NPHET COVID Update 25th November 2021

Current situation



	01-Oct	26-Oct (2 nd wave peak 14 day inc.)	01-Dec	01-Jan	14-Jan (3 rd wave peak 14 day inc.)		17-Nov (1 week ago)	24-Nov
14-day incidence	96.08	306.39	86.90	320.59	1494.31	89.65	1210.43	1287.63
5-day average cases	407.0	919.2	261.0	1476.6	4458.4	313.8	4209.8	4665.0
Total weekly cases	2,607	7,000	1,893	9,417	35,365	2,071	30206	31109

	01-Oct	26-Oct (2 nd wave peak 14 day inc.)	01-Dec	01-Jan	14-Jan (3 rd wave peak 14 day inc.)	(lowest 2021	17-1404	24-Nov
No. Hospital (8.A.M)	122	344	224	508	1792	49	634	611
No. in ICU (11.30 A.M)	20	39	30	42	176	15	119	132

	APR21	MAY21	JUN21	JUL21	AUG21	SEP21	OCT21	NOV21	Unknown	Total since Mar2020
Reported in latest week (to 24/11/2021)	0	0	1	0	1	2	1	32	4	43*
Total	101	42	19	20	175	198	198	112	30	5,652

Cases, numbers in hospital and intensive care

Coronavirus
COVID-19
Public Health
Advice

The average daily case count has almost doubled over the past three weeks, from ≈ 2400 to ≈ 4500 cases per day. The 14-day incidence is approaching the highest ever recorded. The numbers of people in hospital and ICU are high, increasing more slowly, and may increase significantly in the coming weeks. The step change in numbers of people in hospital and ICU between 10 November and 17 November is noteworthy

	Apr 2020	Summer 2020	Oct 2020	Dec 2020	Jan 2021	Jun 2021	3 Nov	10 Nov	17 Nov	24 Nov	Daily count 24 Nov
Cases confirmed per day	859 18-04	8.7 25-06	1158 21-10	262 12-12	6516 10-01	308 19-06	2559	3920	4316	4444	3893
14-day incidence per 100,000 population	212 19-04	3.0 04-07	306 26-10	79 09-12	1531 15-01	91 20-06	676	952	1211	1288	
Hospital in-patients	881 17-04	9 02-08	354 01-11	198 16-12	2020 24-01	43 29-06	487	487	585	647	611
Hospital admissions per day	85	<1	27 26-10	11 13-12	158 15-01	6 27-06	59	60	74	72	69
ICU confirmed cases	155	4 04-08	47 04-11	26 27-12	219 ₂₈₋₀₁	13 27-06	93	81	108	124	132
ICU admissions per day	14 31-03	<1 03-06	4 03-11	1	20	<1 02-07	6	7	9	9	12



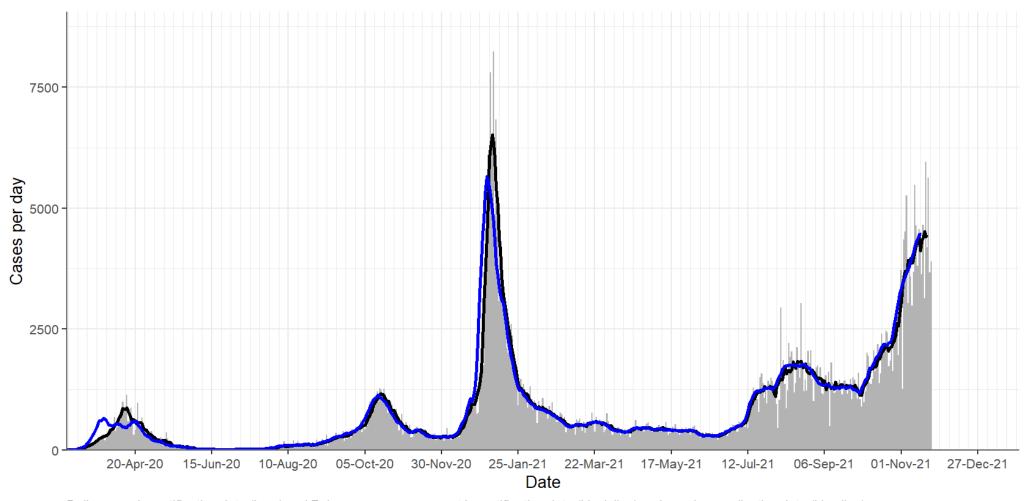


Cases & Incidence Rates

Cases per day

Daily count and 7-day rolling average. Case numbers have increased rapidly over the last 7 weeks, with a step-change in incidence from 22 October 2021 and during the mid-term break: the 7-day average is now 4444, up from 4316 seven days ago, 3920 two weeks ago and 2559 three weeks ago.





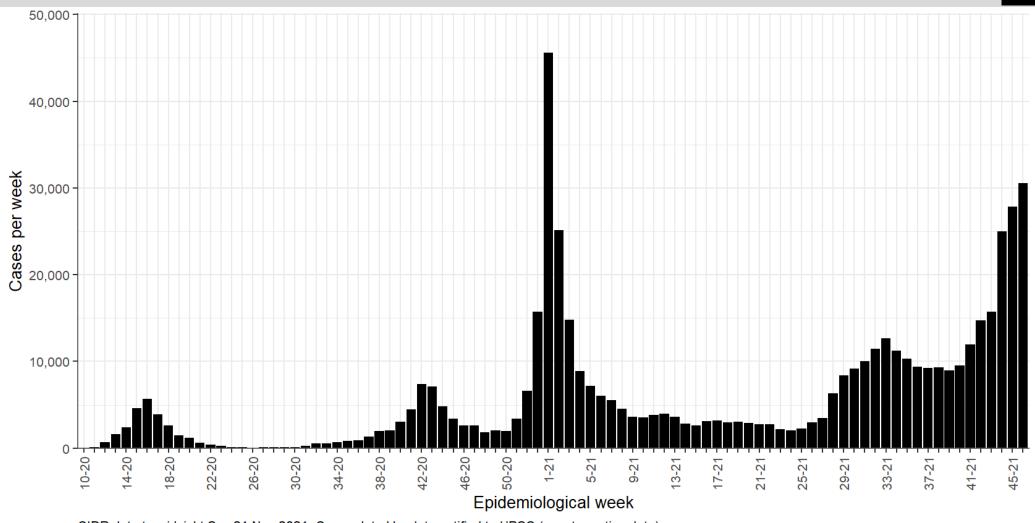
Daily cases by notification date (bars) and 7-day average case count by notification date (black line) and specimen collection date (blue line) CIDR data to midnight Tue 23 Nov 2021. Data by specimen collection date truncated 4 days before report.

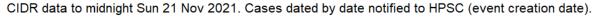


Cases per week

30,533 cases were confirmed in epidemiological week 46 of 2021; we have reported a higher number of cases in only one week of the pandemic to date. It is apparent also that there was a step change in incidence in the first week of November (epidemiological week 44, commencing 31 October 2021)





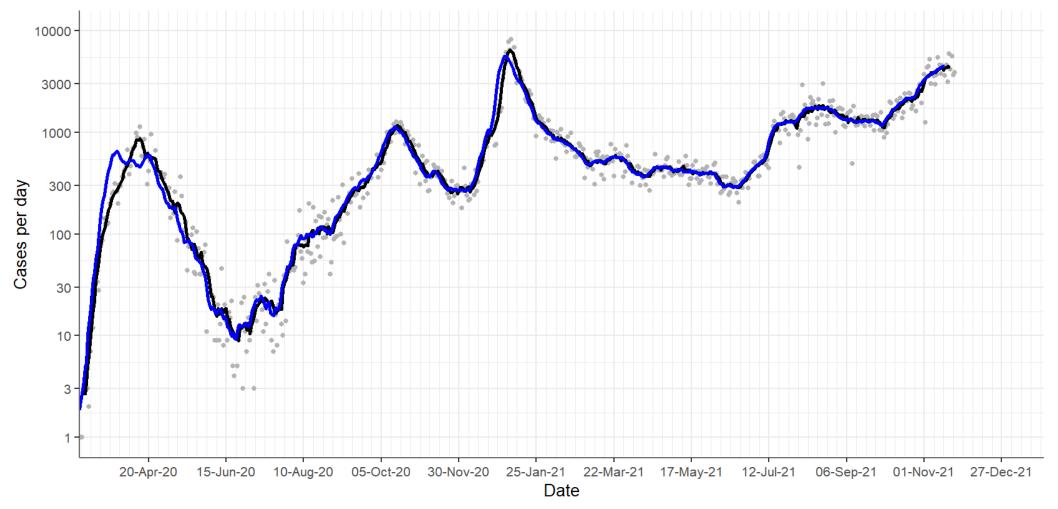




Cases per day

Daily count and 7-day rolling average on a logarithmic scale where exponential growth will appear as a straight line. There is a period of rapid growth from 22 October to 8 November, after which case counts increase at a slower rate. Given testing capacity has been reached, case counts should be interpreted with caution.





Daily cases by notification date (points) and 7-day average case count by notification date (black line) amd specimen collection date (blue line) Note logarithmic scale. CIDR data to midnight Tue 23 Nov 2021. Data by specimen collection date truncated 4 days before report.

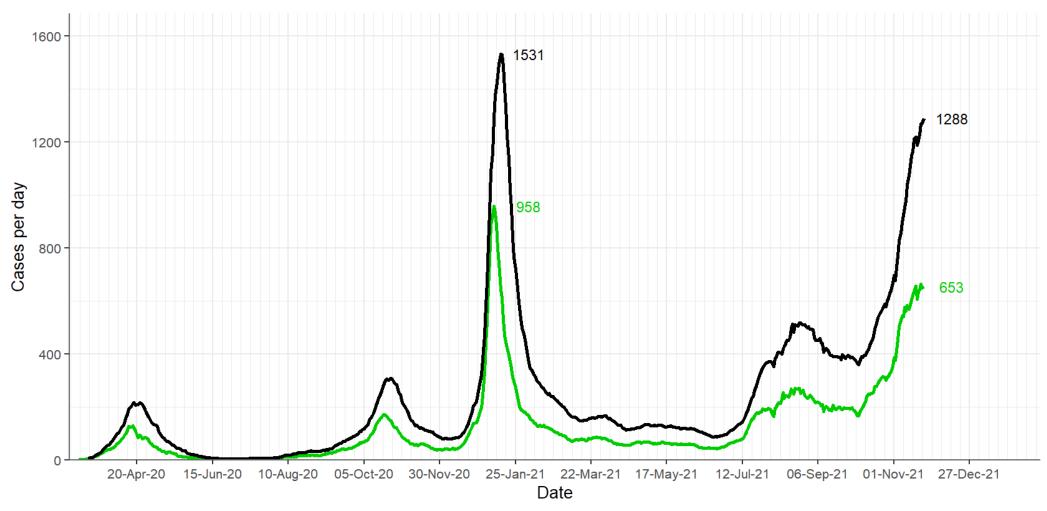




Cumulative incidence

7-day and 14-day cumulative incidence per 100,000 population. The 14-day cumulative incidence, at **1288 per 100,000** is **84% of its highest value** to date (1531 in January 2020).





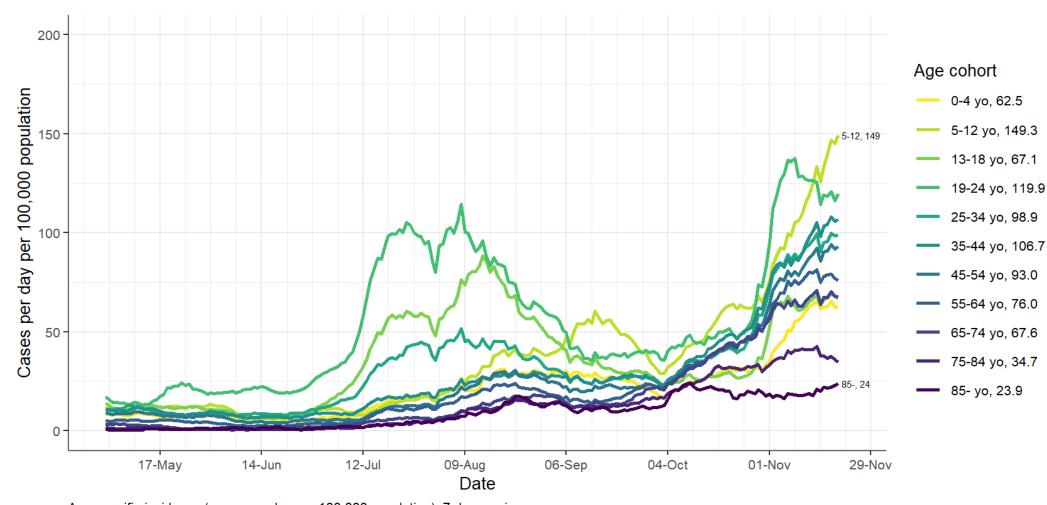
7-day (green) and 14-day (black) cumulative incidence per 100,000 population. CIDR data to midnight Tue 23 Nov 2021. Cases dated by date notified to HPSC (event creation date).



Age-specific incidence (excl. LTRF and hospital outbreaks)

Incidence has risen across all age groups, and is highest in those aged 5-12 years. This is driven by very high levels of infection in adults, primarily through household and community transmission, along with the fact that children under 12 are not yet protected through vaccination. The increase in incidence in those aged 13-18 and 19-24 years during the mid-term break is noteworthy.





Age-specific incidence (cases per day per 100,000 population). 7-day moving average.

Cases associated with outbreaks in long-term residential facilities (LTRF) and outbreaks in hospitals excluded.

CIDR data to midnight Tue 23 Nov 2021. Cases dated by date notified to HPSC (event creation date).

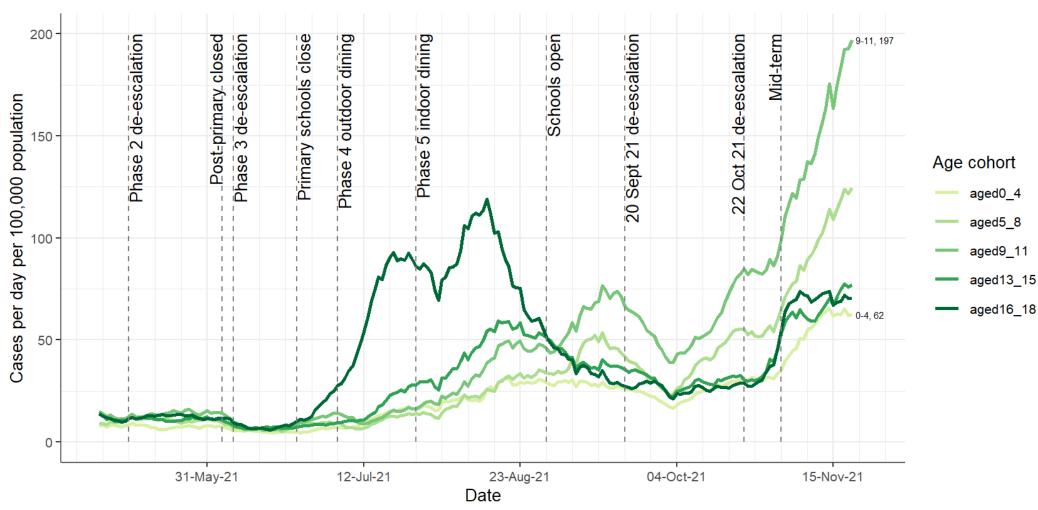




Age-specific incidence (children and adolescents)

This analysis examines incidence in children and adolescents in narrow age bands. It shows a gradient in incidence in children under 12 years of age, with the incidence in the 9-11 age group three times that in the 0-4 age group. The incidence in those aged 13-18 years tripled in the course of the mid-term break, and stabilised as they returned to school.





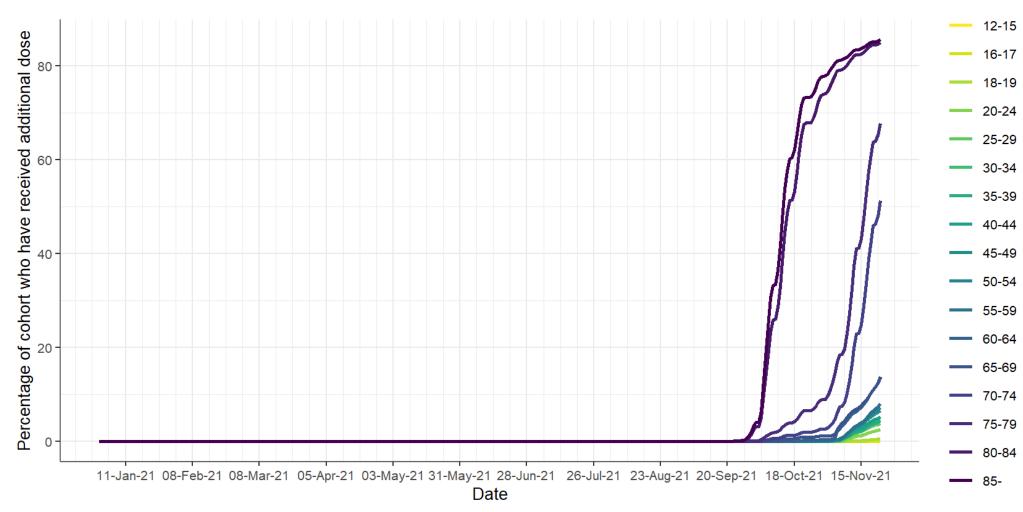
Age-specific incidence (cases per day per 100,000 population). 7-day moving average. CIDR data to midnight Tue 23 Nov 2021. Cases dated by date notified to HPSC (event creation date).



Booster vaccination

The percentage of the population in each age cohort who have received an additional (booster) dose of vaccine. 50% of people over 80 years of age had received a booster dose by 21 October 2021. 50% booster coverage was achieved in 75-79 year olds by 16 November 2021, and 70-74 year olds by 22 November 2021.





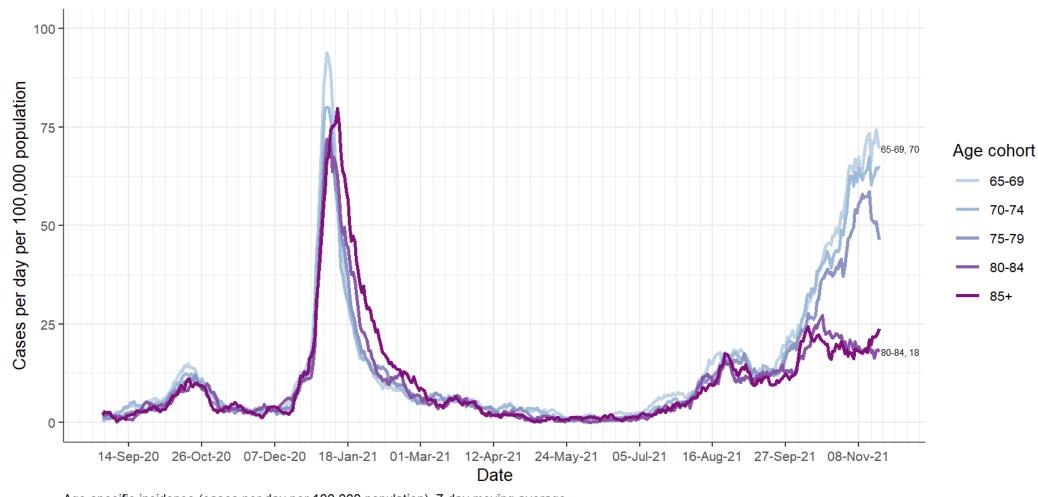
Percentage of each age cohort who have received an additinal dose. Data from COVAX to Tue 23 Nov 2021



Age-specific incidence (excl. LTRF and hospital outbreaks)

The impact of recent booster vaccination of those aged 80 and over is clear, and is beginning to become apparent in those aged 75-79 years: these are the only age groups in which incidence is declining.



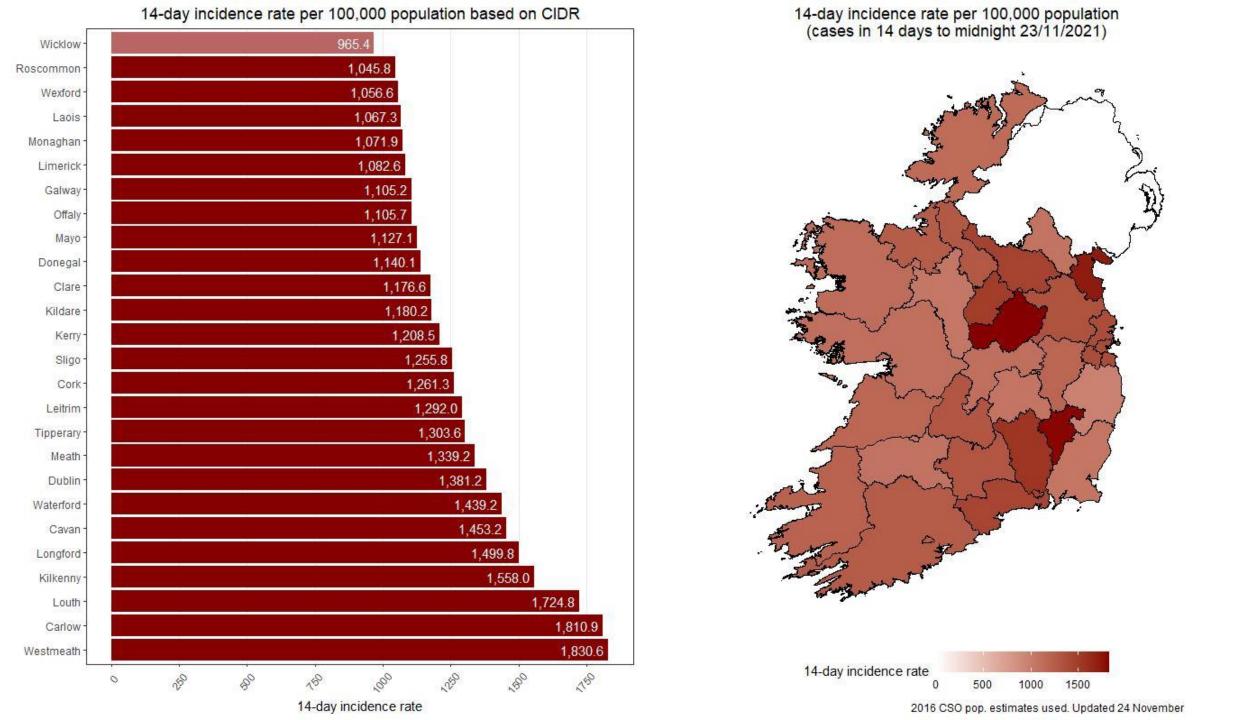


Age-specific incidence (cases per day per 100,000 population). 7-day moving average.

Cases associated with outbreaks in long-term residential facilities (LTRF) and outbreaks in hospitals excluded.

CIDR data to midnight Tue 23 Nov 2021. Cases dated by date notified to HPSC (event creation date).





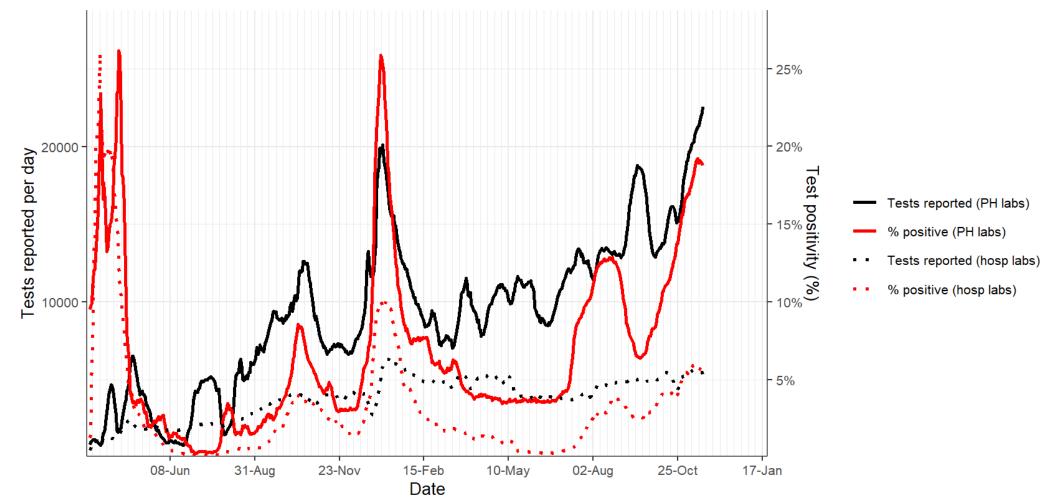


Testing

Tests and test positivity

The demand for testing is higher than it has been at any point in the pandemic and continues to increase. Test positivity has rarely been higher, now over 18% for public health laboratories, and 6% for tests conducted in hospital laboratories.





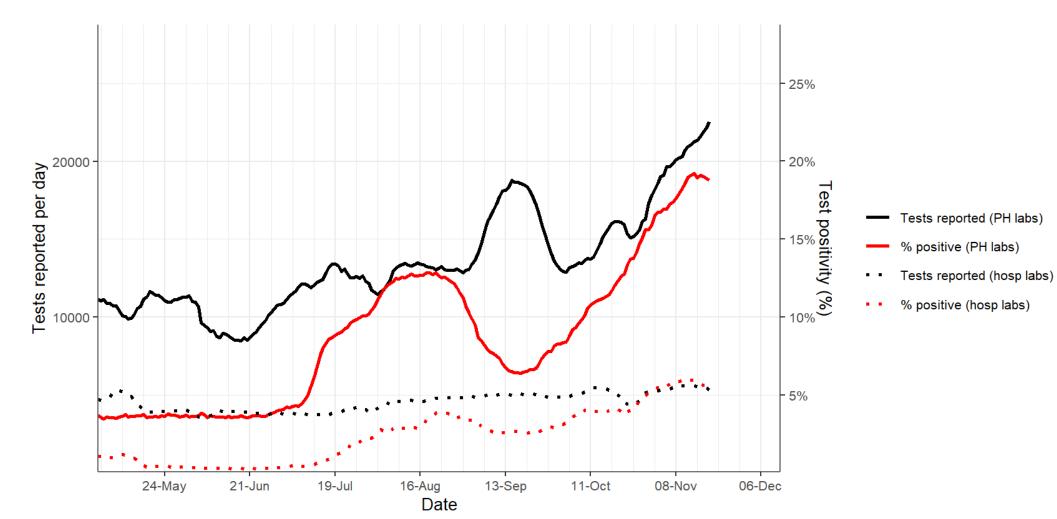
Total tests reported per day (black) and % of tests reported positive (red) for tests conducted in public health laboratories (NVRL and Cherry Orchard, solid lines) and tests conducted in hospital laboratories (dotted lines). 7-day moving averages.



Tests and test positivity

Test positivity has decreased slightly in recent days, in public health and hospital laboratories

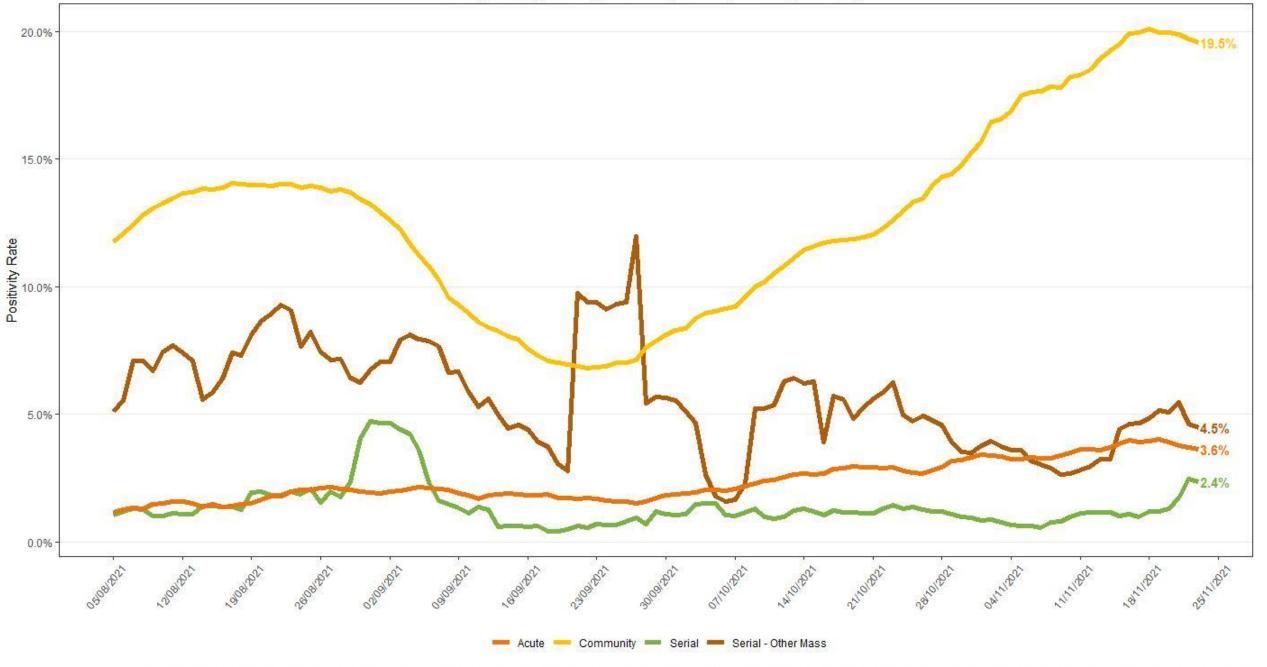




Total tests reported per day (black) and % of tests reported positive (red) for tests conducted in public health laboratories (NVRL and Cherry Orchard, solid lines) and tests conducted in hospital laboratories (dotted lines). 7-day moving averages.



7-day Moving Average Positivity Rate by Testing Pathway

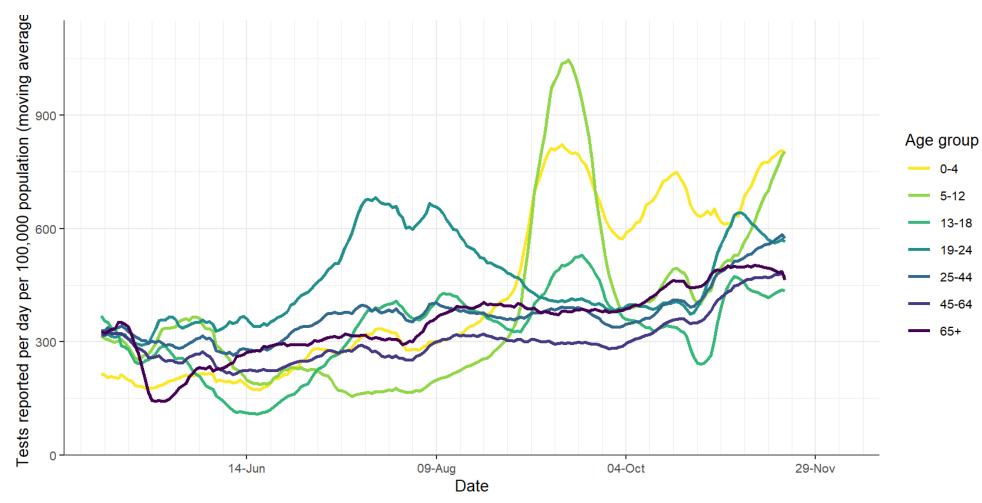


Updated 24 November. Source: CRM data, HSE Contact and Tracing Team. Acute=Swabs taken in acute hospitals; Community=Swabs taken in Community Test Centres for walk-in, online self-referral, GP and CMP referrals; Serial=Swabs taken under the Serial Testing Programme in Nursing Homes, Food Production etc; Other Mass=Swabs taken in response to an outbreak in facilities e.g. workplaces, schools, nursing homes

Testing by age

Testing rates are very high in those aged 12 and under, at approximately 800 tests per 100,000 people per day, so over 5% of the population is being tested every week. This means that case ascertainment in these age groups will be elevated.





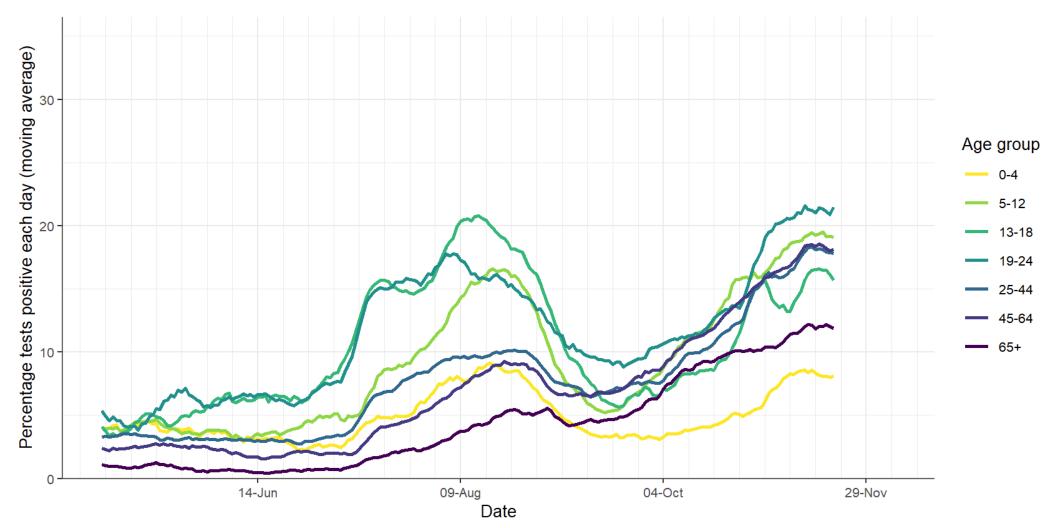
Tests reported per day per 100,000 population (7-day moving average) by age group. Laboratory testing data to Tue 23 Nov 2021.

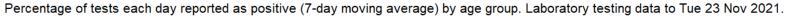


Test positivity by age

Test positivity appears to be stabilizing across all age groups.









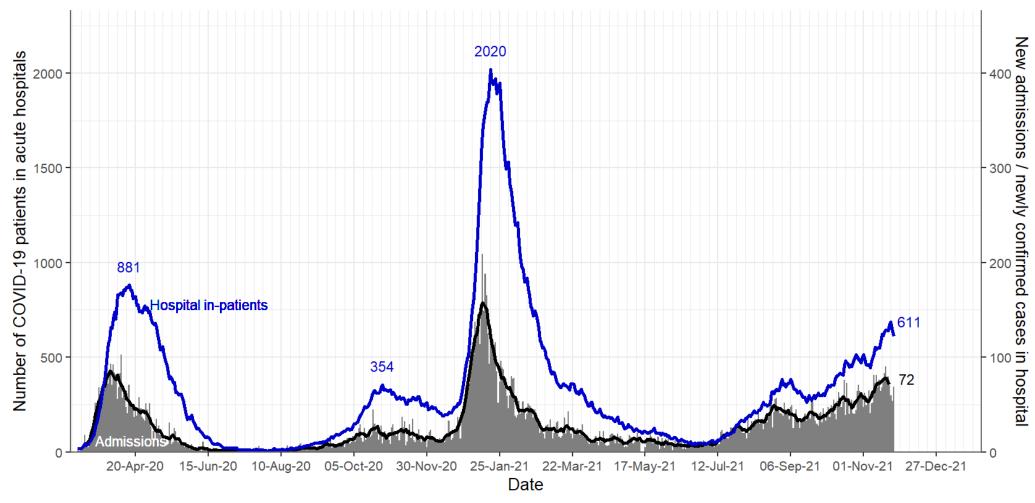


Hospitals & ICU

Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection. The number of people in hospital is high at 611. The number of admissions and newly confirmed cases in hospital per day is high at 72 per day. Note step change in admissions and number in hospital in second week of November.





Number of in-patients with COVID-19 (blue line) and number of newly admitted or newly confirmed cases per day(columns, with 7-day moving average, black line, secondary y-axis) on HSE acute hospital sites. HSE PMIU-SDU data to Wed 24 Nov 2021.

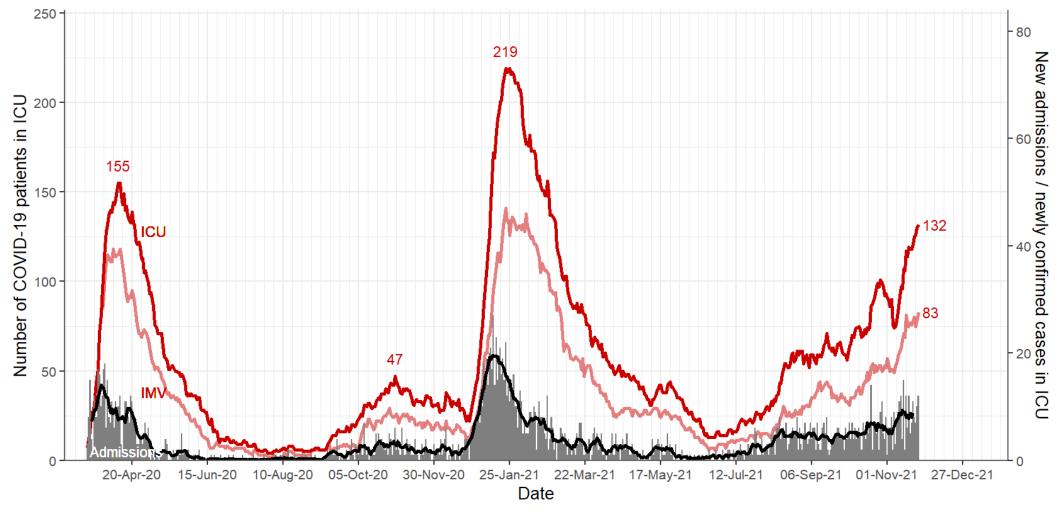




Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection and the number requiring mechanical ventilation are high and variable. **132** people in ICU, **83** mechanically ventilated, average **9** admissions per day. Note step change in admissions and number ventilated in second week of November





Number of in-patients with COVID-19 in ICU (solid red line) number requiring mechanical ventilation (IMV, pale red line), and number of new admissions per day (columns, with 7-day moving average, black line, secondary y-axis). NOCA ICU-BIS data to Wed 24 Nov 2021.





Vaccination Status of COVID-19 cases admitted to ICU in Ireland in October and November 2021 (to November 20th)



Where vaccination status known for ICU admissions in October:

- 53% were unvaccinated
- 3% were partially vaccinated
- 44% were fully vaccinated

Where vaccination status was known for ICU admissions in November (to 20th November):

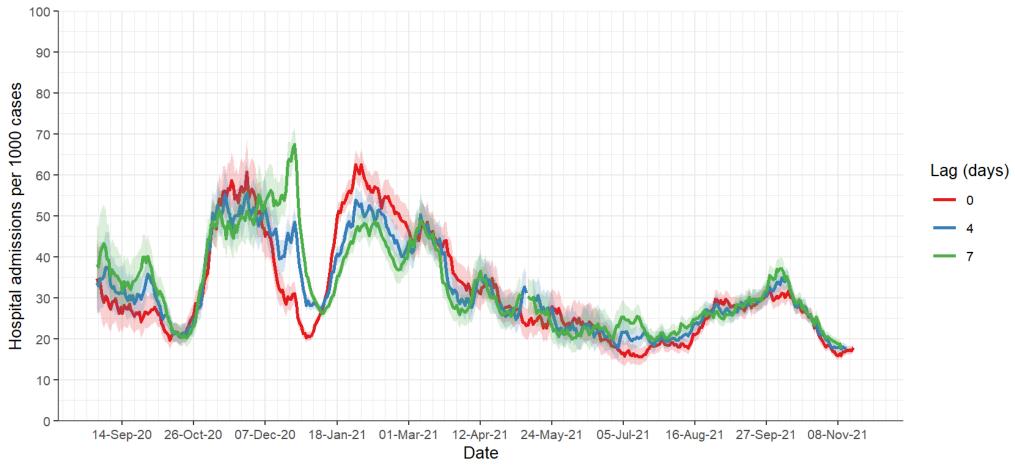
- 51% were unvaccinated
- 4% were partially vaccinated
- 45% were fully vaccinated

CIDR data extracted at 9.30am on November 22nd 2021

Hospital admissions per 1000 cases

The number of admissions per 1000 cases has fallen from 30-35 admissions to under 20 admissions per 1000 cases in recent weeks; most likely this is due to vaccine protection against severe outcomes being relatively well preserved while protection against infection wanes. This ratio is unlikely to fall further, and paradoxically may increase as older people receive booster vaccinations restoring some protection against infection.





Ratio of the number of admissions and new confirmations in hospitalper day to the number of cases per day (admissions per 1000 cases).

Calculated over a moving window of 14 days, or at least 1000 cases. Mean and 95% confidence intervals

Note that this is simply the ratio of admissions to cases on any given day, not the probability that any given case will be admitted.

Ratios are plotted for different lags, in days, between cases and hospital admissions. HSE PMIU-SDU data to Wed 24 Nov 2021. CIDR data to midnight Tue 23 Nov 2021.

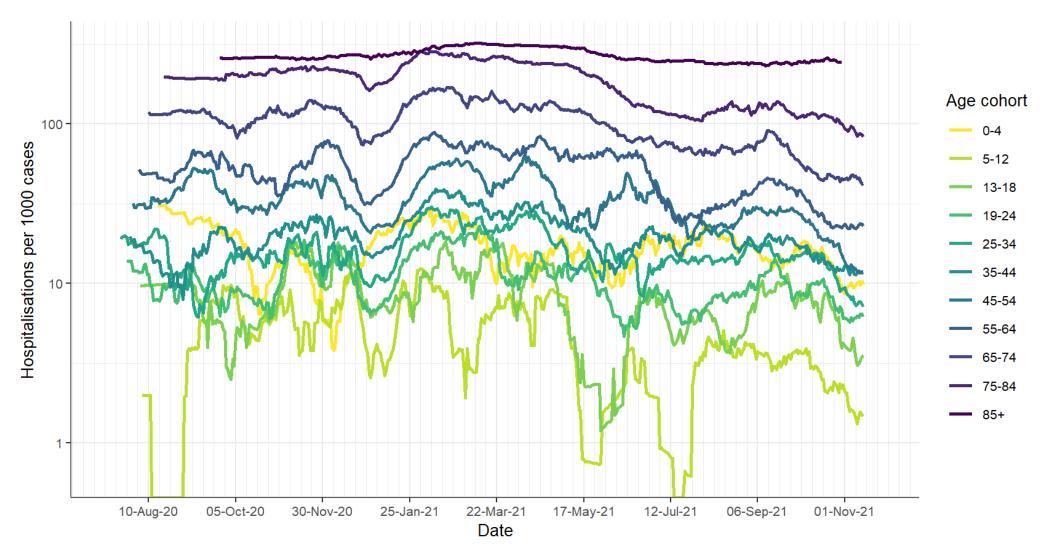




Hospitalisations per 1000 cases by age

Given the focus on high incidence in children, it is important to highlight that the risk of severe disease is very low. The risk of hospitalisation is lower for 5-12 year olds than any other age group and is decreasing. The hospitalisation rate was 5 per 1000 and has fallen to 2 per 1000, suggesting increased case ascertainment. This contrasts with a hospitalisation rate of 10 per 1000 in 0-4 and 19-44 year olds, and 100 per 1000 in 75-84 year olds.



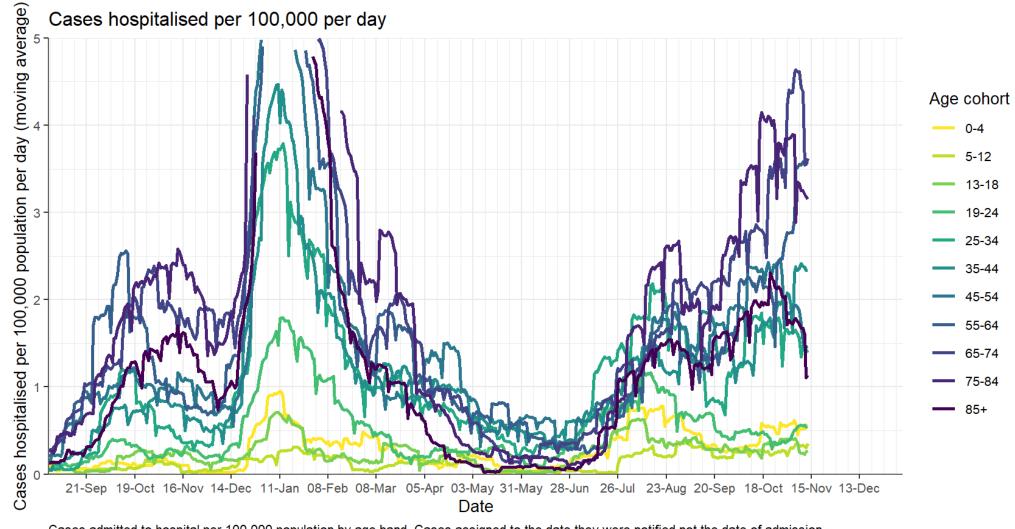




Hospitalisations by age

The recent surge in cases has been associated with increased numbers of people hospitalized in all age groups over 25 years of age, but little increase in hospitalisation in those aged under 25 years







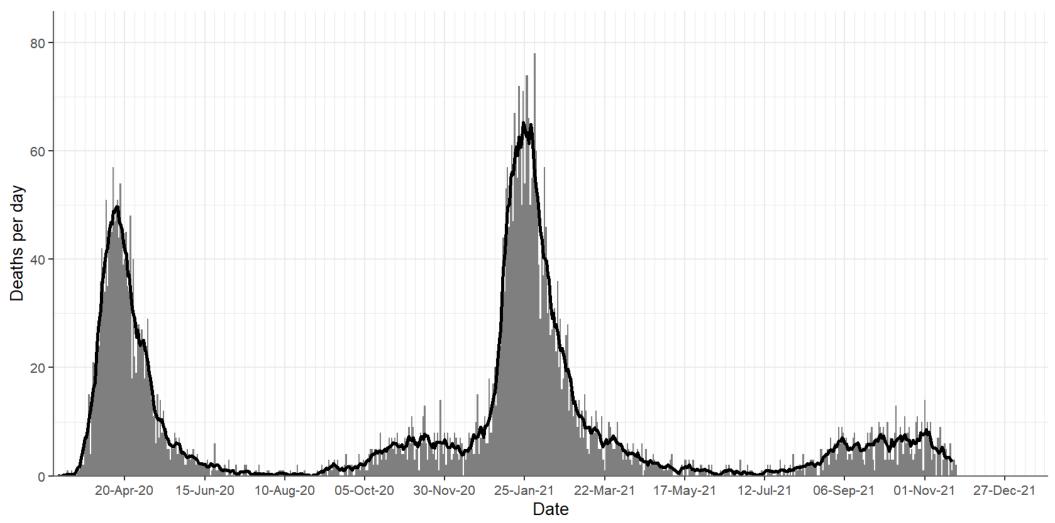


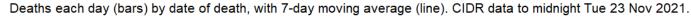
Deaths

Deaths

Deaths per day are increasing very slowly at approximately 7 per day, or 200 deaths per month. This may increase, given the very high case counts, though booster vaccination of those aged 80 years and older should reduce mortality.









Vaccination status of laboratory confirmed COVID-19 cases who died due to COVID-19 in October and November 2021 (to 20th November)



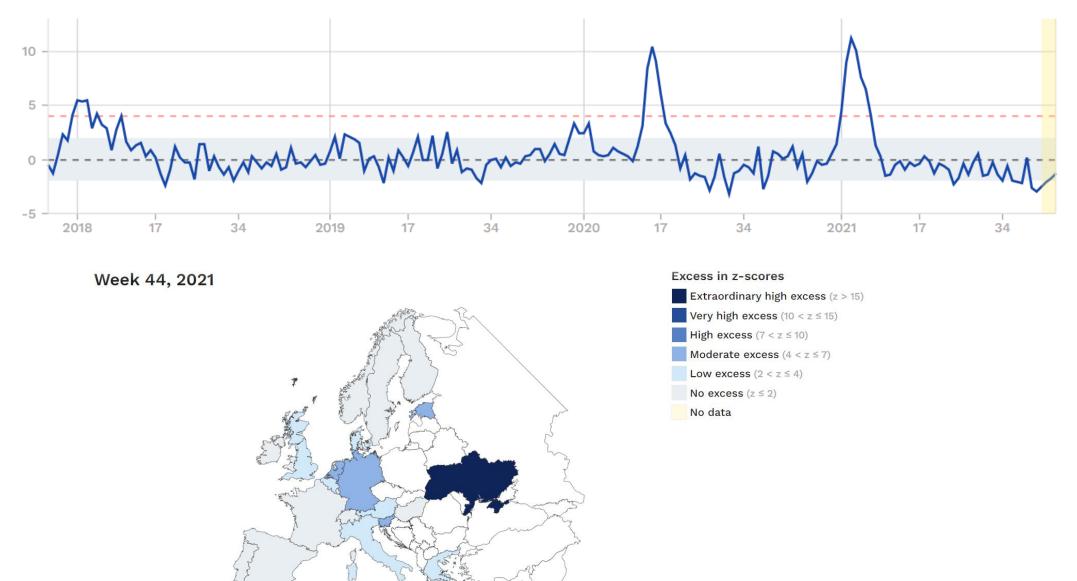
Confirmed COVID-19 cases who died in October 2021:

- Unvaccinated/Not registered on COVAX as vaccinated: 29.3%
- Partially vaccinated: 1.1%
- Fully vaccinated: 69.7%
- Fully vaccinated and epidemiological date ≥ 14 days after vaccination: 62.8%

Confirmed COVID-19 cases who died in November 2021 (to 20th November)

- Unvaccinated/Not registered on COVAX as vaccinated: 22.0%
- Partially vaccinated: 1.2%
- Fully vaccinated: 74.4%
- Fully vaccinated and epidemiological date ≥ 14 days after vaccination: 65.9%

Ireland



Source: EuroMOMO



Outbreaks & Clusters

Outbreaks – Week 46 2021 (to midnight 20th November 2021)

In Week 46 2021, there were 124 COVID-19 outbreaks notified:

Key settings:

Nursing Homes & Community Hospitals

Eight new nursing home and community hospital outbreaks this week – 34 linked cases (range 2-7)

Acute hospitals

Eight new acute hospital outbreaks notified this week with 37 linked cases (range 2-18)

Residential institution outbreaks

Twenty-four new outbreaks reported this week - 94 linked cases (range 1-10)

Vulnerable groups

Seven new outbreaks associated with Irish Travellers, involving 22 cases (range: 4-8 cases), one outbreak associated with Roma (9 cases), one with homeless (7 cases) and one outbreak associated with a Direct Provision Service (9 cases)

Workplace outbreaks

4 new outbreaks in food industry with 15 linked cases (range: 2-8 cases)

An additional 6 workplace outbreaks in other workplace types with 18 linked cases (range: 1-10 cases)

Schools

24 new outbreaks in week 46 with 139 cases (range: 2-16)

14 outbreaks (involving 105 cases) were in primary schools and 10 outbreaks (involving 34 cases) were in special education schools

Childcare facilities

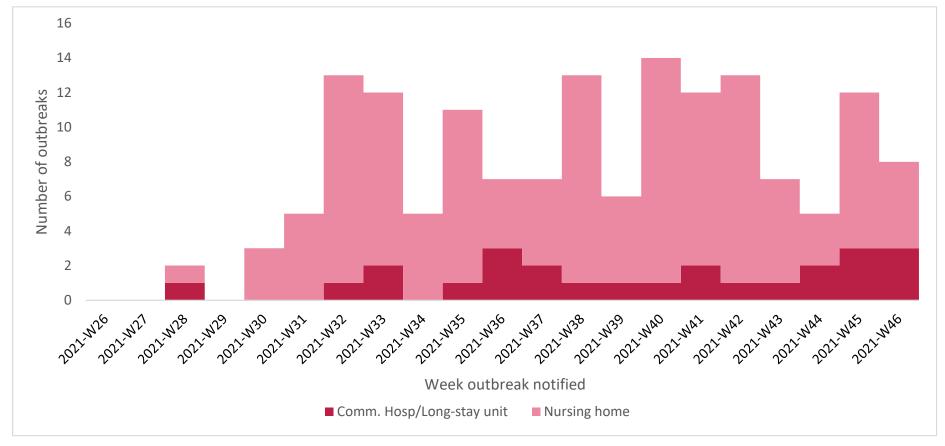
Six childcare facility outbreaks, involving 27 cases (range: 2-12 cases)

*Regional Departments of Public Health are prioritising Public Health Risk Assessments and outbreak investigations in settings that have the greatest clinical need or would benefit most from Public Health intervention. For this reason, outbreaks in some settings may be underestimated.

Data source: CIDR November 23rd 2021, data to midnight November 20th 2021

Weekly number of COVID-19 outbreaks in Nursing Homes and Community Hospitals, wave 4 (weeks 26-46 2021)



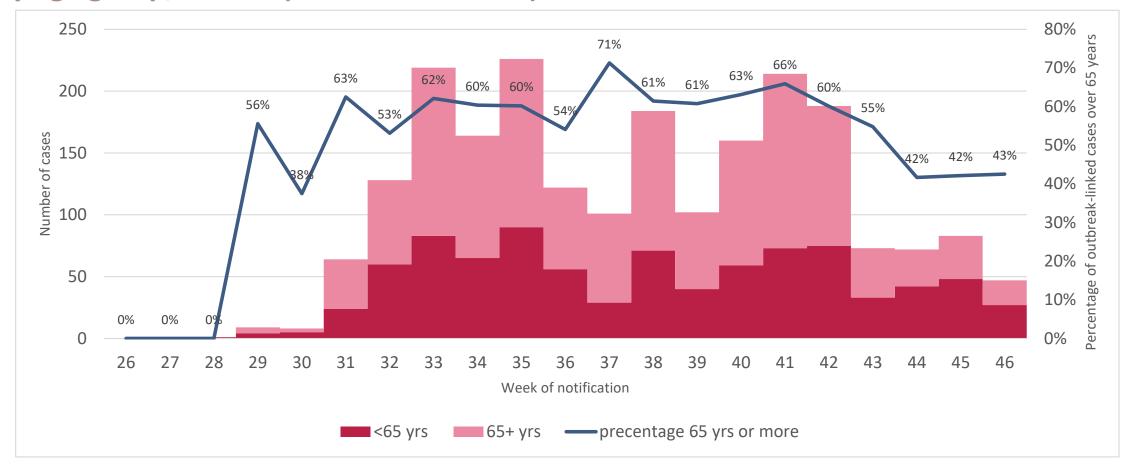


Wave 4:

- 155 nursing home and community hospital/long stay unit COVID-19 outbreaks notified
- The number of outbreaks in these settings in the last 15 weeks has been relatively stable, but was highest in week 40, with 14 outbreaks in that week.

Cases linked to COVID-19 outbreaks in Nursing Homes and Community Hospitals by age group, wave 4 (weeks 26-46 2021)



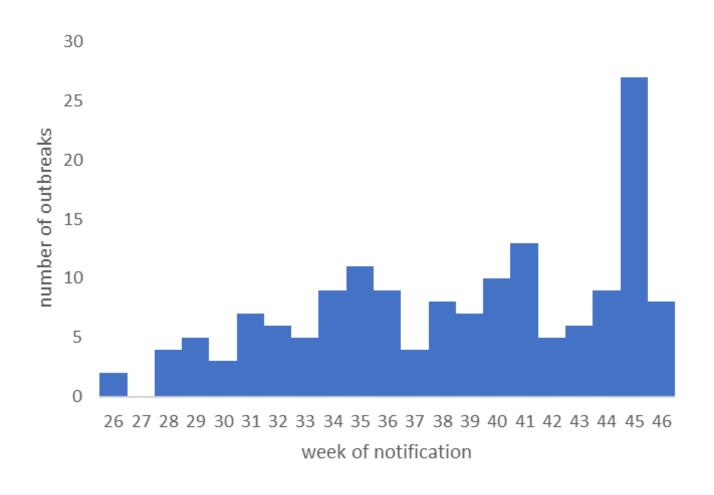


Wave 4:

Across wave 4, 59% (1258/2091) of linked cases were 65 years of age or more; in the last 3 weeks, just 42% (85/202) were 65 years of age
 or more

COVID-19 outbreaks in Acute Hospitals, wave 4 (weeks 26-46 2021)





Update on week 46

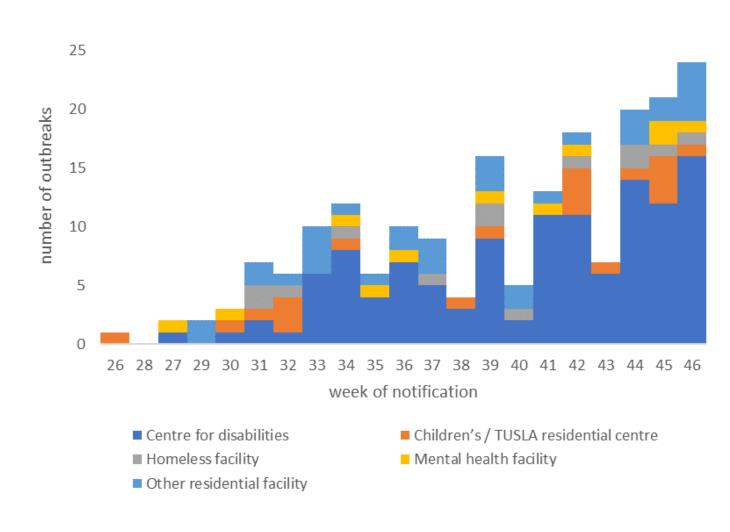
- There were eight new COVID-19 outbreaks in acute hospitals settings in week 46
- 37 cases were linked to these outbreaks (range 2-18 cases per outbreak)

Overview wave 4

 Since week 26 2021, there have been 158 COVID-19 outbreaks in acute hospitals settings, with 881 associated confirmed cases

COVID-19 outbreaks in Residential Institutions, wave 4 (weeks 26-46 2021)





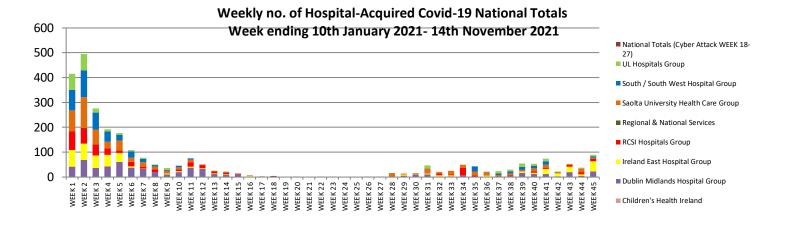
Update on week 46

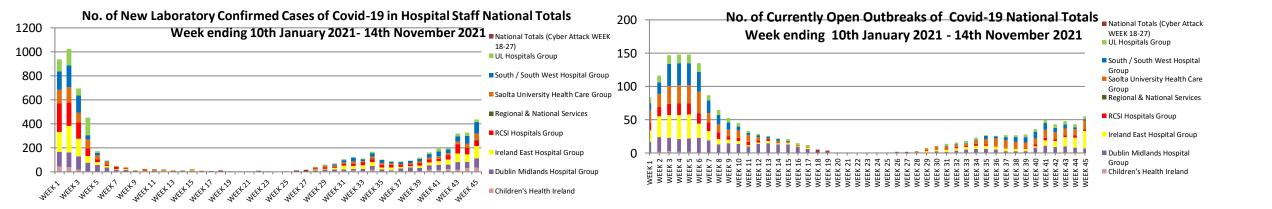
- 24 new COVID-19 outbreaks were reported in Residential Institutions in week 46
 - 16 were in disability settings
 - two in prison settings
 - one each in a children's/TUSLA residential centre, a direct provision centre, a mental health facility, a homeless facility
 - 2 in other/unspecified locations
- 94 cases were associated with these outbreaks

Overview wave 4

- Since week 26 2021, there have been 196 COVID-19 outbreaks in Residential Institutions, with 908 associated cases
 - 119 were in disability settings (527 cases)
 - 20 were in Children's/TUSLA residential centres (64 cases)
 - 13 outbreaks in homeless facilities (52 cases)
 - 11 outbreaks were in mental health facilities (38 cases)
 - 33 outbreaks were in other residential settings (227 cases)

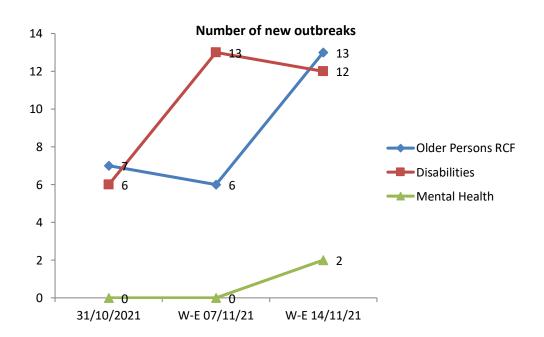
Acute operations key data

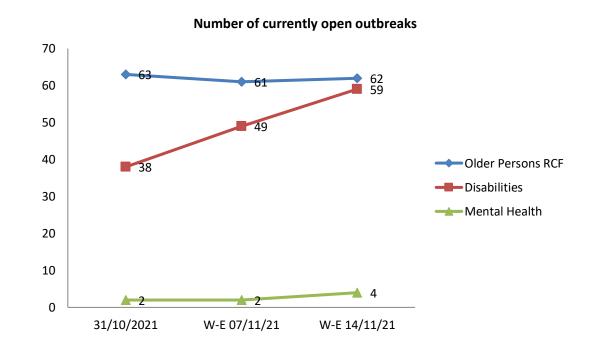




Community operations key data







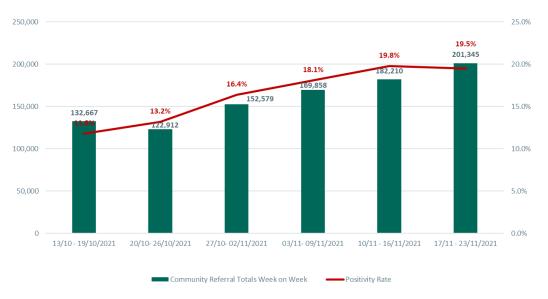


Test & Trace Update

Test and Trace update

- All pillars of the testing pathway are operating at maximum capacity (referrals, swabbing, laboratory testing and contact tracing).
 - In the week to 23rd Nov 206,256 laboratory tests were completed, this is the highest volume of lab tests completed to date in a 7-day period.
- Community referrals have increased by 10% in comparison to the same time-period last week while community positivity is now at 19.4%.
- Swabs completed in the community was **169,934**, this is an **8%** increase in comparison to the same time-period last week.
- The highest day over the past week reached 27,960 swabs (including test centre and outbreak referrals) which is in excess of standing capacity.
- Monday, 22nd November 2021 reported the single highest day for testing referrals to date. Over 36,610 referrals were recorded in total, with 16,111 of these being self-referrals.
- The median end to end TAT for a not detected result in the Community is 1.2 days
- The median end to end TAT for a detected result in the Community is **2.7** days
- Antigen tests being distributed to approx. >3,500 fully vaccinated close contacts per day

Total Community Referrals and Positivity Rates Week on Week



Sources: HSE – COVID-19 Contact Management Programme Weekly report and HSE Test and Trace Reports

CMP update



- The average number of cases managed by the CMP per day during the week ending 21/11/21 was 4653, an increase of 10% from 4242 cases the previous week. The average number of close contacts reported to the CMP per day for the week ending 21/11/21 was 8587, an increase of 8% from 7943 the previous week. Household contacts accounted for 59.7% (N=13602).
- For close contacts created the week ending 07/11/2021: 14953 were referred for antigen testing. Of these, a confirmatory PCR test result was identified for 242 close contacts. 176 (72.7%) of these tests were positive.
- For the week ending 07/11/21, 80% (n=5984) of the close contacts referred for a Test 1 and 66% (n=2074) referred for a Test 2 attended for testing. Test 1 results were available for 5842 close contacts. 23.2% (n=1475) of these had a positive result. Test 2 results were available for 1501 close contacts, of these 11% (n=165) had a positive result. Overall, 26.2% (n=1640) of the close contacts tested had a positive result.
- The mean number of close contacts per case (excluding cases with zero close contacts) was 3.3 for the week ending 21/11/2021, a decrease from 3.5 the previous week

Variants update

Total confirmed variants of concern cases:

P.1 (Gamma): 33

B.1.351 (Beta): 77



• B.1.1.318: 247

• C.37 (Lambda): 4

• B.1.621 (Mu): 4

Delta sublineage:

AY.4.2: 123

(Based on latest NVRL results as of 22.11.21)

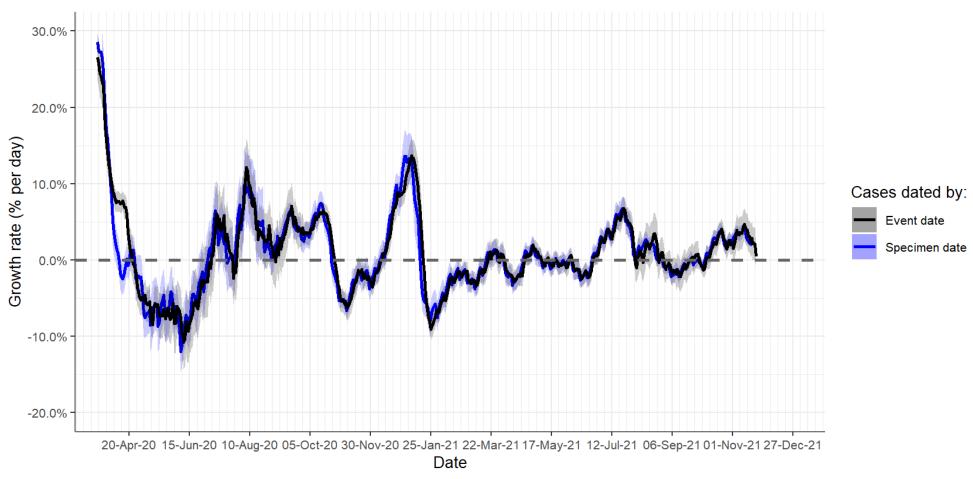


Source: HPSC (23.11.21)

Growth rate

Growth rate for cases has reduced over the last 10 days and is now close to zero being estimated at -0.2% per day (-2.7% to + 2.4%) over a 14-day window and +0.4% per day (-1.0% to 1.9%) over a 21-day window. The number of people in hospital is growing slowly, growth rate 1.4% (0.8% to 2.0%) per day over a 14-day window. This growth rate compares with growth rates of 4-7% per day in September and October 2020 and July 2021, and in excess of 10% per day in January 2021.





Growth rate in case counts using a 21-day window. Mean and 95% confidence intervals. CIDR data to midnight Tue 23 Nov 2021. Cases dated by date specimen collected or date notified to HPSC (event date)





Situation analysis 24 November 2021



- Incidence high
 - Cases (7-day average) 4444, up from 4316 seven days ago, 3920 two weeks ago and 2559 three weeks ago
 - 14-day incidence 1288 per 100,000 (83% of its highest ever value)
 - Incidence increasing across all age groups except those 75 and above
 - Increase in incidence in 13-24 year olds during mid-term break
 - Incidence in children aged 0-12 highest, but high case ascertainment
 - 611 in hospital, 132 in ICU, 83 ventilated
 - Test positivity very high across all age groups but has stabilized
- Growth rate has decreased over the last 10 days
 - Cases: growth rate close to zero
 - Numbers in hospital: 1-2% per day
- Clearly driven by increased social contact and reduced risk mitigation
- Future trajectory uncertain
 - Infection: balance between waning immunity, unknown prior infection-induced immunity, and effective social contact
 - Severe disease: vaccine protection preserved, but very high force of infection
 - 1000-2000 people in hospital and 150-250 people in ICU (plus others on advanced respiratory support) are likely scenarios if levels of infection do not decrease in the next few weeks
 - Models being re-run to include this week's data















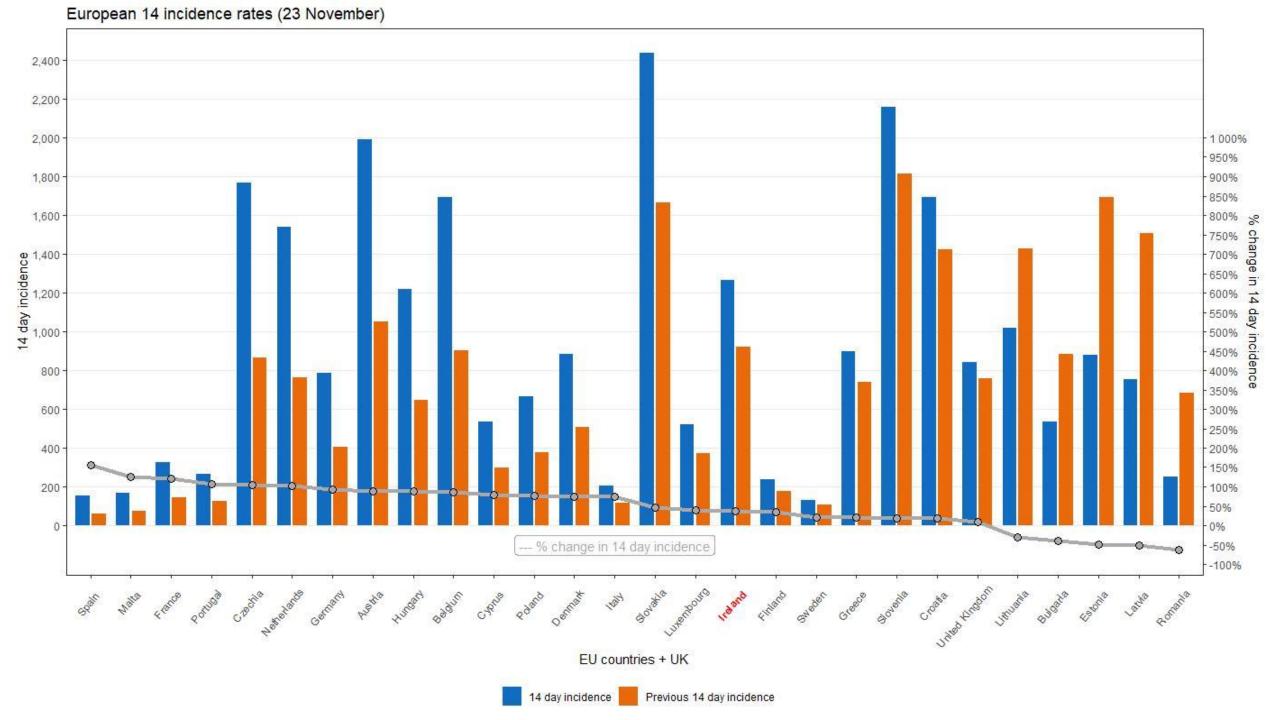
European Data

EU/UK ranked by 14 day incidence (23 Nov)

EU and the UK			% change in 14 day incidence
Slovakia	2435.67	1665.73	46%
Slovenia	2158.2	1813.61	19%
Austria	1992.19	1050	90%
Czechia	1768.18	866.12	104%
Croatia	1692.89	1425.16	19%
Belgium	1692.22	901.65	88%
Netherlands	1542.19	762.48	102%
Ireland	1268.35	923.92	37%
Hungary	1220.96	647.4	89%
Lithuania	1020.24	1428.7	-29%
Greece	900.1	738.97	22%
Denmark	885.33	507.56	74%
Estonia	877.76	1695.08	-48%
United Kingdom	841.11	758.49	11%
Germany	785.65	405.99	94%
Latvia	753.11	1506.27	-50%
Poland	668.09	378.43	77%
Bulgaria	536.2	882.76	-39%
Cyprus	535.38	299.66	79%
Luxembourg	522.52	370.97	41%
France	324.4	146.87	121%
Portugal	265.65	128.12	107%
Romania	252.31	684.06	-63%
Finland	238.36	175.82	36%
Italy	204.46	117.5	74%
Malta	169.73	74.79	127%
Spain	152.44	59.71	155%
Sweden	131.57	107.49	22%

[•] As of 16th 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



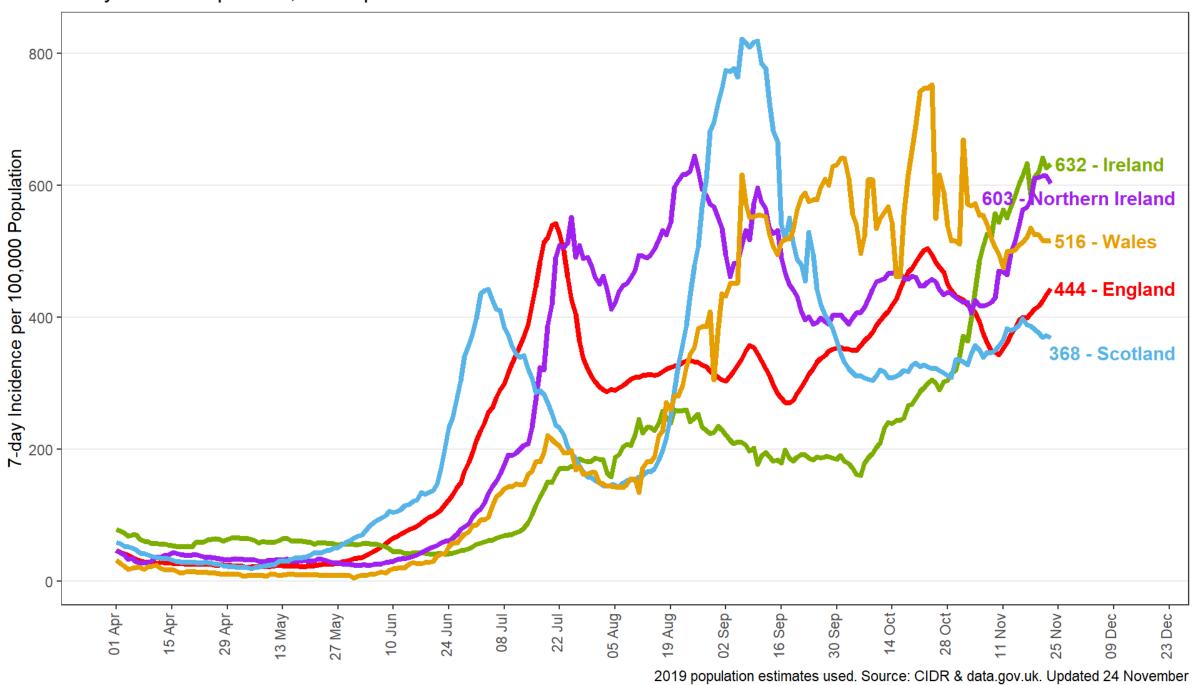
EU/UK ranked by 7 day percentage change (23 Nov)

EU and the UK	7 day incidence	Previous 7 day incidence	% change in 7 day incidence
France	207.7	116.7	78%
Cyprus	333.7	201.67	65%
Portugal	158.96	106.69	49%
Malta	101.34	68.4	48%
Spain	90.43	62.01	46%
Czechia	1029.79	738.39	39%
Poland	389.09	279	39%
Netherlands	897.56	644.64	39%
Luxembourg	304.03	218.49	39%
Germany	443.14	342.51	29%
Belgium	952.63	739.59	29%
Hungary	685.56	535.4	28%
Italy	114.4	90.07	27%
Sweden	73.49	58.08	27%
Finland	131.66	106.7	23%
Austria	1084.01	908.18	19%
Slovakia	1308.09	1127.58	16%
Denmark	474.07	411.26	15%
United Kingdom	439.13	401.98	9%
Ireland	647.79	620.56	4%
Greece	456.74	443.36	3%
Slovenia	1045.98	1112.22	-6%
Croatia	791.42	901.47	-12%
Bulgaria	250.03	286.17	-13%
Lithuania	452.74	567.5	-20%
Estonia	387.11	490.65	-21%
Latvia	317.04	436.06	-27%
Romania	96.29	156.01	-38%

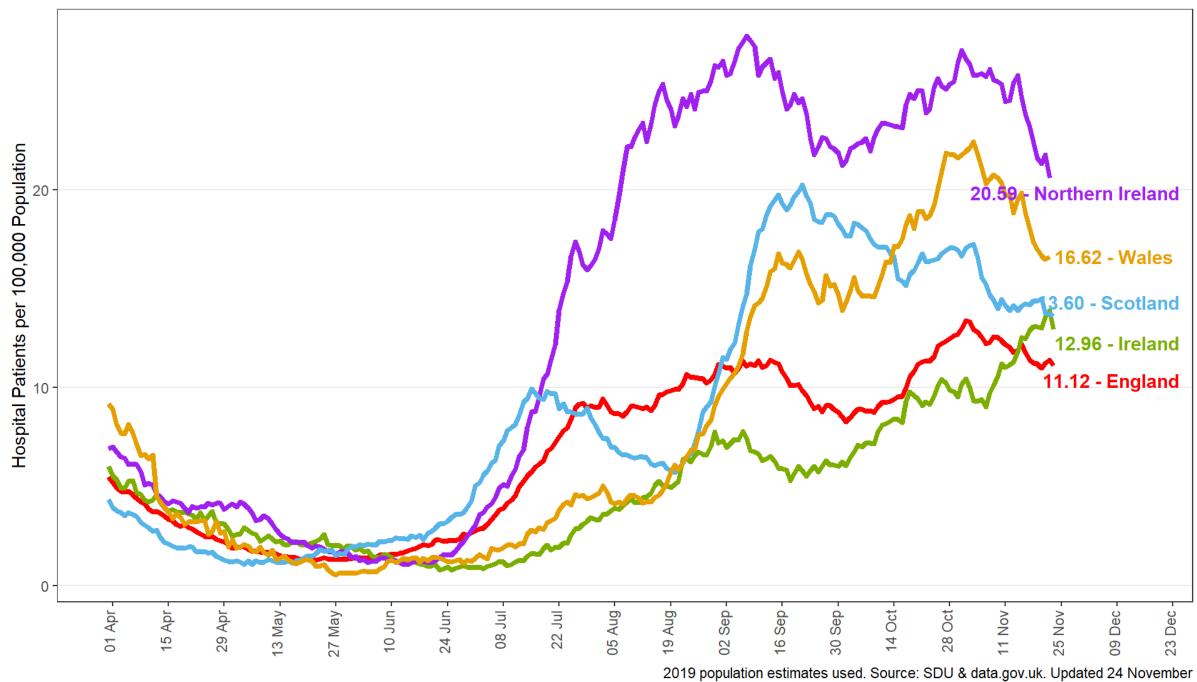
[•] As of 16th Dec, this daily data is now sourced from Our World In Data (OWID) instead of ECDC as they have switched to weekly reporting (Thursday evenings).

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7-day Incidence per 100,000 Population

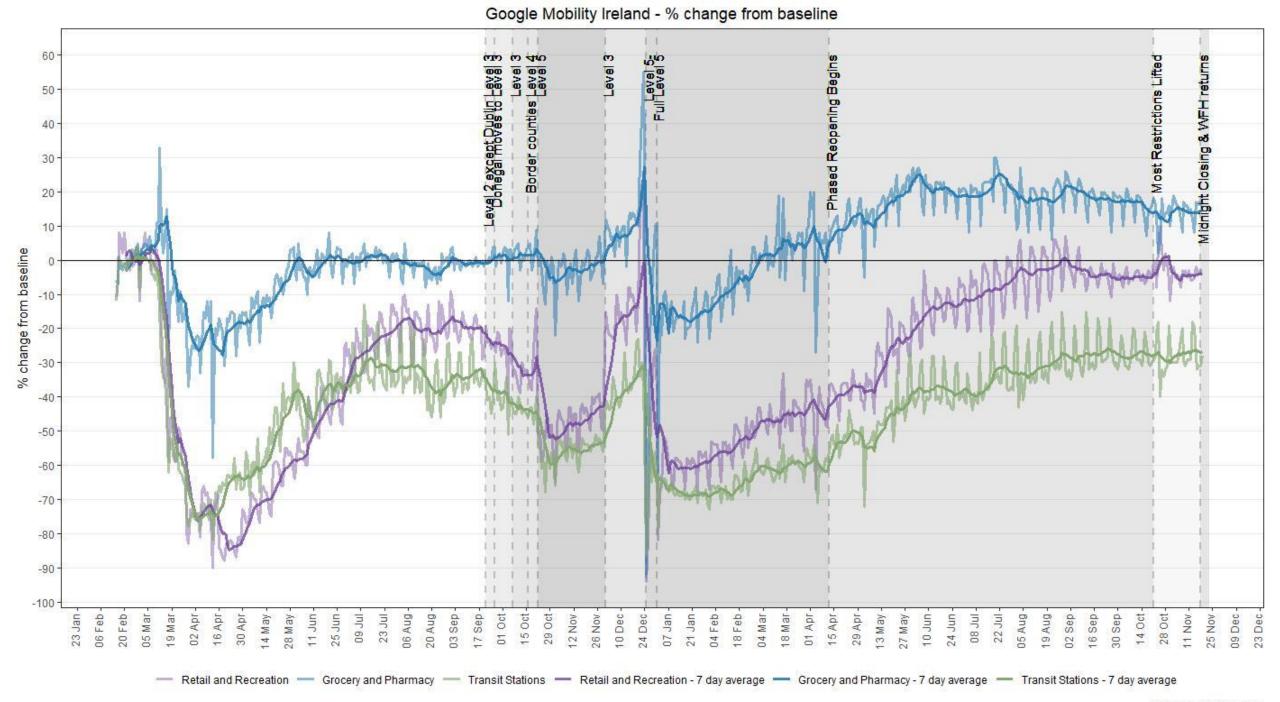


Hospital Patients per 100,000 Population





Mobility Data



Google Mobility Ireland - % change from baseline

