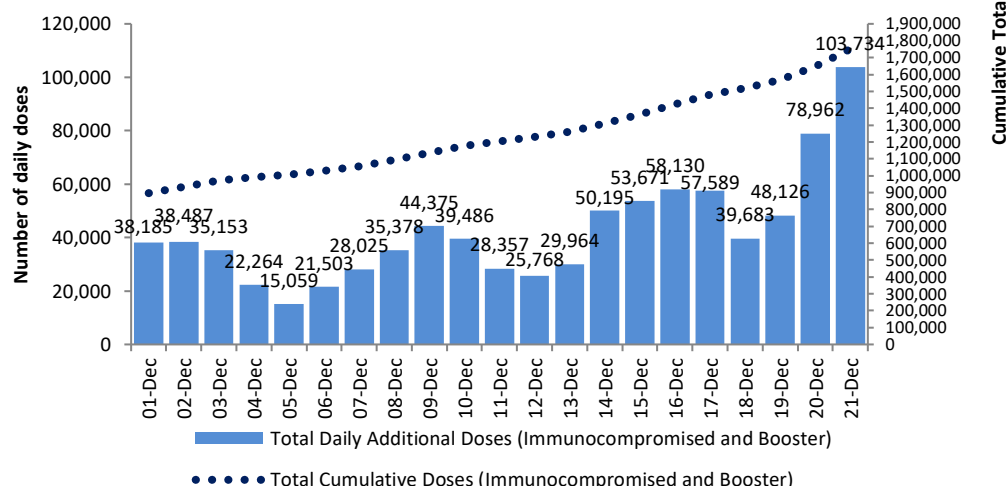


COVID-19 Data Summary, Wednesday 22nd December 2021

Introduction:

As certain restrictions are introduced and the Omicron Variant of Concern spreads, we will continue to monitor the situation closely to predict future pressures on the hospital system and to assess effectiveness of control measures.

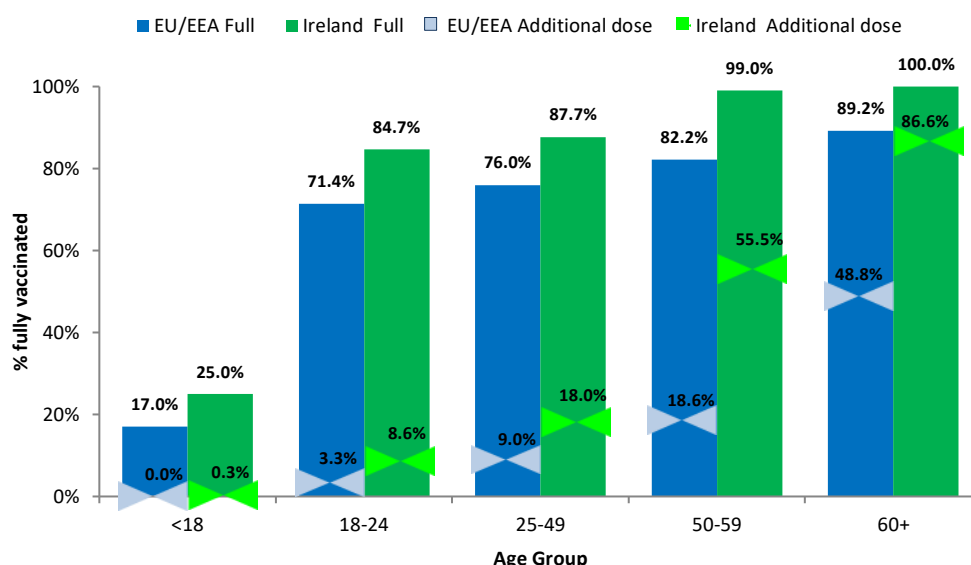
Daily doses of COVID-19 Additional vaccinations, 1st December-21st December



Up to 21st December **1,750,593 additional dose vaccinations** have been administered, 102,099 (5.8%) of which were administered to the immunocompromised.

In the latest week (15th – 21st December) 454,956 total doses were administered. 437,395 (96.1%) were additional doses (excl. Immunocompromised), 2,500 (0.5%) were administered to the immunocompromised and 15,061 (3.3%) were first, second or single doses.

Cumulative uptake of full vaccination by age group, Ireland & EU/EEA (21st December)

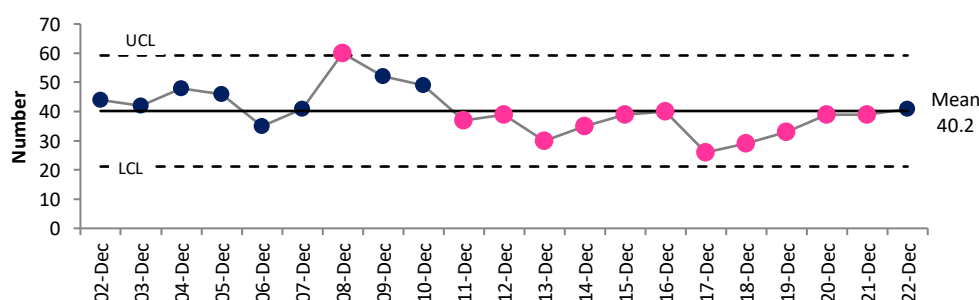


Data from ECDC shows that 78.6% of adults age 18+ in the EU/EEA have been fully vaccinated, with 67.3% of the total population (including children) fully vaccinated.

Additional dose uptake is 40.7% of adults age 18+ for Ireland and 22.4% for the EU/EEA. 30.9% of the total population of Ireland has had an additional dose compared to 18.4% in the EU/EEA.

Uptake rates vary significantly by age group, with Ireland having higher uptake rates across all age groups compared to the EU/EEA.

Number of hospital admissions of COVID positive patients during the previous 24 hours

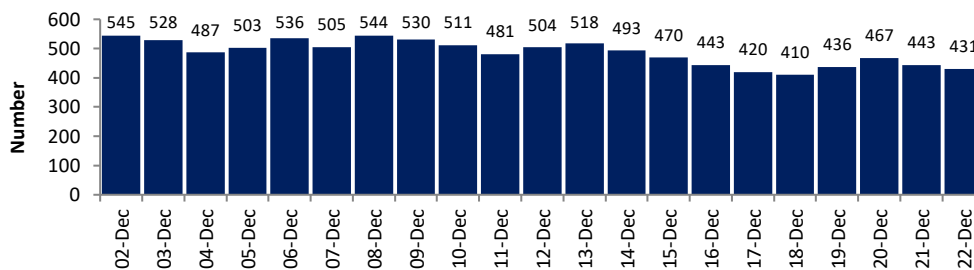


The SPC chart shows a signal of decrease in the number of new admissions of COVID positive patients over the past 3 weeks around a mean of 40.2 admission per day (44.9 last week).

41 admissions today.

A total of 247 admissions over the past 7 days (**down 12% on the previous week**).

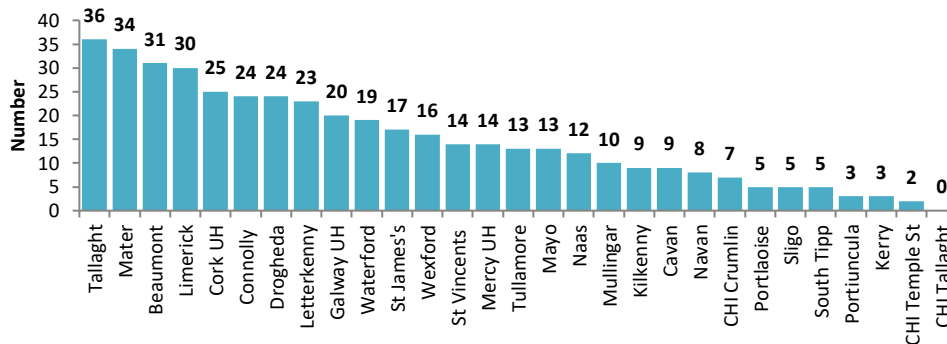
Number of people with confirmed COVID-19 in hospital (8am)



The number of people with COVID in hospital fluctuates by day, and has **decreased over the last 3 weeks. Down 8% on the same day last week and down 19% on the same day two weeks ago.**

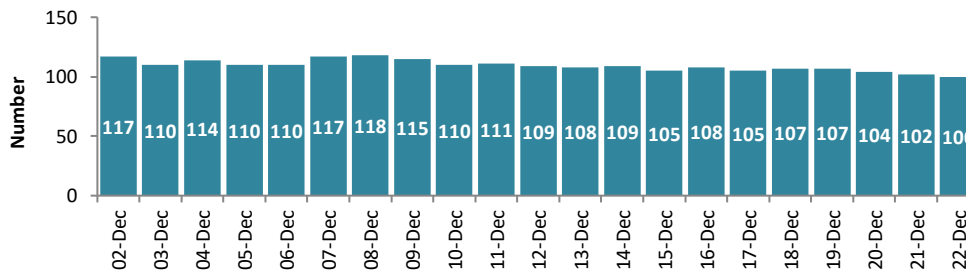
470 in hospital at 8am today.

Number of people with confirmed COVID-19 in hospital, by hospital (8am on 22nd Dec)



Of the 431 people with confirmed COVID-19 in hospital, **Tallaght has the highest number (36 people)**, followed by the Mater (34), Beaumont (31), Limerick (30), Cork UH (25) and Connolly (24).

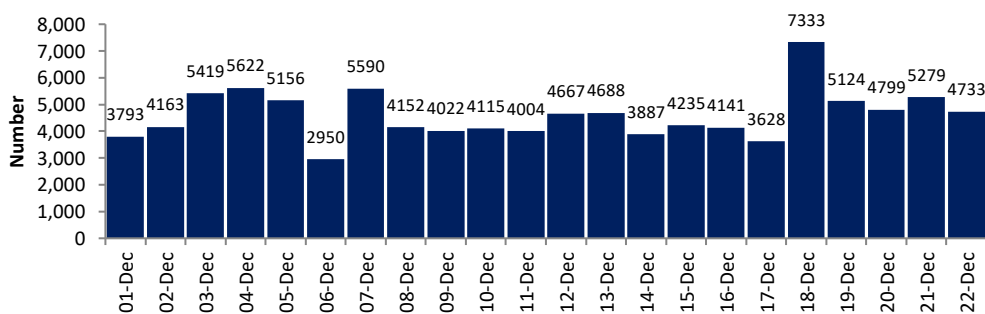
Number of people with COVID-19 in critical care



The number with COVID-19 in **critical care is showing signs of improvement. Down 5% on this day last week and down 15% on two weeks ago.**

Currently 100 in ICU (**down 5 on the same day last week**). **8 new admissions today.**

Number of new cases per day (last 3 weeks to 22nd Dec)

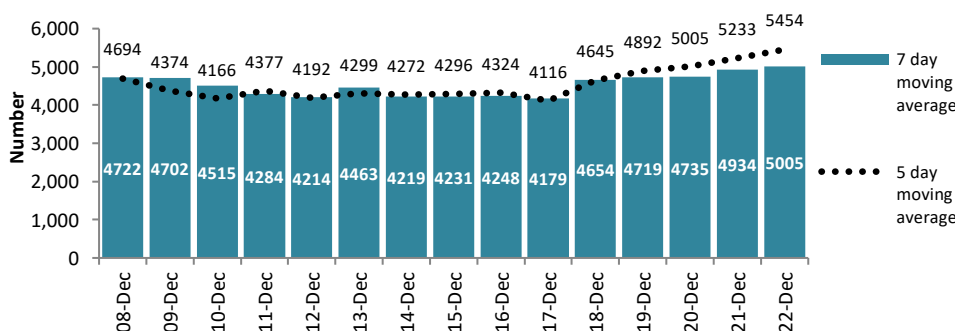


The number of cases fluctuates by day but has increased over the past week.

The **number of new cases in the 7 days to 22nd Dec is up 18%** on the previous week.

4,733 new cases on 22nd Dec.

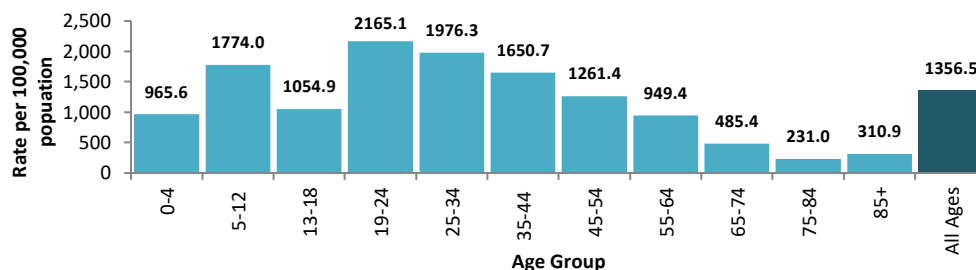
5 and 7 day moving averages of new cases per day (14 days to 22nd Dec)



Compared to **last week the 5 day average is up 27%** and the **7 day average is up 18%.**

Compared to previous 2 weeks, the **5 day average is up 16%** and the **7 day average is up 6%.**

Rate of new cases per 100,000 population by age group notified over the 2 weeks to 22nd Dec

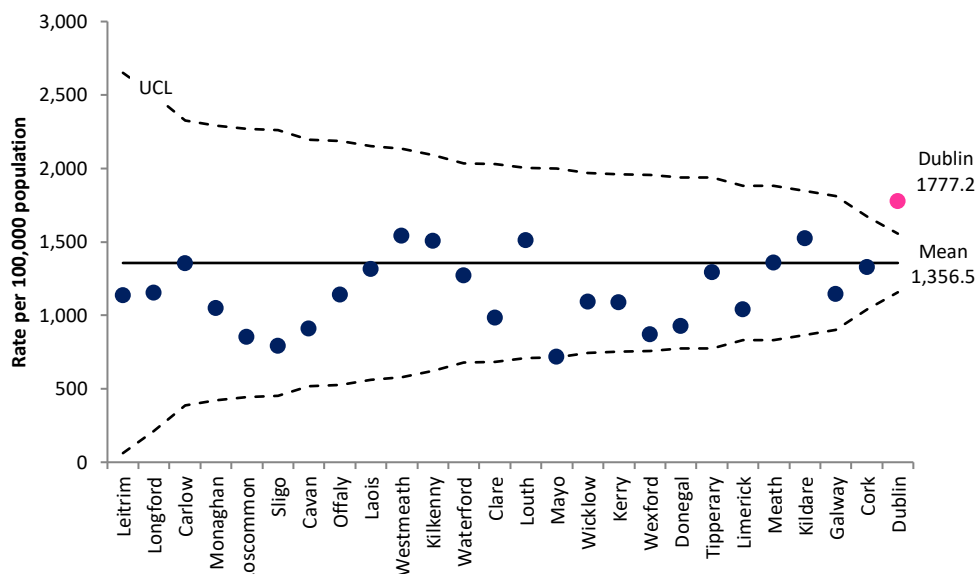


Compared to the previous week the **overall 14 day incidence rate is up 3%.**

The 14 day incidence rate is highest among 19-24 year olds, with an increase of 36%.

Incidence in **5-12 year olds has decreased by 21%**, 25-34 year olds (up 32%) and **85+ (up 21%) increased**. Incidence in 65-74 (down 18%) and 75-84 (down 11%).

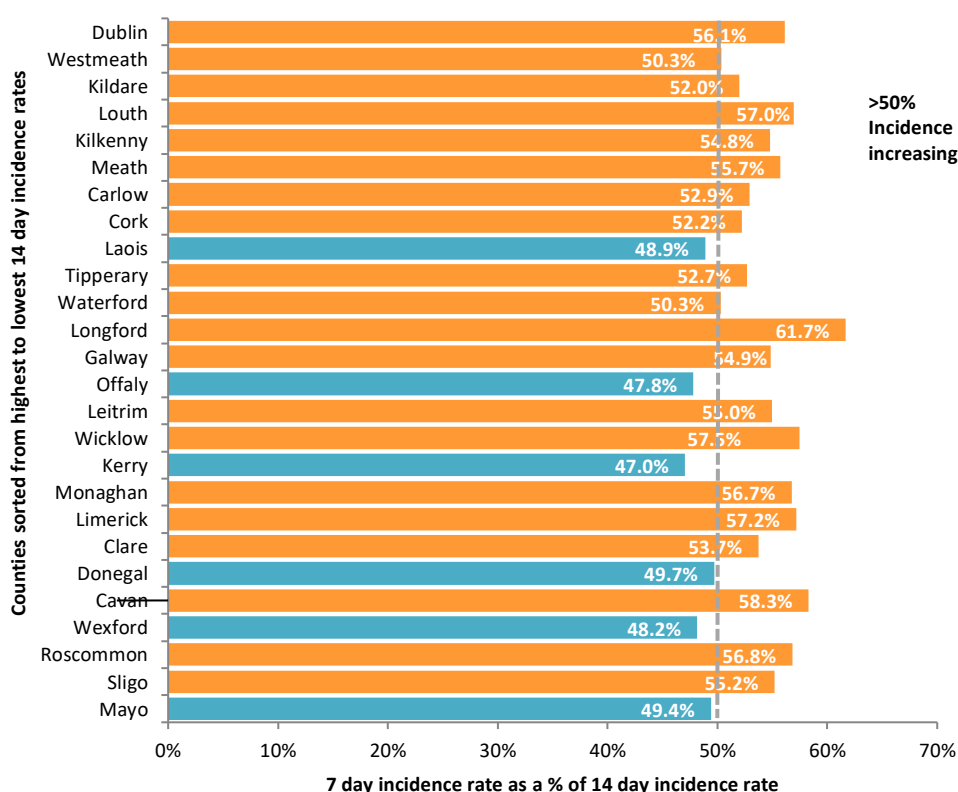
14-day incidence rate per 100,000 population by county notified from 8th Dec– 22nd Dec



The SPC funnel plot shows that the rates of new cases in all counties but Dublin are within the expected range of variation when compared to the national average (1,356.5). The average increased week on week (1,314.6 last week).

Dublin (1777.2) has highest incidence rate and is outside the expected range of variation.

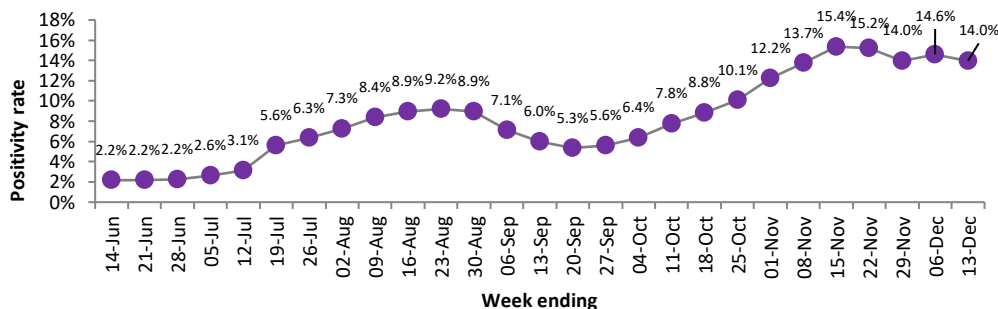
7 day incidence rate as a percentage of 14 day rate, 8th Dec – 22nd Dec



The 14 day incidence rate to 22nd Dec is 1356.5 per 100,000 population, while the 7 day incidence rate is 735.3. **The 7 day rate is more than half (54.21%) of the 14 day rate;** this means that there were **more new cases in the most recent 7 days than in the previous 7 days.**

At county level, the 7 day rates for **20 of the 26 counties are more than half of the 14 day rates.** This is a disimprovement on this day last week when 23 of the 26 counties were less than half of the 14 day rate.

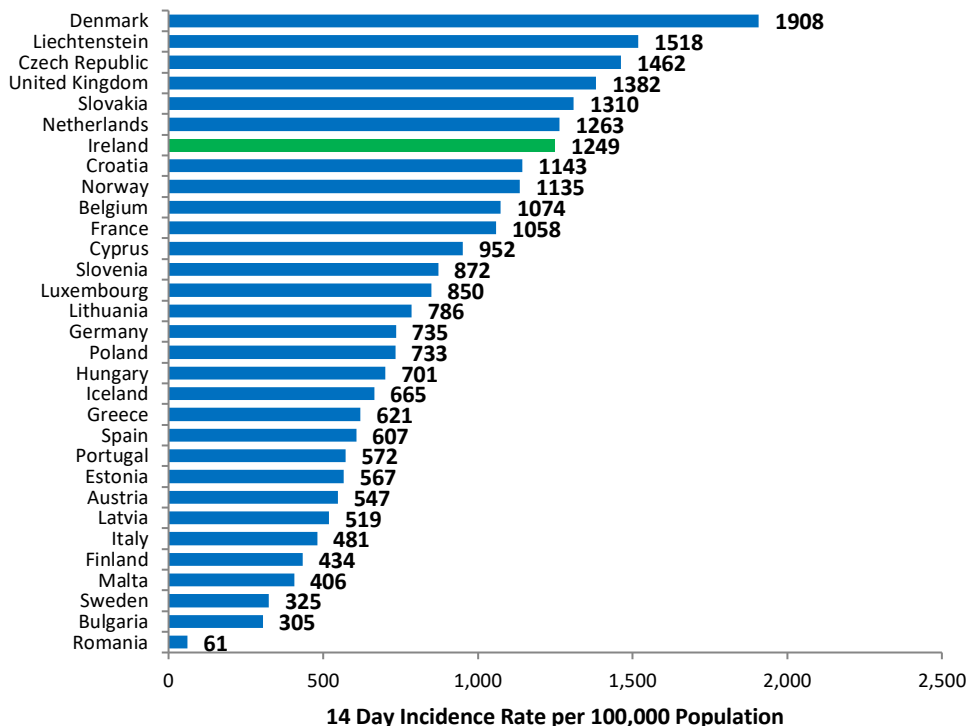
Positivity rate for COVID-19 tests by week



Positivity rates have **trended upwards** since week ending 20th Sept.

This week (ending 13th Dec) sees a decrease in **positivity rate** from **14.6%** last week to **14%** this week.

14-day COVID-19 rates per 100,000 population EU/EEA & UK (WHO Data, 21st December)



Data from the WHO on COVID incidence rates within Europe shows that the **14 day incidence rate** is the **7th highest out of the 31 countries** (7th highest last week).

The 14 day incidence rates in **15 of the 31 countries** have **increased compared to 2 weeks ago, including Ireland** (up 3%).

Rates have decreased in 16 countries.

Key trends & recent changes:

- In the **7 days up to 15th December** there were **29,618 new cases** reported; **down 10% on the previous week** (33,052 new cases in the 7 days up to 8th December). Compared to the previous week, the **5 day average is down 8% and compared to two weeks ago, down 4%**.
- Variant B.1.1.529 (Omicron) has emerged as a variant of concern (26th November).**
 - This variant is marked by a **large number of mutations in protein spikes**. These have the potential to change the transmissibility and vaccine susceptibility of the virus. The ECDC reports evidence for impact on immunity has been published¹. Evidence on transmissibility and severity has not yet been published.
 - The **ECDC report 2,127 confirmed cases of the Omicron Variant of Concern across 25 EU/EEA as of 14th December, 441 of which were reported on 13th December**
 - Ireland has reported 18 confirmed cases of the Omicron Variant and estimates that 11% of new Covid Cases are likely the Omicron VOC.
 - The ECDC reports **6,699 confirmed cases across 50 countries outside of the EU/EEA**.
 - The ECDC 18th rapid risk assessment of the Omicron Variant of concern (VOC) assesses:
 - The probability of further spread of Omicron VOC in the EU/EEA as **very high**

1. Pulliam JRC, van Schalkwyk C, Govender N, von Gottberg A, Cohen C, Groome MJ, et al. Increased risk of SARS-CoV-2 reinfection associated with emergence of the Omicron variant in South Africa. medRxiv. 2021:2021.11.11.21266068.

- Overall level of risk to public health associated with the further emergence and spread of the Omicron VOC as **very high**
- **Omicron VOC is very likely to cause additional hospitalisations and fatalities.** This holds even if the severity of the disease caused by Omicron VOC is equal or lower than the Delta VOC. This is because the increased transmissibility and resultant growth in cases will rapidly outweigh any benefits of potentially reduced severity
- **31.2% of new cases over the past 2 weeks were among children aged 0-18 years.** 43.5% of new cases over the past 2 weeks were among people aged 19-44 years. 21% of new cases were among people aged 45-64 years and 4.6% were among people aged 65 and over.

Hospital activity:

- The number of patients with confirmed COVID currently **in hospital is down 14% compared to last week** (470 at 8am on 15th December, 544 at 8am on 8th December).
- Over the past 7 days there have been **281 admissions of COVID positive patients to hospital** (an average of 40 per day), **down 11% on the previous week** (316 new admissions in the 7 days up to 8th December).
- Data from the NOCA ICU Bed Information System shows that the number of **confirmed COVID cases in ICU has decreased by 11% compared to last week** (105 on 15th December, 118 on 8th December).
- **ICU Admission 27th June to 11th December (15+ years)**
 - **638 ICU admissions of COVID-19 positive patients of which:**
 - 94 (14.8%) remain in hospital
 - 355 (55.6%) discharged alive, with median length of stay 8 days (range 1-90)
 - 189 (29.6%) died in ICU, with median length of stay 11 days (range 1-62)
 - 80.1% of the 638 ICU admissions had one or more underlying illnesses; 19.9% had no underlying illnesses
 - Pregnancy was reported in 24 cases of which 21 (87.5%) had not been vaccinated and 3 (22.5%) had received one dose of a two dose vaccination scheduled prior to infection.
- **The 14 days to 15th December:** Of 62,598 new cases notified in the 14 days to 15th Dec, **548 (0.9%) have been hospitalised** to date and **24 (0.04%) have been admitted to ICU**. Of these 548 hospitalised cases:
 - **61 (11.1%) were aged 0-18 years**, with 0 ICU admissions in this age group
 - 72 (13.1%) were aged 19-34 years, with 2 ICU admissions in this age group
 - 233 (42.5%) were aged 35-64 years, with 13 ICU admissions in this age group
 - 182 (33.2%) were aged 65 and over, with 6 ICU admissions in this age group.

Outbreaks:

- For the most recent week (ending 19th of December), there were 8 new outbreaks in acute hospitals reported (5 last week).
- There were 7 new outbreaks in nursing homes (13 last week).
- There was 1 new outbreaks in community hospitals / long-term care facilities (5 last week).
- There were 7 outbreaks in other healthcare services (12 last week).
- There were 21 new outbreaks in residential institutions (29 last week).
- There were 22 new outbreaks reported in schools (37 last week).
- There were 2 new outbreaks associated with childcare facilities (9 last week).
- There were 13 outbreaks in vulnerable populations (26 last week); 6 among members of the Irish traveller community, 2 in direct provision centres, 2 among Roma community and 3 associated with homelessness.
- There were 4 new outbreaks in workplaces (3 last week).
- Note data on outbreaks are provisional and subject to ongoing review, validations and updating.

Conclusion:

There are signals of improvement. Cases have decreased compared to last week. Incidence among 5-12 year olds, which was previously strongly increasing has reduced. **Hospital admissions of COVID-19 positive patients has**

reduced compared to last week, as has ICU admissions. 23 of 26 counties have 7 day incidence rates less than the 14 day incidence rates indicating a reduction in cases in these counties.

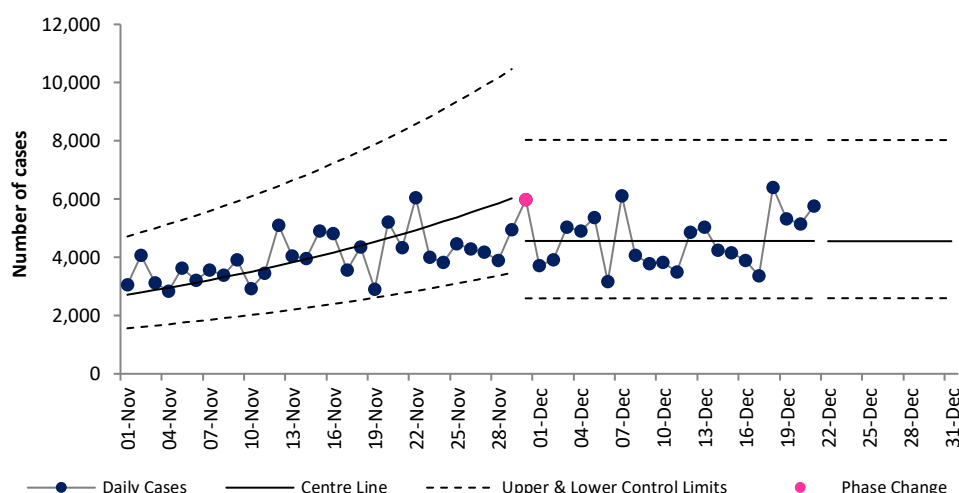
However, the **spread of the Omicron variant is of considerable concern.** The ECDC assess the risk of further spread and the risk to public health of the Omicron variant in the EU/EEA as **very high.** They further indicate that **Omicron VOC is very likely to cause additional hospitalisations and fatalities, regardless of the severity in comparison to the Delta variant.**

The high uptake of vaccinations among all ages and the proposal to speed up the roll-out of additional vaccination programme, including **close to 240,000 additional doses this week** remain positive signals.

Weekly Report on COVID-19 Statistical Process Control Charts

22nd December 2021

Daily COVID-19 Reported Cases



Epoch 3: Plateau or descent in Daily Reported Cases

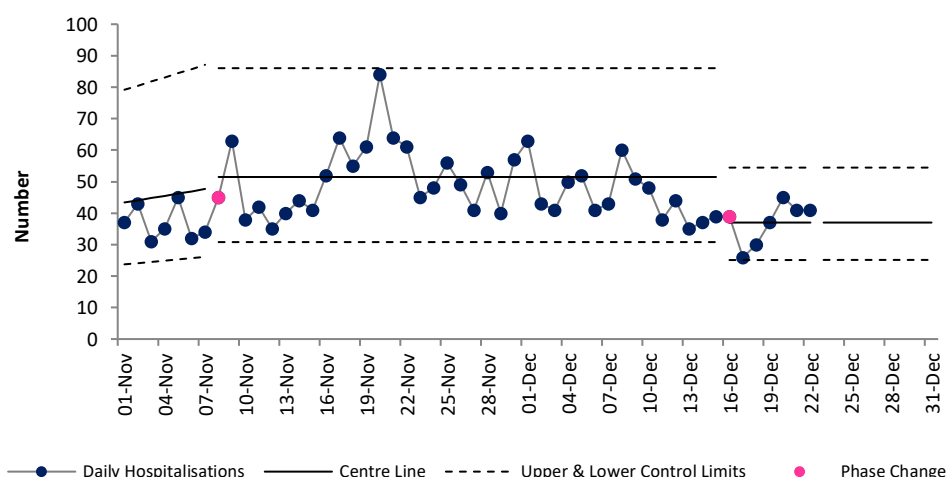
From 23rd September to 14th October cases remained in Epoch 3 plateau or descent in daily cases.

From 15th October, cases entered Epoch 2, rapid growth. During this phase both cases and the rate of growth of cases increased.

From November 30th, daily reported cases has re-entered Epoch 3.

Based on data up to 21st December we would expect to see, new cases stabilise at 4,562 cases per day although we notice a slight increase in the mean (4,506 last week).

Daily new hospital admissions of COVID-19 positive patients



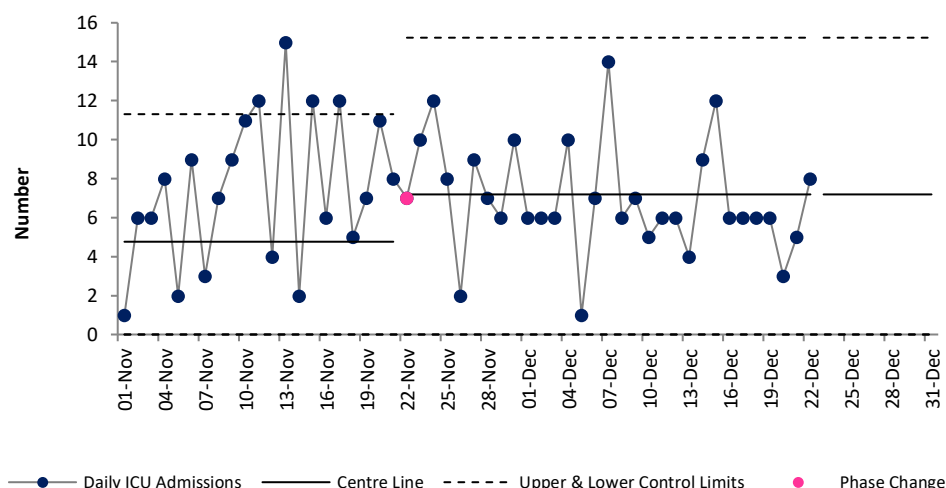
Epoch 3: Plateau or descent in daily reported hospital admissions

From 20th Oct, Covid Hospitalisations remained in epoch 3 (stability/plateau) at a higher level than previously with an expected 39 daily admissions.

From 20th Nov, Covid Hospitalisations increased again to an expected level of 52 admission per day.

From 16th Dec both mean and variation decreased with cases expected at a level of 37 admissions per day.

Daily admissions to ICU of COVID-19 positive patients



Epoch 4: Stability after descent in daily reported ICU admissions

The number of new ICU admissions per day of COVID positive patients had been trending downwards since January. From 18th August to 21st Nov ICU admissions remained stable but at a higher level than preceding weeks (4.8 per day).

From 22nd Nov onward expected ICU admissions increase to **7.2 per day (50 a week)**. While the absolute number of expected admissions has increased, it does not yet met the threshold for rapid growth and thus remains stable at that higher level.

Note that due to the cyber attack data on daily notified deaths of people with COVID-19 are not currently available.

For more information on the methodology used above and the team behind the development of this SPC approach see

<https://www.hse.ie/eng/about/who/qid/covid-19-qi-learning/resources-developed-to-support-the-national-covid19-response/understanding-variation-in-key-covid-19-indicators-in-ireland-using-statistical-process-control-shewhart-charts.pdf>