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

Epidemiological report
9th December 2022

Executive Summary

- The overall epidemiological situation in Ireland indicates that the number of reported and detected infections has increased, while the total number of hospitalised COVID-19 cases and the daily average number of newly confirmed cases in hospital has been broadly stable.
- The total number of confirmed cases in critical care has been broadly stable.
- The number of notified outbreaks has been broadly stable across key vulnerable settings.
- COVID-19 mortality has remained broadly stable, although it is noted that there can be a lag in reporting of deaths.
- SARS-CoV-2 variants continue to be closely monitored and assessed for any potential threat to population health. The World Health Organization (WHO) and the European Centre for Disease Prevention and Control (ECDC) continue to monitor a number of emerging SARS-CoV-2 variants including BQ.1 (and its sub-lineages) and XBB (a recombinant variant).
- The European Centre for Disease Prevention and Control (ECDC) has reported that (9th December 2022), as of epidemiological week 48 (28th November to 4th December 2022), BQ.1 is the dominant variant in a number of European Union (EU)/European Economic Area (EEA) countries but changes in the epidemiological situation appear to not be directly linked to the spread of BQ.1 alone, or even to a combination of several immune escape mutations on the rise. Some of the countries in which BQ.1 is dominant are among those showing recent increases in transmission and/or severity indicators, but the countries with the highest reported proportions of BQ.1 have not reported any concerning epidemiological changes to date.
- The circulation of SARS-CoV-2 variants (including BQ.1 and BQ.1.1) in Ireland continues to be closely monitored. As in a number of other European countries, the proportion of BQ.1 variant (and its sub-lineages) identified amongst cases sequenced in Ireland has increased. BQ.1 variant (including its lineages) represents in excess of 50% of reported sequenced cases with a specimen collection date in recent epidemiological weeks. The increase in circulation of BQ.1 (and its sub-lineages) in Ireland may contribute to an increase in COVID-19 cases and hospitalisations in the coming weeks and months.
- The number of confirmed cases of influenza, and the total number of hospitalized influenza cases have increased significantly, while levels of RSV infection and hospitalisations remain at very high levels.

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.

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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 if possible.

- 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.

Epidemiological update

- A total of 1,873 confirmed PCR cases have been reported in the 7 days to 06 December 2022 (cases notified to midnight 05 December 2022), which is an 8.7% increase from last week when 1,723 PCR positive cases were reported in the 7 days to 29 November.
- There were 3,954 positive antigen test results reported in the 7 days to 06 December 2022 (results uploaded to HSE portal in the week to 05 December), which is a 9.5% increase from last week when 3,610 positive antigen test results were reported in the 7 days to 29 November 2022.
- As of 06 December 2022, the 14-day incidence rate (PCR) per 100,000 population is 76 which is 13.5% higher than a week previously (67). 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 52%, demonstrating that there were more confirmed cases identified through PCR testing in laboratories in the 7 days to 06 December, compared with the preceding 7 days.
- The 5-day rolling average of daily reported cases (PCR) is 250 as of 06 December, which is 16.5% higher than that reported on 29 November (215).
- Regarding national SARS-CoV-2 wastewater surveillance, in week 48 (to 03 December), of the 64 catchment areas for which a change from the previous week could be calculated, the viral load remained stable (within +/- 10%) in 44 of them, while 13 experienced decreases of 10% or more, and 7 saw increases from 10 to 50%. When data across catchments areas was pooled and normalised for the population, the weekly distribution of SARS-CoV-2 viral load was declining across several catchment areas in recent weeks.
- There were 351 confirmed COVID-19 cases in hospital this morning (09 December 2022), compared with 346 last week on 02 December. There have been 47 newly confirmed cases in hospital in the 24 hours preceding this morning. On average, there have been 53.3 new COVID-19 hospitalisations per day observed in the seven days to 09 December.
- As of 06 December, 32% (N=159) of hospitalised cases were categorised as hospitalised for COVID-19, with the remaining 68% (N=345) categorised as asymptomatic COVID-19 cases and potentially infectious.
- The age breakdown of cases hospitalised for COVID-19 (N=159) as of 06 December: 113 (71%) aged 65 years and older, 27 (17%) aged 50-64, 10 (6%) aged 15-49 and 9 (6%) aged 0-14 years old.
- The vaccination profile of cases aged 15 years and older hospitalised for COVID-19 (N=150) was:
    - Of those aged 65 years and older (N=113): 44% had received a second booster; 24% had received a first booster; 4% had completed a primary vaccination course; and 27% had not completed a primary vaccination course.
    - Of those aged 50-64 (N=27): 37% had received a second booster; 22% had received a first booster; 4% had completed primary vaccination; and 37% had not completed a primary vaccination course.
    - Of those aged 15-49 (N=10): 30% had received a first booster; 10% had completed primary vaccination; and 60% had not completed a primary vaccination course.
- There were 10 confirmed cases in critical care as of this morning (09 December 2022), compared with 14 a week ago (02 December). There was 1 new admission to critical care in the 24 hours preceding this morning. On average, there has been 1.6 new COVID-19 admissions per day

observed in the seven days to 08 December. Of the 10 cases in critical care this morning, 2 were invasively ventilated.

- The number of COVID-19 cases in ICU whose primary reason for admission to ICU was COVID-19 was 5 on 06 December, an increase from 3 a week previously on 29 November. The proportion of COVID-19 cases in ICU for whom the primary reason for admission to ICU was COVID-19 increased from 25% on 29 November to 50% on 06 December.
- According to National Office of Clinical Audit (NOCA) data, as of 06 December 2022, where vaccination status was known (N=7), no COVID-19 case in ICU was unvaccinated. Of those COVID-19 cases in ICU who had completed their primary course of vaccination (N=7), 71% were recorded as having received a booster/additional dose.
- As of 06 December, 171 patients were in receipt of non-invasive ventilation/Continuous Positive Airway Pressure (CPAP) or High-Flow Oxygen in non-critical care settings, of whom 19 patients were COVID-19 cases.
- There continues to be a significant number of cases of hospital acquired infection (note this is based on data to the week ending 27 November 2022). There were 141 hospital acquired COVID-19 infections reported in the week ending 27 November, compared to 129 in the week ending 20 November, and 126 in the week ending 13 October.
- As of 06 December 2022, there have been 8,231 COVID-19 related deaths reported in Ireland since the outset of the pandemic. As of midnight 05 December 2022, there have been fewer than 5 COVID-19 related deaths notified which occurred in December 2022, 67 which occurred in November 2022, and 126 which occurred in October 2022.
- As of 7th December 2022, the HPSC has reported that 1,066 cases of BQ.1 and its sub-lineages have been detected in Ireland through whole genome sequencing. The proportion of BQ.1 variant (and its sub-lineages) identified amongst cases sequenced in Ireland has increased. BQ.1 variant (including its lineages) represents in excess of 50% of reported sequenced cases with a specimen collection date in recent epidemiological weeks in Ireland. In addition, as of 7th December, 47 cases of Omicron recombinant XBB (and its sub-lineages) and 371 cases of BA.2.75 (or BA.2.75 sub-lineages) have been identified in Ireland.
- As of 06 December 2022, 68% 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 06 December, approximately 37% of the population aged 50-64 years have received a second booster dose. For those aged 65 years and older, 79% have received a second booster dose and 39% have received a third booster dose.
- The HPSC has reported that influenza activity increased in Ireland during week 48 2022 (week ending 04 December 2022). Detections of influenza A(H3), A(H1)pdm09 and B have been reported this season to date. Respiratory syncytial virus (RSV) activity also increased during week 48 2022 and remains at very high levels in Ireland. Given the increase in most influenza surveillance indicators, HPSC considers that influenza viruses are now circulating in Ireland. The number of influenza notifications increased during week 48 to 370, compared to 222 during week 47 (week ending 26 November 2022). During week 48 2022, 123 laboratory confirmed influenza cases were reported as hospital inpatients. This is an 89% increase compared to 65 laboratory confirmed influenza notifications reported as hospital inpatients during week 47 2022. One laboratory confirmed influenza case was admitted to critical care and notified to HPSC during week 48 2022. During weeks 40-48, 15 laboratory confirmed influenza cases have been admitted to critical care and notified to HPSC. In total, 677 RSV cases were notified during week

48, an increase of 11% compared to 610 during week 47. During week 48 2022, 46% of notified RSV cases were in the 0-4-year age group. There were 239 RSV hospitalised cases notified during week 48 2022, an increase of 6% compared to 225 in week 47.

Outbreaks for week 48 (27 November to 03 December) are based on those reported up to midnight on 03 December 2022.

There was a total of 54 COVID-19 outbreaks notified in week 48. 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 4 new community hospital/long-stay unit outbreaks reported in week 48. The case range of these outbreaks was 0-11 cases.
- There were 24 new acute hospital outbreaks reported in week 48, with a range of 0-13 cases.
- There were 6 new outbreaks reported in a residential institution setting (3 in centres for older people, 1 in centres for disabilities, 1 in a mental health facility and 1 in a facility for people with addiction issues) in week 48, with 3-22 cases.
- There were 2 new outbreaks reported in 'other healthcare settings' (2 in services for people with disabilities) in week 48, with fewer than 5 cases.

Noting that the 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 over the last week. PCR testing volumes and test positivity have been stable. 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 recently increased slightly and continues to be monitored (351 as of 9th December). The daily average number of newly confirmed cases in hospital has been stable (53 per day observed in the seven days to 9th December). Data for COVID-19 cases in hospital as of 6th December show that 32% were hospitalised for COVID-19 disease, with the remainder categorised as asymptomatic infectious cases.

The total number of confirmed cases in critical care (10 as of 9th December) has been broadly stable. The number of ICU COVID-19 cases requiring mechanical ventilation has been stable. The proportion of cases whose primary reason for admission to ICU was COVID-19 was 50% as of 6th December. The number of COVID-19 patients in receipt of advanced respiratory support in hospital settings outside of ICU has been stable.

The number of notified outbreaks has been broadly stable across 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 (351 COVID-19 inpatients on 9th December).

We continue to closely monitor emerging SARS-CoV-2 variants and assess any potential threat to population health. The World Health Organization (WHO) is currently monitoring the global circulation of a number of Omicron variants including BQ.1 and its sublineages and XBB. WHO has reported (7th December 2022) that a comparison of sequences submitted to GISAID (genomic sequencing database) during weeks 45 (7th to 13th November 2022) and 46 (14th to 20th November 2022) shows an increase from 27.6% to 36.2% for BQ.1 and its descendent lineages. During the same period, the prevalence of XBB and its descendent lineages increased from 4.2% to 5.0%.

The European Centre for Disease Prevention and Control (ECDC) has reported that (9th December 2022), as of 8th December 2022, BQ.1 and BQ.1.1 are present at significant levels and continue to increase in the EU/EEA. Some of the countries in which BQ.1 is dominant are among those showing recent increases in transmission and/or severity indicators, but the countries with the highest reported proportions of BQ.1 have not reported any concerning epidemiological changes to date. The ECDC has added the recombinant XBB lineage as variant of interest noting that XBB and its sublineages have high relative growth advantages.

The circulation of SARS-CoV-2 variants in Ireland continues to be closely monitored. As of 7th December 2022, the HPSC has reported that 1,066 cases of BQ.1 and its sub-lineages have been detected in Ireland through whole genome sequencing. BQ.1 variant (and its sub-lineages) has increased as a proportion of cases sequenced in Ireland. BQ.1 variant (including its lineages) represents in excess of 50% of reported sequenced cases with a specimen collection date in recent epidemiological weeks in Ireland. In addition, as of 7th December, 47 cases of Omicron recombinant XBB (and its sub-lineages) and 371 cases of BA.2.75 (or BA.2.75 sub-lineages) have been identified in Ireland.

In regard to the epidemiological situation in the European Union (EU)/European Economic Area (EEA), the ECDC has reported (9th December 2022) that, at the end of week 48 2022 (week ending 4th December), the pooled EU/EEA COVID-19 case rate in people aged 65 years and older continued to decrease, while the overall (all ages) COVID-19 14-day case notification rate increased, up 3.5% compared to the previous period. 13 of the 25 countries with available data reported increases compared with the previous week in at least one of these indicators of transmission. These increases were recent (of 1–3 weeks duration), starting from relatively low levels. Pooled hospital or and ICU admissions/occupancy increased at the EU/EEA level. Increases were reported by eight of the 21 countries with data on these indicators. Increases were recent (of 1–3 weeks duration) and reported values relatively low.

In summary, the overall epidemiological situation in Ireland indicates that the number of reported and detected infections has increased. The total number of hospitalised COVID-19 cases and the daily average of newly confirmed cases in hospital has been broadly stable. The total number of confirmed cases in critical care has been broadly stable. SARS-CoV-2 variants (including BQ.1) continue to be closely monitored. As in a number of other European countries, the proportion of BQ.1 variant (and its sub-lineages) identified amongst cases sequenced in Ireland has increased. BQ.1 variant (including its lineages) represents in excess of 50% of reported sequenced cases with a

specimen collection date in recent epidemiological weeks. The increase in circulation of BQ.1 (and its sub-lineages) in Ireland may contribute to an increase in COVID-19 cases and hospitalisations in the coming weeks and months.