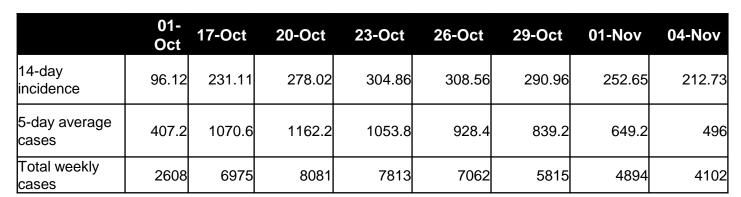


An Roinn SláinteDepartment of Health

COVID Update NPHET 05th November 2020

Current situation



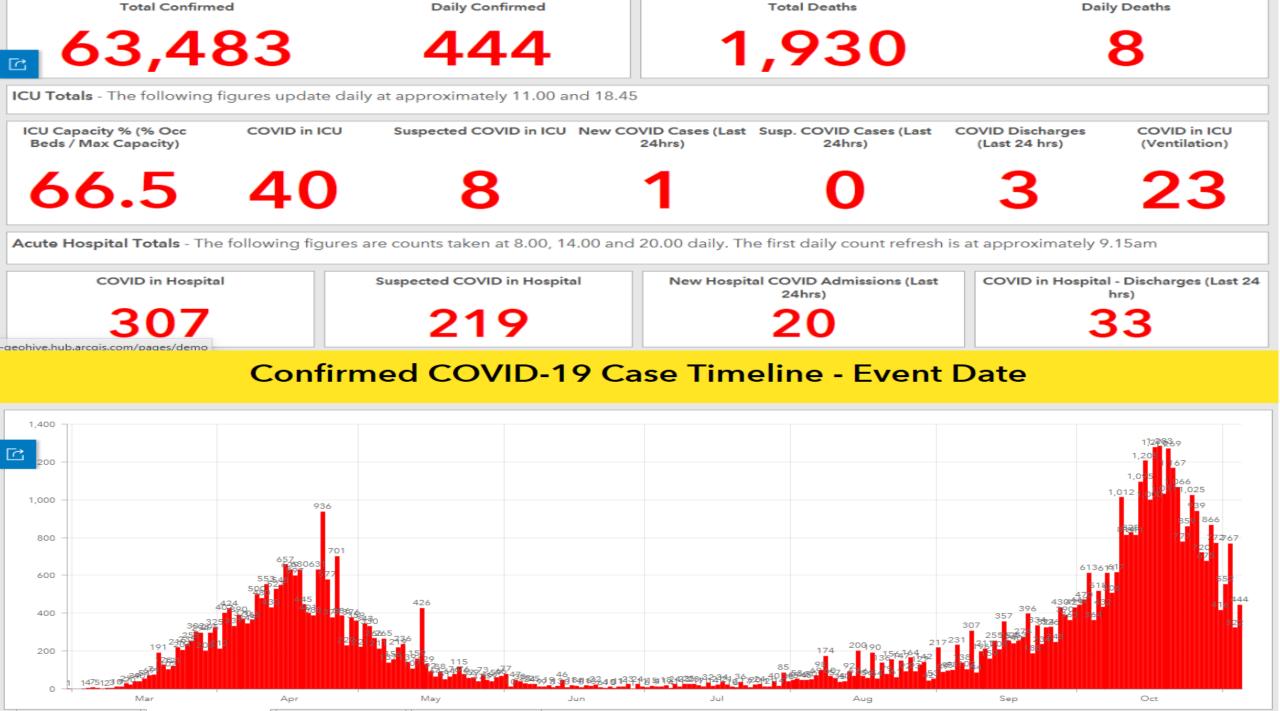
	01-Oct	17-Oct	20-Oct	23-Oct	26-Oct	29-Oct	01-Nov	04-Nov	05-Nov
No. Hospital (8.A.M)	122	260	315	311	344	330	325	315	307
No. in ICU (6.30 P.M)	20	30	34	38	39	43	44	43	40

	01-Oct	17-Oct	20-Oct	23-Oct	26-Oct	29-Oct	01-Nov	04-Nov
Positivity rate (7 day average)	3.1%	7.2%	6.6%	5.8%	5.4%	5.2%	5.1%	4.7%

	August	September
Total Deaths	5	36
Deaths associated with Nursing home outbreaks	3	12

October	November
108	9
42	2

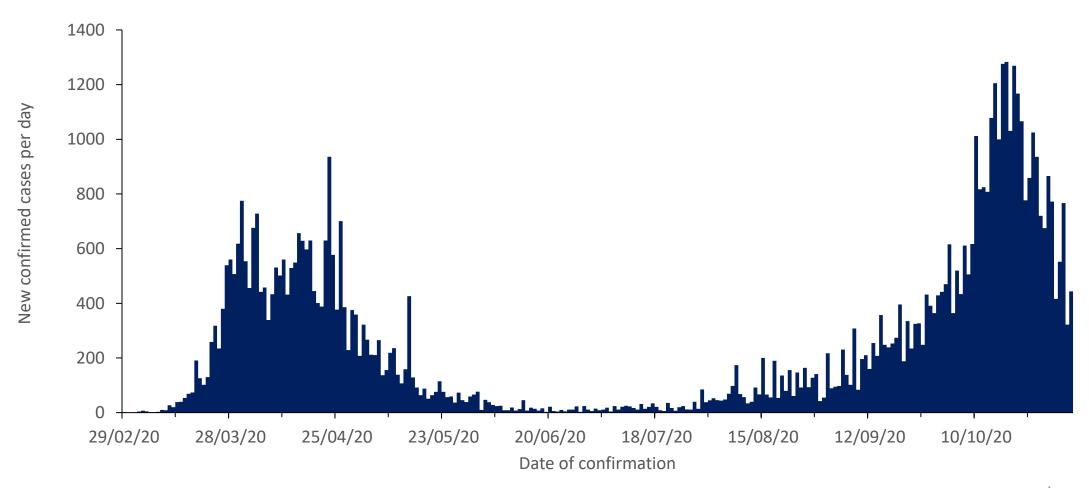




Confirmed cases each day

Daily case count since the beginning of the epidemic





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

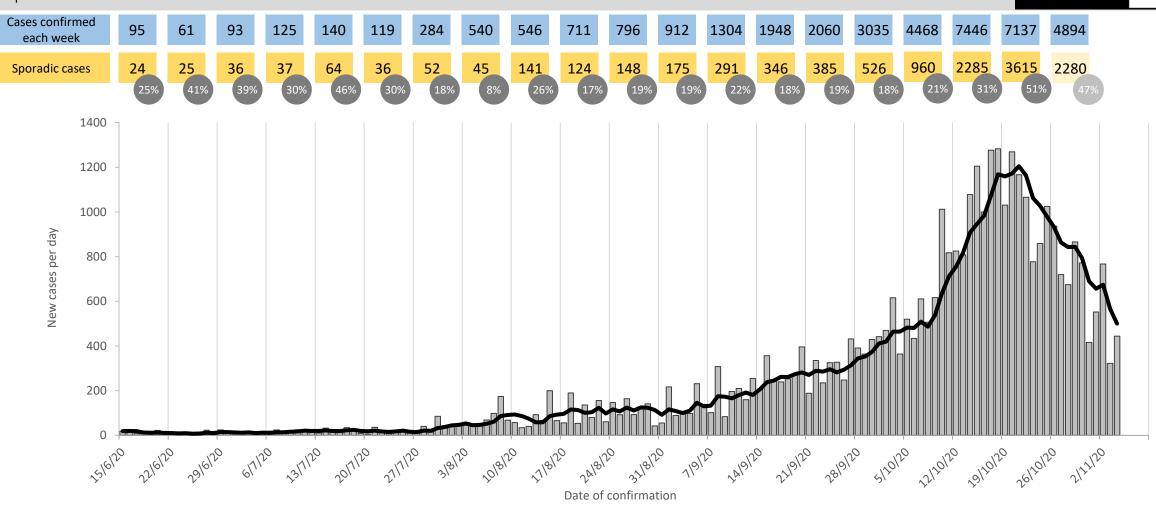




Confirmed cases each day

Daily and weekly count and 5-day rolling average – case counts have been decreasing since 23 October; the 5-day average peaked at 1205 on 21 October and is now 500.









Cases, numbers in hospital and intensive care

Case numbers have been increasing since late June, and have decreased for the first time over the last week. Hospitalisations and admissions to ICU have increased over the last six weeks, as have the number of deaths. Hospitalisations and deaths are delayed relative to changes in case numbers.



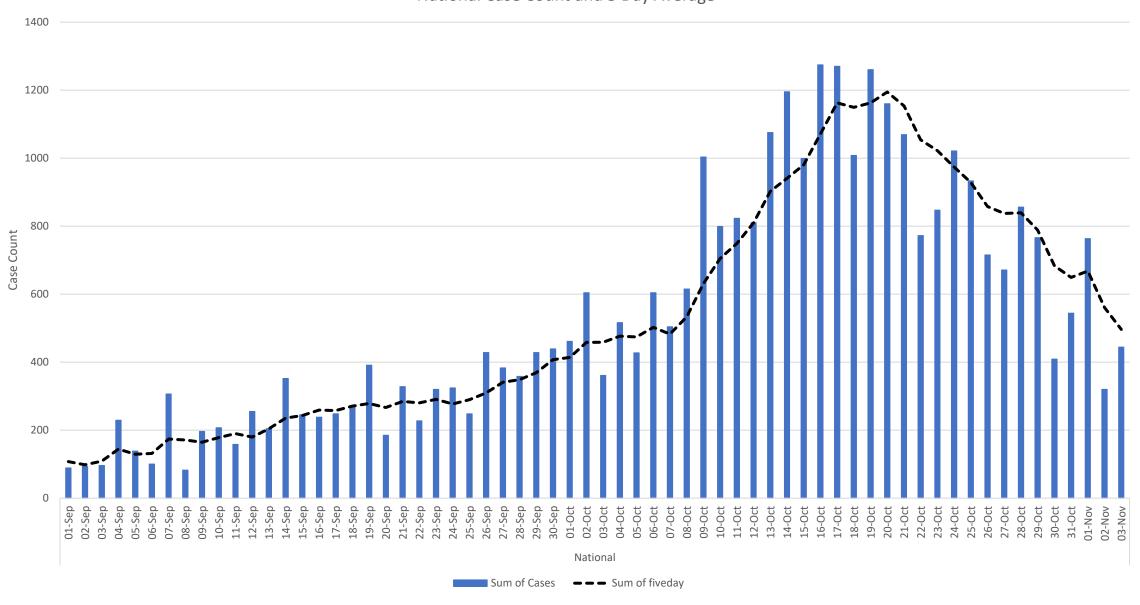
	16 Apr	24 Jun	29 Jul	30 Sept	7 Oct	14 Oct	21 Oct	28 Oct	4 Nov
Cases confirmed per day	551	9	18	359	493	809	1176	865	591
14-day incidence per 100,000 population	157	3.8	5.7	93	125	192	291	299	213
Hospital in-patients	858	42	11	108	136	204	279	325	322
Hospital admissions per day	56	2	2	10	14	19	23	20	19
ICU confirmed cases	147	15	5	18	22	30	32	38	43
ICU admissions per day	8	< 1	< 1	1	2	3	3	3	3
Deaths confirmed per day	32	2	< 1	2	2	3	5	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.





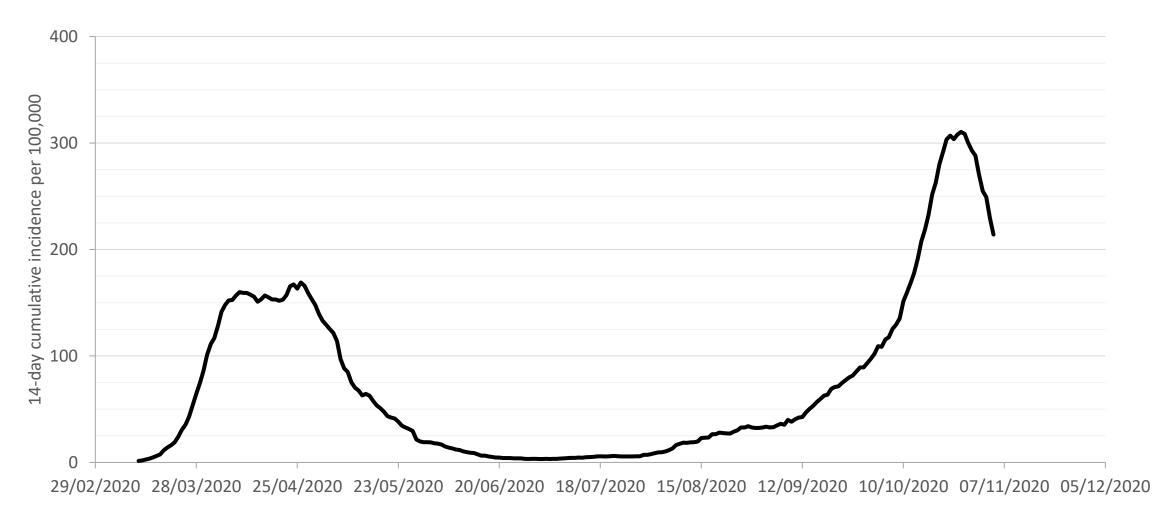
National Case Count and 5 Day Average



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 310 per 100,000, and is now 213 per 100,000



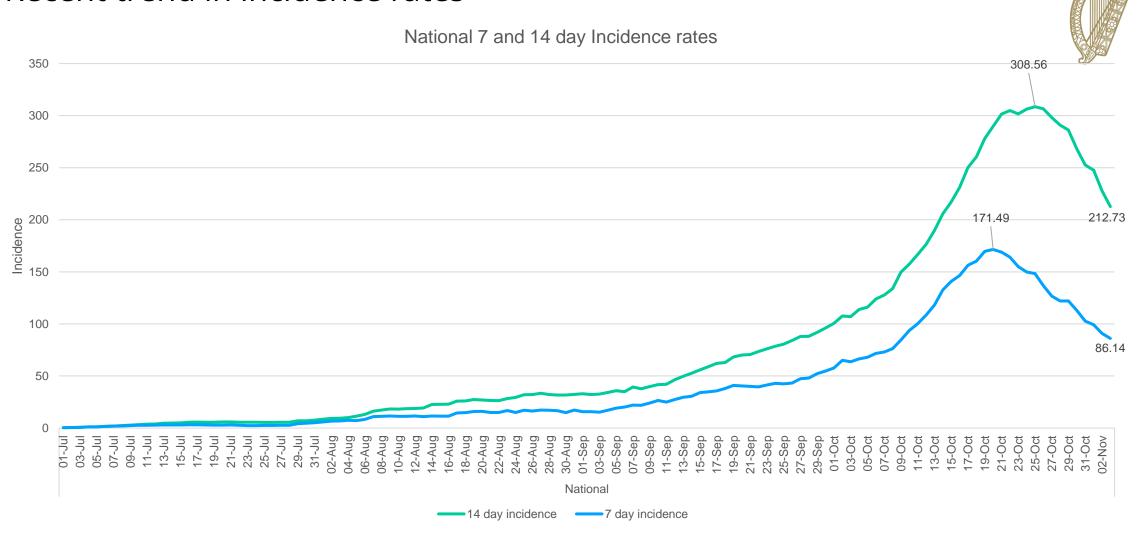


14-day cumulative incidence by date of confirmation. Tests outsourced to German laboratory in April backdated, using the specimen collection date, to the date they would have been confirmed if tested in a timely manner.



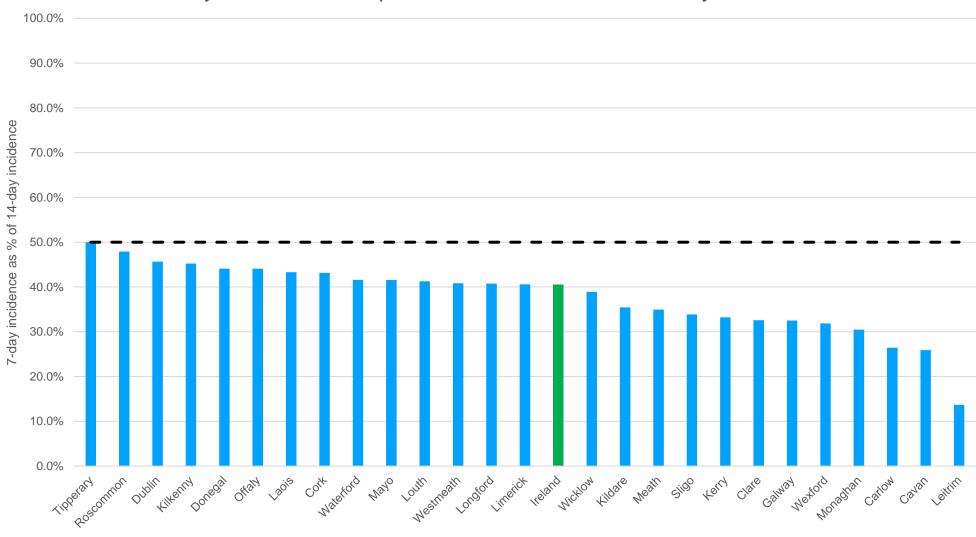


Recent trend in incidence rates

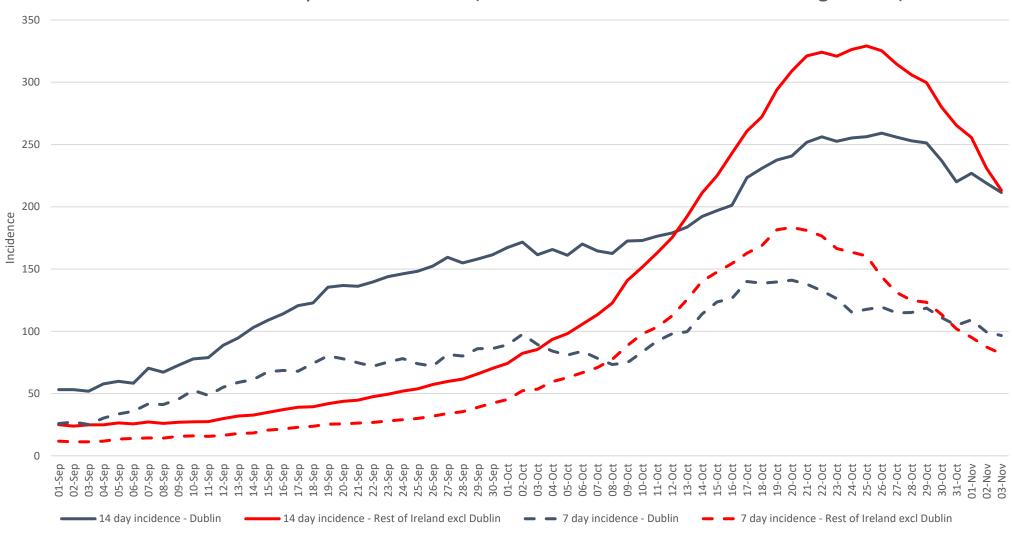


7-day incidence rate per 100,000 as % of the 14-day incidence

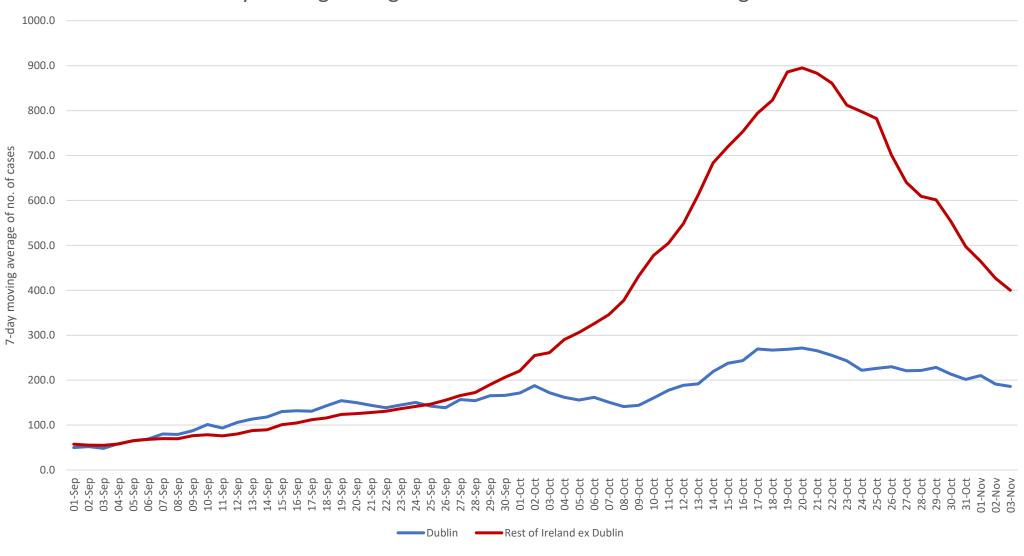




National 7 and 14 day Incidence rates (Dublin and Rest of Ireland excluding Dublin)



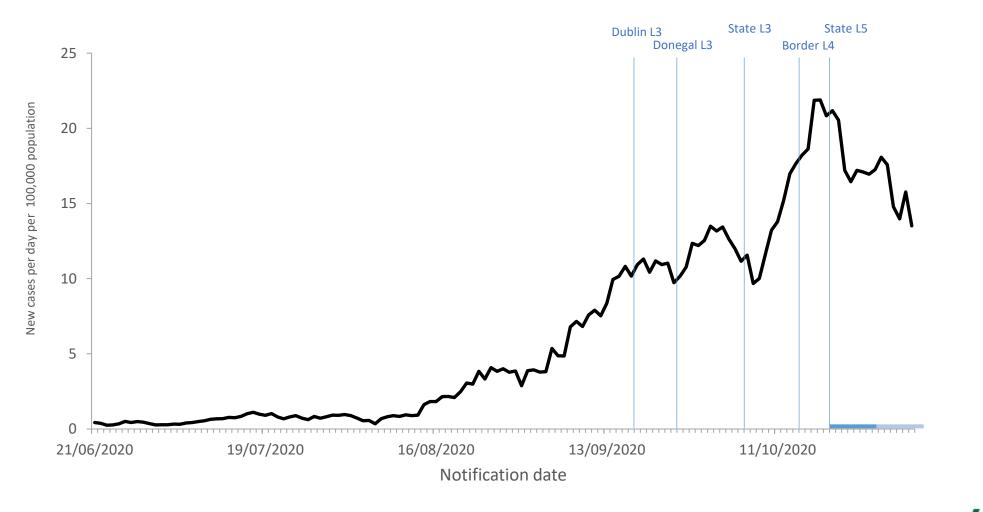
7 day moving average Dublin vs Rest of Ireland excluding Dublin



Daily incidence: Dublin

Incidence in Dublin has started to decrease, though more slowly than in the rest of the country.





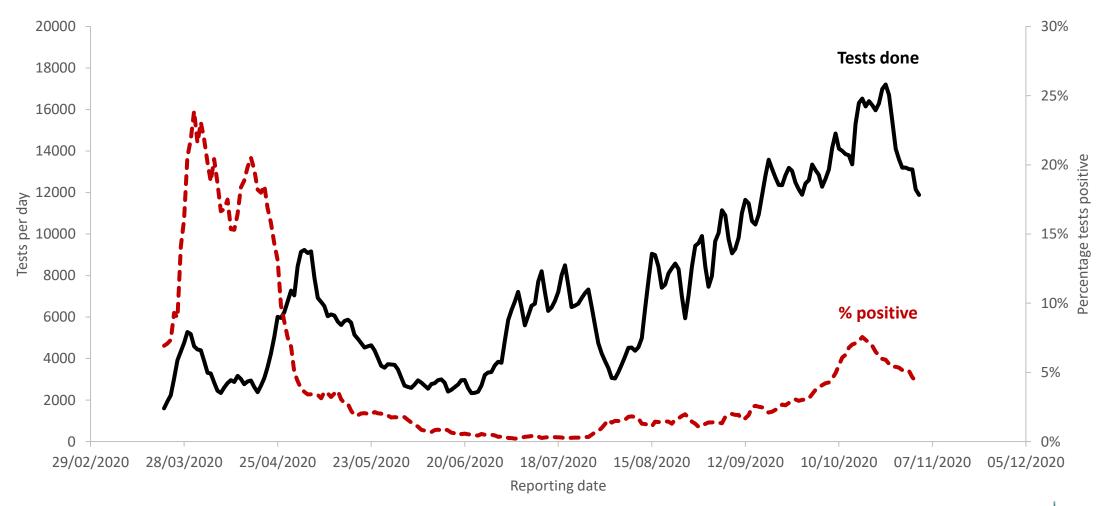


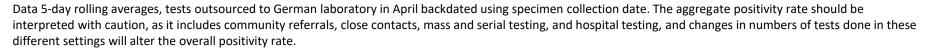
-Dublin

Testing and test positive rate

The number of tests remains high and the positivity rate is now starting to decrease.



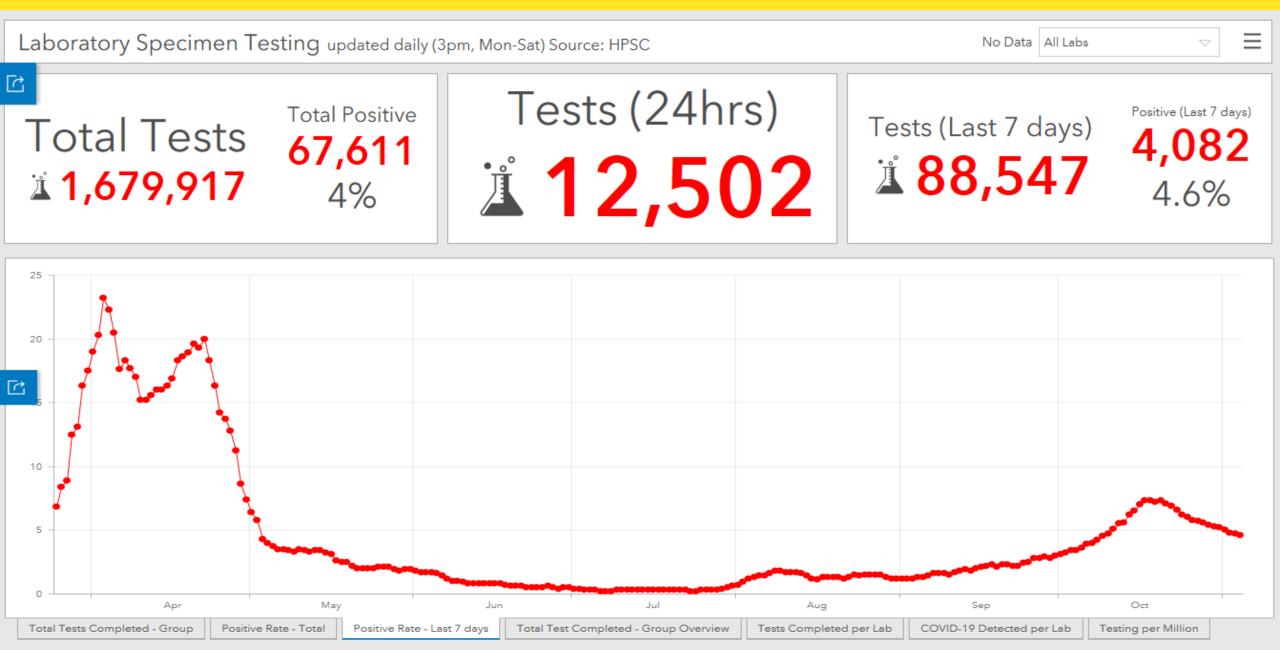


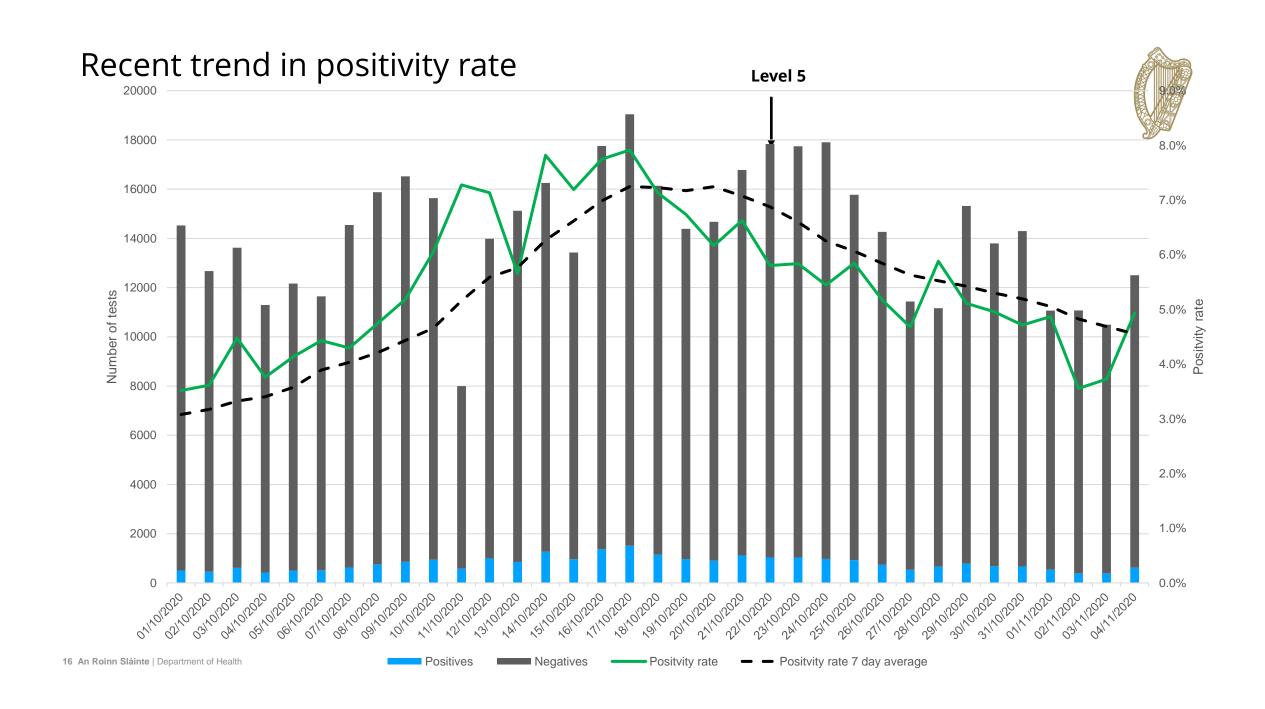


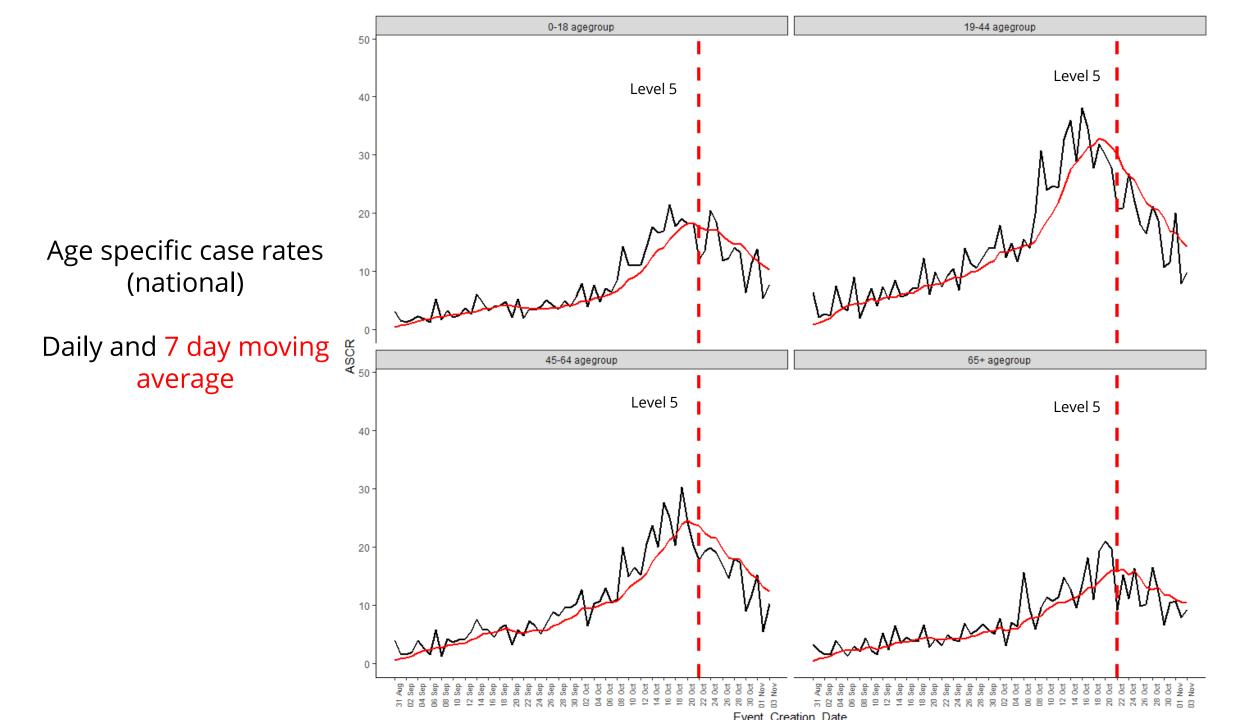




Laboratory Specimen Testing

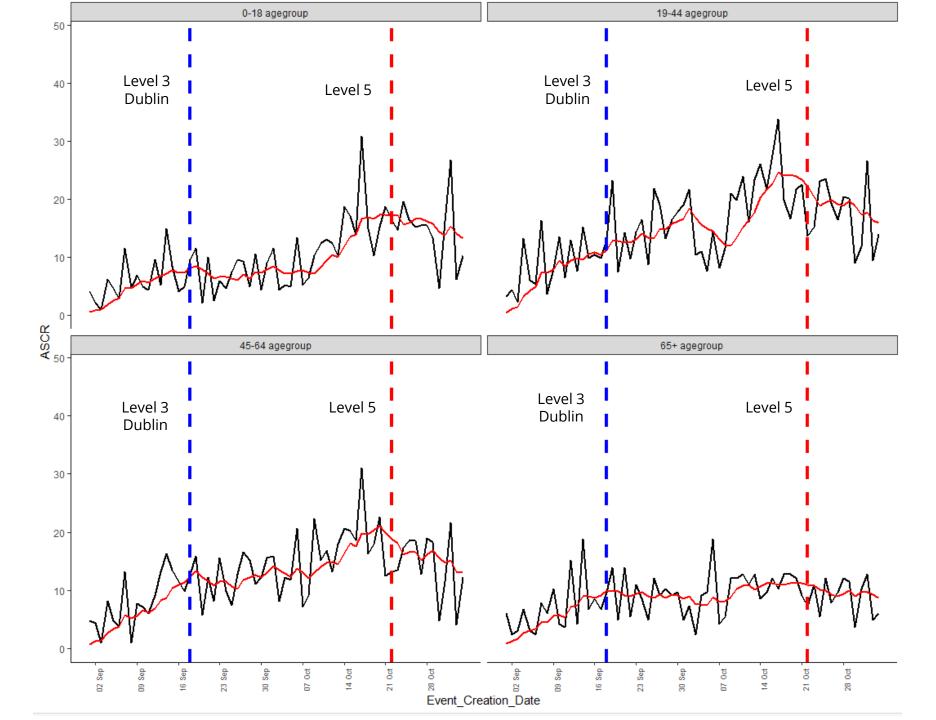






Age specific case rates in Dublin

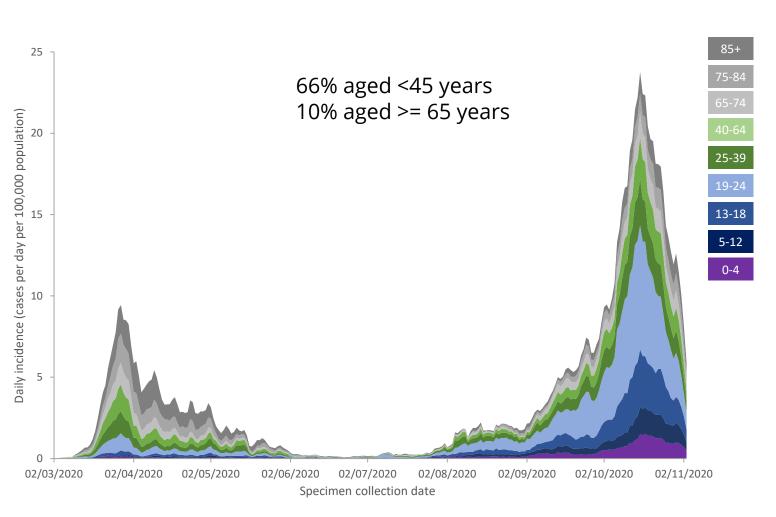
Daily and 7 day moving average



Incidence across different age groups

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 over the last two weeks, and incidence has now started to decrease in those aged 65 and older.





Heat map of 7-day incidence by age									
					Age band	I			
Week	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	31.2	25.4	24.9	28.1
13	6.9	4.2	14.5	58.0	73.4	86.6	72.6	88.5	84.4
14	4.5	4.4	6.7	28.1	40.2	50.9	51.1	92.1	109.5
15	5.7	5.6	9.1	32.0	29.3	47.7	46.9	71.8	108.1
16	3.0	5.3	10.8	18.7	20.8	32.0	28.4	50.4	69.6
17	3.3	4.2	7.8	21.1	23.7	26.6	21.2	50.4	60.7
18	4.5	6.4	9.4	20.2	26.0	21.0	18.7	37.1	44.4
19	2.1	2.7	4.8	13.3	15.3	14.6	10.4	18.8	31.1
20	3.6	1.6	4.8	12.1	16.4	11.9	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	11.0	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	34.7	15.3	10.5	5.6	5.1	1.5
35	6.3	9.7	13.5	37.4	18.6	11.2	4.8	9.2	5.9
36	13.0	13.5	17.5	47.7	22.3	13.5	11.0	11.7	14.8
37	17.5	17.5	29.9	64.0	28.4	24.9	22.8	8.7	7.4
38	21.4	26.2	44.1	90.6	44.3	34.9	32.9	19.8	14.8
39	12.4	22.8	42.8	148.2	50.7	42.3	33.2	31.0	17.8
40	30.2	29.0	63.2	172.7	69.0	59.0	34.3	27.0	19.2
41	43.7	47.0	135.9	321.2	117.3	92.2	62.9	52.9	56.3
42	84.5	96.2	205.9	449.3	163.1	150.8	97.7	69.7	60.7
43	77.5	87.5	167.4	295.0	118.3	117.6	82.2	82.4	78.5
44	54.6	66.0	94.2	153.1	76.1	78.3	56.0	58.0	53.3

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 across different age groups

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 over the last two weeks, and incidence has now started to decrease in those aged 65 and older.

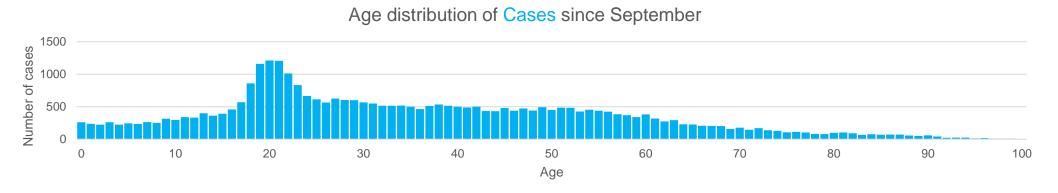


Heat map of 7-day incidence by age									
\\/ -	Age band								
Week	0-4	5-12	13-18	19-24	25-39	40-64	65-74	75-84	85+
25	0.0	0.4	0.5	1.8	1.4	1.0	0.8	0.5	1.5
26	0.6	0.2	0.3	1.8	1.5	0.7	0.8	1.5	3.0
27	1.5	0.4	0.3	1.8	1.9	0.9	0.0	1.0	0.0
28	0.9	1.1	1.1	10.9	2.0	1.1	1.9	1.0	3.0
29	1.2	0.4	0.8	3.0	3.3	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	11.0	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	34.7	15.3	10.5	5.6	5.1	1.5
35	6.3	9.7	13.5	37.4	18.6	11.2	4.8	9.2	5.9
36	13.0	13.5	17.5	47.7	22.3	13.5	11.0	11.7	14.8
37	17.5	17.5	29.9	64.0	28.4	24.9	22.8	8.7	7.4
38	21.4	26.2	44.1	90.6	44.3	34.9	32.9	19.8	14.8
39	12.4	22.8	42.8	148.2	50.7	42.3	33.2	31.0	17.8
40	30.2	29.0	63.2	172.7	69.0	59.0	34.3	27.0	19.2
41	43.7	47.0	135.9	321.2	117.3	92.2	62.9	52.9	56.3
42	84.5	96.2	205.9	449.3	163.1	150.8	97.7	69.7	60.7
43	77.5	87.5	167.4	295.0	118.3	117.6	82.2	82.4	78.5
44	54.6	66.0	94.2	153.1	76.1	78.3	56.0	58.0	53.3



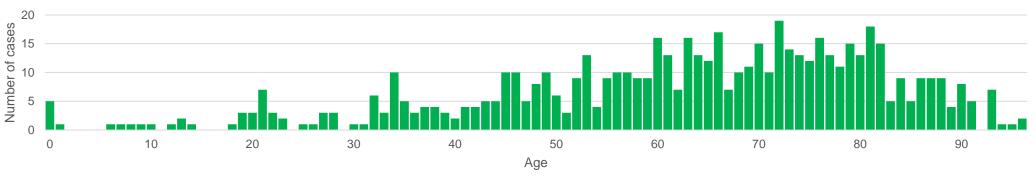


Age distributions Cases/hospitalisations/deaths

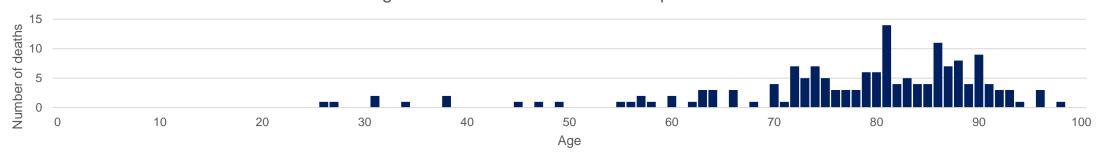




Age distribution of Hospitalisations since September

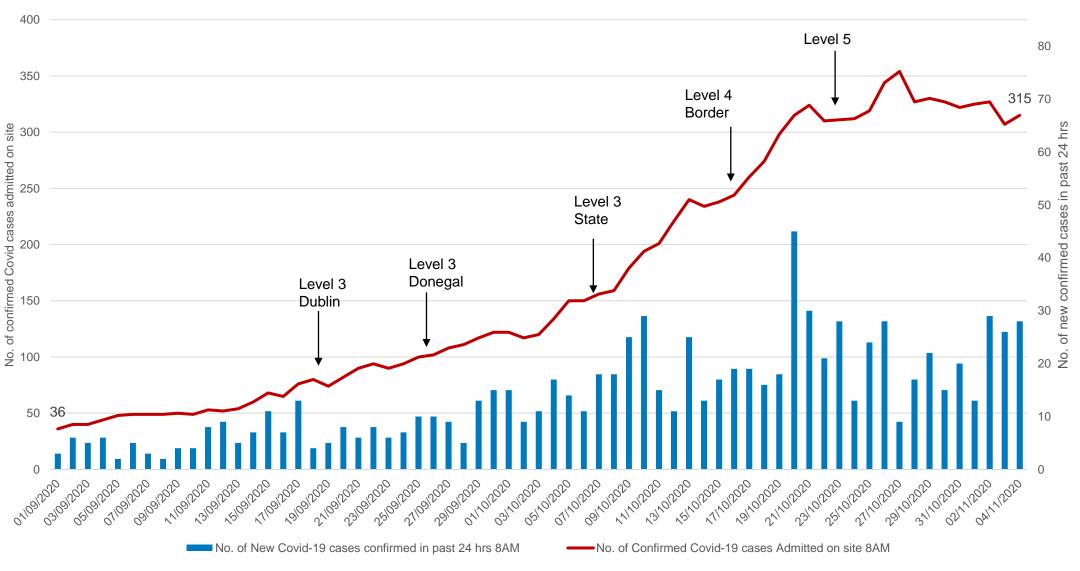


Age distribution of Deaths since September



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

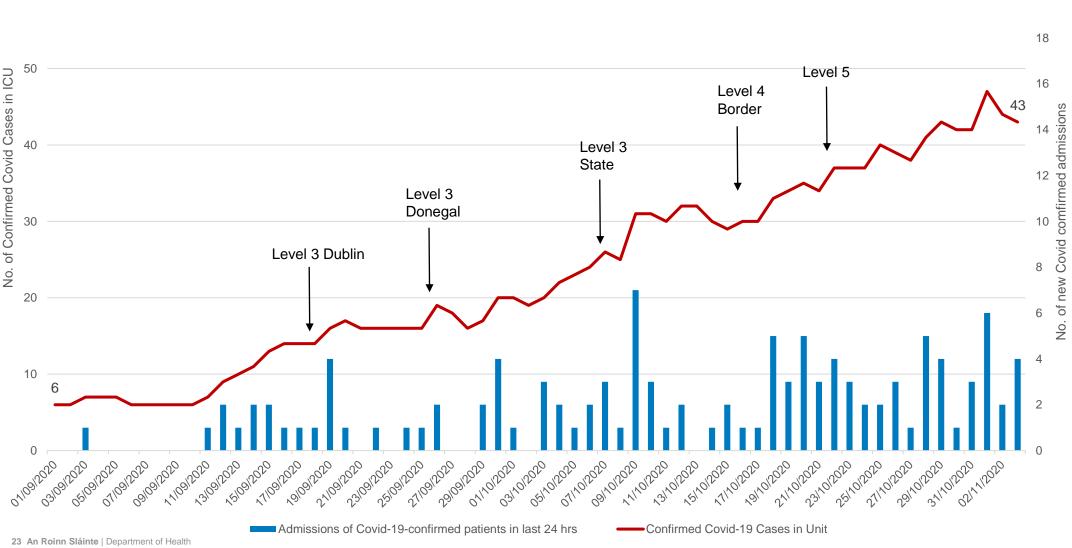




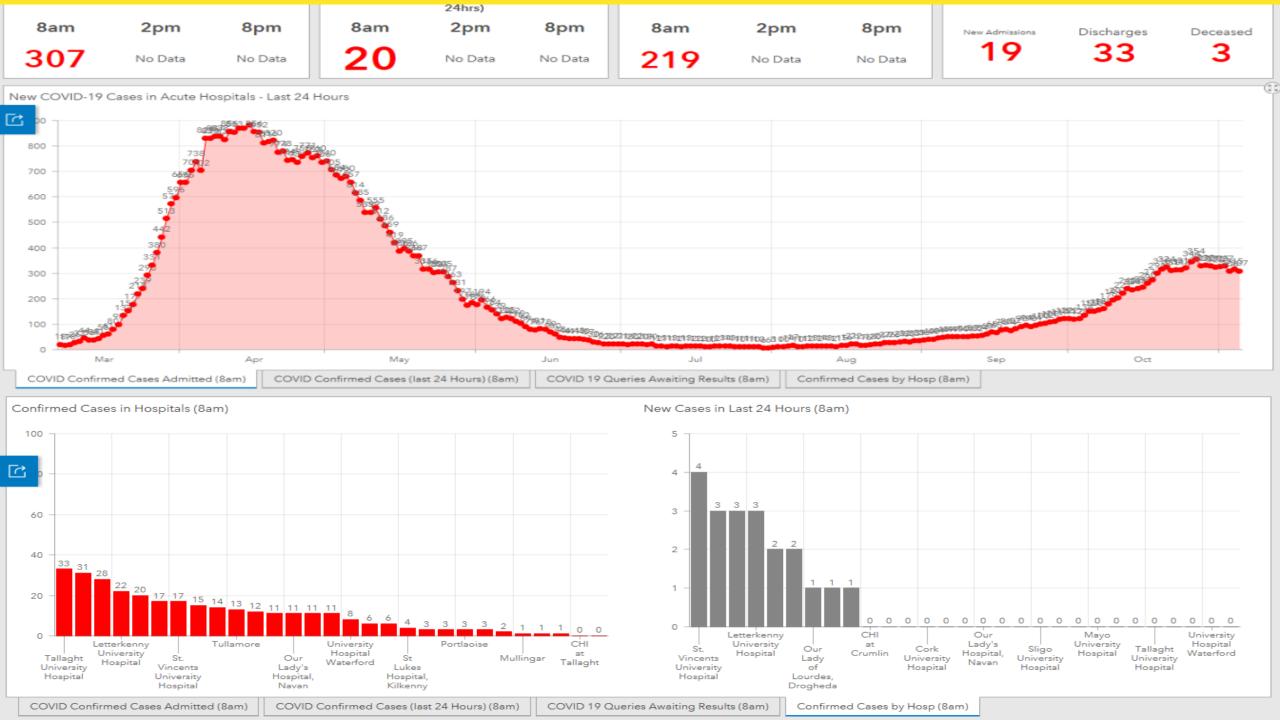
Total No. of Confirmed Covid Cases in ICU at 11.30AM & No. of New Confirmed Covid Admissions to ICU in past 24 hrs since 01/09/20



20

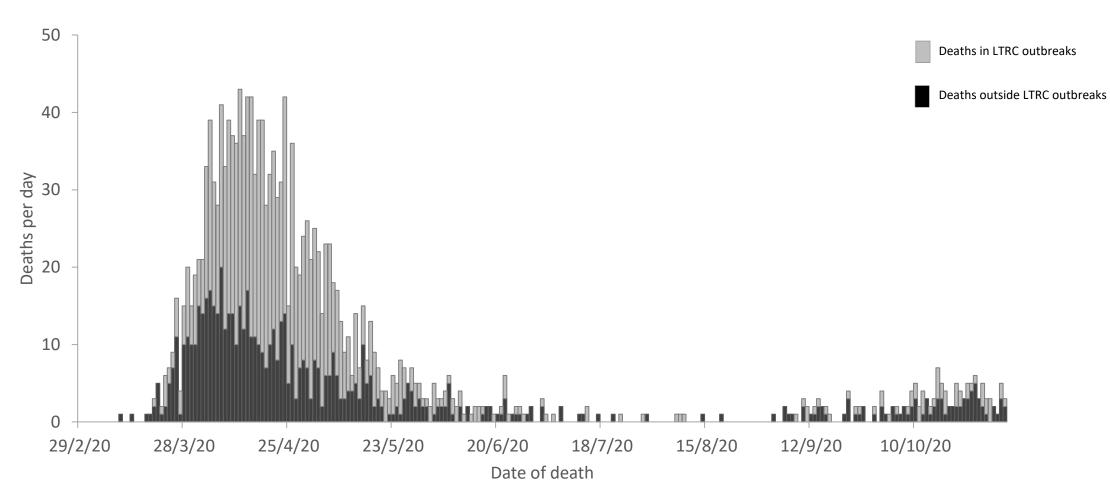


60



Deaths per day

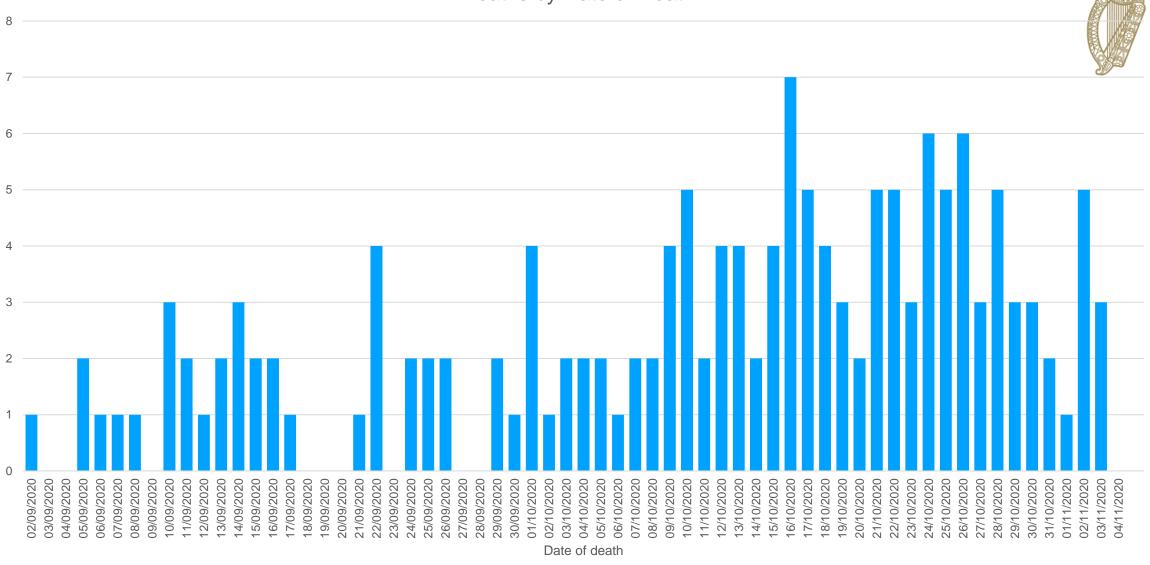








Deaths by Date of Death



COVID-19 outbreaks by key outbreak locations, week 44 and overall, 2020 Ireland



- Since March 1st 2020, 6,703 outbreaks have been notified to CIDR
- In week 44, 480 outbreaks were notified; 320 in private houses, 160 in other locations

Key outbreak locations	Week 44	Weeks 10-44
Workplace	11	237
Direct Provision Centre	1	32
Vulnerable groups*	4	71
Prisons	1	7
Nursing Home/Community Hospital	8	369
Acute hospitals	8	148
School^	30	156
Childcare facility	9	63

^{*}Includes Irish Travellers, Roma and homeless population



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

Weekly Summary

hpsc

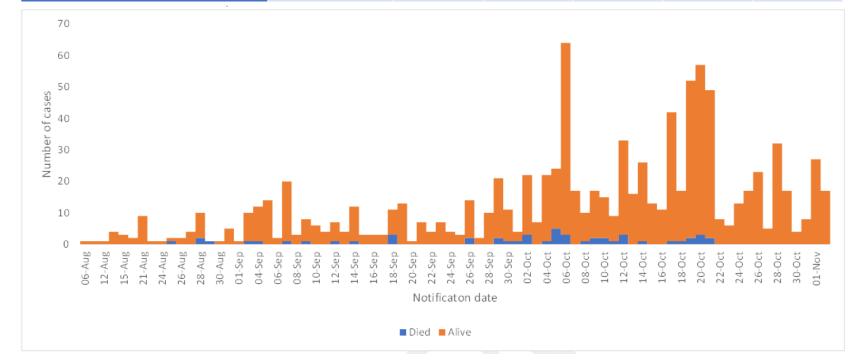
- Reduction in outbreaks in week 44 n=480 compared with week 43 n=680 (mainly a reduction in private house outbreaks)
- Vulnerable groups
 - Irish Traveller outbreaks (since 20/09/2020)
 - 41 outbreaks (2 in week 44,1 in week 45)
 - 889 cases in Irish Travellers
 - Three new DPC outbreaks (1 in week 44, 2 in week 45) with 20 linked cases
 - One outbreak in prison with 11 linked cases
- Workplace & construction sector outbreaks
 - Three new outbreaks in food production since last week's report with 6 linked cases
 - Largest outbreak remains in HSE NW, with
 52 linked cases
 - Two new construction sector outbreaks with 4 linked cases

- Nursing Homes & Community Hospitals
 - 50/369 outbreaks remain open with 801 linked cases
 - 4 new outbreaks with 33 linked cases since last week's report
 - Five largest outbreaks: 50 -72 cases linked
 - Since August 1st, 50 deaths have occurred in cases linked to NH/CH outbreaks
- Acute hospitals
 - Eight new outbreaks since last week's report with 18 linked cases
- Schools
 - 32 new outbreaks since last week's report with 101 linked cases
 - 28 outbreaks ≥ 2 linked cases (range 2-8)
- Childcare facilities
 - Thirteen new outbreaks since last week's report with 38 linked cases
 - Seven outbreaks ≥ 2 linked cases (range 2- 12)

Nursing Homes and Community Hospital/Long Stay Units: to midnight November 2nd 2020



Outbreaks location	Outbreak	Linked confirmed cases					
	Number of outbreaks	Number of cases	Number hospitalised	Number admitted to ICU	Number hospitalised and died	Number who died	
Comm. Hosp/Long-stay unit	32	516	33	1	10	69	
Nursing home	337	6854	492	15	195	872	
Total	369	7370	525	16	205	941	



Overview

 369 outbreaks in Nursing Homes and Community Hospital/Long Stay Units between March & November 2nd 2020

68 outbreaks notified 1st August
 2020 to midnight November 2nd
 have 1008 linked confirmed cases
 and 50 linked deaths (Figure shows
 distribution of linked cases since
 Aug 1st 2020)

Data source: CIDR October 27th 8:30 am

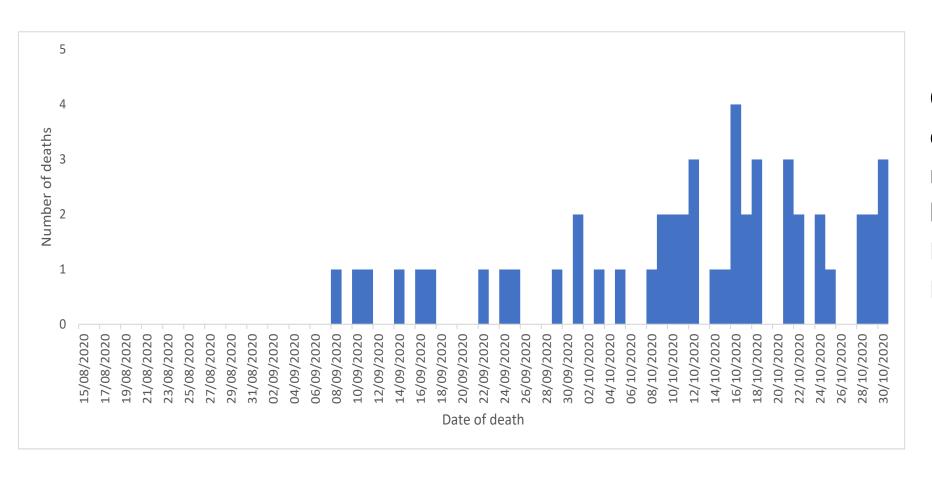




- 801 associated cases (266 HCW/staff cases, 266 client cases, 269 cases HCW status unknown)
- 10 outbreaks include only HCW/staff cases, 26 include both HCW/staff cases and client cases, for 11, it is unclear what mix of cases they include, and 3 have no linked cases on CIDR
- 4 new outbreaks since last week's report 33 linked cases
- 15 previously notified outbreaks 107 additional cases since last week's report
- 31 previously notified outbreaks no additional cases since last week's report
- 2-72 linked cases per 'Open' outbreak the five largest 'Open' outbreaks have 50, 51,
 54, 61 and 72 cases respectively

Deaths linked to outbreaks in Nursing Home and Community Hospital/Long Stay Units among confirmed COVID-19 cases notified August 1st to midnight November 2nd 2020





Of 50 deaths among confirmed COVID-19 cases notified since August 1st linked to outbreaks in Nursing Home and Community Hospital/Long Stay Units

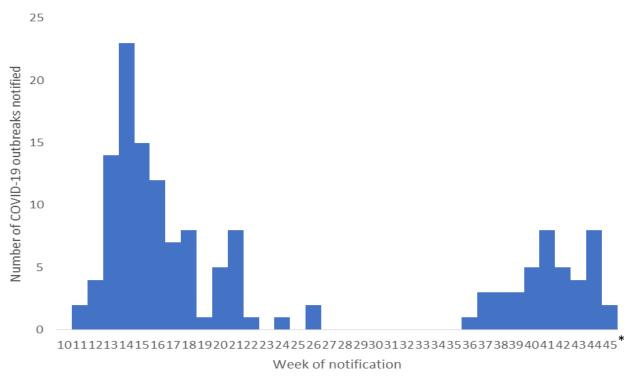
- 46 (92%) were >75 years
- 30 (60%) were male

Data source: CIDR October 27th 8:30 am

Hospital outbreaks to midnight 2nd November 2020 (n=149)



Number of COVID-19 Outbreaks in Hospitals (n=149)



Outbreak status	Number of outbreaks	Confirmed linked cases	Number admitted to ICU	Number Died	Number HCWs
All	149	1354	38	126	818
Open	34	182	3	17	66

Overview

- 149 outbreaks in acute hospitals
- 34 'open' acute hospital outbreaks (all occurring since 1st August 2020)
 - in 7 of the 8 HSF areas
- 182 confirmed cases linked (range 1-48)

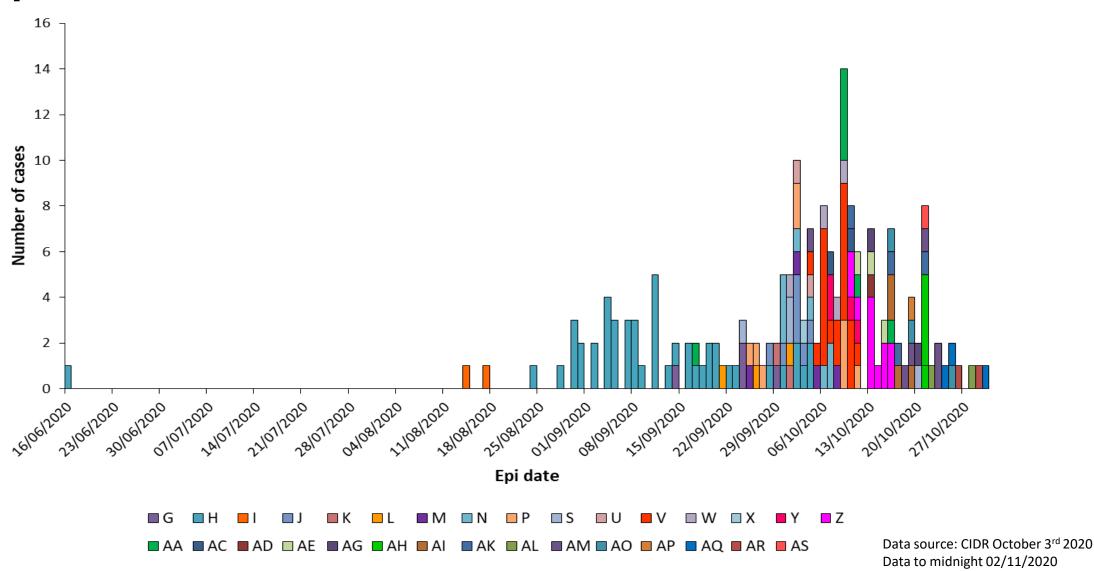
Update

- 8 new outbreaks since reporting on 27/10/2020
- 18 confirmed cases linked to seven of these outbreaks
- One previously notified outbreak was deactivated since last week
- No outbreaks were closed since last week

Data source: CIDR October 3rd 2020

Epidemic curve of confirmed cases linked to "Open" Hospital outbreaks





Laboratory Completed Tests during Last 7 Days (28 Oct - 3 Nov 2020) by LGD

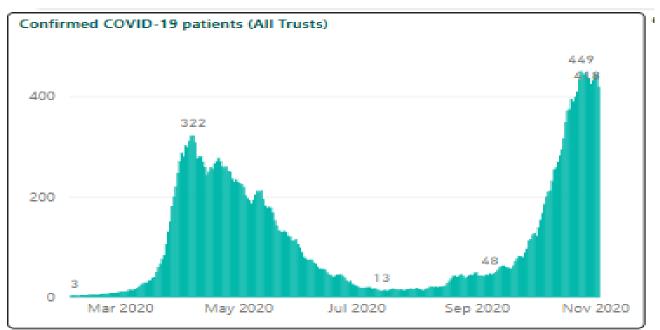
Local Government District	+ve Cases Last 7 Days	Last 7 Day Rate per 100K	Individuals Tested Last 7 Days
Antrim and Newtownabbey	279	195.6	2,346
Ards and North Down	225	139.9	2,752
Armagh City, Banbridge and Crai	459	214.8	3,753
Belfast	906	265.5	6,911
Causeway Coast and Glens	306	212.1	2,202
Derry City and Strabane	452	300.0	2,776
Fermanagh and Omagh	187	160.1	2,025
Lisburn and Castlereagh	385	265.2	2,724
Mid and East Antrim	288	207.8	1,954
Mid Ulster	520	352.5	3,238
Newry, Mourne and Down	336	186.5	2,909
Not Known	155		1,366
Total	4,498	239.0	34,956

Monaghan 64/100,000

Donegal 126/100,000

Louth 92/100,000

Ireland = 86/100,000

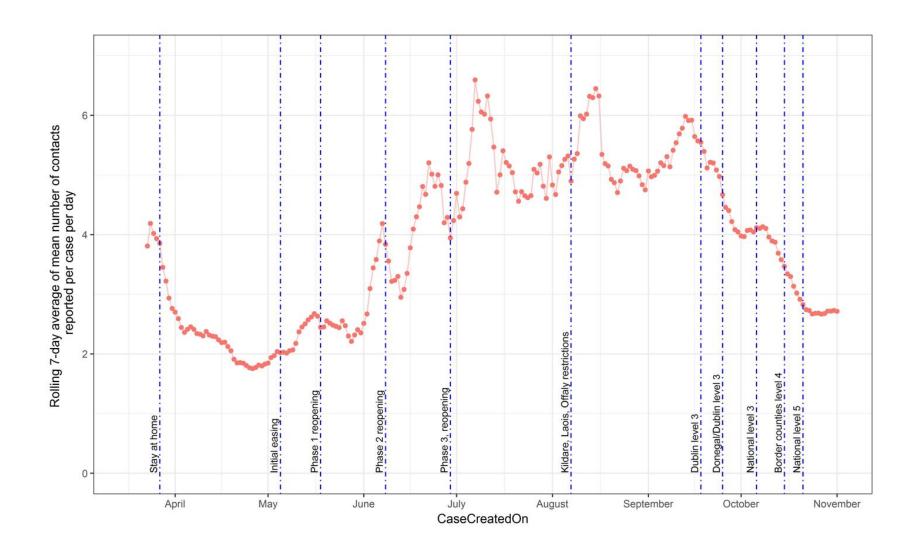


125 ICU Beds - 50 (40%) COVID 2,881 Total Beds - 2,899 (101%) Occupied - 492 COVID

Average number of close contacts for confirmed cases

The average number of close contacts per confirmed case over the course of the pandemic to date. The number of contacts started to decrease in anticipation of formal public health restrictions, and seems to have stabilised at just under 3 close contacts per case









Estimates of effective reproduction (R)

Reproduction number has decreased since the last estimate, and is currently estimated at 0.7 to 0.9. It is similar or slightly higher in Dublin compared to the rest of the country



Method	Estimate	95% confidence interval
SEIR model-inferred	0.98	0.94 – 1.04
Bayesian model	0.65	0.26 – 1.32
Time-dependent R	0.82	0.76 – 0.88
GAM estimate 27 Oct 2020	0.90	0.73 – 1.07
GAM estimate 3 Nov 2020	0.71	0.51 – 0.91

Estimates generated 3 November 2020, refer to IEMAG technical notes for methodology. Estimates are unreliable when case numbers are low or variable. Time-dependent R estimates relate to infectious events approximately two weeks ago. GAM is best estimate for current R. The estimate of R is influenced by different patterns of transmission in large outbreaks, smaller clusters, and individual transmission.

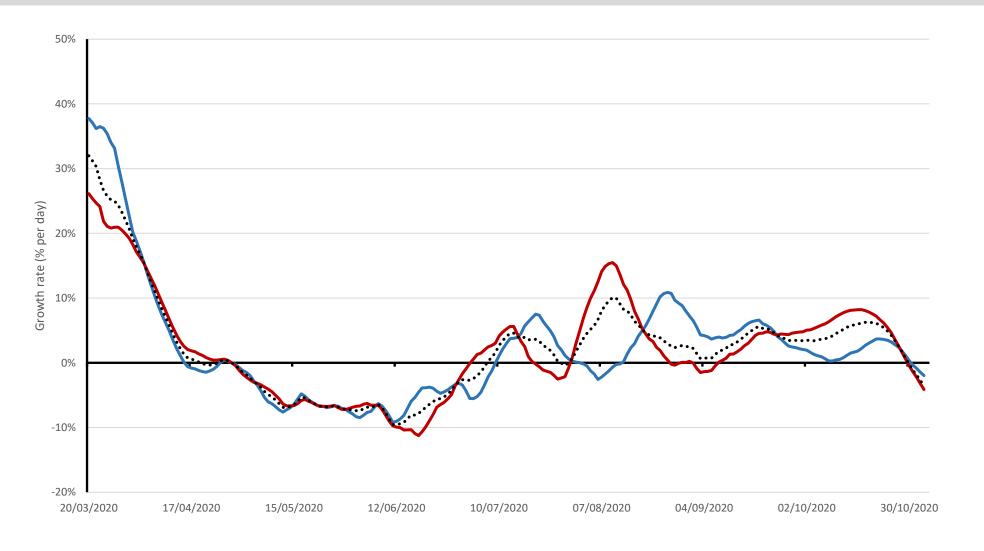




Growth rate – cases – 21-day window

The growth rate in Dublin and in the other 25 counties was the same in the first phase of the pandemic, but has differed in recent months. The outbreaks in Kildare, Laois and Offaly increased the national growth rate in early August. Growth rate in Dublin then increased to almost 7% per day, fell to a low of zero growth, and then increased again to grow at 3% per day. Growth rate across the rest of the country rose throughout September and October to a peak of 8% per day. Case numbers are decreasing (negative growth) perhaps more slowly in Dublin than in other parts of the country. Given that this analysis is conducted over a 21-day window, it takes 2-3 weeks for changes to have full effect.





Daily growth in cases:

____ Dublin

State

25 counties

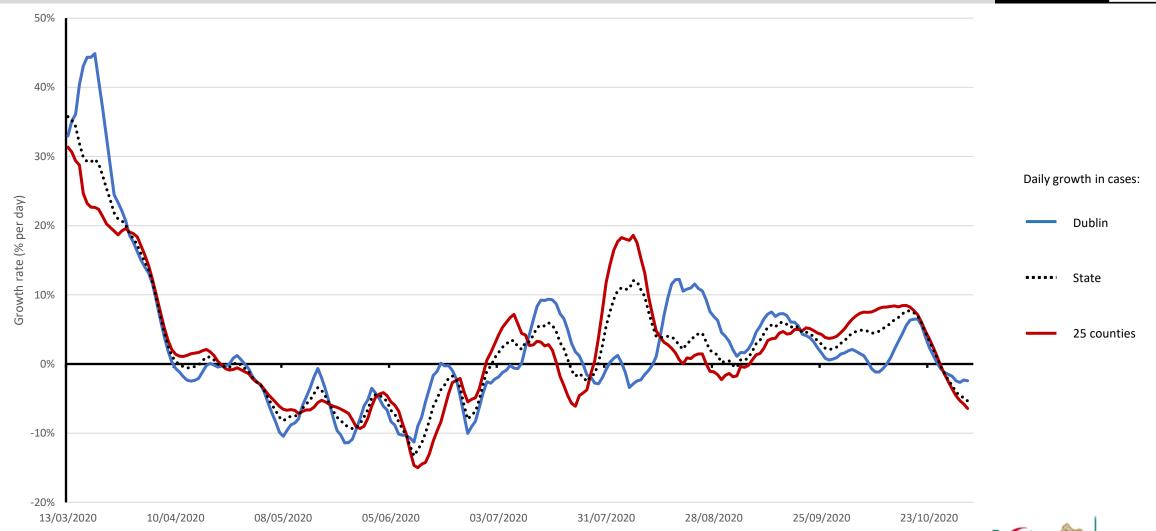




Growth rate for case numbers - 14 day window

We can calculate growth rate over a shorter window, giving a noisier result but one which responds more rapidly to change. This analysis would suggest that, over the last two weeks the numbers of cases is decreasing, at about -5% per day for the country as a whole, and about -2% per day for Dublin





Situation analysis 4 November 2020



- Case numbers decreasing with significant suppression of viral transmission
 - Day on day reduction in case numbers
 - negative growth at -3.5 % per day over last 21 days, -5% per day over last 14 days)
 - R estimated at 0.7-0.9
- Numbers in hospital and intensive care may have stabilised
- There has been a very significant decrease in incidence in younger adults, and incidence in those aged 75 and older has also started to decrease
- Incidence in Dublin starting to decrease but more slowly than the rest of the country
- The need now is to sustain our efforts to further reduce transmission and bring the number of cases and force of infection to very low levels

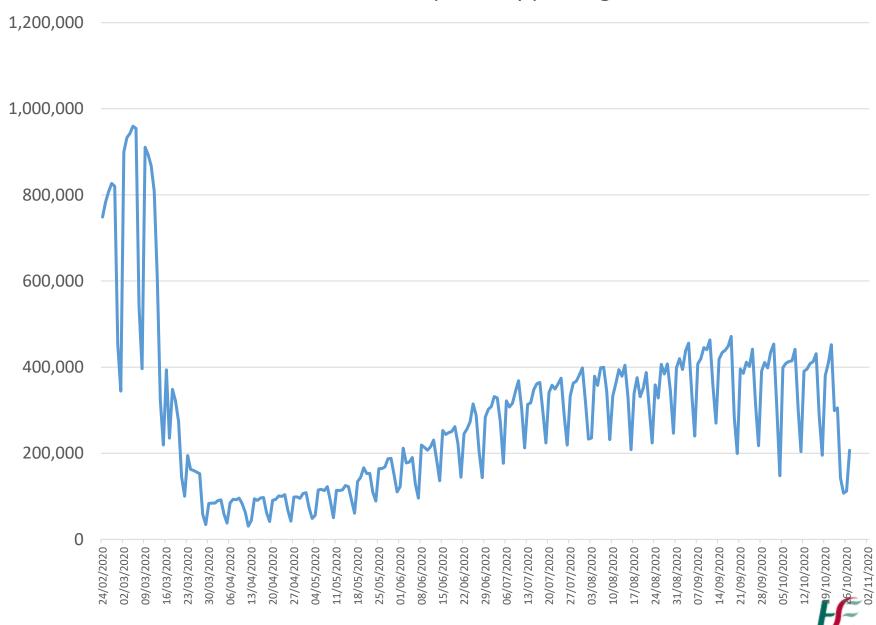




Compliance data

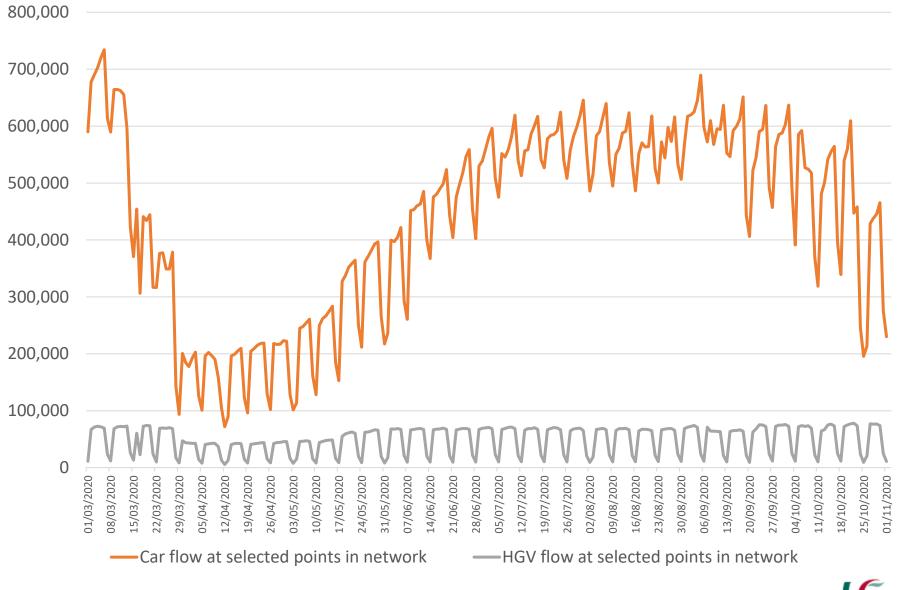


Overall Public Transport daily passengers





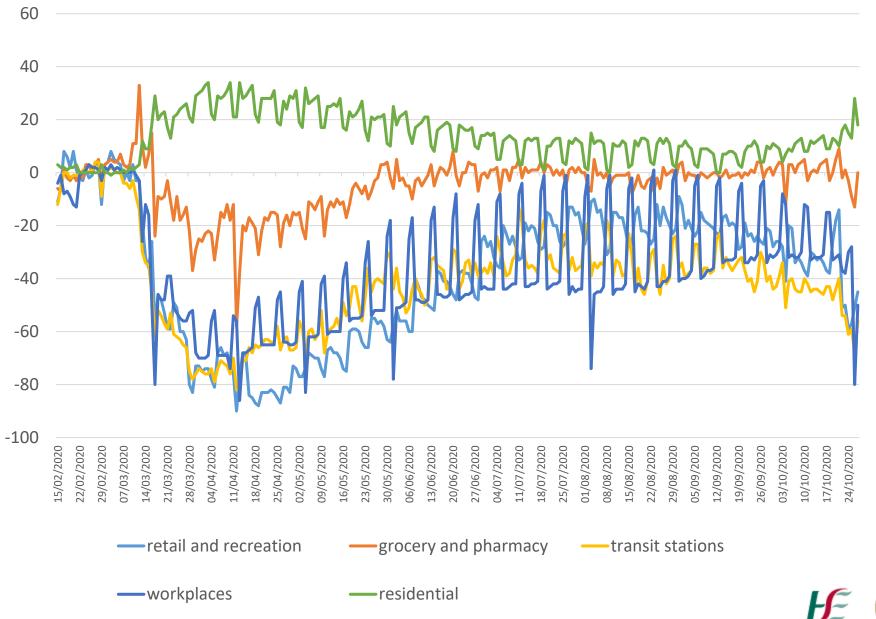
Daily Traffic Flow





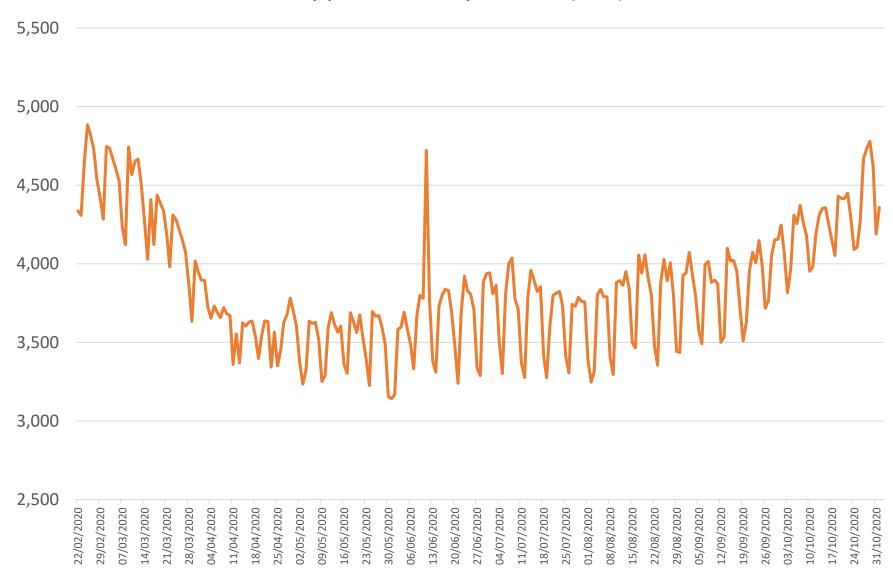


Google Mobility Ireland % change from baseline





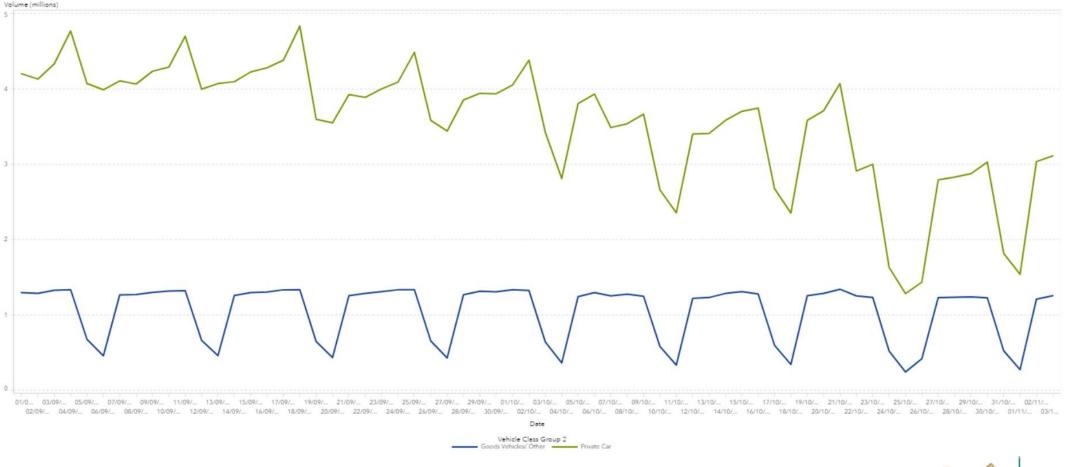
Daily peak Electricity Demand (MW)







Daily Traffic Volume by Vehicle Type since 1 September





Daily Traffic Volume by Road Type since 1 September

