NPHET COVID Update 6th January 2022

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.)		30-Dec (1 week ago)	05-Jan
14-day incidence	96.08	306.37	86.88	320.57	1494.23	89.57	2,686.7**	4,449.7**
5-day average cases	407.0	919.2	260.8	1476.4	4458.0	313.8	12,625**	19,259**
Total weekly cases	2607	7000	1892	9416	35362	2070	88,074 **	136,960**

	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.)	30-Dec (1 week ago)	05-Jan
No. Hospital (8.A.M)	122	344	224	508	1792	49	619	928
No. in ICU (11.30 A.M)	20	39	30	42	176	15	88	94

	MAY21	JUN21	JUL21	AUG21	SEP21	OCT21	NOV21	DEC21	Unknown	Total since Mar2020
Reported in latest week (to 29/12/2021)	0	0	0	0	0	6	7	26	1	40
Total	43	20	22	87	179	217	230	157	30	5,952

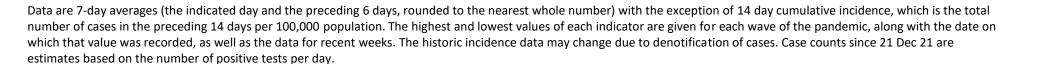
^{**}From 22nd December, reported daily case numbers have been based on positive SARS-CoV-2 results uploaded to the HSE COVID Care Tracker the preceding day. These data are provisional and do not represent notified cases. National 14-day incidence, 5-day average and weekly cases are based on reported cases from CCT since 22nd December

Cases, numbers in hospital and intensive care

The average daily case count has increased five-fold since mid-December, from \approx 4000 cases per day to \approx 20000 cases per day. The numbers of admissions to (and new confirmations in) hospital has doubled. The number of people in ICU is currently stable.



	Apr 2020	Summer 2020	Oct 2020	Dec 2020	Jan 2021	Jun 2021	15 Dec	22 Dec	29 Dec	5 Jan	Daily count 5 Jan
Cases confirmed per day	859 18-04	8.7 25-06	1158 21-10	262 12-12	6516 10-01	308 19-06	4226	5226	10704	19259	17656
14-day incidence per 100,000 population	212 19-04	3.0 04-07	306 26-10	79 09-12	1531 ₁₅₋	91 20-06	1314	1390	2342	4450	
Hospital in-patients	881 17-04	9 02-08	354 01-11	198 16-12	2020 24-01	43 29-06	501	435	448	756	978
Hospital admissions per day	85 04-04	<1 10-07	27 26-10	11 13-12	158 15-01	6 27-06	56	53	73	139	173
ICU confirmed cases	155 14-04	4 04-08	47 04-11	26 27-12	219 28-01	13 27-06	110	105	92	89	94
ICU admissions per day	14 31-03	<1 03-06	4 03-11	1 16-12	20 17-01	<1 02-07	7	6	5	6	7



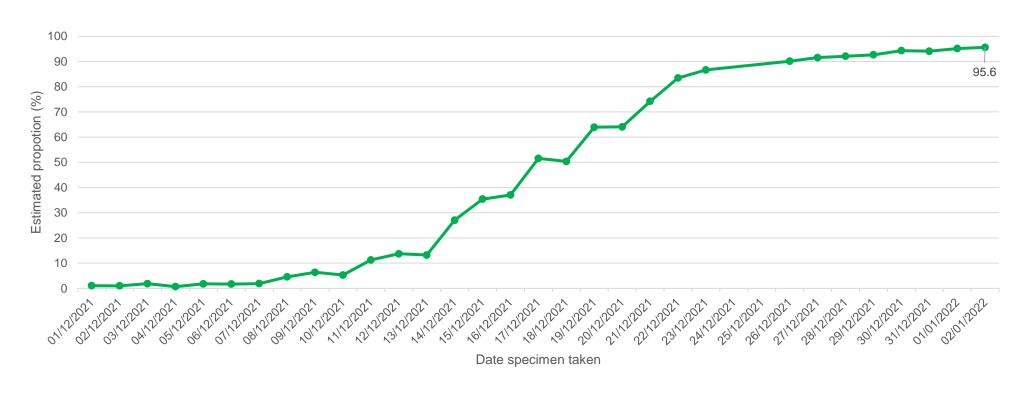


Ireland – Current Situation

Proportion of cases SGTF approximately 96%

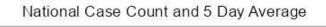


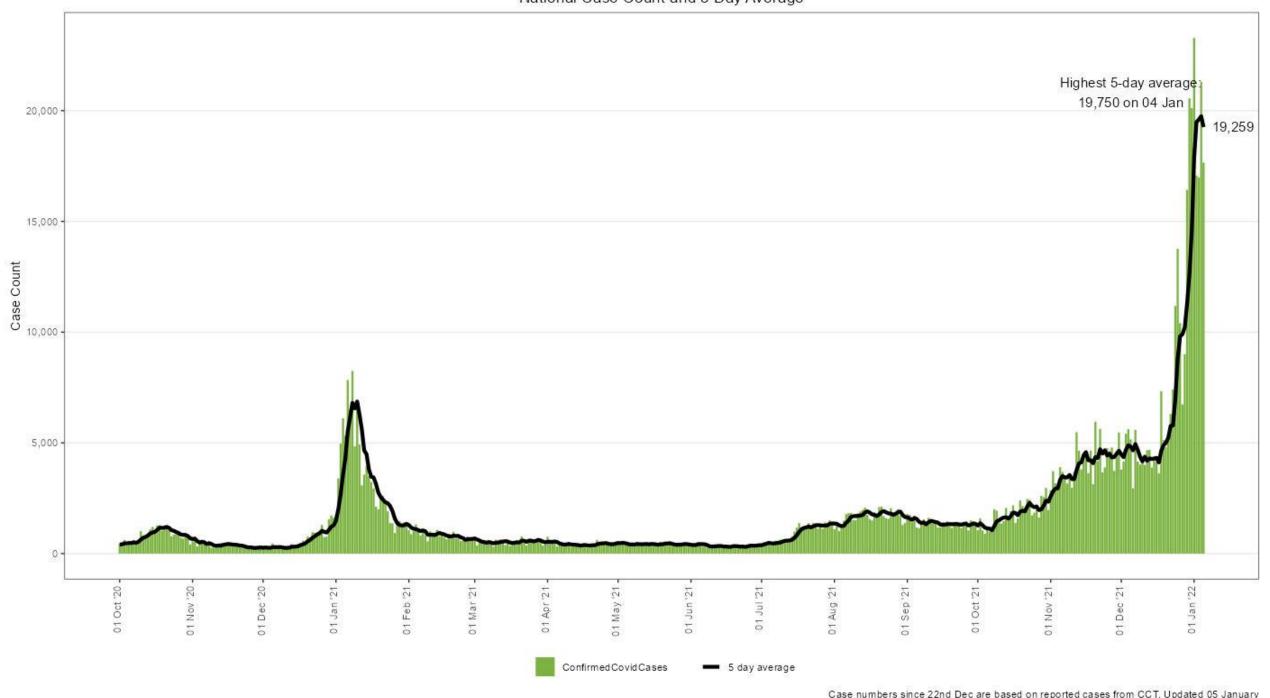
Estimated proportion of positive cases with S gene Target Failure (a proxy for Omicron)





Cases & Incidence Rates

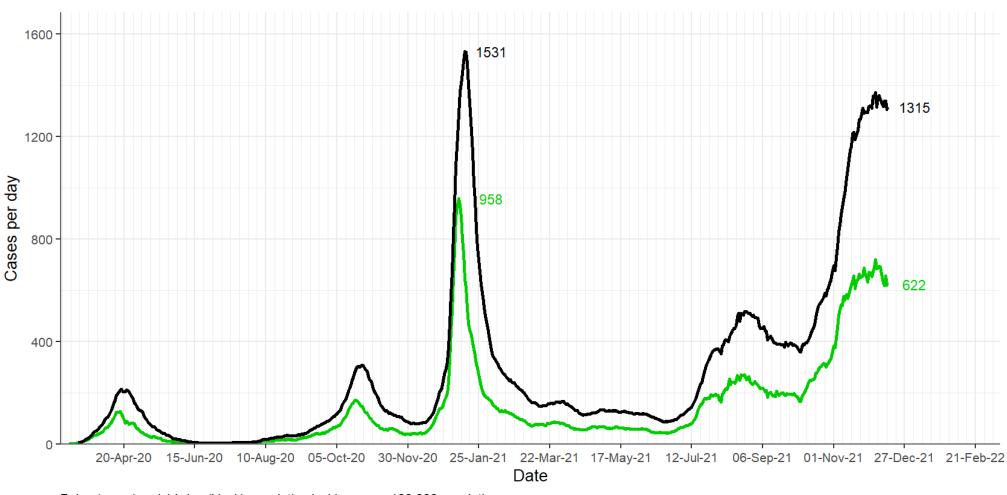




Cumulative incidence to 14 Dec 21

Incidence was stabilizing prior to Christmas, before omicron came to dominance, at a 14-day cumulative incidence around 1,300 per 100,000.





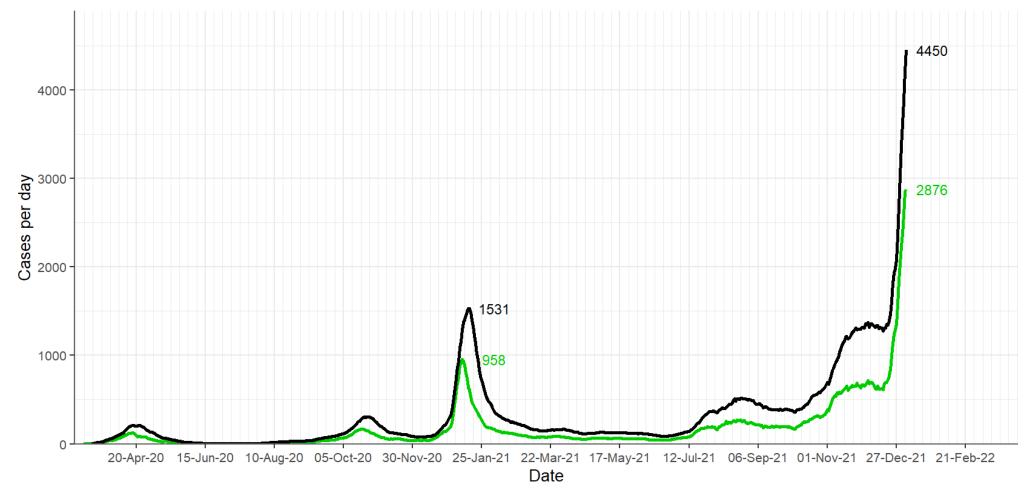
7-day (green) and 14-day (black) cumulative incidence per 100,000 population.
CIDR data to midnight Tue 14 Dec 2021. Cases dated by date notified to HPSC (event creation date). CSO 2016 population.



Cumulative incidence to 5 Jan 22

7-day and 14-day cumulative incidence per 100,000 population. Given the 7-day cumulative incidence of 2,876 per 100,000 (2.9%), allowing for constraints on testing and undetected infections, the likely population prevalence of active SARS-CoV-2 infection is 5.7%-9.6%; between 1 in 10 and 1 in 20 of the population are likely to be infected.





7-day (green) and 14-day (black) cumulative incidence per 100,000 population. Data from CIDR to 21 Dec 21, then estimated from positive tests reported.

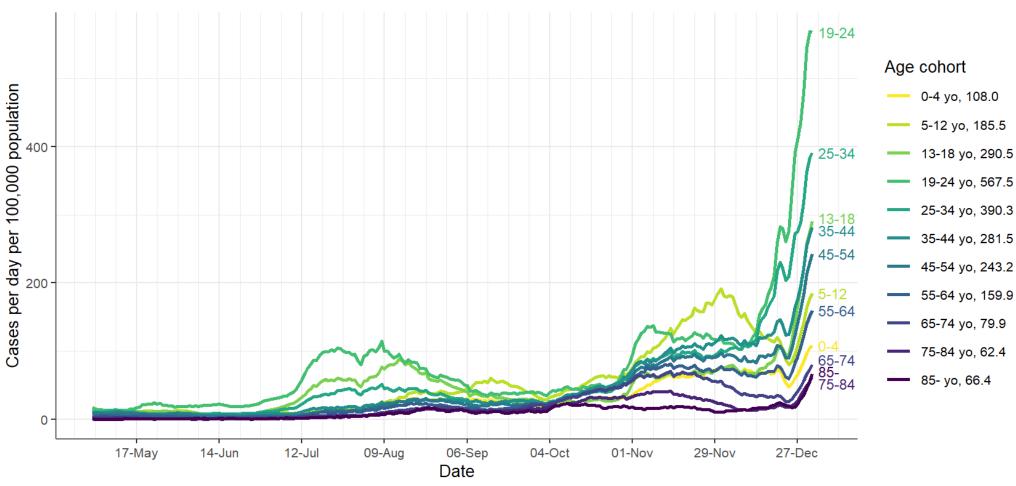




Age-specific incidence (excl. LTRF and hospital outbreaks)

There is a 5-day lag in uploading data to CIDR, so information on the age breakdown of cases is delayed. Incidence is high across all age groups, and while lower and rising more slowly in older age groups, incidence exceeds that seen in December 2020, and in most age groups is higher than at any time in the pandemic.





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 04 Jan 2022. Cases dated by date notified to HPSC (event creation date). CSO 2016 population.

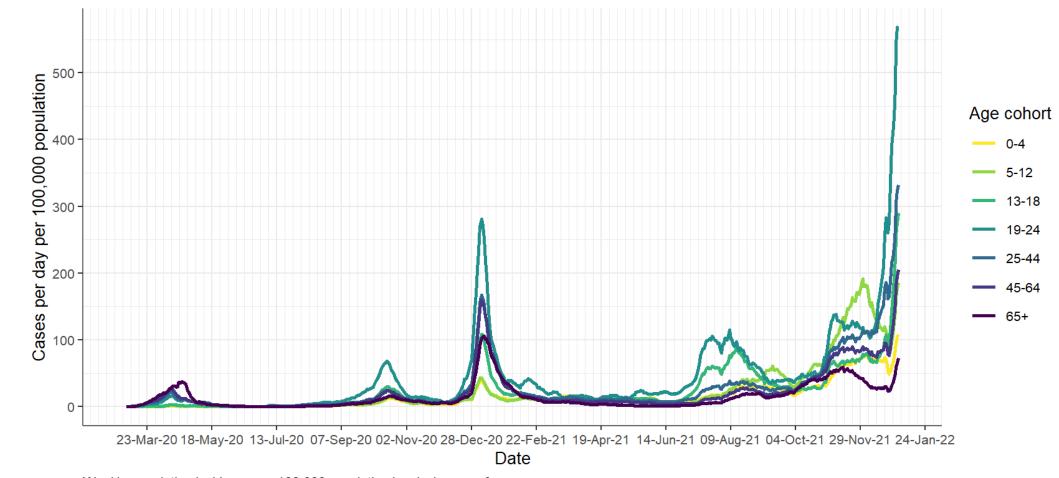




Age-specific incidence (excl. LTRF and hospital outbreaks)

The incidence in all age groups under 65 years of age is the highest recorded at any point in the pandemic, and for those aged 65 years and older incidence is approaching and likely to exceed the peak seen in January 2021.





Weekly cumulative incidence per 100,000 population by single year of age.

Cases in healthcare workers, and associated with outbreaks in LTRF or hospitals excluded.

Line is average number of tests reported per day 100,000 population.

CIDR data to midnight Tue 04 Jan 2022. Cases dated by date notified to HPSC (event creation date).

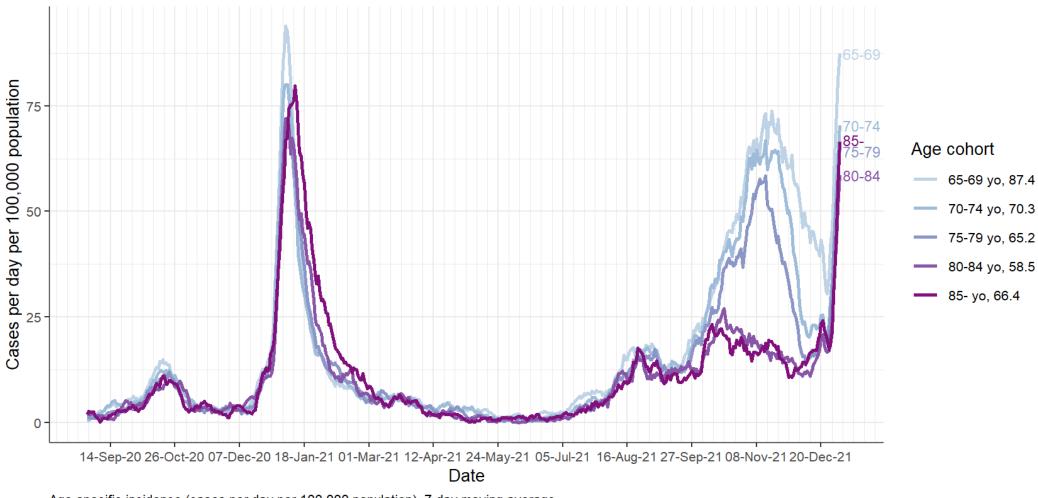




Age-specific incidence (excl. LTRF and hospital outbreaks)

Incidence has increased rapidly in those aged 65 years and older, and is approaching the levels seen in January 2021; note that this estimate relates to specimens taken 6-7 days ago.



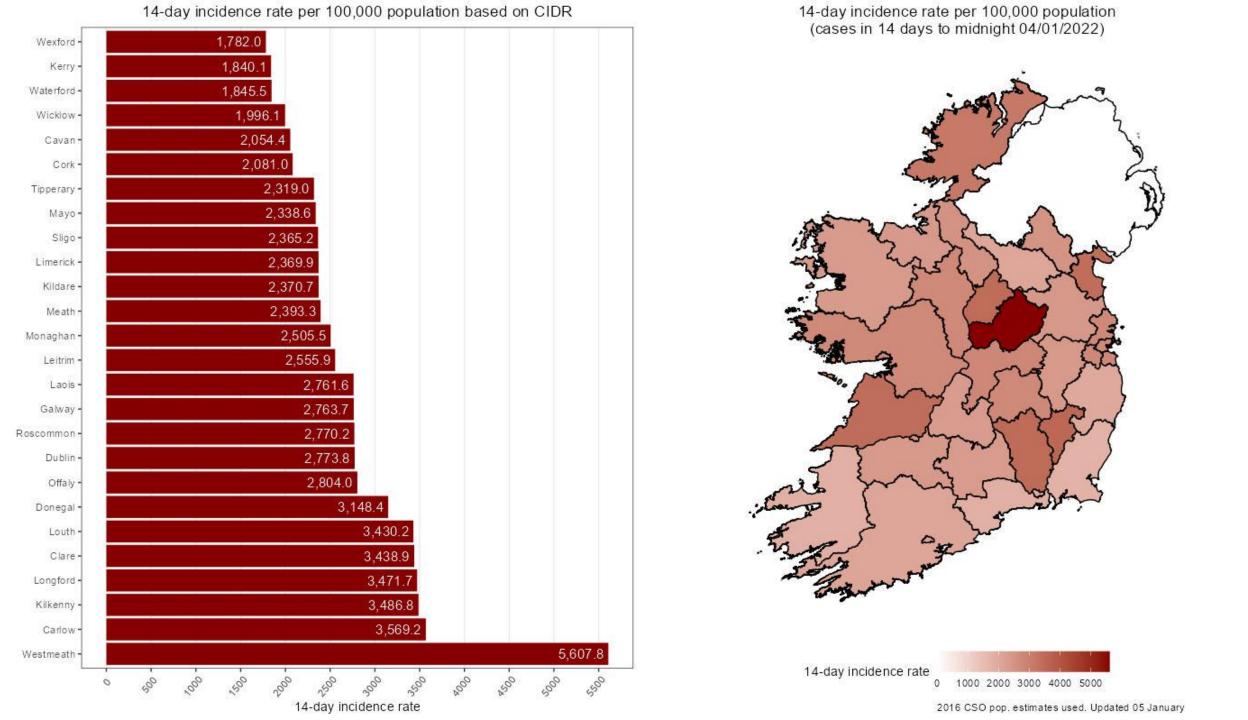


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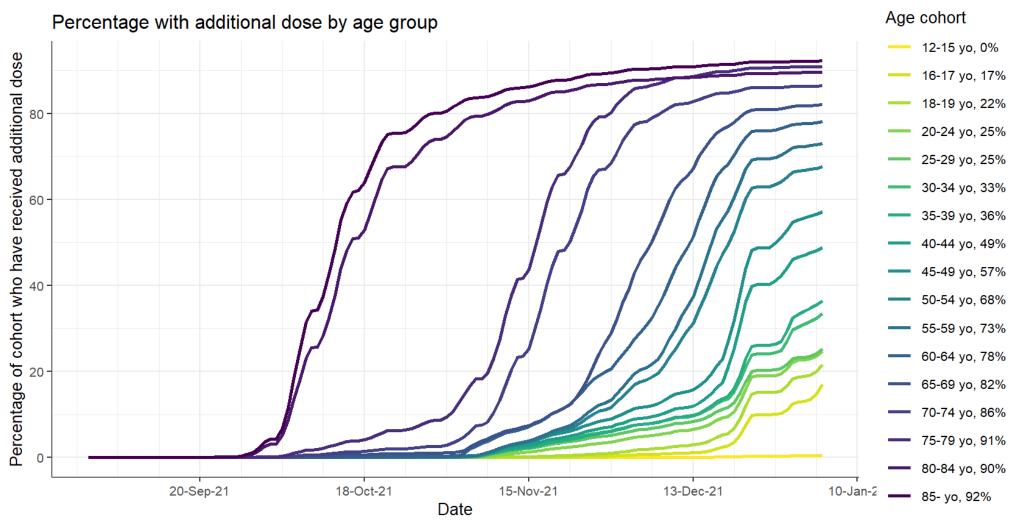




Booster vaccination

78% of those aged 60-64 years, 68% of those aged 50-54 years, and 49% of those aged 40-44 years have received an additional booster dose.







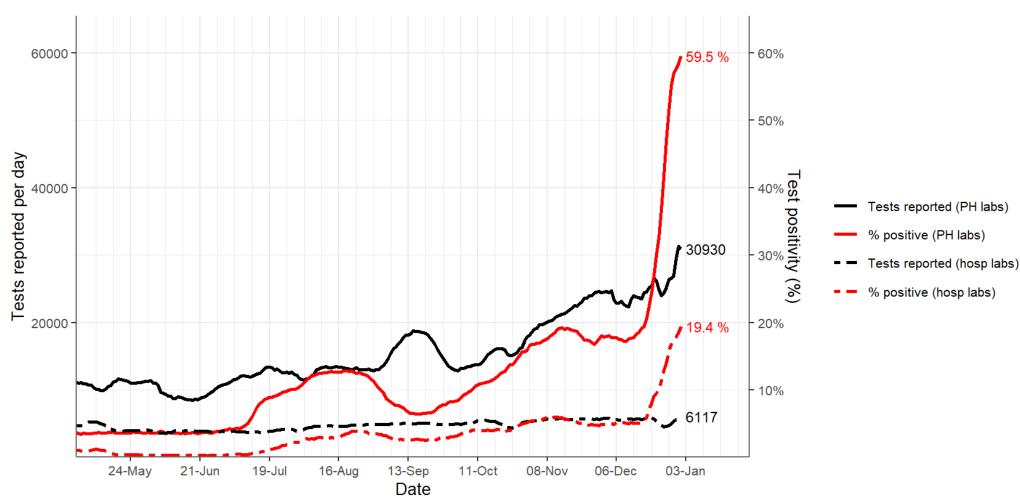


Testing

Tests and test positivity

Demand for PCR testing exceeds supply. The positivity rate in public health laboratories (60%) may be elevated due to prior antigen testing selecting out infected people who then present for PCR. The positivity rate in hospital laboratories (19%) is also exceptionally high, higher than at any point since April 2020 when it was 20-25%.





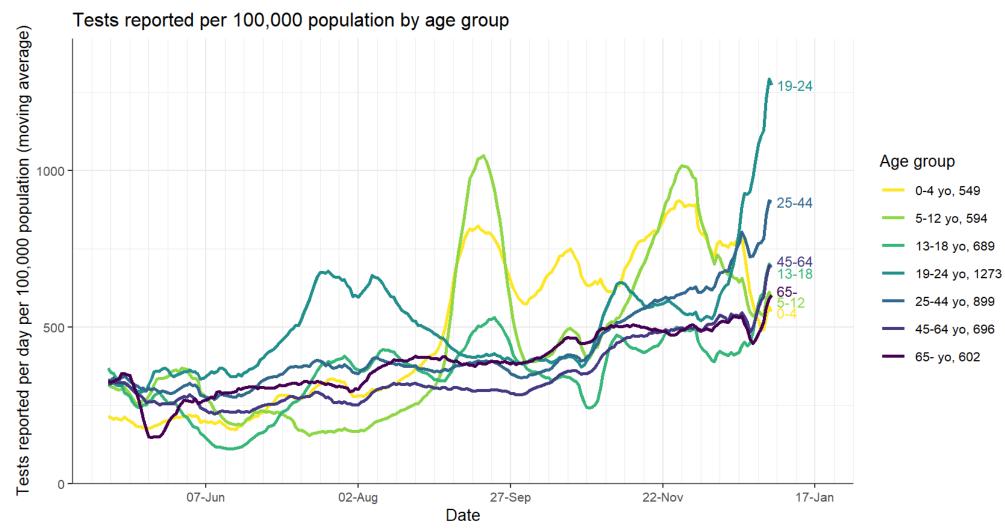
Total tests reported per day (black) and % of tests reported positive (red) for tests conducted in public health laboratories (NVRL and Cherry Orchard, solid lines) and tests conducted in hospital laboratories (dotted lines). 7-day moving averages.



Testing by age

The demand for testing is high amongst those aged 19-44 years; demand for testing of children may increase as schools reopen.

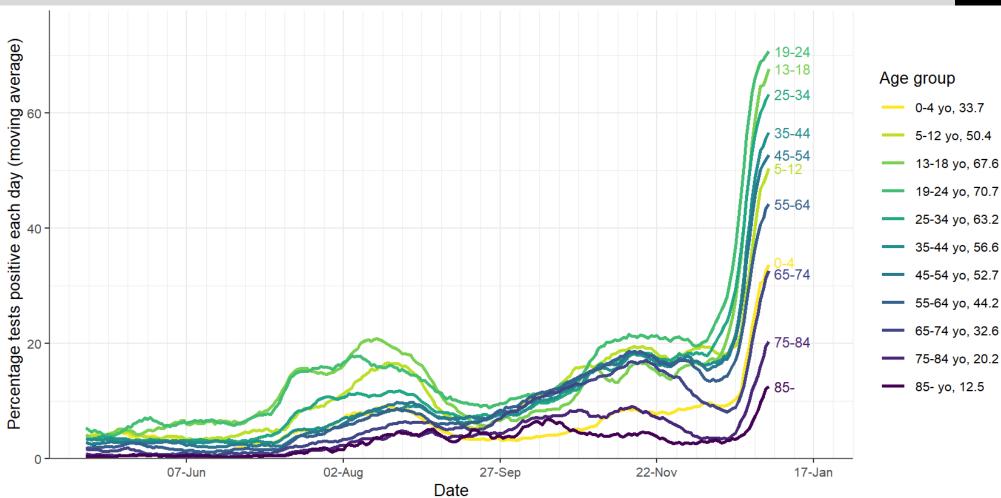




Test positivity by age

Test positivity very high across all age groups, and continues to increase in those aged 65 years and older.





Percentage of tests each day reported as positive (7-day moving average) by age group. Laboratory testing data to Tue 04 Jan 2022.



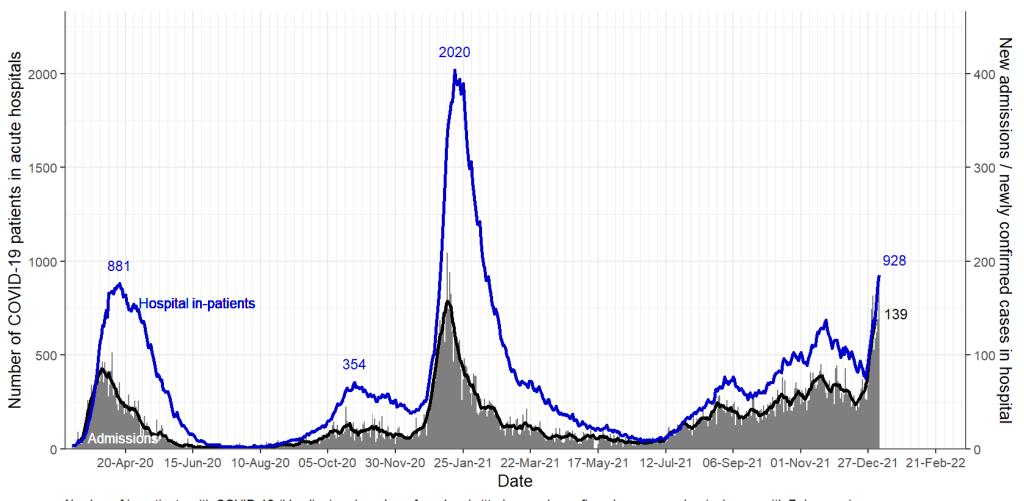


Hospitals & ICU

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 to 928 from a low of 390 on 23 December 2020. The number of admissions and newly confirmed cases in hospital per day has also increased to 139 per day.





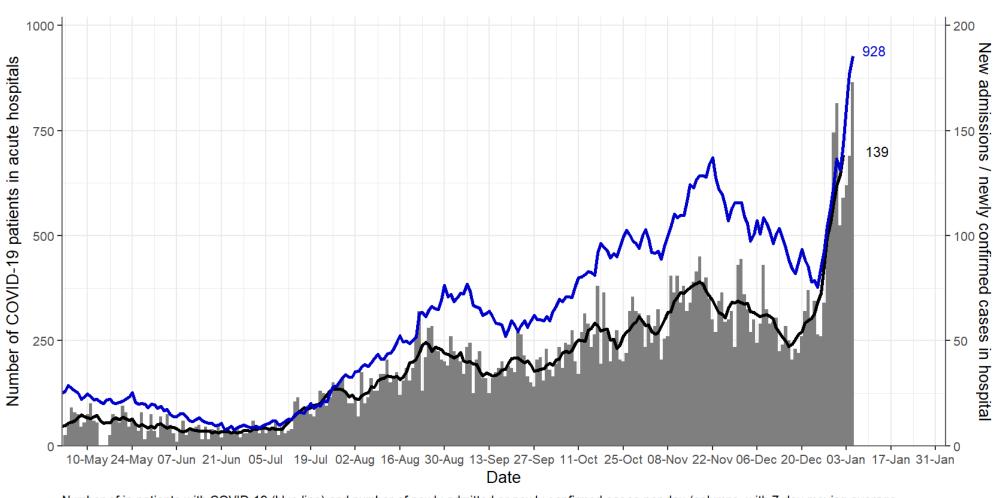
Number of in-patients with COVID-19 (blue line) and number of newly admitted or newly confirmed cases per day (columns, with 7-day moving average, black line, secondary y-axis) on HSE acute hospital sites. HSE PMIU-SDU data to Wed 05 Jan 2022.





New cases in hospital The number of admissions and newly confirmed cases in hospital per day has also decreased to 139 per day, from a recent low of 50 per day in mid-December 2020.

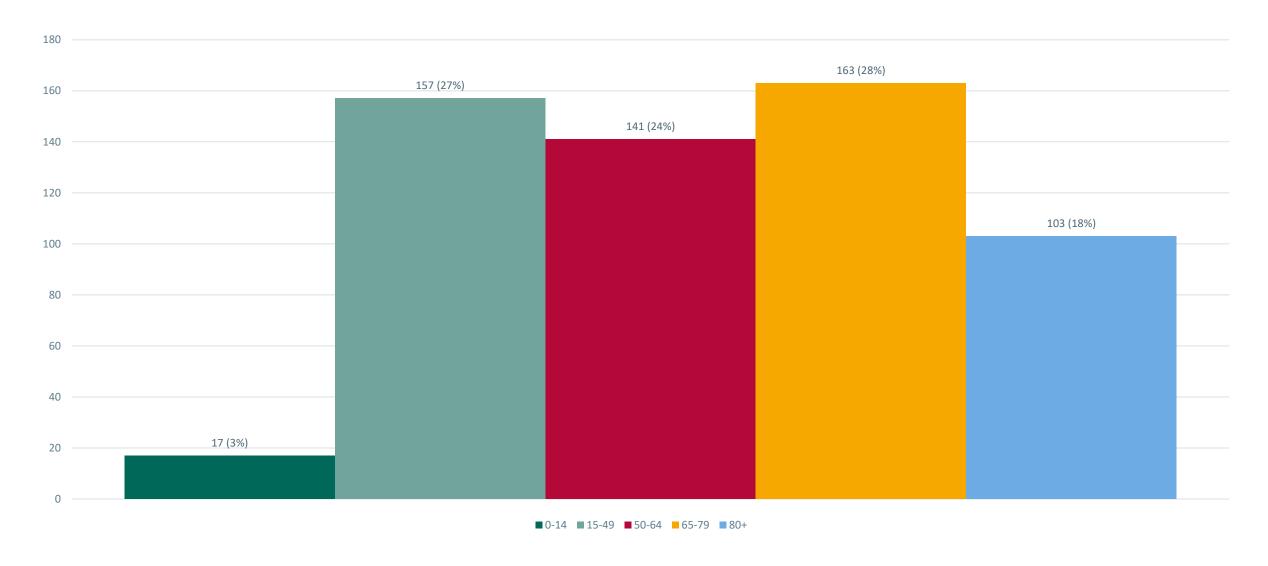




Number of in-patients with COVID-19 (blue line) and number of newly admitted or newly confirmed cases per day (columns, with 7-day moving average, black line, secondary y-axis) on HSE acute hospital sites. HSE PMIU-SDU data to Wed 05 Jan 2022.



Age Profile of Hospitalised COVID-19 Cases as of 29th December 2021

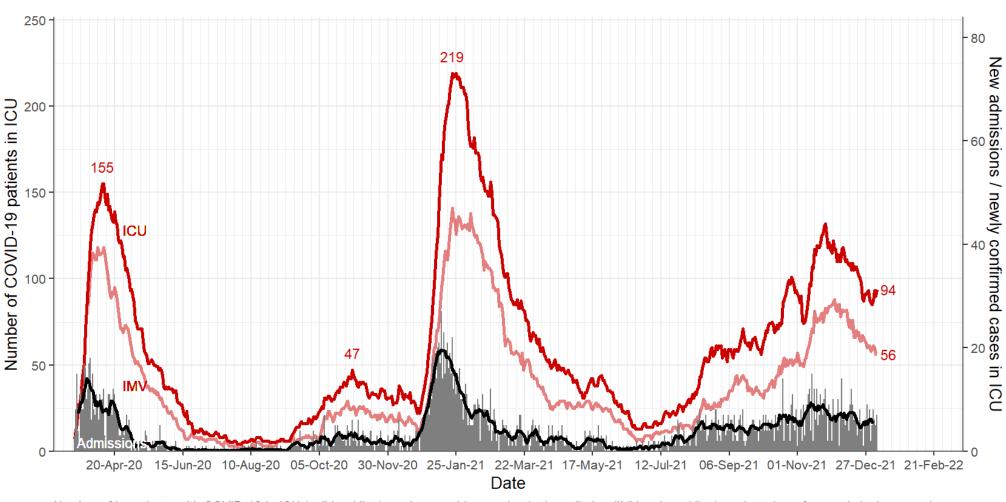




Confirmed cases in intensive care

The number of people in ICU with confirmed SARS-CoV-2 infection and the number requiring mechanical ventilation are currently stable. 94 people in ICU, 56 mechanically ventilated, average 6 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 Wed 05 Jan 2022.





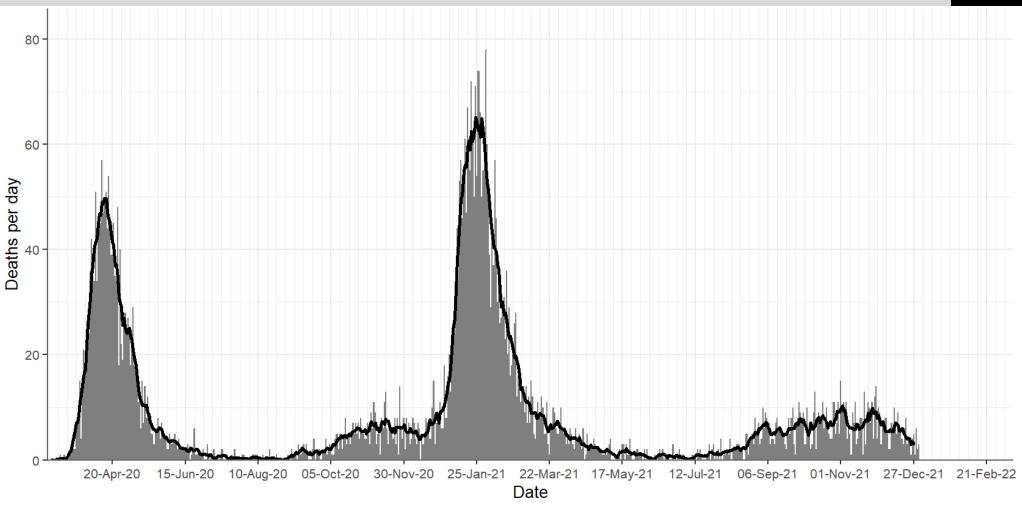


Deaths

Deaths

Deaths per day appear stable; notification of deaths is delayed over the holiday period.





Deaths each day (bars) by date of death, with 7-day moving average (line). CIDR data to midnight Tue 04 Jan 2022.







Outbreaks & Clusters

Summary of COVID-19 outbreaks by key outbreak locations, week 52* and weeks 26-52** 2021



Kov outbrook locations	Current week	Total
Key outbreak locations	week 52	Week 26 - 52 2021
Nursing Home/Community Hospital	8	220
Acute hospitals	8	221
Residential Institutions#	19	298
Vulnerable groups^	4	288
Schools^^	2	514
Childcare facility	1	244
Workplace	0	458

Public Health are prioritising the reporting of outbreaks in settings that have the greatest clinical need or would benefit most from Public Health intervention. Therefore, the number outbreaks in other settings is underestimated.

^{*} Week 51 2021 (December 26th 2021 – January 1st 2022), **Week 26-52 2021 (June 27th 2021 – January 1st 2022) #Includes: Centres for disabilities, Centres for older people, Children's/TUSLA residential centres, Mental health facilities, Prisons, Women/ children's refuges, Other/not specified ^Includes Irish Travellers, Roma, homeless, direct provision service and addiction service 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 – week 52, 2021



Nursing Homes & Community Hospitals

 Eight new outbreaks -31 associated cases (range 0-17 cases per outbreak)

Acute hospitals

Eight new acute hospital outbreaks notified this week with
 24 linked cases* (range 2-5)

Residential institution outbreaks

 19 new outbreaks reported this week – 50 linked cases* (range 0-8)

Vulnerable groups

- Four new outbreaks reported this week,
 - Two outbreak associated with homeless services with 4 linked cases
 - Two outbreaks in Direct Provision Services with 6 linked cases

Workplace outbreaks

No new outbreaks notified in week 52

Schools

- Two new outbreaks in week 52 with four linked cases*
- One in primary school (no cases linked as yet)
- One in special education school (four linked cases*)

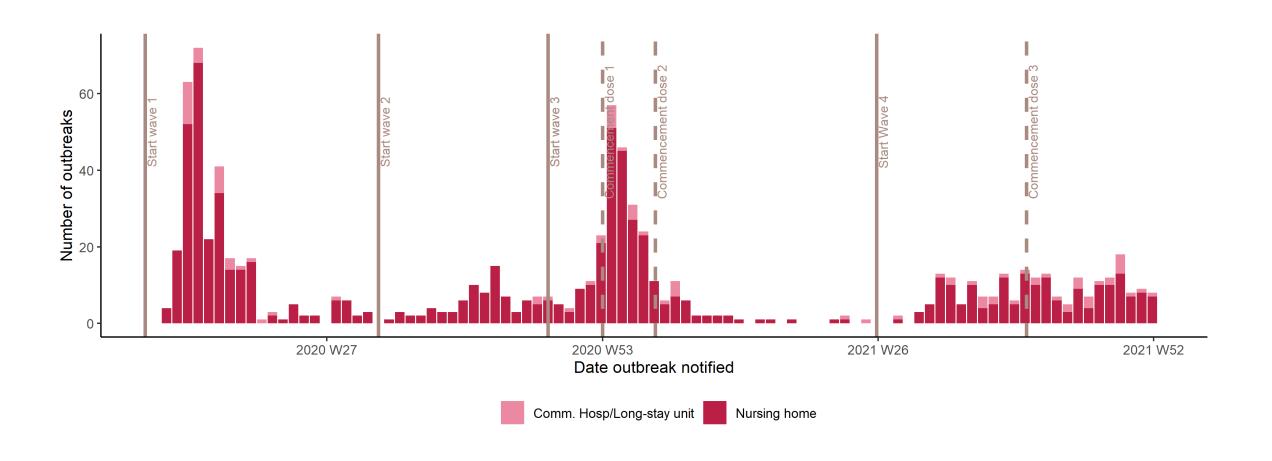
Childcare facilities

One new outbreak in week 52 with three linked cases*

^{*}Due to delays in linkage of outbreak cases as a result of the recent surge, an interim measure has been applied whereby the higher number between aggregate and outbreak linked confirmed case numbers is used.

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

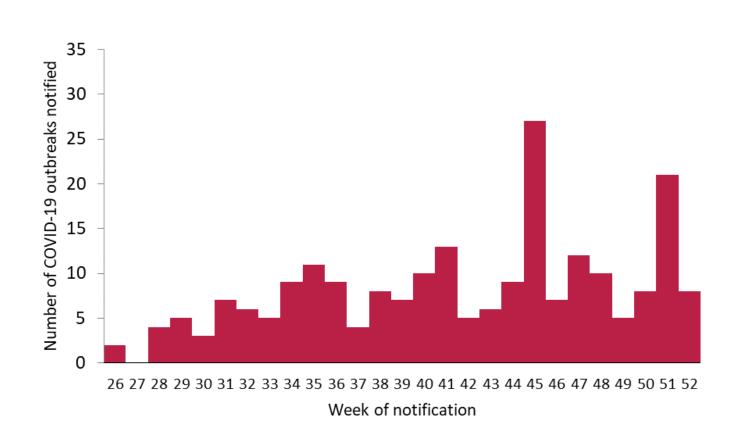




Large peaks occurred in the number of outbreaks in wave 1 (72 outbreaks in a single week) and wave 3 (57 outbreaks in a single week)

COVID-19 outbreaks in Acute Hospitals, wave 4 (weeks 26-52 2021)





*Due to delays in linkage of outbreak cases as a result of the recent surge, an interim measure has been applied whereby the higher number between aggregate and outbreak linked confirmed case numbers is used in outbreak settings.

Update on week 52

- There were eight new COVID-19 outbreaks in acute hospitals settings in week 52
- 24 cases* were linked to these outbreaks (range 2-5 cases per outbreak)

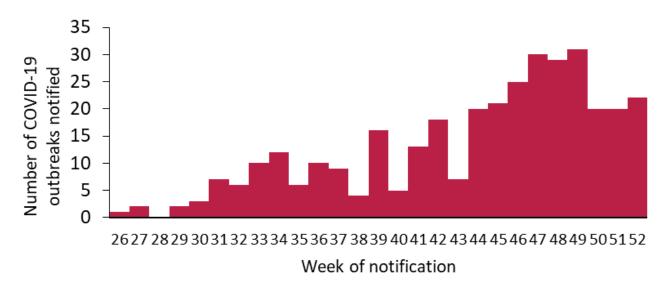
Overview wave 4

 Since week 26 2021, there have been 221 COVID-19 outbreaks in acute hospitals settings, with 1,092 linked confirmed cases

COVID-19 outbreaks in Residential Institutions, wave 4 (weeks 26-52 2021)



	Number of outbreaks notified								
Outbreak location	Week 52	Week 52 outbreaks: Range in no. of cases#	Week 26-52	Number open	Open outbreaks: Range in no. of cases#				
Centre for disabilities	12	0-8	208	113	0-32				
Centre for older people	0	n/a	4	1	12				
Children's / TUSLA residential centre	2	2-3	33	20	2-8				
Mental health facility	2	0-3	29	19	0-11				
Other	0	n/a	12	6	3-10				
Not Specified	3	3-3	5	3	3-3				
Prisons	0	n/a	7	4	2-75				
Total	19	0-8	298	166	0-75				



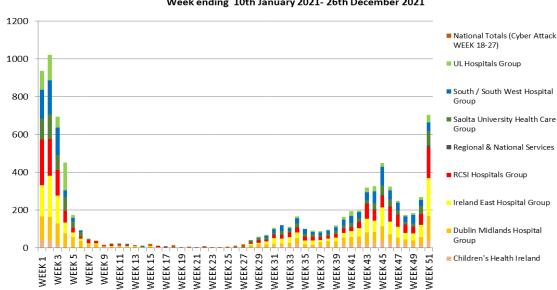
Note: This figure includes all residential institutions including those in Vulnerable groups section i.e. Direct Provision Centres and Addiction Services

Public Health are prioritising the reporting of outbreaks in settings that have the greatest clinical need or would benefit most from Public Health intervention. Therefore, the number outbreaks in some settings is underestimated.

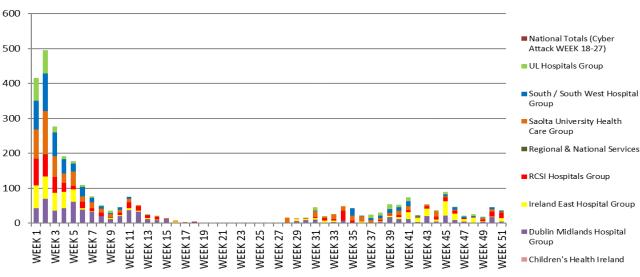
#Due to delays in linkage of outbreak cases as a result of the recent surge, an interim measure has been applied whereby the higher number between aggregate and outbreak linked confirmed case numbers is used in outbreak settings.

Acute operations key data

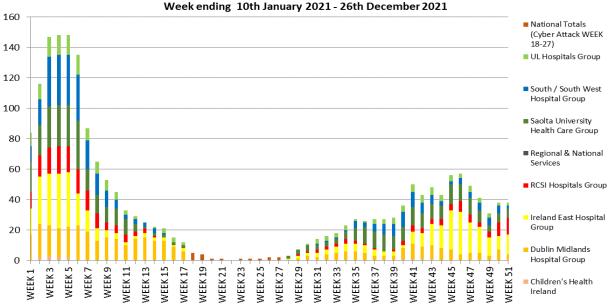
No. of New Laboratory Confirmed Cases of Covid-19 in Hospital Staff National Totals Week ending 10th January 2021- 26th December 2021



Weekly no. of Hospital-Acquired Covid-19 National Totals Week ending 10th January 2021- 26th December 2021



No. of Currently Open Outbreaks of Covid-19 National Totals Week ending 10th January 2021 - 26th December 2021



Source: AMRIC, HSE



Test & Trace Update

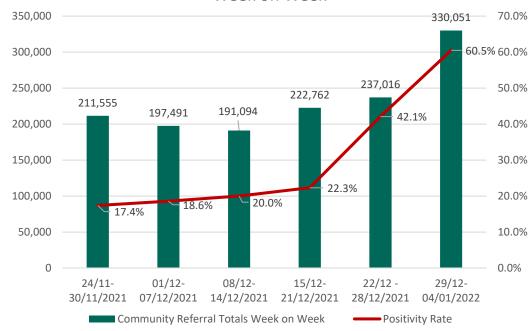
Test and Trace update

The Test and Trace system is now operating at surge capacity and is under severe pressure.

HSE has increased capacity from 100,000 tests per week to **650,000 tests per week**. PCR testing capacity is at 300,000 per week from the original weekly 100,000 baseline capacity. Antigen Testing Capacity has increased to 350,000 per week.

- Community referrals have **increased by 39%** in comparison to the same time-period last week while **community positivity is now at 60.5%**.
- Like many testing systems and despite an increase in PCR testing capacity, access remains challenging in most areas for people to PCR testing. Clinical prioritisation is in place to ensure that those most in need receive access first.
- **143,708** GP referrals were received last week which is an increase of **217**% compared to the previous week.
- In the past week **272,308** laboratory tests were completed. In addition, 70,000 antigen tests were delivered giving a **total number of c 345,000 tests completed last week**.
- Swabs completed in the community was **229,903**, this is a **27% increase** in comparison to the same time-period last week.
- The highest number of swabs over the past week was **37,206 swabs** (including test centre and outbreak referrals).
- The single highest day for testing referrals to date was on Wednesday, 29th December 2021 with over **77,312** referrals recorded in total, **11,052** of these being self-referrals.
- The median end to end TAT for a not detected result in the Community is **1.9** days.
- The median end to end TAT for a detected result in the Community is 2.3 days

Total Community Referrals and Positivity Rates Week on Week



Over 328,026 antigen tests have been reported through the public antigen results portal.
 Test kits dispatched via postal distribution to date are:

Programme	Commenced	Total Test kits dispatched	Average per day last 7 days
Close contacts	28/10/21	299,068	11,258
Primary school pods	29/11/21	125,259	2,574
Childcare pods	15/12/21	4,854	218
Symptomatic 4-39 year olds	03/01/22	97,117	48,559
Total		526,298	62,609

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

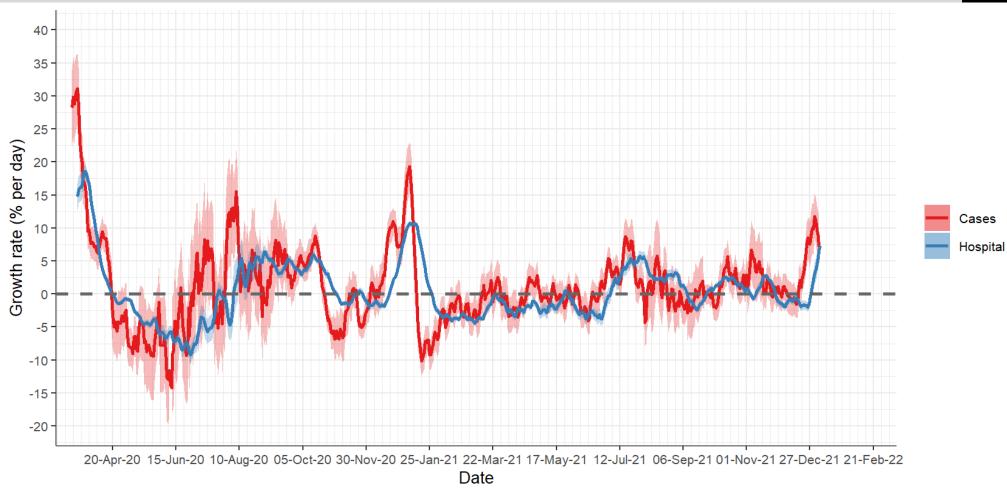
CMP update

- The average number of cases managed by the CMP per day during the week ending 02/01/22 was 18367, an increase of 99% from 9200 cases the previous week. The average number of close contacts reported to the CMP per day for the week ending 02/01/22 was 32730, an increase of over 100% from 14679 the previous week. Household contacts accounted for 64.3% (N=126710).
- For close contacts created the week ending 19/12/2021: 20178 were referred for antigen testing. Of these, a confirmatory PCR test result was identified for 1402 close contacts. 1005 (71.7%) of these tests were positive. Close contacts with a positive antigen test result are advised to seek a confirmatory PCR test. As these tests are not booked via the CCT, the results are presented for close contacts where it was possible to link the close contact episode to a confirmatory PCR test result.
- For the week ending 19/12/21, 88% (n=13497) of the close contacts referred for a Test 1 and 67% (n=3519) referred for a Test 2 attended for testing. Test 1 results were available for 12281 close contacts, 19.8% (n=2426) of these had a positive result. Test 2 results were available for 2274 close contacts, of these 17.9% (n=407) had a positive result. Overall, 22.7% (n=2725) of the close contacts tested had a positive result. The highest proportion of close contacts testing positive by circumstances was amongst household contacts (25.3%).
- The mean number of close contacts per case (excluding cases with zero close contacts) for the week ending 02/01/222 was 2.6, an increase from 2.4 the previous week.

Growth rate

Case counts are rising rapidly, with growth rate estimated at 7.2 % per day (+3.5%, +10.9%) over a 14-day window and 8.8% per day (+6.9%, +10.7%) over a 21-day window. The number of people in hospital is also increasing, growth rate 7.3% per day (+6.7%, +8.0%) over a 14-day window.





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 **20 Dec 21.** HSE PMIU-SDU data to Wed 05 Jan 2022. Cases dated by date notified to HPSC (event creation date).

Case data from CIDR to 21 Dec 21, then estimated from positive tests reported.





Situation analysis 6 January 2022



- Incidence has increased very rapidly to unprecedented levels
 - 7-day average case count 19,259
 - 7- and 14-day incidence 2876 and 4450 per 100,000 respectively
 - 928 in hospital, 94 in ICU, 56 ventilated
 - Test positivity 60% in public health laboratories
- Prevalence of detected infection ≈ 3%, prevalence of infection likely to be 6-10%
- Incidence increased first in younger adults, and is now increasing in older age groups.
- Growth rate in cases and hospitalisations about 7% per day
 - doubling time 7-20 days, though it is not clear we will see a further doubling
- The increase in incidence and hospitalisation has not (yet) translated into critical care admissions or increased mortality
 - Age profile of cases? Immunity protecting against very severe disease? Immunity delaying very severe disease? Lower virulence?





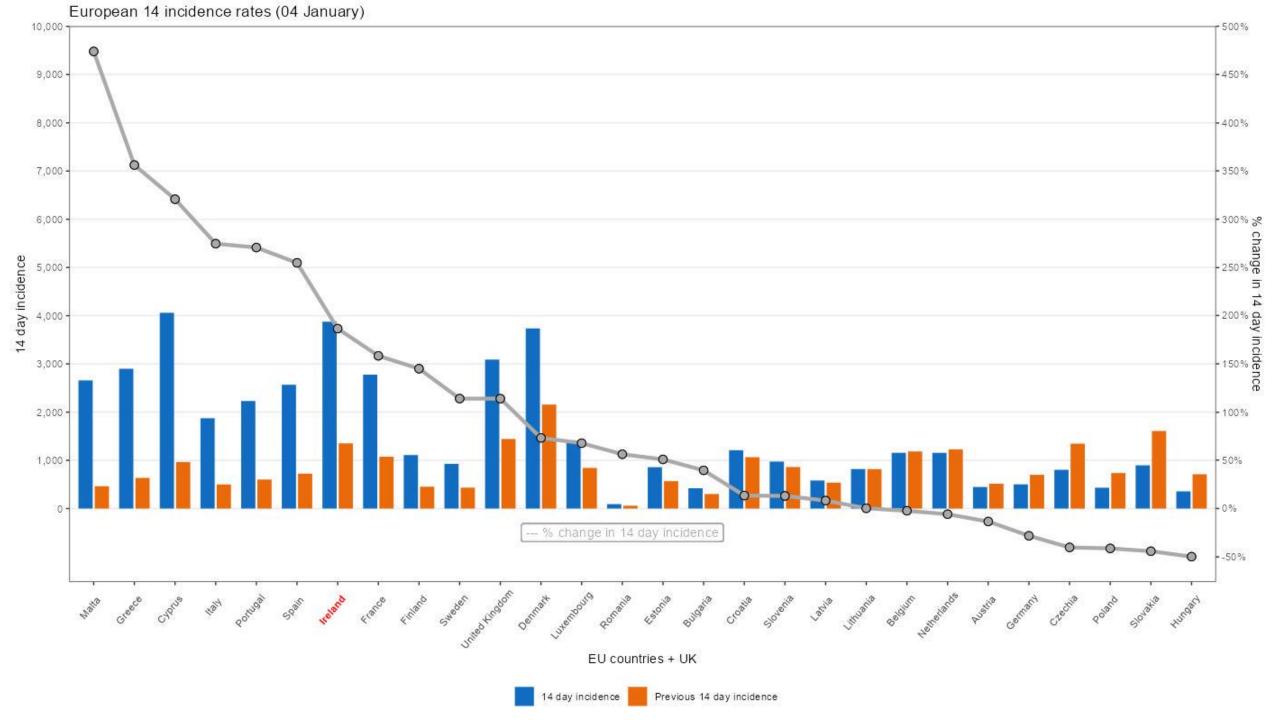


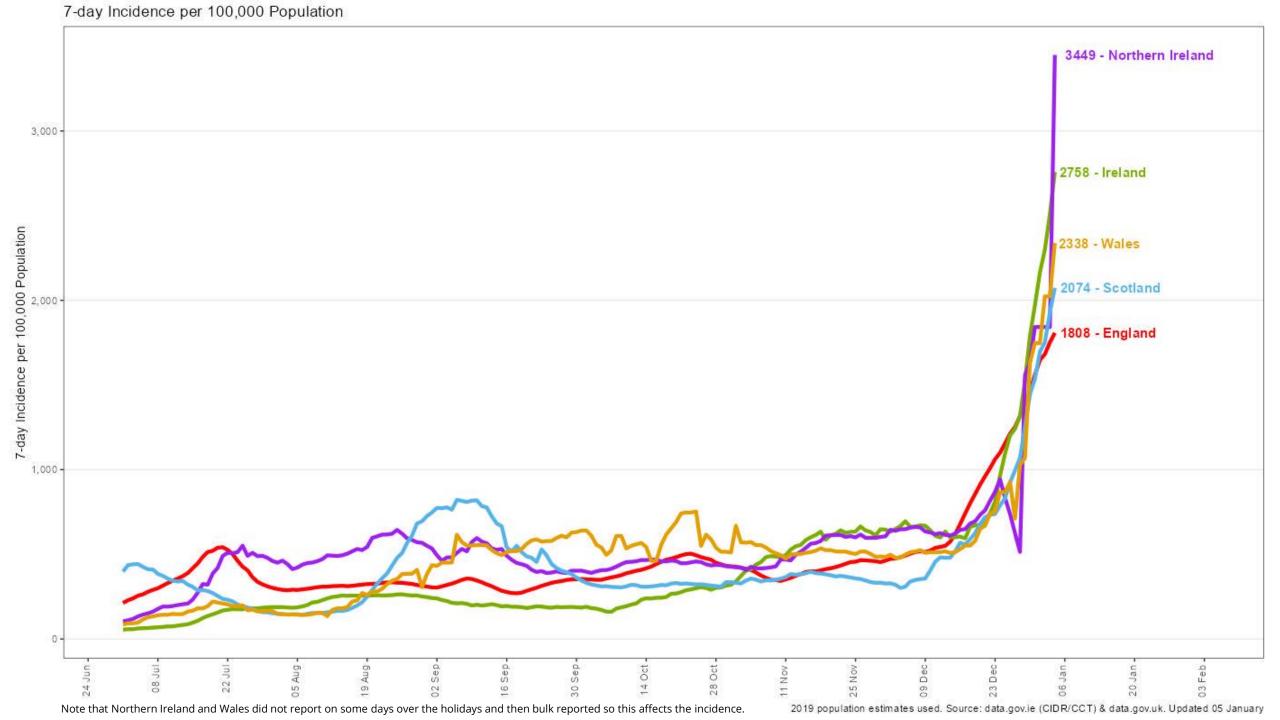


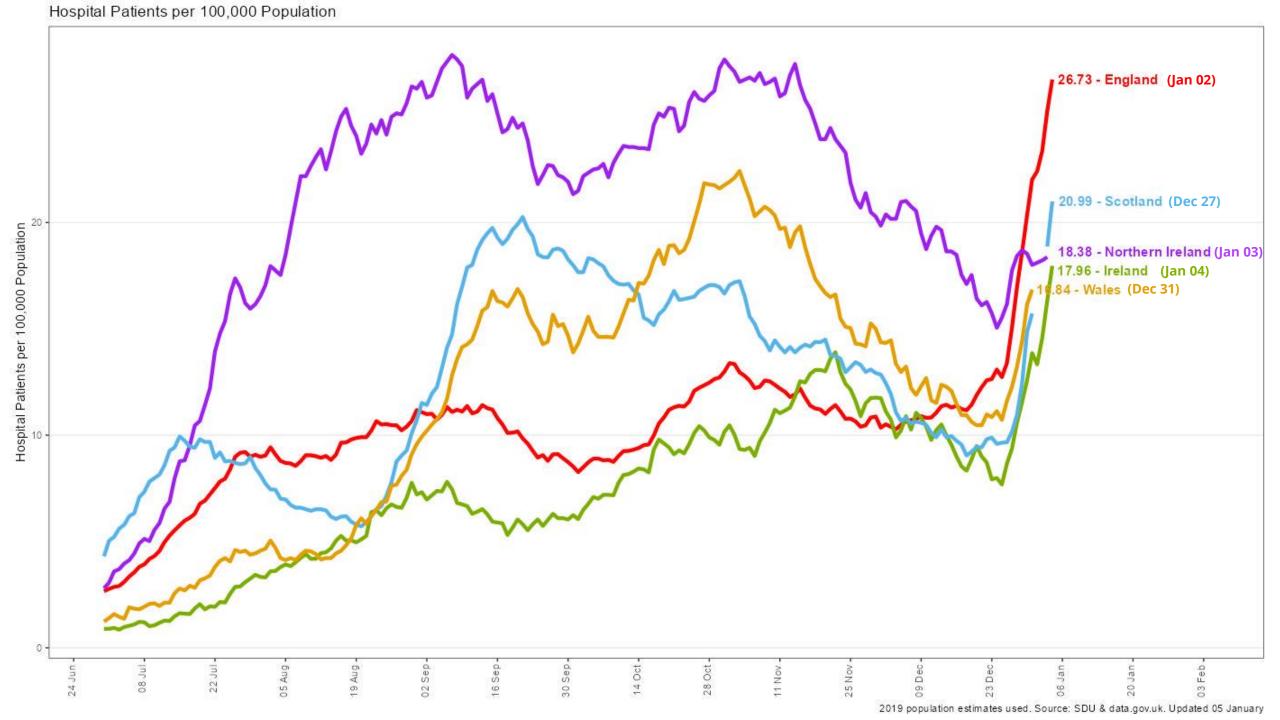




European Data

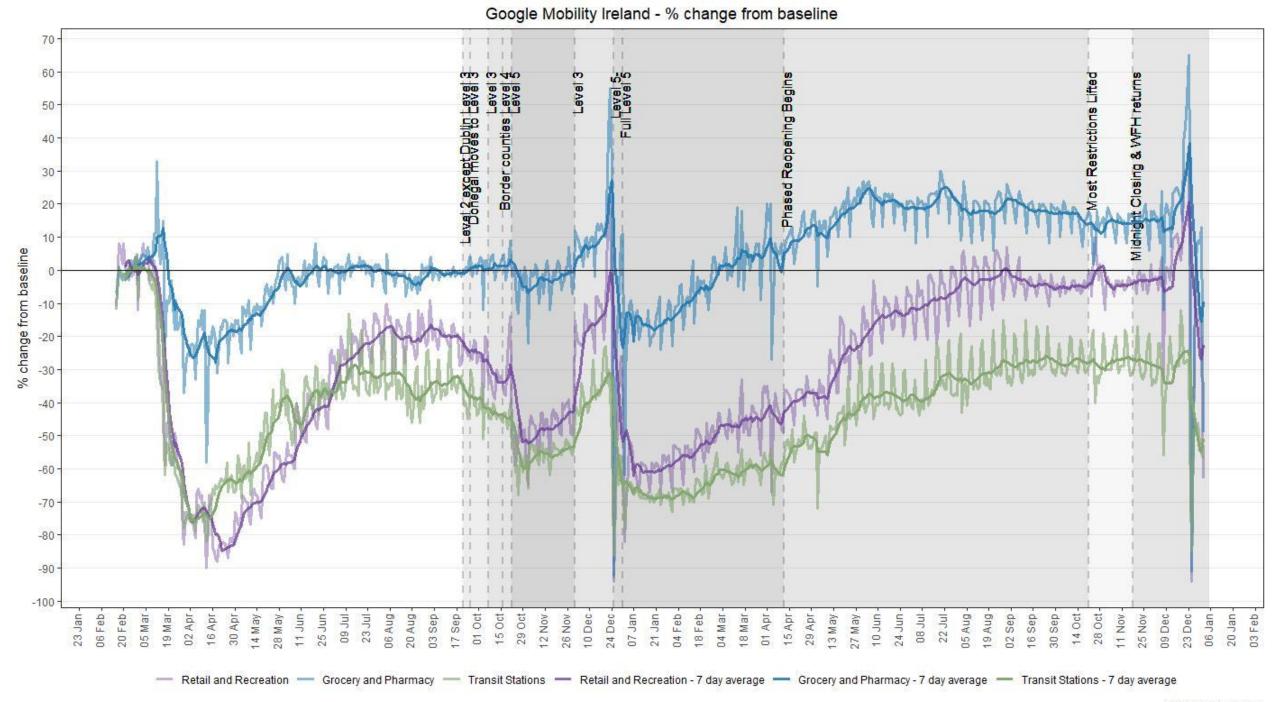








Mobility Data



Google Mobility Ireland - % change from baseline

