An Roinn Sláinte
Department of Health
Office of the Chief Medical Officer

Epidemiological update
21st October 2022

- A total of 2,132 confirmed PCR cases have been reported in the 7 days to 18th October 2022 (cases notified to midnight 17th October 2022), which is a 6% decrease from last week when 2,274 PCR positive cases were reported in the 7 days to 11th October.
- There were 4,068 positive antigen test results reported in the 7 days to 18th October 2022 (results uploaded to HSE portal in the week to 17th October), which is a 1% decrease from last week when 4,092 positive antigen test results were reported in the 7 days to 11th October 2022.
- As of 18th October 2022, the 14-day incidence rate (PCR) per 100,000 population is 93 which is 6% lower than a week previously (98). Incidence rates are likely to be underestimates.
- Nationally, the 7-day incidence (PCR) per 100,000 population as a proportion of 14-day incidence (PCR) per 100,000 population is 48%, demonstrating that there were fewer confirmed cases identified through PCR testing in laboratories in the 7 days to 18th October, compared with the preceding 7 days.
- The 5-day rolling average of daily reported cases (PCR) is 275 as of 18th October, which is 8% lower than that reported on 11th October (299).
- Regarding national SARS-CoV-2 wastewater surveillance, in week 41 (to 15th October), of the 65 catchment areas for which a change from the previous week could be calculated, the viral load remained stable (within +/- 10%) in 46 of them, while 17 experienced decreases of 10% or more, and 2 saw increases of 10 to 50%.
- There were 442 confirmed COVID-19 cases in hospital this morning (21st October 2022), compared with 434 last week on 14th October. There have been 71 newly confirmed cases in hospital in the 24 hours preceding this morning. On average, there have been approximately 62 new COVID-19 hospitalisations per day observed in the seven days to 21st October.
- As of 18th October, 37% (N=223) of hospitalised cases were categorised as hospitalised for COVID-19, with the remaining 63% (N=337) categorised as asymptomatic COVID-19 cases and potentially infectious.
- The age breakdown of cases hospitalised for COVID-19 (N=223) as of 18th October: 171 (76.7%) aged 65 years and older, 23 (10.3%) aged 50-64, 22 (9.9%) aged 15-49 and 7 (3.1%) aged 0-14 years old.
- The vaccination profile of cases aged 15 years and older hospitalised for COVID-19 (N=216) was:
    - Of those aged 65 years and older (N=171): 32% had received a second booster; 34% had received a first booster; 4% had completed primary vaccination; and 30% had not completed their primary vaccination course.
    - Of those aged 50-64 (N=23): 9% had received a second booster; 57% had received a first booster; 9% had completed primary vaccination; and 26% had not completed their primary vaccination course.
    - Of those aged 15-49 (N=22): 23% had received a first booster; 14% had completed primary vaccination; and 73% had not completed their primary vaccination course.
- There were 16 confirmed cases in critical care as of this morning (21st October 2022), compared with 14 a week ago (14th October). There were no new admissions to critical care in the 24 hours

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preceding this morning. On average, there has been approximately 2 new COVID-19 admissions per day observed in the seven days to 21st October.

- The number of COVID-19 cases in ICU whose primary reason for admission to ICU was COVID-19 was 7 on 18th October, up from 6 a week previously on 11th October. The proportion of COVID-19 cases in ICU for whom the primary reason for admission to ICU was COVID-19 decreased from 46% on 11th October to 44% on 18th October.
- According to National Office of Clinical Audit (NOCA) data, as of 18th October 2022, where vaccination status was known (N=14), 2 (14%) COVID-19 cases in ICU were unvaccinated. Of those COVID-19 cases in ICU who had completed their primary course of vaccination (N=12), 83% were recorded as having received a booster/additional dose.
- As of 18th October, 146 patients were in receipt of non-invasive ventilation/Continuous Positive Airway Pressure (CPAP) or High-Flow Oxygen in non-critical care settings, of whom 20 patients were COVID-19 cases.
- There continues to be a significant number of cases of hospital acquired infections (note this is based on data to the week ending 9th October 2022). There were 154 hospital acquired COVID-19 infections reported in the week ending 9th October, compared to 143 in the week ending 2nd October, and 100 in the week ending 25th September.
- As of 18th October 2022, there have been 8,010 COVID-19 related deaths reported in Ireland since the outset of the pandemic. As of midnight 17th October 2022, there have been 20 COVID-19 related deaths notified which occurred in October 2022, 49 which occurred in September 2022, and 104 which occurred in August 2022.
- In total, as of week 41 2022 (to 15th October), approximately 9% of TaqPath assay samples were S-gene target positive (indicating BA.2 lineage infection), suggesting approximately 91% of infections were BA.4/BA.5 lineages. Recent whole genome sequencing results (to 15th October 2022) indicate BA.5 (including its sub-lineages) is the dominant Omicron variant in Ireland and a number of variants continue to be monitored. As of 15th October, the Health Protection Surveillance Centre (HPSC) has reported 82 cases of BA.2.75 (or sub-lineages), 136 cases of BF.7 and 59 cases of BQ.1 (or its sub-lineages BQ.1.1, BQ.1.2 and BQ.1.4) have been identified in Ireland through whole genome sequencing (WGS). The proportion of Omicron cases with K444X and N460X mutations (including BQ.1 lineage variants) has increased in recent weeks.
- As of 18th October 2022, 71% of children aged 12-15 years have received their primary course of vaccination. Of those aged 5-11 years, 26% have received one dose of their primary course of vaccination.
- As of 18th October, approximately 23% of the population aged 50-64 years have received a second booster dose, while 74% of the population aged 65 years and older have received a second booster dose.
- Indicators of influenza activity stabilised in Ireland during week 41 2022 (week ending 16/10/2022) and remain at relatively low levels. There were 60 laboratory confirmed influenza cases notified during week 41 2022 – 1 A(H3), 1 A(H1)pdm09, 2 influenza B, and 56 influenza A (not subtyped). This is stable compared to 62 influenza notifications during week 40 2022. In total, 28 confirmed influenza hospitalised cases were notified during week 41 2022. One confirmed critical care influenza A case was notified to HPSC during week 41 2022. Respiratory syncytial virus (RSV) activity was at a similar level in Ireland during week 41 compared to week 40 2022. In total, 177 RSV cases were notified during week 41 2022, compared to 170 cases notified during week 40

2022. During week 41 2022, 72% of notified RSV cases were in the 0-4-year age group. RSV activity has increased throughout September and October; indicating an early RSV season.

Outbreaks for week 41 (9th to 15th October) are based on those reported up to midnight on 15th October 2022.

There was a total of 52 COVID-19 outbreaks notified in week 41. Regional departments of public health are currently prioritising the reporting of outbreak investigations in settings that would benefit most from public health and clinical intervention.

Healthcare setting outbreaks:

- There were 18 new nursing home and 1 new community hospital/long-stay unit outbreaks reported in week 41. The case range of these outbreaks was 0-22 cases.
- There were 18 new acute hospital outbreaks reported in week 41, with a range of 0-20 cases.
- There were 12 new outbreaks reported in a residential institution setting (9 in centres for disabilities, 2 in centres for asylum seekers/refugees and 1 in 'other') in week 41, with 0-12 cases.
- There were 3 new outbreaks reported in a 'other healthcare settings' (all in services for people with disabilities) in week 41, with fewer than 5 cases.

Noting that national SARS-CoV-2 testing guidance may influence trends, the number of infections detected and reported daily (based on PCR and self-reported antigen tests) has been stable over the last week. PCR testing volumes have been stable, while PCR test positivity has slightly reduced. A significant proportion of detected infections continues to be identified in older age groups.

The COVID-19 burden on acute hospital care remains significant. Following a previous rise, the trend in terms of total number of hospitalised COVID-19 cases has not continued to increase over recent days but continues to be monitored (442 as of 21st October). The trend in daily average number of newly confirmed cases in hospital has also not increased further (62 per day observed in the seven days to 21st October). Data for COVID-19 cases in hospital as of 18th October show that 37% were hospitalised for COVID-19 disease, with the remainder categorised as asymptomatic infectious cases.

The total number of confirmed cases in critical care (16 as of 21st October) has been stable. The number of ICU COVID-19 cases requiring mechanical ventilation has also been stable. The proportion of cases whose primary reason for admission to ICU was COVID-19 was 44% as of 18th October. The number of COVID-19 patients in receipt of advanced respiratory support in hospital settings outside of ICU has recently increased.

Following a recent increase, the number of notified outbreaks has been broadly stable across a number of key vulnerable settings. COVID-19 mortality has remained broadly stable, although it is noted that there can be a lag in reporting of deaths.

You will be aware from colleagues in the Department that the acute hospital system remains under considerable pressure, with COVID-19 continuing to impact on acute capacity (442 COVID-19 inpatients on 21st October).

We continue to closely monitor emerging SARS-CoV-2 variants and assess any potential threat to population health. The World Health Organization (WHO) has reported that as of epidemiological week 39 (26th-2nd October 2022), based on sequences submitted to GISAID (genomic sequencing database), BA.5 descendant lineages continue to be dominant globally representing approximately 79% of sequences, with BA.4 lineages (including BA.4.6) at approximately 7% and BA.2 lineages (including BA.2.75) at approximately 4% of sequences. WHO continues to monitor emerging subvariants and recombinants for potential signs of immune escape or increase in disease severity. As of 17th October 2022, XBB, a BA.2.10.1 and BA.2.75 recombinant with 14 additional mutations in the BA.2 spike protein, has been reported by 26 countries. WHO has indicated that available preliminary laboratory-based evidence suggests that XBB is the most antibody-evasive SARS-CoV-2 variant identified to date. As of 17th October, there have been 233 XBB sequences and 609 sequences of the XBB.1 variant reported on GISAID. While the recombinant shows signs of higher growth advantage as compared to other Omicron descendent variants, WHO has indicated that there is no evidence yet of any change in disease severity.

As of 20th October 2022, the European Centre for Disease Prevention and Control (ECDC) categorised Omicron BQ.1 with its sub-lineages as a variant of interest. This variant belongs to the broader variant Omicron with mutations K444X+N460X which has been under ECDC's monitoring since 6th October. ECDC has reported that currently BQ.1 has been detected in most of the European Union (EU)/European Economic Area (EEA) countries and is circulating in higher proportions in a number of countries including France, Belgium, Ireland, the Netherlands and Italy. ECDC has indicated that these proportions are not high enough for the variant to already have had a large impact on the epidemiological situation in the affected countries. ECDC has further indicated that any major effect on the number of cases by BQ.1 will occur in the coming weeks to months depending on the current proportion of BQ.1 in each country. Due to the observed increase in its growth rate, most likely driven mainly by immune escape, the presence of BQ.1 may contribute to a further increase of COVID-19 cases in the EU/EEA in the coming weeks and months. ECDC has indicated that it is possible but not likely that the variant is also associated with an increase in intrinsic transmissibility compared to BA.5, and it is unlikely that the variant will be associated with a significant difference in infection severity compared to BA.5.

As of 13th October 2022, ECDC has designated B.1.1.529 (Omicron) with N460X and F490X (including XBB) as a variant under monitoring (VUM). ECDC has reported that there has been a rapid increase of this variant in Singapore, India and Bangladesh, and it is present at low levels in the EU/EEA. The detections of lineages XBB and XBB.1 have been observed in several EU/EEA countries but the proportions of this variant remain quite low (0-1% proportion). The N460X and F490X substitutions are located near important antigenic sites, and there are some indications of a significant effect on neutralising activity. As of 20th October 2022, BA.2.75 detections including BA.2.75.2 sub-lineage were reported in multiple EU/EEA countries, and have been circulating in low proportions (1-6%) in EU/EEA countries. Slightly increasing/stable trend in the proportion of this SARS-CoV-2 variant has been observed in the EU/EEA countries so far.

Recent whole genome sequencing results (to 15th October 2022) indicate BA.5 (including its sub-lineages) is the dominant Omicron variant in Ireland and a number of variants continue to be monitored. As of 15th October, the Health Protection Surveillance Centre (HPSC) has reported 82 cases of BA.2.75 (or sub-lineages), 136 cases of BF.7 and 59 cases of BQ.1 (or its sub-lineages BQ.1.1, BQ.1.2

and BQ.1.4) have been identified in Ireland through whole genome sequencing (WGS). The proportion of Omicron cases with K444X and N460X mutations (including BQ.1 lineage variants) has increased in recent weeks.

In regard to the epidemiological situation in the European Union (EU)/European Economic Area (EEA), at the end of week 41 2022 (week ending 16th October), the European Centre for Disease Prevention and Control (ECDC) has reported that increases have continued to be observed across all epidemiological indicators although at a slower rate. In many countries, the rate of increase of case rates has slowed. While some severity indicators have started to stabilise or decrease at a pooled EU/EEA level, more than half of EU/EEA countries continue to see increases in at least one of these indicators. Pooled EU/EEA rates of ICU occupancy have been increasing for the last 3 weeks, while trends in ICU admissions, hospital admissions and hospital occupancy were stable or decreasing compared to the previous week. There is considerable variation at the country level, as 14 of 26 countries reporting data observed increasing trends in at least one hospital or ICU indicator. The EU/EEA COVID-19 death rate remained at a low level, similar to the previous week.

In summary, the overall epidemiological situation in Ireland indicates that trends in the number of reported and detected infections have recently been stable, while the trend in hospitalised COVID-19 cases has not continued to increase over recent days but remains under monitoring. In addition, the total number of confirmed cases in critical care is currently stable, while there has been a recent increase in the number of COVID-19 patients in receipt of advanced respiratory support in hospital settings outside of ICU. SARS-CoV-2 variants (including BQ.1) continue to be closely monitored.

It remains important to provide clear guidance and communication with the public on the evolving disease profile and a cultural shift towards embedding individual and collective personal behaviours to mitigate against COVID-19 and other respiratory infections. It is important that the existing key public health advice continues to be communicated to the general public so that individuals may optimally protect themselves from severe health outcomes associated with COVID-19. It is particularly important that eligible groups for primary and booster doses (first, second and third) continue to be encouraged to avail of vaccination in order to confer optimal protection against the risk of severe disease as well as against other potential long-term consequences of infection.

The current key public health advice is as follows:

- Anyone who has symptoms of COVID-19 should self-isolate until 48 hours after symptoms have substantially or fully resolved – please do not attend any social events, work, school or college if you have symptoms.

- Anyone diagnosed with COVID-19 should self-isolate for 7 days from date of onset of symptoms, or if asymptomatic, date of first positive test. Anyone exiting self-isolation at day seven should continue to adhere to other public health protective measures.

- Mask wearing is advised on public transport and in healthcare settings. Mask wearing is also advised based on individual risk assessment. Anyone who wishes to wear a mask should not be discouraged from doing so. Individuals who are vulnerable to COVID-19 are further advised to be aware of the risk associated with activities they may choose to engage in and to take

measures to optimally protect themselves. Vulnerable individuals are advised to consider wearing masks in crowded indoor settings, such as may relate, for example, to social gatherings or other activities and events.

- Continue to practise good hand and respiratory hygiene by washing and sanitising hands regularly and coughing/sneezing into your elbow. Maintain a physical distance where possible.

- Meet up outdoors if possible. When meeting indoors, avoid poorly ventilated spaces and keep windows open.

- Many people who were infected with COVID-19 in late 2021 and earlier in 2022 will now be eligible for a booster dose of COVID-19 vaccine. Book a first booster appointment on www.hse.ie if you are 12 years or older. People aged 50 years to 64 years, pregnant women (from 16 weeks), healthcare workers, people aged 12 or older with a condition that puts them at high risk of serious illness from COVID-19 (for example, diabetes or heart disease) are now eligible to register for their second COVID-19 booster vaccine. People aged 65 years or older and people aged 12 or older who have a weak immune system are now eligible to register for their third booster dose. It is not too late to receive a primary course of COVID-19 vaccine. Vaccines remain the most effective way of protecting ourselves from the worst effects of COVID-19.