NPHET COVID Update 18th October 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.)	20-Jun (lowest 2021 14 day inc.)	11-Oct (1 week ago)	18-Oct
14-day incidence	96.08	306.39	86.90	320.59	1494.31	89.65	394.85	466.29
5-day average cases	407.0	919.2	261.0	1476.6	4458.4	313.8	1578.0	1735.6
Total weekly cases	2607	7000	1893	9417	35365	2071	9998	12206

	01-Oct	26-Oct (2 nd wave peak 14 day inc.)	01-Dec	01-Jan	14-Jan (3 rd wave peak 14 day inc.)	20-Jun (lowest 2021 14 day inc.)	11-001	18-Oct
No. Hospital (8.A.M)	122	344	224	508	1792	49	400	482
No. in ICU (11.30 A.M)	20	39	30	42	176	15	75	74

Deaths	MAR21	APR21 MAY21		JUN21 .	JUL21	AUG21 SEP21 OCT21			Total since Mar2020	
Total (as of 13/10/2021)	258	97	39	17	20	73	136	35	5,306	

Cases, numbers in hospital and intensive care

After a period of stability, there has been a sudden increase in the number of daily cases and the numbers in hospital and ICU. It is not yet clear if this is a transient increase, or one that will be sustained or increase further.



	Apr 2020	Summer 2020	Oct 2020	Dec 2020	Jan 2021	Jun 2021	27 Sept	4 Oct	11 Oct	18 Oct	Daily count 18 Oct
Cases confirmed per day	859 18-04	8.7 25-06	1158 21-10	262 12-12	6516 10-01	308 19-06	1316	1258	1428	1744	1578
14-day incidence per 100,000 population	212 19-04	3.0 04-07	306 26-10	79 09-12	1528 15-01	91 20-06	382	378	395	466	
Hospital in-patients	862 17-04	9 02-08	333 01-11	198 16-12	1949 24-01	43 29-06	290	308	362	426	482
Hospital admissions per day	85	<1	27 26-10	11 13-12	158 15-01	6 27-06	39	38	44	56	39
ICU confirmed cases	150	4 04-08	43 04-11	26 27-12	217 28-01	13 27-06	63	60	71		73
ICU admissions per day	14 31-03	<1 03-06	4 03-11	1	20 17-01	<1 02-07	5	5	5		



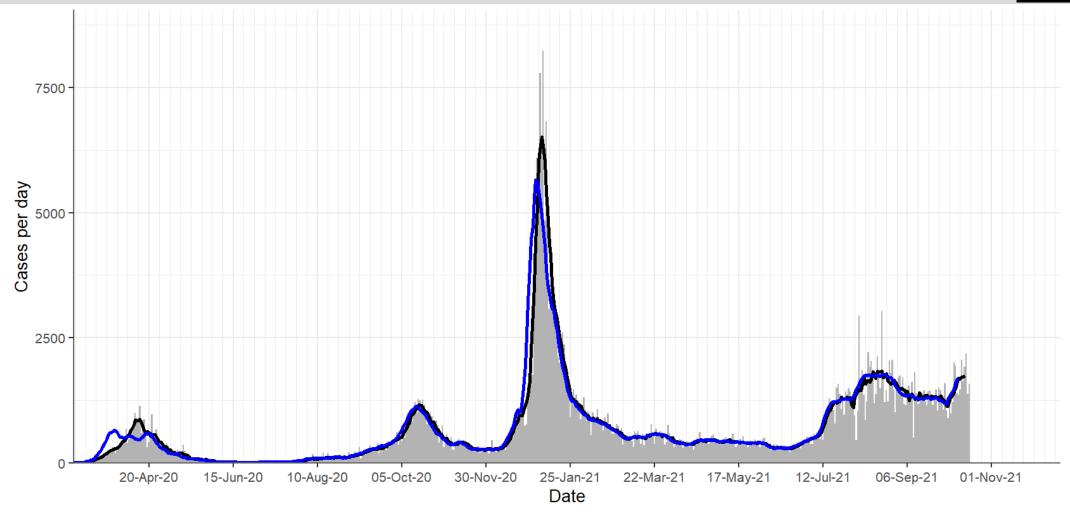


Cases & Incidence Rates

Confirmed cases each day

Daily count and 7-day rolling average. Case numbers have increased rapidly over the last 10 days: the 7-day average is now 1744, up from 1428 seven days ago, 1258 two weeks ago and 1316 three weeks ago.





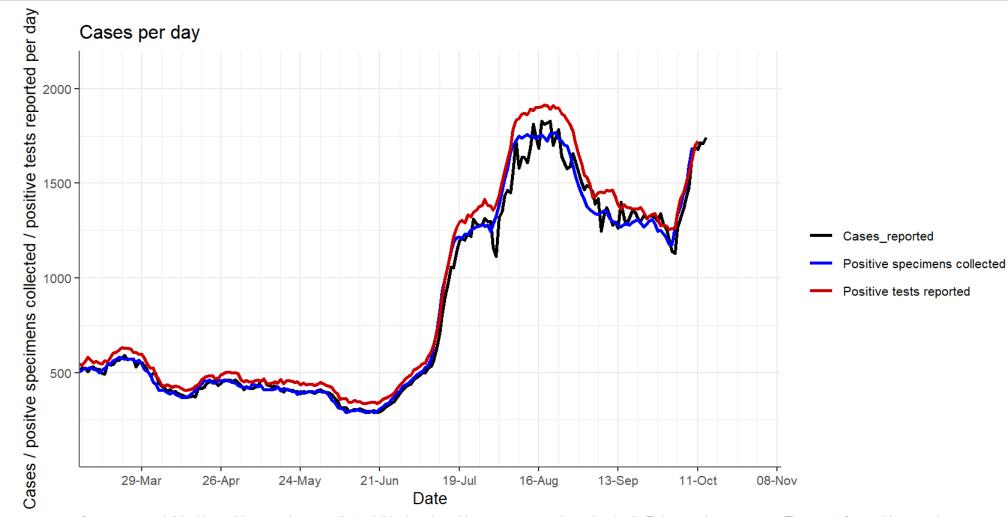
Daily cases by notification date (bars) and 7-day average case count by notification date (black line) and specimen collection date (blue line) CIDR data to midnight Sun 17 Oct 2021. Data by specimen collection date truncated 4 days before report.



Positive specimens collected, tests reported, and cases confirmed

The same pattern of rapid growth is seen in all three metrics

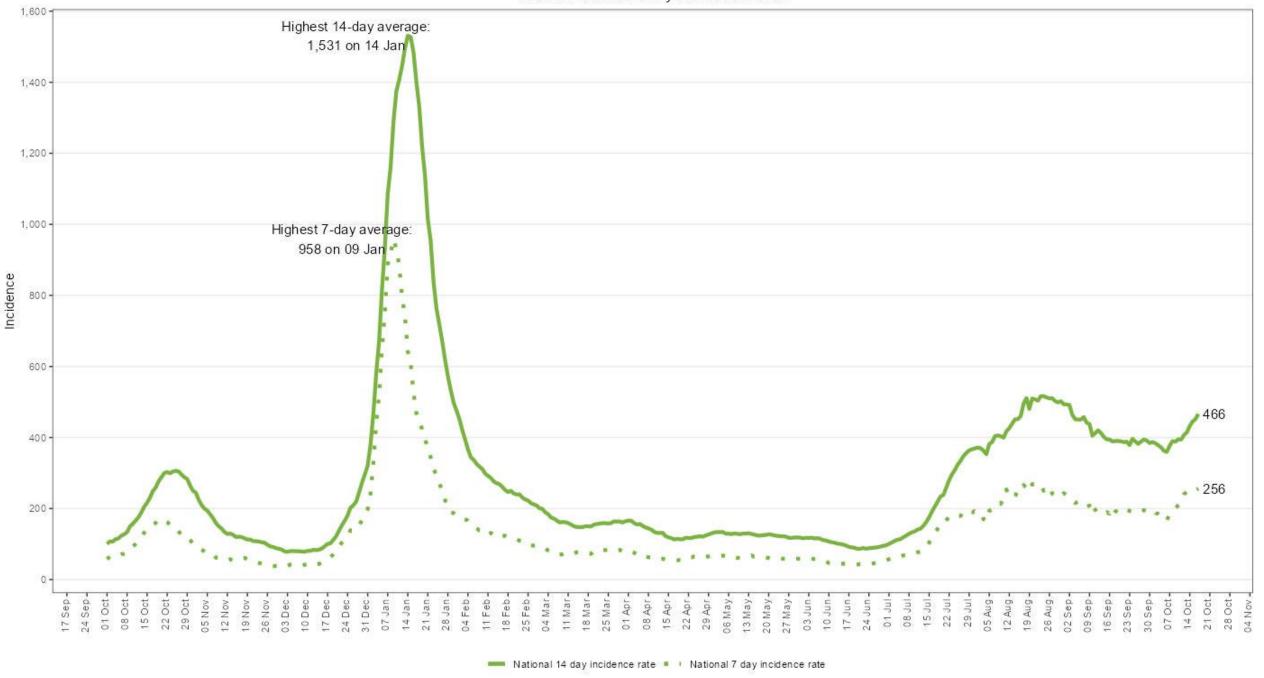




Cases reported (black), positive specimens collected (blue) and positive tests reported per day (red). 7-day moving averages. The count for positive specimens collected for the most recent 3-4 dayswill be undercounted, as some specimens collected on those days have yet to be tested or reported. The moving average is truncated 4 days early for these data. CIDR data to midnight Sun 17 Oct 2021.



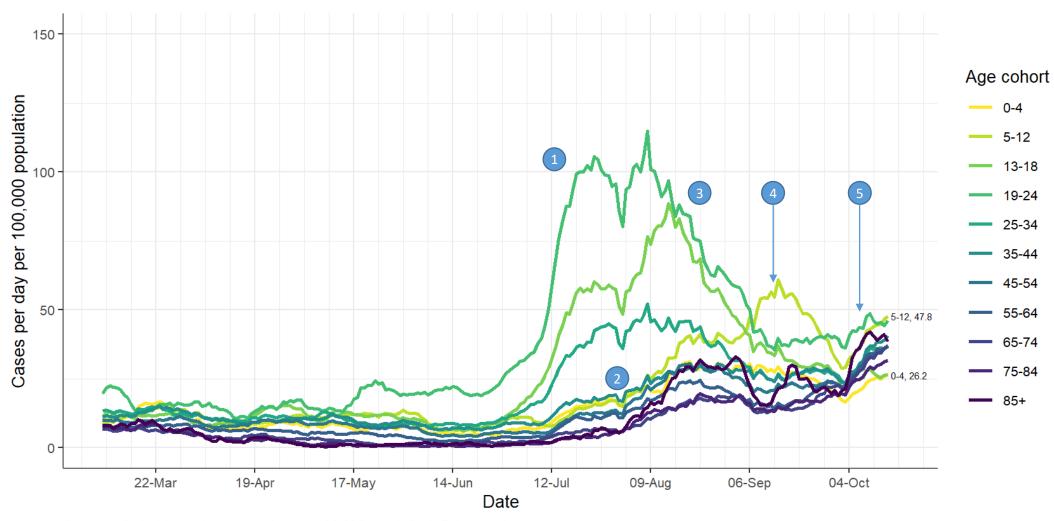
National 7 and 14 day Incidence rates

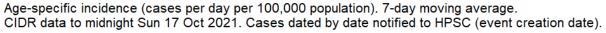


Age-specific incidence

The delta variant drove a very large wave of infection in unvaccinated young adults in July 2021 (1). This force of infection caused a smaller wave across all age groups (vaccinated older adults and children) through August 2021 (2) which was suppressed by the vaccination of 16-30 year olds (3). The reopening of schools was associated with a transient increase in cases in children (4) followed by a significant fall (despite ongoing high levels of testing). Cases are now increasing at the same time and at similar rates across all age groups, suggesting that it is due more to increased social contact and force of infection than to waning immunity.







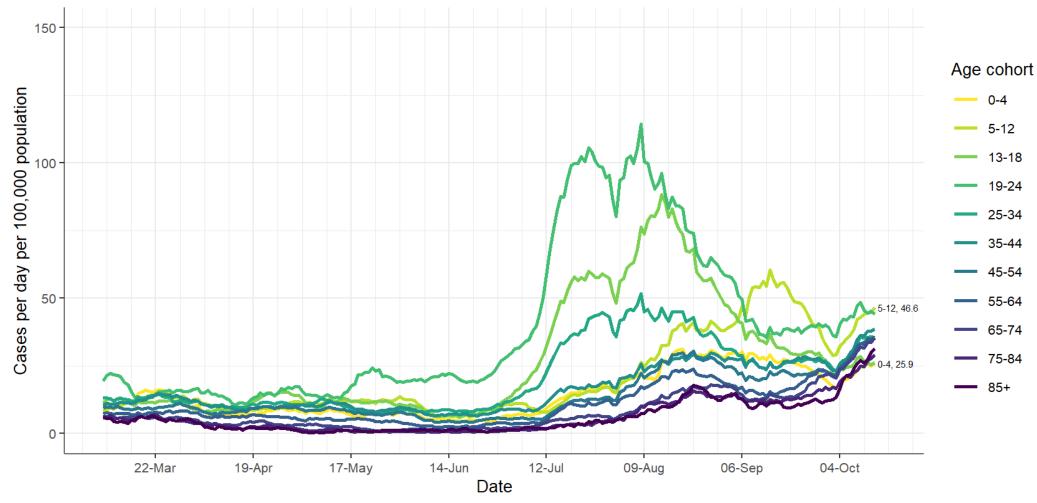




Age-specific incidence (excl LTRC and hospital outbreaks)

LTRC and hospital outbreaks account for the volatility in age-specific incidence in those aged 85 and older; the removal if these cases reveals the underlying upward trend.





Age-specific incidence (cases per day per 100,000 population). 7-day moving average. CIDR data to midnight Sun 17 Oct 2021. Cases dated by date notified to HPSC (event creation date).

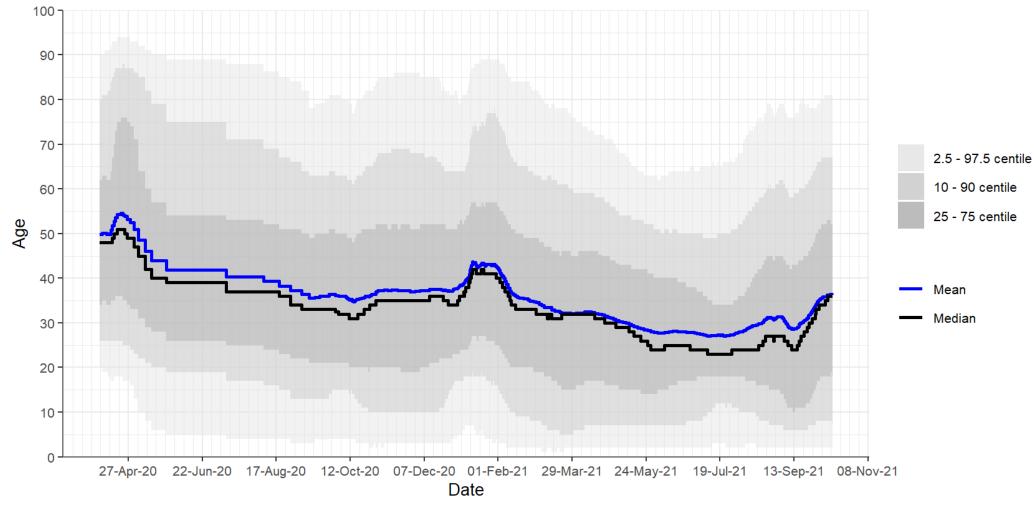




Age distribution of cases

The median age of cases reached its lowest level (23 years) in late July 2021; with older adults vaccinated the majority of infections were in younger adults. Now with relatively even levels of vaccination across all age groups, the median age of cases (36 years) is approaching the median age of the population (38 years) indicating that risk of infection is evenly distributed across the population.





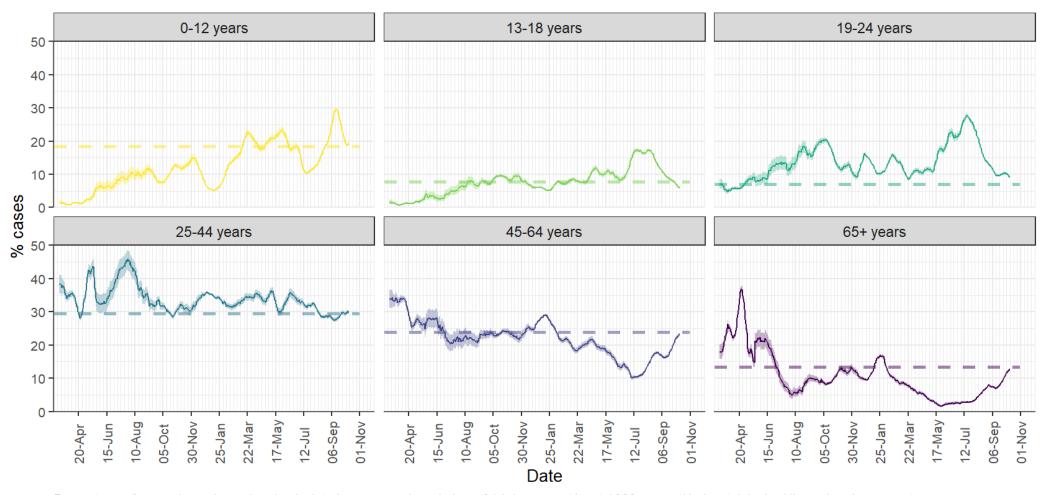
Mean, median and quantile age of cases, calculated over a moving window of 10000 cases, advanced 1000 cases each iteration. CIDR data to midnight Thu 14 Oct 2021. Cases dated by date notified to HPSC (event creation date).



Percentage of cases by age group

The percentage of cases in each age group is now very close to the percentage of the population in that age group, implying that the risk of infection is evenly distributed across the population. Note that when older age groups were first vaccinated, the large number of cases in unvaccinated younger adults meant that the percentage of cases in older adults was very low. Note also that children, despite being unvaccinated, are not overrepresented in case counts, suggesting they are less likely to become infected than unvaccinated adults





Percentage of cases in each age band, calculated over a moving window of 14 days, or at least 1000 cases. Horizontal dashed lines give the percentage of the population in each age group (CSO 2016).

CIDR data to midnight Sun 17 Oct 2021. Cases dated by date notified to HPSC (event creation date).

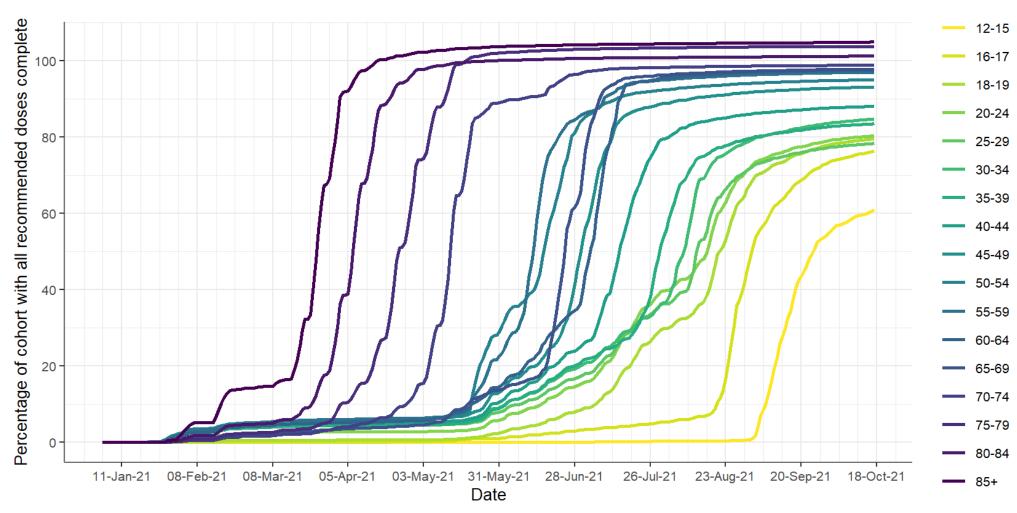




Vaccination regimen completion by age

While vaccine coverage exceeds 90% for those aged 45 yeas and older, it ranges from 78% to 88% for those aged 16 to 44 years, and stands at 60% for those aged 12-15 years.





Percentage of each age cohort with all recommended doses of vaccine administered. Data from COVAX to Sun 17 Oct 2021



Incidence by county

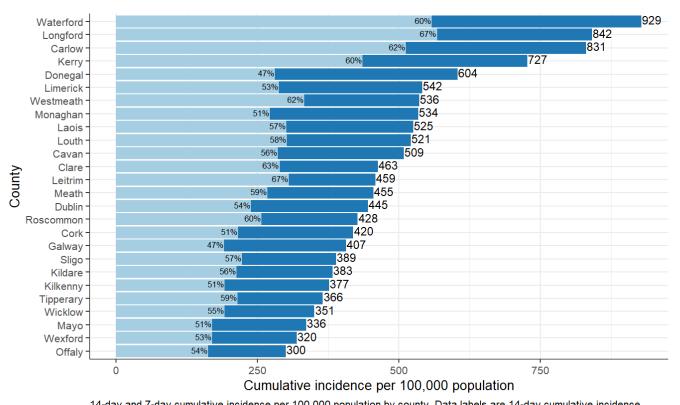
The geography of the disease has shifted, from a position where incidence was high in border counties, to a more uniform distribution marked by high incidence in small counties with complex outbreaks.

Incidence

14-day cum. incidence

7-day cum. incidence

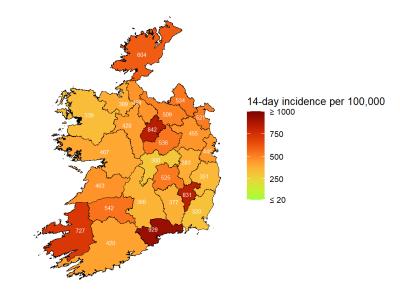




14-day and 7-day cumulative incidence per 100,000 population by county. Data labels are 14-day cumulative incidence, and 7-day cumulative incidence as a percentage of 14-day cumulative incidence.

CIDR data to midnight Sun 17 Oct 2021. Cases dated by date notified to HPSC (event creation date).

14 day cumulative incidence per 100,000 population by county



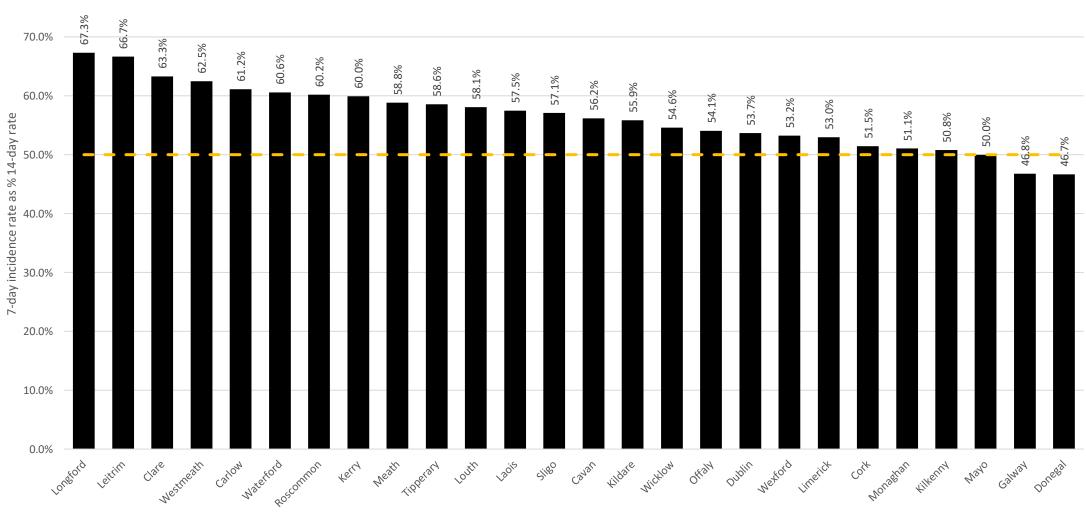
14-day cumulative incidence per 100,000 population for each county.
Colour scale truncated at 20 and 1000 cases per week per 100,000 population.
CIDR data to midnight Sun 17 Oct 2021. Cases dated by date notified to HPSC (event creation date).











7-day as % 14-day

80.0%

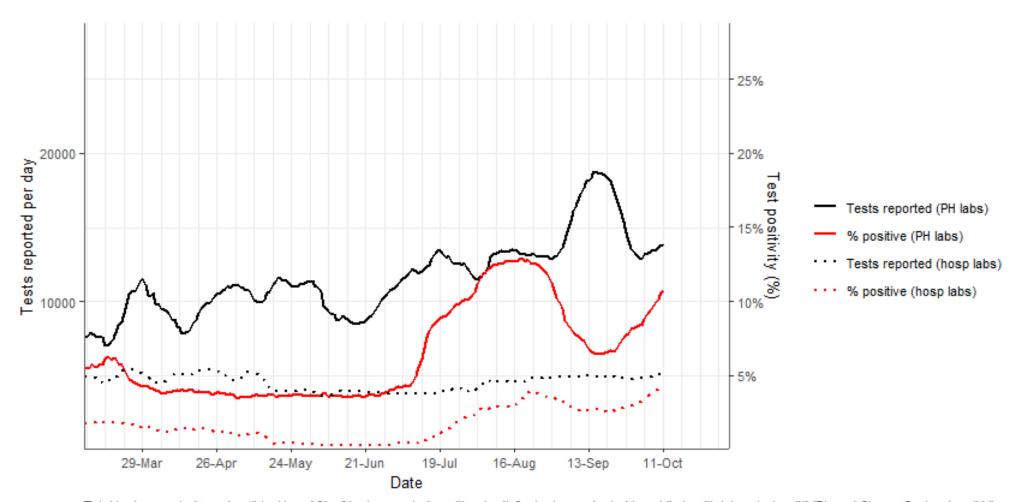


Testing

Tests and test positivity

The demand for testing is high, and increasing. Test positivity is increasing also at approximately 11% for public health laboratories, and increasing also for tests conducted in hospital laboratories.



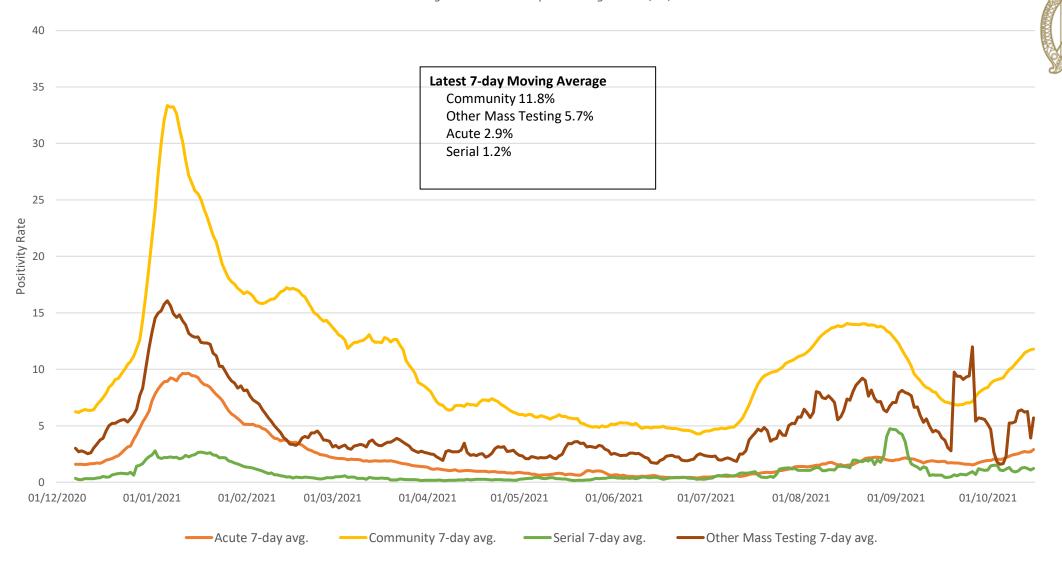


Total tests reported per day (black) and % of tests reported positive (red) for tests conducted in public health laboratories (NVRL and Cherry Orchard, solid lines) and tests conducted in hospital laboratories (dotted lines). 7-day moving averages.



7-day Moving Average Positivity Rate by Testing Pathway

*Some msising data in Acute Hospital testing since 14/05/2021



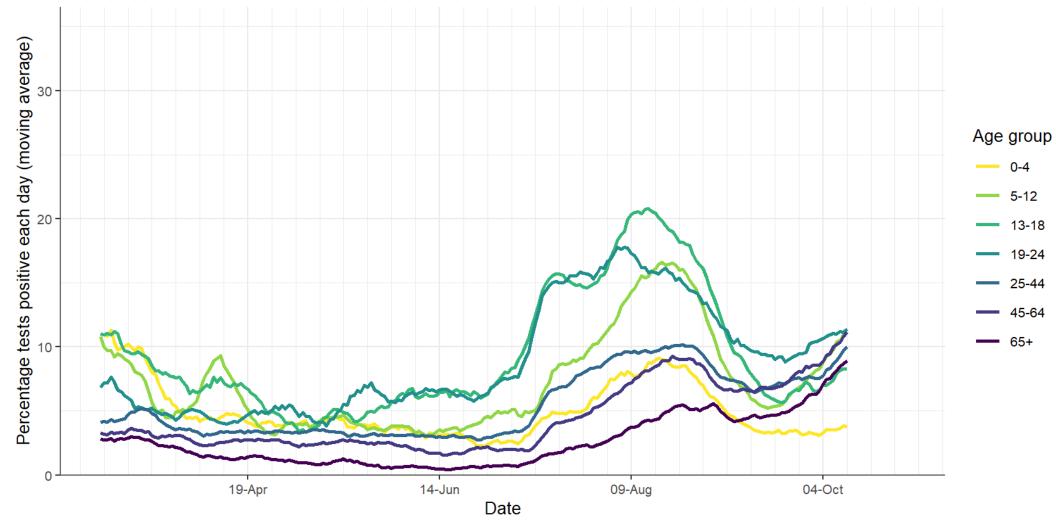
Updated 18/10/2021. Source: CRM data, HSE Contact and Tracing Team.

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

Test positivity by age

Test positivity is increasing rapidly across all age groups except those aged 0-4 years.





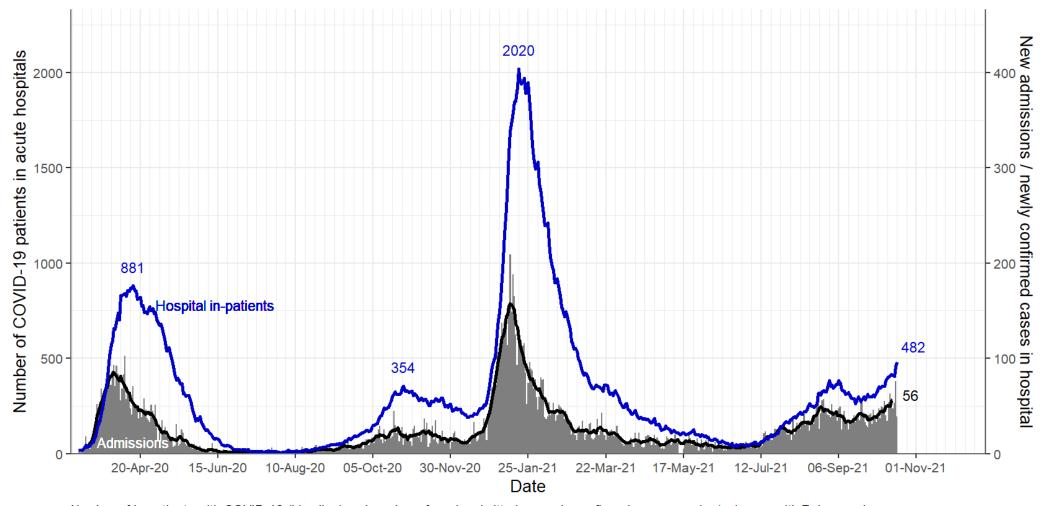


Hospitals & ICU

Confirmed cases in acute hospitals

The number of people in hospital with confirmed SARS-CoV-2 infection. The number of people in hospital has increased over the last four weeks and is now 482. The number of admissions and newly confirmed cases in hospital per day has increased to an average of 56 per day.





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 Mon 18 Oct 2021.

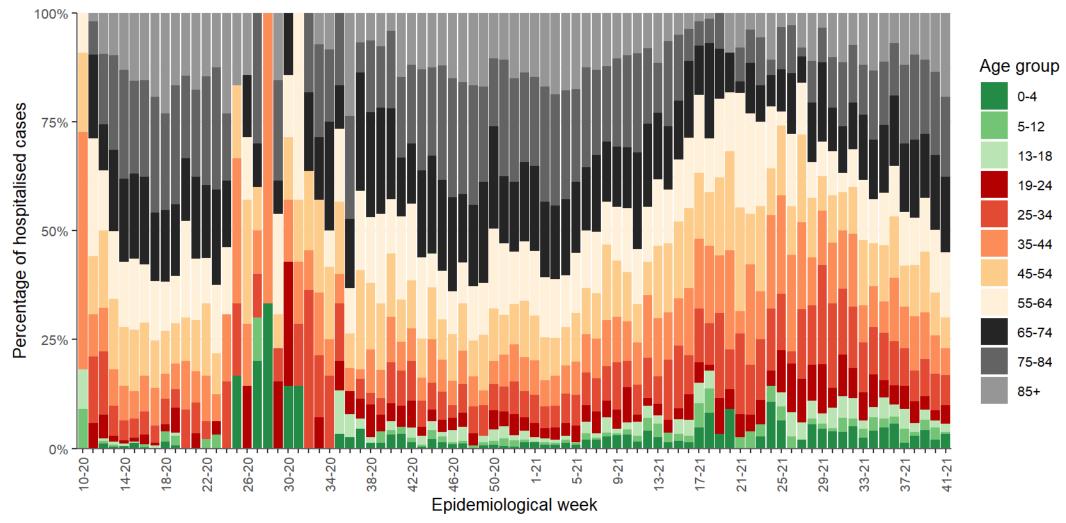




Percentage of hospitalisations by age group

When cases were largely in younger adults, during summer 2021, 75% of hospitalisations were under 65 years of age, with shorter lengths of stay. Now, with relatively even distribution of vaccination, infections are more evenly distributed across the population, and 50% of hospitalisations are aged 65 years and older





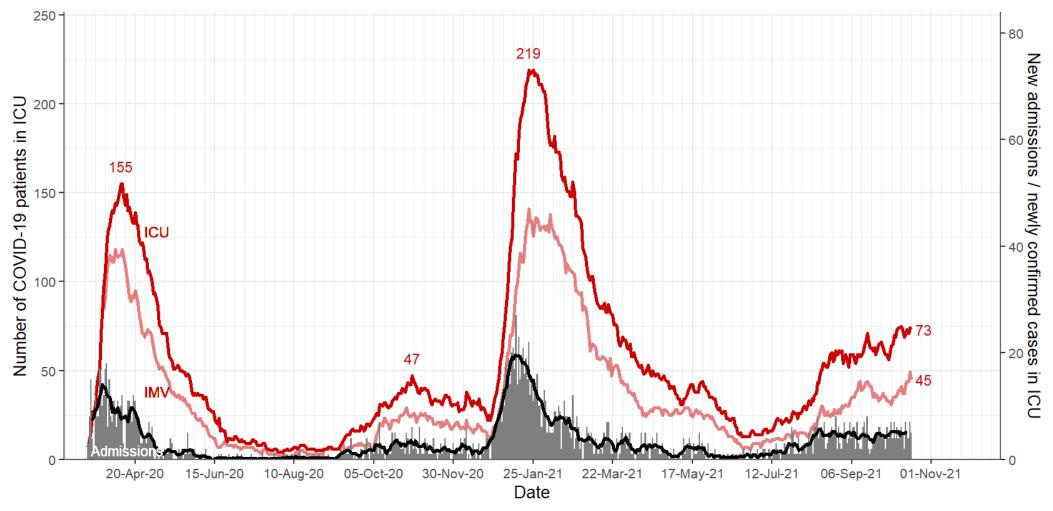
Weekly cases admitted to hospital: percentage in each age band. Cases assigned to the week they were notified not the week of admission. CIDR data to midnight Sun 17 Oct 2021.



Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection and the number requiring mechanical ventilation has increased. 73 people in ICU, 45 mechanically ventilated, average 5 admissions per day.





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 Mon 18 Oct 2021.



Vaccination Status of COVID-19 cases admitted to ICU in Ireland between April 1st and October 9th 2021

Between April 1st and October 9th 2021:

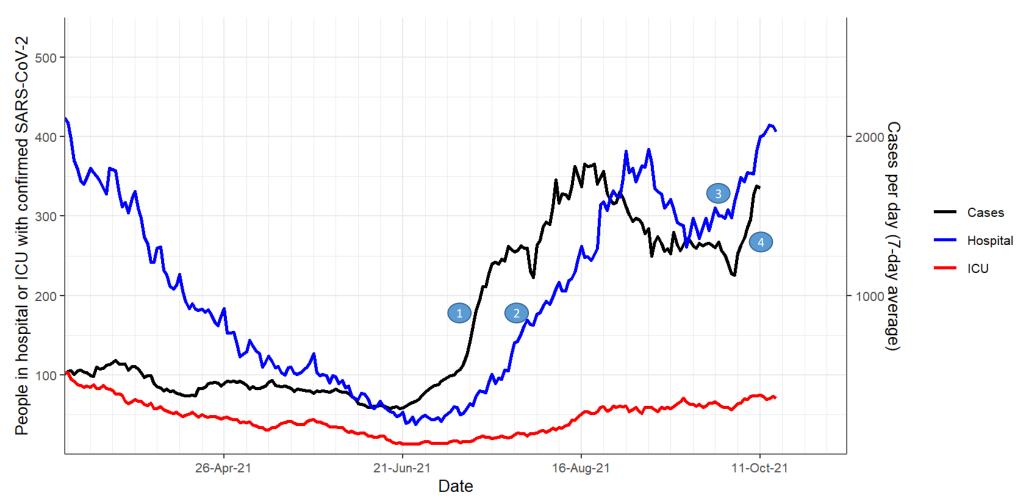
- 402 persons (aged 15 + years) were reported to the Health Protection Surveillance Centre (HPSC) as admitted to ICU with confirmed COVID-19 infection
- 279 cases (69%) were reported as not having received a COVID-19 vaccine or were not registered as vaccinated on Ireland's national COVID-19 immunisation system (COVAX) and 123 cases (31%) are reported as having received a COVID-19 vaccine (one or two doses).
- 82 cases had an epidemiological date 14 days or more after receiving all recommended doses of vaccine.

Source: HPSC (CIDR data extracted at 5pm on 11.10.2021)

Cases, hospitalisations and admission to ICU

The July 2021 wave of delta infections (1) caused a subsequent increase in numbers of people in hospital (2). However, in September, numbers in hospital increased (3) before an increase in cases (4). This is because the age mix of cases changed in September, with a greater proportion of cases in older people more likely to require hospital care with longer lengths of stay. The full effect of the recent increase in cases (4) on numbers in hospital will be seen over the next 10 days.





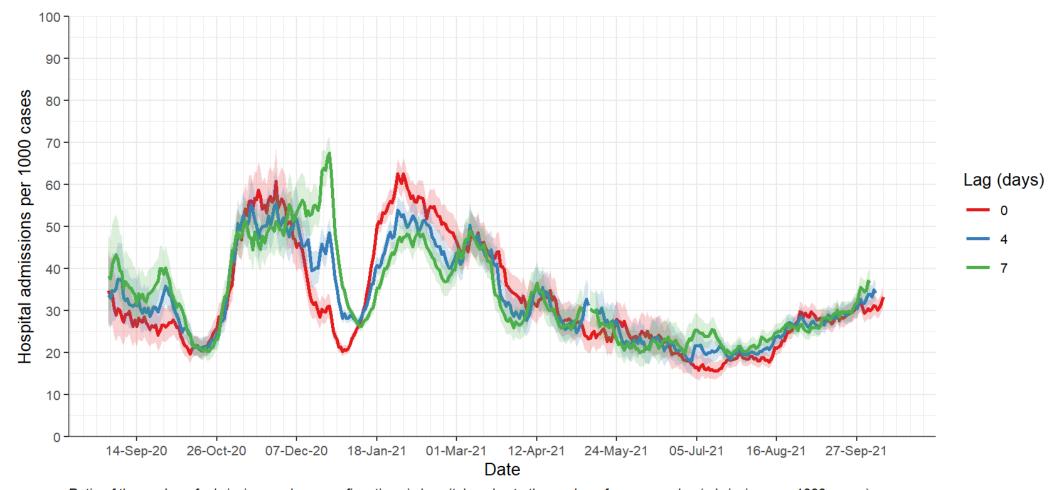
Cases per day (7-day average, secondary y-axis) and number of people with confirmed SARS-CoV-2 infection in hospital and in ICU. CIDR data to midnight Thu 14 Oct 2021. HSE PMIU-SDU data to Sat 16 Oct 2021. NOCA ICU-BIS data to Sat 16 Oct 2021.



Cases and hospitalisations

The number of hospital admissions per 1000 cases. This ranged from 30-50 hospitalisations per 1000 cases prior to vaccination, to a low of about 20 hospitalisations per 1000 cases in July 2021 when older adults and those at higher risk of hospitalisation were vaccinated and most cases were aged under 35 years. However, this ratio has increased again to approximately 35 admissions per 1000 cases now that young adults are vaccinated, and cases are more evenly distributed across age groups.





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 admissionsHSE PMIU-SDU data to Mon 18 Oct 2021. CIDR data to midnight Sun 17 Oct 2021.





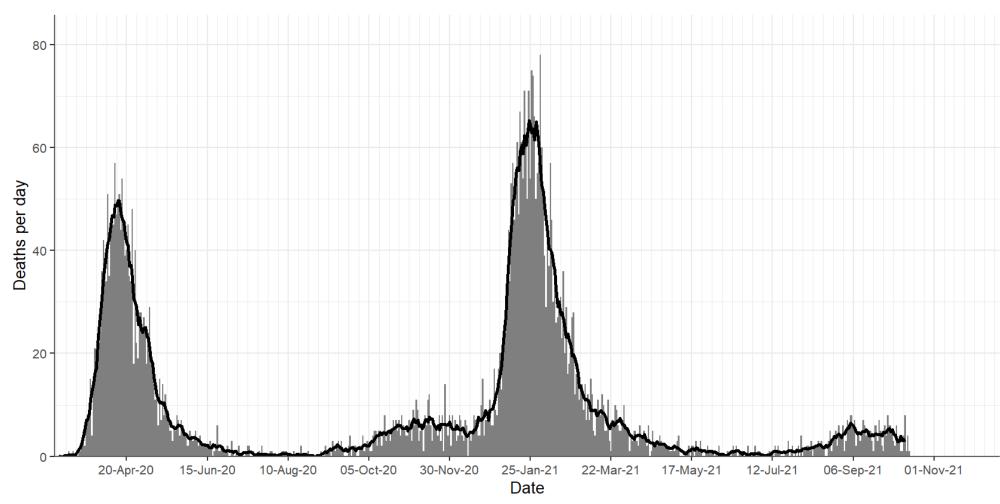


Deaths

Deaths

Deaths per day are relatively constant at approximately 5 per day, or 150 deaths per month.

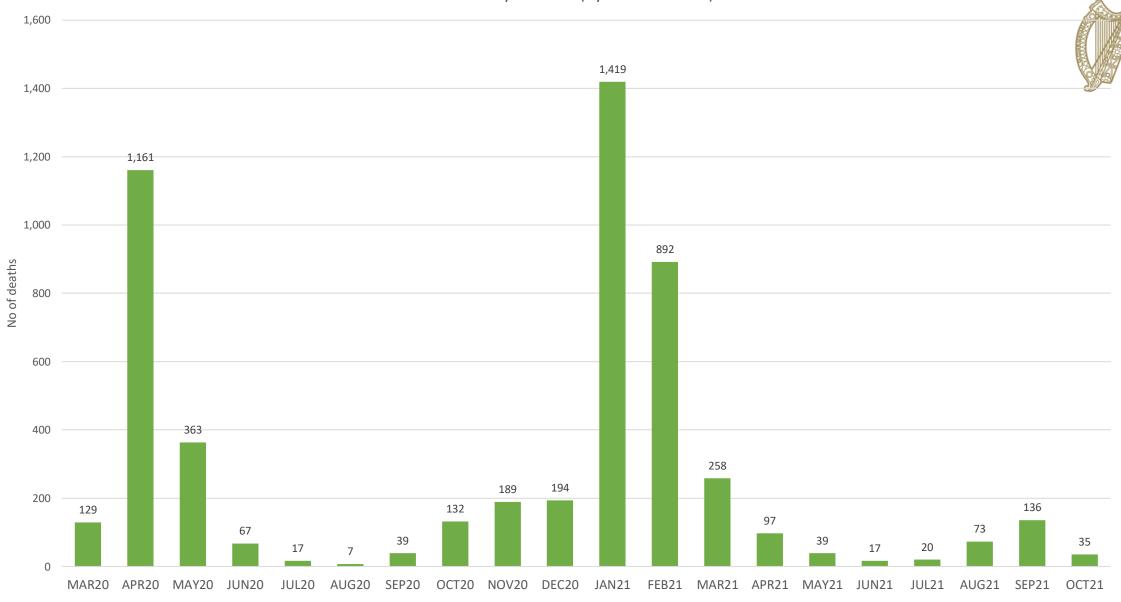




Deaths each day (bars) by date of death, with 7-day moving average (line). CIDR data to midnight Sun 17 Oct 2021.



Total deaths by month* (by date of death)



Surveillance of COVID-19 vaccine status amongst COVID-19 deaths (with date of death 1st April 2021 – 9th October 2021) notified to HPSC

369 deaths in laboratory confirmed COVID-19 cases were notified to the HPSC with a date of death between 1st April 2021 and 9th October 2021.

- 169/369 (45.8%) deaths were reported in persons who were not vaccinated or not registered as vaccinated on Ireland's National COVID-19 immunisation system (COVAX).
- 200/369 (54.2%) deaths were reported in persons who had received at least one dose of COVID-19 vaccine prior to death.
- 162/369 (43.9%) deaths were reported in persons who had received all recommended doses of COVID-19 vaccine prior to death.
- 155/369 (42.0%) COVID-19 deaths were reported in persons with an epidemiological date 14 days or more after receiving all recommended doses of vaccine



Outbreaks & Clusters

Weekly Summary – week 40/41, 2021



Vulnerable groups (week 41)

 Nine new outbreaks in Irish Travellers with 34 associated cases and one outbreak in Direct Provision with 5 associated cases

Workplace outbreaks

- 5 new outbreaks in food industry with 41 linked cases (range: 4-14 cases)
- 4 new construction sector outbreaks with 10 linked cases (range: 2-3 cases)
- An additional 10 workplace outbreaks in other workplace types with 37 linked cases (range: 1-7 cases)

Residential institution outbreaks (week 41)

 Ten new outbreaks reported this week - 43 linked cases (0-10)

Nursing Homes & Community Hospitals (week 41)

Thirteen new nursing home outbreak this week – 65 linked cases (range 0-18)

Acute hospitals (week 41)

 Thirteen new acute hospital outbreaks notified this week with 52 linked cases (range 0-13)

Schools

 Three new outbreaks in week 40 with 15 cases (range: 1-12); 2 primary, 1 SEN

Childcare facilities

Two new outbreaks in week 40 with nine linked cases (range: 3-6)

Third-level students/University/college

 No new outbreaks associated with a university/college in week 40

Travel associated outbreaks

No new outbreaks

Hospitality

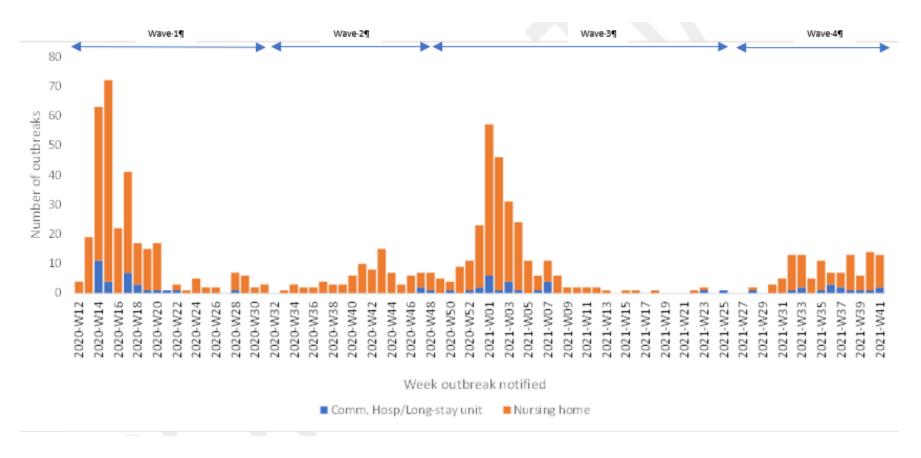
5 new outbreaks: 3 in pubs; 1 in guesthouse/B&B;
 1 in restaurants/café; 12 linked cases (range 2-4)

Social and Recreational

3 in social gatherings; 1 in religious/other ceremonies; 17 linked cases (range 2-8)

COVID-19 outbreaks in Nursing Homes and Community Hospitals, waves 1-4



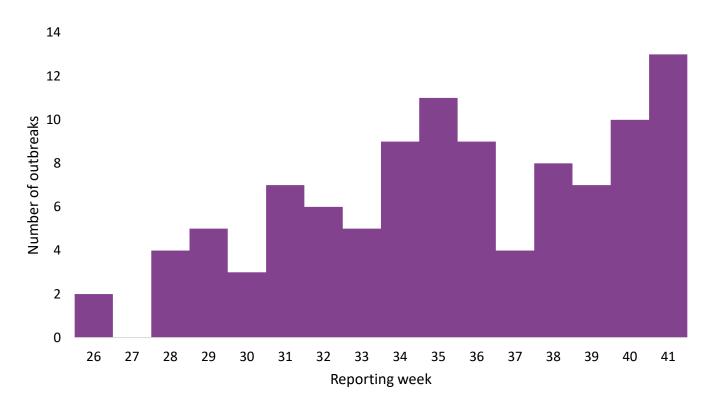


Wave 4:

- One hundred and twelve outbreaks in wave 4 (weeks 26-41 2021), being highest in week 40;
- Forty-one-of 112 outbreaks in wave 4 reported as closed, and an additional seventeen outbreaks have not had a reported case in the last
 28 days
- Twenty-five outbreaks were reported in HSE-E, eighteen in HSE-S, sixteen in HSE-MW, thirteen in HSE-SE, twelve in HSE-NW, ten each in HSE-M and HSE-W and eight in HSE-NE

COVID-19 outbreaks in Acute Hospitals, wave 4 (weeks 26-41 2021)





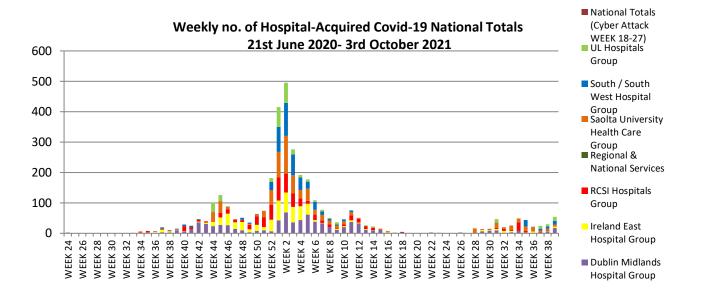
Update on week 41

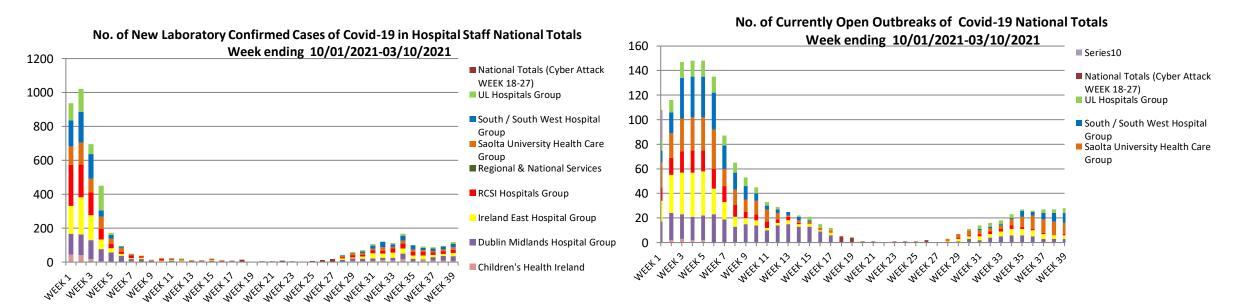
- There were thirteen new COVID-19
 outbreaks in acute hospitals settings in week
 41
- Fifty-two cases were linked to these outbreaks (range 0-13 cases per outbreak)

Overview wave 4

 Since week 26 2021, there have been 103 COVID-19 outbreaks in acute hospitals settings, with 538 associated confirmed cases

Acute operations key data

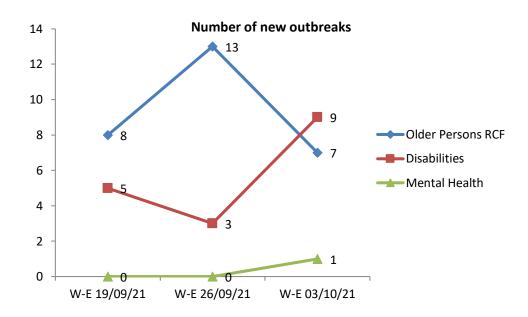


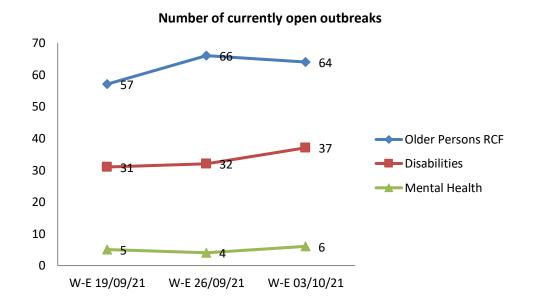


Source: AMRIC, HSE

Community operations key data





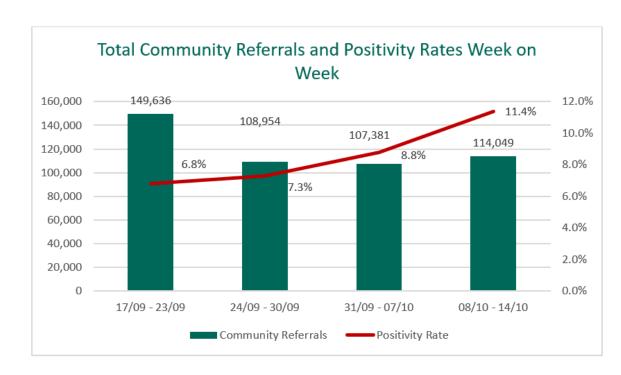




Test & Trace Update

Test and Trace update

- From the 7th 13th October, there have been approximately 142,356 lab tests reported in community, private and acute labs.
- From the 08th 14th October, there were c.114,049 community referrals. Overall, total referrals have increased by 6% in comparison to the same time-period last week while positivity has increased to c.11.4%.
- In the community, the median end-to-end turnaround time from referral to:
 - > SMS for **not detected** tests was **1.0 day**
 - Communication of a detected result by call was1.3 days
 - Contact tracing completed, for detected results was 2.1 days



CMP update - Week ending 10th October 2021

• The average number of cases managed by the CMP per day was 1,530, an increase of 20% from 1,279 the previous week. The average number of close contacts reported to the CMP per day was 3,353, an increase of 17% from 2,891 the previous week. Of the 17,210 close contacts with self-reported vaccination status recorded, 55.7% (n=9,583) were fully vaccinated and considered to be significantly protected, an increase from 51.9% the previous week.



- For week ending 3/10/2021, 74% (n=4,001) of the close contacts referred for a Test 1 appointment attended for testing. For week ending 3/10/2021, 61% (n=952) of the close contacts referred for a Test 2 appointment attended for testing. For week ending 3/10/2021, Test 1 results were available for 4,199 close contacts. 21.8% (n=917) of these had a positive result. For week ending 3/10/2021, Test 2 results were available for 646 close contacts. 8.4% (n=54) of these had a positive result.
- The mean number of close contacts per case (including cases with zero close contacts) was 2.4 for the week ending 10/10/2021, unchanged from for the previous week. When the close contacts categorised as fully vaccinated with significant protection based on self-reported vaccination status were excluded, the mean number of close contacts per case was 1.1.

Variants update

Total confirmed variants of concern cases:

- P.1 (Gamma): 32
- B.1.351 (Beta): 77

Total of other confirmed variants of note/of interest cases:

- B.1.429 (Epsilon): 7
- B.1.1.318: 245
- C.37 (Lambda): 4
- B.1.1.7 with E484K mutation: 2
- A.27: 2
- B.1.621 (Mu): 4

(Based on latest NVRL results as of 15th October 2021)

S gene target positive prevalence



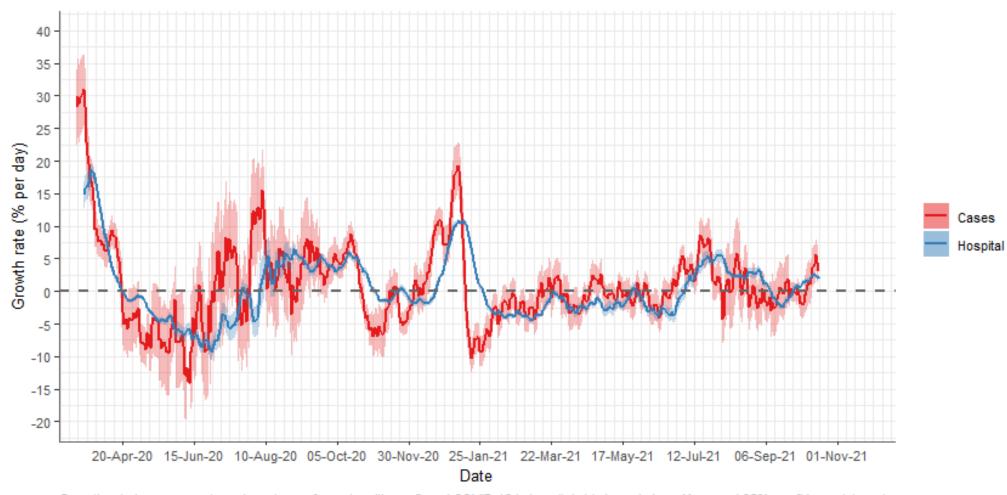
Wk 36: 98.4%

Source: HPSC

Growth rate

Growth rate for cases is 3.0% per day (0.1% – 5.8%) over a 14-day window and 2.1% per day (0.5% - 3.7%) over a 21-day window. The number of people in hospital is growing at 2.4% (1.9% - 2.8%) per day over a 14-day window. This growth rate compares with growth rates of 4-5% per day in September and October 2020, and in excess of 10% per day in January 2021.





Growth rate in case counts and numbers of people with confirmed COVID-19 in hospital. 14-day window. Mean and 95% confidence intervals. CIDR data to midnight Sun 17 Oct 2021. HSE PMIU-SDU data to Mon 18 Oct 2021. Cases dated by date notified to HPSC (event creation date).



Situation analysis 18 October 2021



- Incidence high and increasing
 - Cases (7-day average) 1744, up from 1428 one week ago, and 1258 two weeks ago
 - 14-day incidence 466 per 100,000
 - Incidence increasing across all age groups
 - 482 in hospital, 73 in ICU
 - Test positivity increasing across all age groups
- Growth rate
 - Cases: +3% (0% to +6%) per day
 - Numbers in hospital: +2.3% (+1.9% to +2.8%) per day
- Risk now evenly distributed across age groups
 - Increase in median age of cases
 - 35 hospitalisations per 1000 cases, up from 15-20 per 1000 cases
- Future trajectory very uncertain













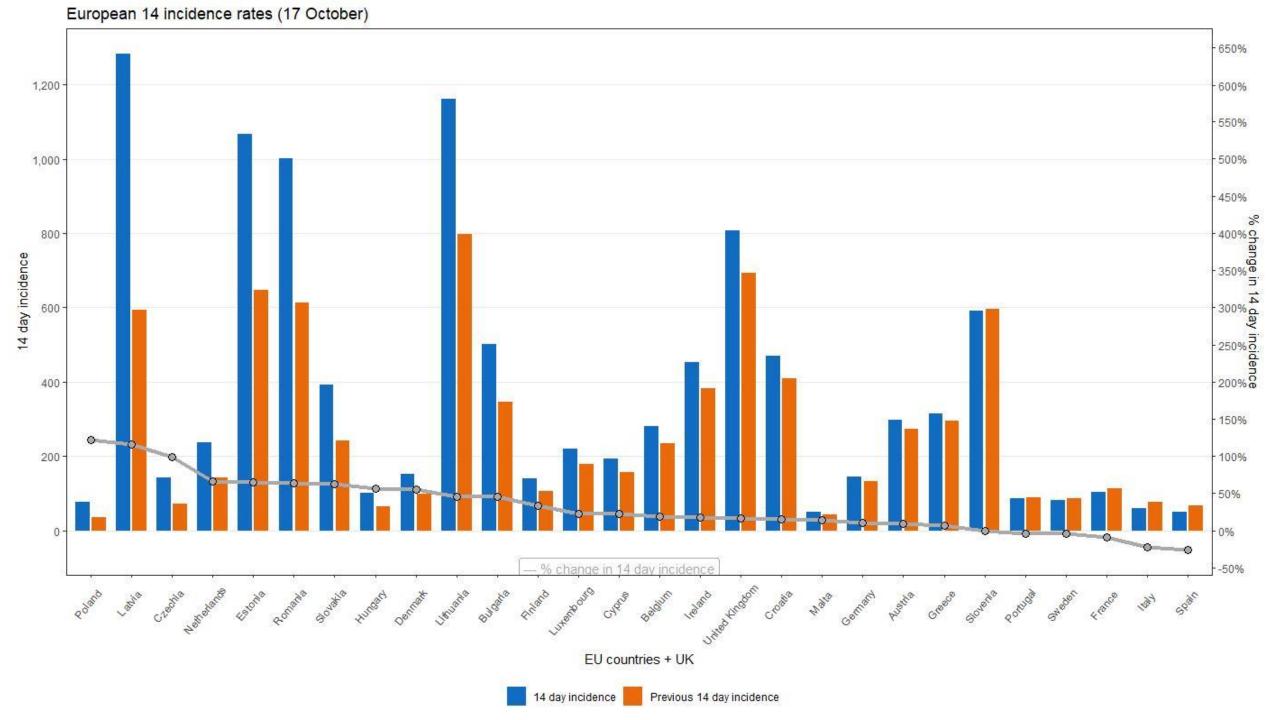


European Data

EU/UK ranked by 14 day incidence (18th Oct)

EU and the UK	,		% change in 14 day incidence
Latvia	1284.08	593.54	116%
Lithuania	1160.84	798.07	45%
Estonia	1068.3	647.53	65%
Romania	1000.81	612.29	63%
United Kingdom	807.65	693.5	16%
Slovenia	590.65	595.51	-1%
Bulgaria	502.05	345.21	45%
Croatia	470.76	409.52	15%
Ireland	451.88	383.69	18%
Slovakia	391.74	241.45	62%
Greece	314.13	294.33	7%
Austria	298.1	274.13	9%
Belgium	280.87	235.4	19%
Netherlands	235.91	141.78	66%
Luxembourg	219.59	179.11	23%
Cyprus	192.3	157.25	22%
Denmark	151.65	97.41	56%
Germany	144.84	131.9	10%
Czechia	141.12	70.94	99%
Finland	140.28	105.56	33%
France	102.65	112.99	-9%
Hungary	101.01	64.61	56%
Portugal	85.48	89.16	-4%
Sweden	81.48	85.36	-5%
Poland	76	34.21	122%
Italy	59.41	76.07	-22%
Malta	49.75	43.73	14%
Spain	49.75	67.56	-26%

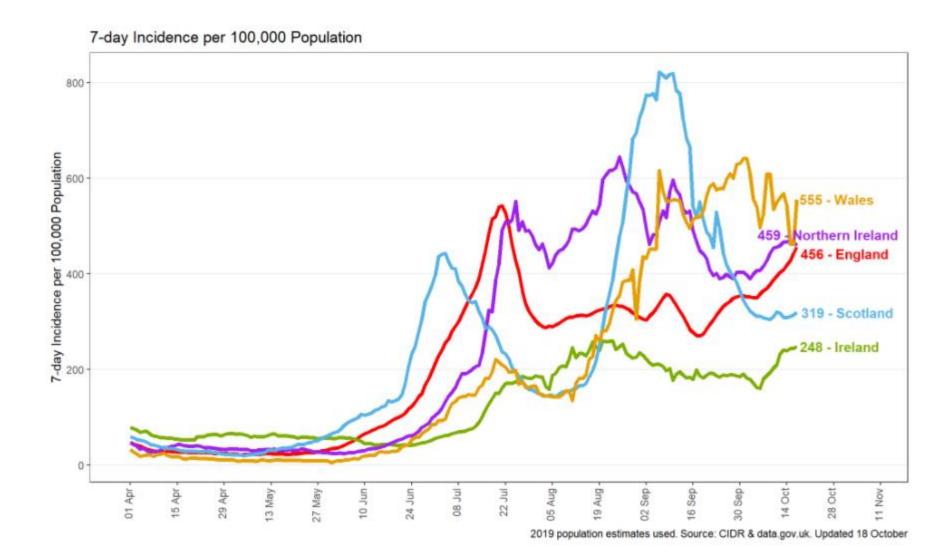
- As of 16th Dec, this daily data is now sourced from Our World In Data (OWID) instead of ECDC as they have switched to weekly reporting (Thursday evenings).
- OWID source their confirmed cases and deaths data from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE)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



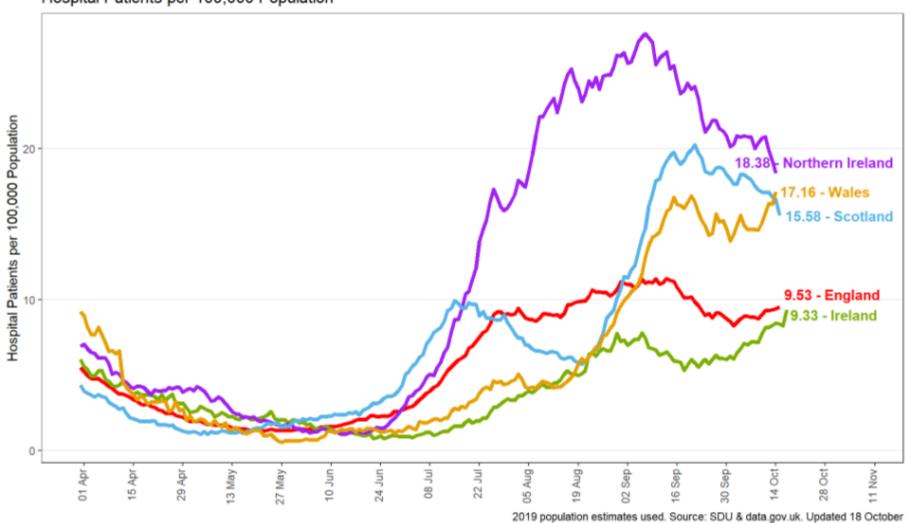
EU/UK ranked by 7 day percentage change (18th Oct)

EU and the UK	7 day incidence	Previous 7 day	% change in 7 day incidence
Czechia	85.62	55.51	•
Netherlands	142.09	93.82	
Poland	45.48	30.52	49%
Latvia	768	516.09	49%
Hungary	59.22	41.79	42%
Cyprus	111.94	80.36	39%
Belgium	161.33	119.54	35%
Bulgaria	286.47	215.58	33%
Estonia	595.84	472.46	26%
Ireland	251.71	200.17	26%
Slovakia	216.38	175.36	23%
Denmark	83.46	68.19	22%
Slovenia	321.25	269.4	19%
Finland	76.02	64.25	18%
Austria	161.05	137.04	18%
United Kingdom	434.11	373.54	16%
Lithuania	620.92	539.92	15%
Romania	526.04	474.77	11%
Greece	164.76	149.37	10%
Croatia	246.37	224.39	10%
Germany	75.78	69.06	10%
Portugal	44.2	41.29	7%
Luxembourg	110.58	109.01	1%
Sweden	40.46	41.01	-1%
Italy	29.13	30.28	-4%
France	49.58	53.06	-7%
Spain	23.03	26.72	-14%
Malta	20.6	29.15	-29%

- 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



Hospital Patients per 100,000 Population





Mobility Data

