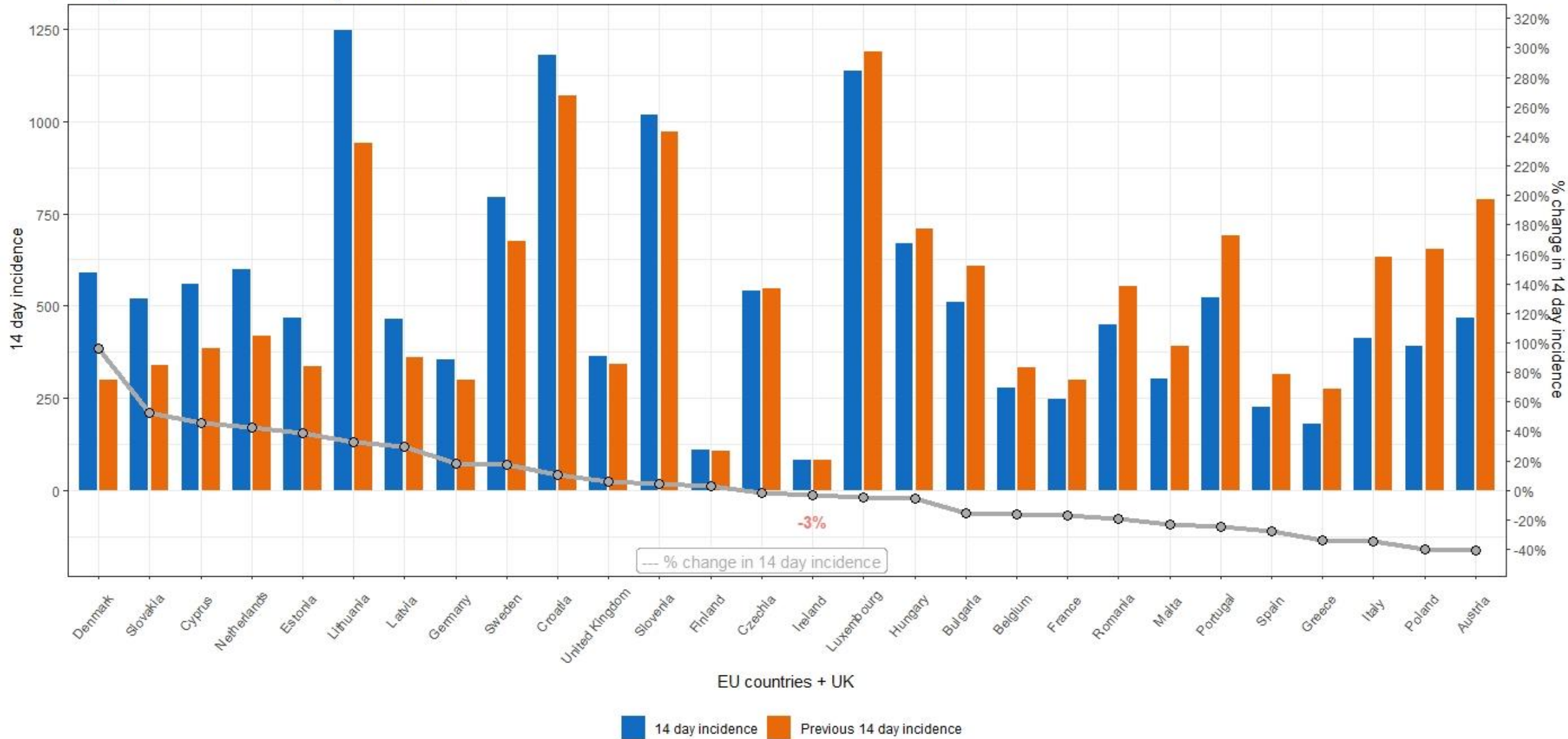
This week

- *Increasing referrals for testing*
- *Increasing activity as reported by GPs*
- *Increasing ILI rates*
- *Increasing 5-day average, 7- and 14-day incidence*
- *Increasing positivity rates*
- *Growth rate estimated at 1.5% - 2.0%*
- *$R$  estimated at 1.1 -1.3\**
- *Increasing mobility*
- *Very concerning situation internationally and in Northern Ireland with implications for travel over the coming weeks*

Remain extremely cautious

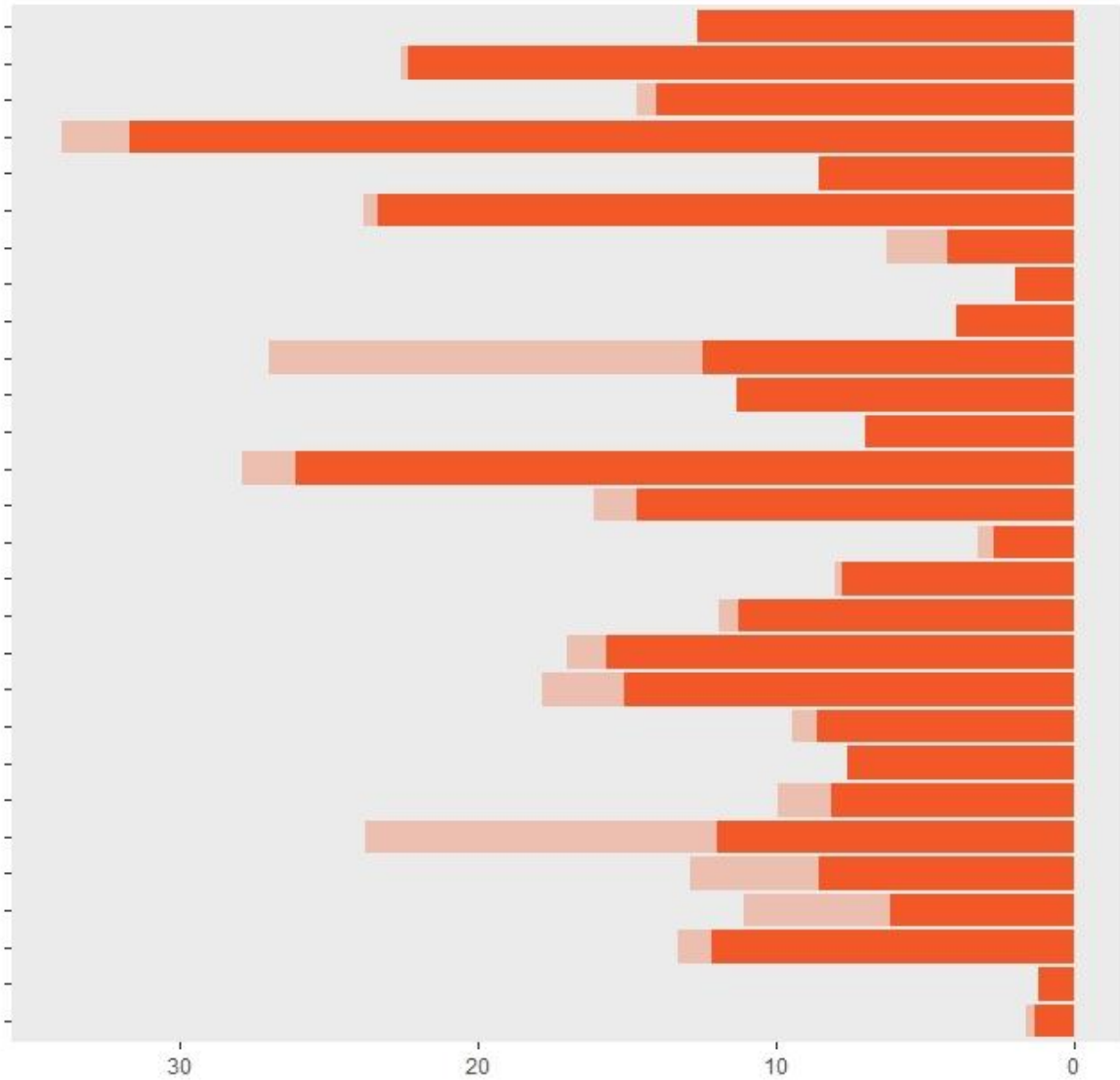
- *We are now at high risk of surge in January*
- *If measures are eased next week this will lead to increased socialization and opportunity for transmission, with high likelihood of intergenerational spread and consequent impact on older people and those with medical comorbidity, with implications for health service capacity over the coming weeks*

European 14 incidence rates (15 December)



- As of 16<sup>th</sup> Dec, this daily data is now sourced from Our World In Data (OWID) instead of ECDC as they have switched to weekly reporting (Thursday evenings).
- OWID source their confirmed cases and deaths data from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU). <https://github.com/owid/covid-19-data/tree/master/public/data>

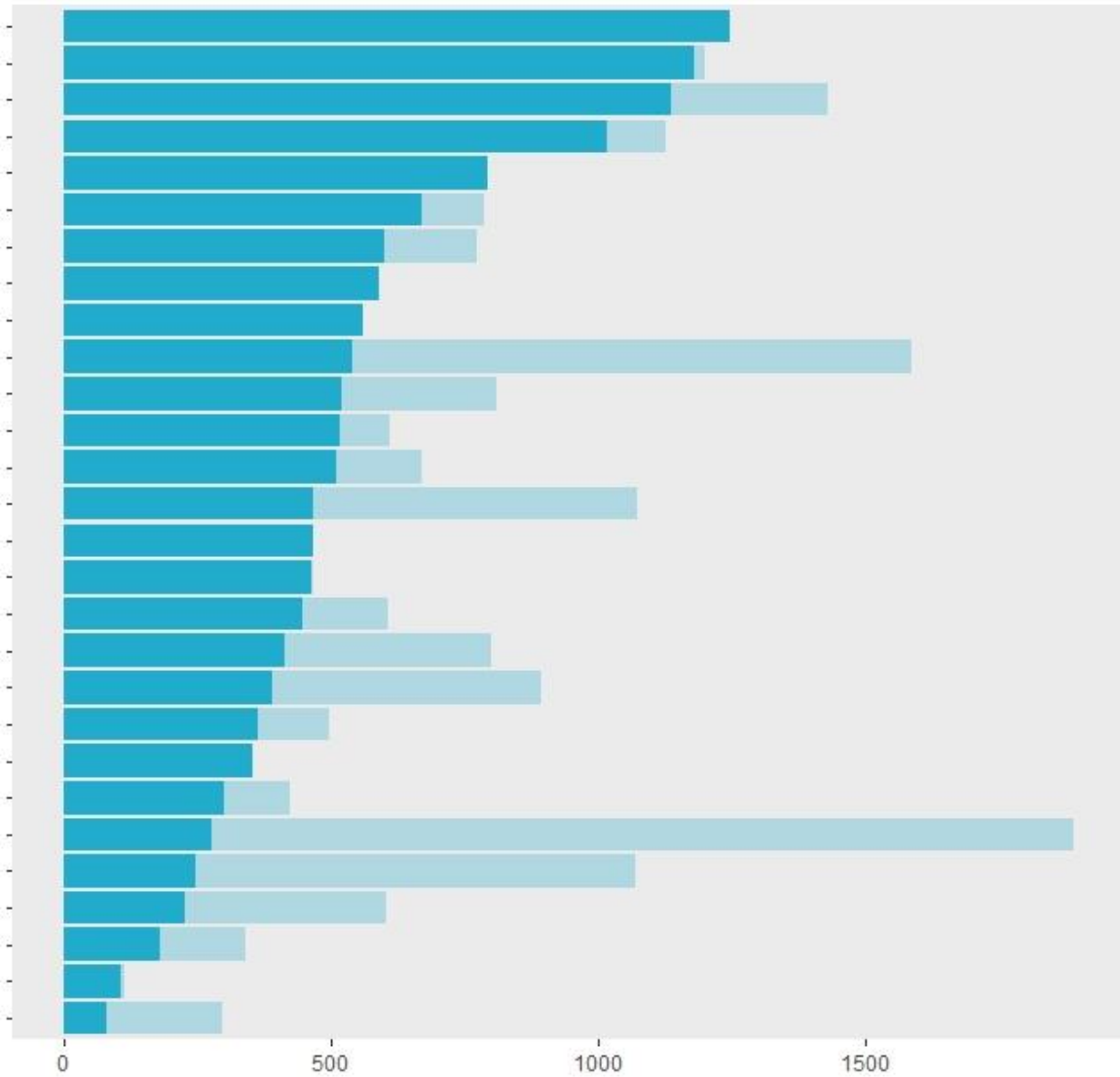
14 day mortality rate



EU Country

- Lithuania
- Croatia
- Luxembourg
- Slovenia
- Sweden
- Hungary
- Netherlands
- Denmark
- Cyprus
- Czechia
- Portugal
- Slovakia
- Bulgaria
- Austria
- Estonia
- Latvia
- Romania
- Italy
- Poland
- United Kingdom
- Germany
- Malta
- Belgium
- France
- Spain
- Greece
- Finland
- Ireland

14 day case incidence



Current 14 day mortality rate Highest mortality rate during 2nd wave (Sep-Dec)

Current 14 day case incidence Highest case incidence during 2nd wave (Sep-Dec)

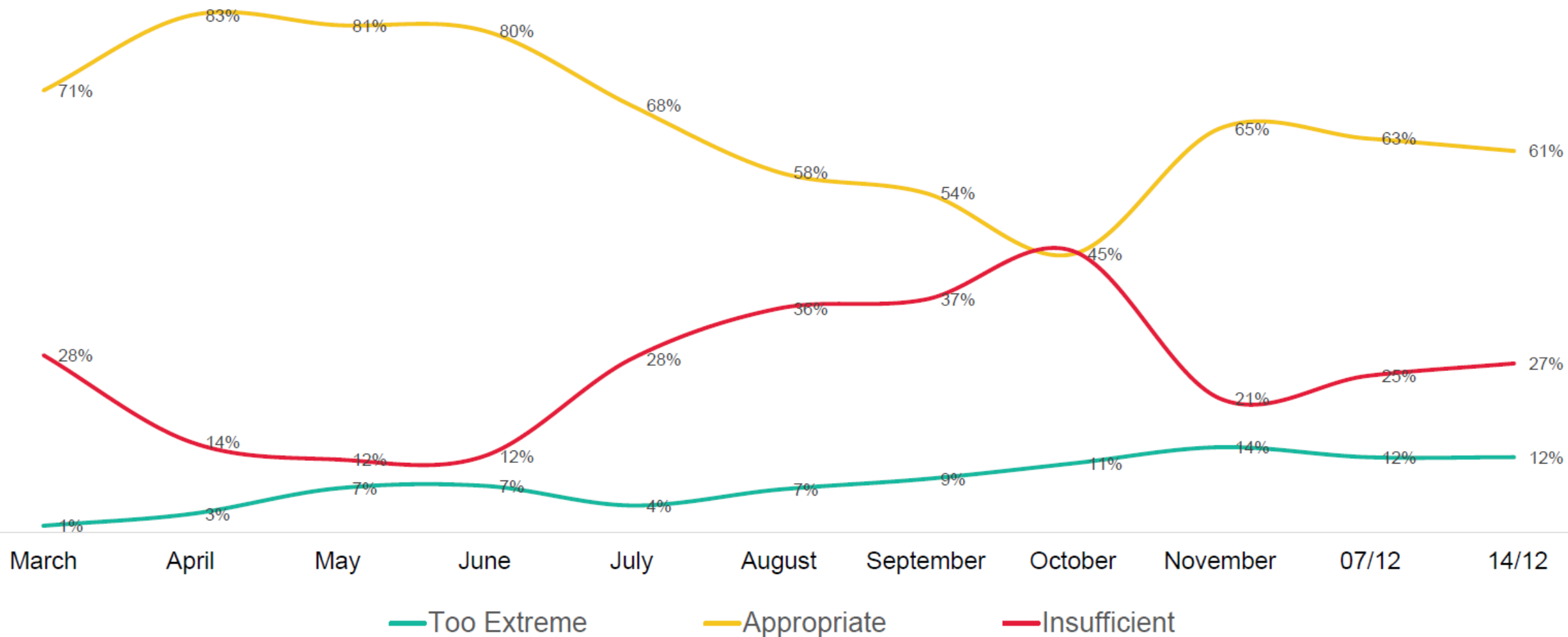
Updated 15 December

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## Going Too Far?

Do you think the reaction of the government to the current coronavirus outbreak is appropriate too extreme or not sufficient?





# Worry Index

## How worried are you personally about the Coronavirus?

On a scale of 1 to 10 where 1 is not at all worried and 10 is extremely worried:  
Average Score

