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

Epidemiological update
7th October 2022

- A total of 2,410 confirmed PCR cases have been reported in the 7 days to 4th October 2022 (cases notified to midnight 3rd October 2022), which is a 46% increase from last week when 1,648 PCR positive cases were reported in the 7 days to 27th September.
- There were 3,786 positive antigen test results reported in the 7 days to 4th October 2022 (results uploaded to HSE portal in the week to 3rd October), which is an 8% increase from last week when 3,494 positive antigen test results were reported in the 7 days to 27th September 2022.
- As of 4th October 2022, the 14-day incidence rate (PCR) per 100,000 population is 85 which is 23.5% higher than a week previously (69). 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 59%, demonstrating that there were more confirmed cases identified through PCR testing in laboratories in the 7 days to 4th October, compared with the preceding 7 days.
- The 5-day rolling average of daily reported cases (PCR) is 297 as of 4th October, which is 36% higher than that reported on 27th September (218).
- Regarding national SARS-CoV-2 wastewater surveillance, in week 39 (to 1st October), of the 66 catchment areas for which a change from the previous week could be calculated, the viral load remained stable (within +/- 10%) in 18 of them, while 48 experienced decreases of 10% or more, and 0 had an increase of at least 10%. When data across catchments areas was pooled and normalised for the population, the weekly distribution of SARS-CoV-2 viral load showed a decreasing trend.
- There were 421 confirmed COVID-19 cases in hospital this morning (7th October 2022), compared with 335 last week on 30th September. There have been 60 newly confirmed cases in hospital in the 24 hours preceding this morning. On average, there have been approximately 60 new COVID-19 hospitalisations per day observed in the seven days to 6th October.
- As of 4th October, 40% (N=222) of hospitalised cases were categorised as hospitalised for COVID-19, with the remaining 60% (N=332) categorised as asymptomatic COVID-19 cases and potentially infectious.
- The age breakdown of cases hospitalised for COVID-19 (N=222) as of 4th October: 167 (75.2%) aged 65 years and older, 29 (13.1%) aged 50-64, 18 (8.1%) aged 15-49 and 8 (3.6%) aged 0-14 years old.
- The vaccination profile of cases aged 15 years and older hospitalised for COVID-19 (N=214) was:
    - Of those aged 65 years and older (N=167): 37% had received a second booster; 28% had received a first booster; 6% had completed primary vaccination; and 29% had not completed their primary vaccination course.
    - Of those aged 50-64 (N=29): 17% had received a second booster; 52% had received a first booster; and 31% had not completed their primary vaccination course.
    - Of those aged 15-49 (N=18): 39% had received a first booster; and 61% had not completed their primary vaccination course.
- There were 7 confirmed cases in critical care as of this morning (7th October 2022), compared with 14 a week ago (30th September). There was one new admission to critical care in the 24 hours

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preceding this morning. On average, there has been approximately 1 new COVID-19 admission per day observed in the seven days to 6th October.

- The number of COVID-19 cases in ICU whose primary reason for admission to ICU was COVID-19 was 5 on 4th October, down from 6 a week previously on 27th September. The proportion of COVID-19 cases in ICU for whom the primary reason for admission to ICU was COVID-19 increased from 40% on 27th September to 50% on 4th October.
- According to National Office of Clinical Audit (NOCA) data, as of 4th October 2022, where vaccination status was known (N=8), no COVID-19 cases in ICU were unvaccinated. Of those COVID-19 cases in ICU who had completed their primary course of vaccination (N=8), 87.5% were recorded as having received a booster/additional dose.
- As of 5th October, 148 patients were in receipt of non-invasive ventilation/Continuous Positive Airway Pressure (CPAP) or High-Flow Oxygen in non-critical care settings, of whom 11 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 25th September 2022). There were 95 hospital acquired COVID-19 infections reported in the week ending 25th September, compared to 89 in the week ending 18th September, and 72 in the week ending 11th September.
- As of 4th October 2022, there have been 7,959 COVID-19 related deaths reported in Ireland since the outset of the pandemic. As of midnight 3rd October 2022, there has been 1 COVID-19 related death notified which occurred in October 2022, 31 which occurred in September 2022, and 98 which occurred in August 2022.
- In total, approximately 7% of TaqPath assay samples were S-gene target positive (indicating BA.2 lineage infection) as of week 39 2022 (to 1st October), suggesting approximately 93% of infections were BA.4/BA.5 lineages. Recent whole genome sequencing results (to 27th September 2022) indicate BA.5 (including its sub-lineages) is the dominant Omicron variant in Ireland. As of 27th September, the HPSC has reported that 35 cases of Omicron lineage BA.2.75 (or descendant lineages) and 227 cases of lineages BA.4 and BA.5 with the spike mutation R346X have been identified in Ireland through whole genome sequencing (WGS). As of 7th October 2022, 26 B.1.1.529 sequences with both the K444X and N460X mutations have been submitted to GISAID (genomic sequencing database) from Ireland.
- As of 5th 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 5th October, approximately 65% of the population aged 35-44 years, 59% of those aged 25-34 years, and 52% of those aged 16-24 years have received a first booster vaccine dose.
- As of 5th October, approximately 19% of the population aged 50-64 years have received a second booster dose, while 70% of the population aged 65 years and older have received a second booster dose.

Outbreaks for week 39 (25th September to 1st October) are based on those reported up to midnight on 1st October 2022.

There was a total of 55 COVID-19 outbreaks notified in week 39. 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 19 new nursing home and 2 new community hospital/long-stay unit outbreaks reported in week 39. The case range of these outbreaks was 0-18 cases.
- There were 17 new acute hospital outbreaks reported in week 39, with a range of 0-8 cases.
- There were 10 new outbreaks reported in a residential institution setting (8 in centres for disabilities, 1 in a centre for older people, and 1 in mental health facilities) in week 39, with 0-12 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 increased. PCR testing volumes have remained stable while test positivity has increased. A significant proportion of detected infections continues to be identified in older age groups.

The COVID-19 burden on acute hospital care remains significant. The total number of hospitalised COVID-19 cases has increased by 26% compared to a week ago (from 335 on 30th September to 421 as of this morning). The daily average number of newly confirmed cases in hospital has also increased (60 per day observed in the seven days to 6th October). Data for COVID-19 cases in hospital as of 4th October show that 40% were hospitalised for COVID-19 disease, with the remainder categorised as asymptomatic infectious cases.

The total number of confirmed cases in critical care (7 as of 7th 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 50% as of 4th October. The number of COVID-19 patients in receipt of advanced respiratory support in hospital settings outside of ICU has been broadly stable.

The number of notified outbreaks has increased 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 (421 COVID-19 inpatients on 7th 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 there continues to be increased diversity within Omicron and its descendant lineages, of which a number are under monitoring. As of epidemiological week 36 (5th-11th September 2022), based on sequences submitted to GISAID (genomic sequencing database), BA.5 descendant lineages continue to be dominant globally representing approximately 81% of sequences, with BA.4 lineages (including BA.4.6) at approximately 8% and BA.2 lineages (including BA.2.75) at approximately 3% of sequences.

As of 6th October, the European Centre for Disease Prevention and Control (ECDC) has added Omicron variant B.1.1.529 with additional mutations K444X and N460X as a variant under monitoring. ECDC has indicated that a wide range of new SARS-CoV-2 variants within Omicron that carry changes at position 444 and 460 in the spike have recently emerged. These variants belong to several different

lineages (mainly BQ.1, BU.1 and BW.1 and their sub-lineages). These mutations are located near important antigenic sites, and there are some indications of a significant effect on neutralising activity. ECDC has reported that there has been a rapid increase in sequences from the EU/EEA belonging to this variant under monitoring, but that it is still not currently at sufficiently high levels to have any significant impact on the overall epidemiological situation. ECDC has indicated that it is very unlikely that this variant under monitoring is associated with any increase in infection severity, and that it is unlikely to be associated with any increase in intrinsic transmissibility, compared to previously circulating Omicron variants. However, ECDC has reported that it is likely that changes in antigenic properties of this variant could confer a transmission advantage compared to other variants. ECDC has further reported that, as of 3rd October, there is no indication that marginal but steady increases in detection of Omicron sub-lineages BA.5 and BA.4 with additional mutation R346X in the EU/EEA are associated with increases in cases or severity indicators at a population level. ECDC has also reported that BA.2.75 (including sub-lineage BA.2.75.2) has been circulating in low proportions (1-2%) in the EU/EEA but that there has been no significant increasing trend. In Ireland, recent whole genome sequencing results (WGS) (to 27th September 2022) indicate BA.5 (including its sub-lineages) is the dominant Omicron variant. As of 27th September, the HPSC has reported that 35 cases of Omicron lineage BA.2.75 (or descendant lineages) and 227 cases of lineages BA.4 and BA.5 with the spike mutation R346X have been identified in Ireland through WGS. As of 7th October 2022, 26 B.1.1.529 sequences with both the K444X and N460X mutations have been submitted to GISAID (genomic sequencing database) from Ireland.

In regard to the epidemiological situation in the EU/EEA, ECDC has reported that, as of the period from 26th September to 2nd October 2022, the increase in COVID-19 transmission observed in the region during the last month is becoming more widespread, affecting the population aged 65 years and older, and showing impact on hospital/ICU indicators. ECDC has reported that increases in these indicators should however be interpreted with caution as it is not possible to differentiate between hospitalisations with, or because of, COVID-19 in many countries. The number of countries reporting increases in case rates among the population aged 65 and older has increased from 13 to 19 countries compared to two weeks previously. Fifteen countries report increases in hospital/ICU indicators, compared to 14 in the previous week, and 9 in the week before that. All reported increases are recent, of 1-3 weeks' duration, and the absolute values of the indicators remain relatively low. Regarding the hospital/ICU indicators, fewer countries reported increases in the ICU than in the overall hospital indicators. ECDC has indicated that changes in population mixing following the summer period are likely to be the main driver of the increase in cases.

In summary, the overall epidemiological situation in Ireland indicates a recent increase in infection in the community and in cases receiving general hospital care. In addition, the total number of confirmed cases in critical care is currently stable. Recent WGS results continue to indicate BA.5 (including sub-lineages) is the dominant variant.

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 (both first and second) 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. Current hospitalisation data indicates that most cases hospitalised for COVID-19 who are aged 65 years and older have not received a second booster vaccine. The uptake of second booster vaccine in this population is sub-optimal currently and it is strongly recommended that individuals in this age group avail of this dose if they have not yet done so.

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 first 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.