



Mr. Stephen Donnelly TD,
Minister for Health,
Department of Health,
Miesian Plaza,
50-58 Lower Baggot Street,
Dublin 2.

7th January 2021

Via email to Private Secretary to the Minister for Health

Dear Minister,

I write further to today's meeting of the COVID-19 National Public Health Emergency Team (NPHEt).

The NPHEt reviewed the latest epidemiological data and the following key points were noted:

- A total of 31,001 cases have been notified in the 7 days to 6th January, which is a 286% increase on the previous 7 days in which there were 8,018 cases;
- As of 6th January, the 7- and 14-day incidence rates per 100,000 population have significantly increased to 651 and 819, respectively; these compare with rates of 168 and 273 on the 30th December, and with rates of 104 and 153 on 23rd December;
- Nationally, the 7-day incidence as a proportion of 14-day incidence is 79%, demonstrating that there have been substantially more cases in the last 7 days compared with the preceding 7 days;
- There has been a rapid rise in age specific incidence rates across all age groups, including in those aged 65 and older. In the last 14 days, 10% of cases notified were aged over 65. The incidence in those aged 18 and under remains at or below the population average.
- The 5-day rolling average has increased rapidly from 1,213 on 30th December to 5,524 today and is 7 times greater than the figure for 23rd December (785 cases);
- Of cases notified in the past 14 days, 64% have occurred in people under 45 years of age; the median age for cases notified in the same period is 35 years;
- There has been a significant increase in the 14-day incidence rates across the country with all counties now having a 7-day incidence as a percentage of 14-day incidence significantly greater than 50%, indicating a considerable increase in cases in the last 7 days compared with the previous 7 days;
- Reproduction number (R) is extremely high and is currently estimated to be 2.4 to 3.0; this estimate has increased significantly over the last week and is now estimated to be at its highest point since March. The current daily growth rate of cases is 14%. This compares with daily growth rate of 7-10% at the last NPHEt meeting on 30th December. The doubling time is currently 5 days.
- A very high volume of tests (171,931) was undertaken in the last 7 days. The 7-day average test positivity rate has rapidly increased to 21.9% on 6th January from 9.3% last week on 29th December;
- Excluding serial testing, the test positivity rate has also rapidly increased over recent days. It was 27.5% over the 7 days to 6th January and up from 10.9% in the 7 days to 29th December.
- According to contact management programme data, 25 counties have test positivity rates greater than 10% and 16 counties have positivity rates greater than 25%.

- There are currently 1,022 confirmed COVID-19 cases in hospital this morning, compared with 454 on 30th December. There have been 131 newly confirmed cases in hospital in the preceding 24 hours;
- There are currently 89 confirmed cases in critical care, compared with 37 on 30th December. There have been 18 admissions in the last 24 hours.
- To date, sadly, there have been 34 deaths notified with a date of death in January. This compares with 158 and 162 deaths notified (to date) with a date of death in November and December, respectively. Of the 34 deaths in January to date, 10 have been associated with hospital outbreaks and 6 have been associated with nursing home outbreaks. Of the 162 deaths in December, 54 have been associated with hospital outbreaks and 45 have been associated with nursing home outbreaks.

Further relevant information includes:

- **Due to the surge in case numbers in week 53, there was delay in reporting of outbreaks to the national surveillance system (Computerised Infectious Disease Reporting system) and the linking of cases to outbreaks. Therefore, the number of outbreaks and linked cases are likely to be underestimates. The number of outbreaks represents the most reliable indicator.**
- There were 23 new clusters notified in acute hospitals in week 53.
- There are currently 79 open clusters associated with 32 acute hospitals. There have been 71 deaths linked to these outbreaks.
- There were 23 new clusters notified in nursing homes/community hospitals in week 53; there are 41 new outbreaks in nursing homes in the current week.
- There are currently 101 open clusters associated with nursing homes. There have been 69 deaths linked to these outbreaks.
- There have been 11 outbreaks associated with schools in week 53 with 15 linked cases (although transmission in the school setting has not necessarily been established in these outbreaks).
- There was one outbreak in the Irish Traveller community in week 53. There are currently 45 open outbreaks in the Irish Traveller community.
- A range of mobility and compliance data suggest that movement and social contact in the population had significantly increased in the lead up to Christmas. There has been a decrease in mobility since Christmas and in recent days.
- The number of close contacts during the week ending 3rd January was 81,523, a 144% increase compared to the previous week (33,390).
- The number of close contacts remained below 3.3 on average until early December, rose to almost 5 on average by 28th December, and is now decreasing rapidly; it is currently 3.0 per case.
- The sentinel GP influenza-like illness (ILI) consultation rate increased to 65.1/100,000 population during week 53 2020, compared to 45.2/100,000 in week 52 2020 and 44/100,000 in week 51 2020. A rate of 65.1/100,000 population is above the medium intensity threshold (57.5/100,000). The sentinel GP ILI consultation rate continues to reflect SARS-CoV-2 circulation, as there are currently no reports of any confirmed influenza cases in Ireland for the 2020/21 season.
- As of 6th January, the 14-day incidence per 100,000 population in Northern Ireland was 1,051; this is 28% higher than the 14-day incidence in the Republic of Ireland (819 per 100,000 population). The latest 7-day incidence per 100,000 population in Northern Ireland is 652, which is the same level as the 7-day incidence in the Republic of Ireland (651 per 100,000 population).

Modelling Projections

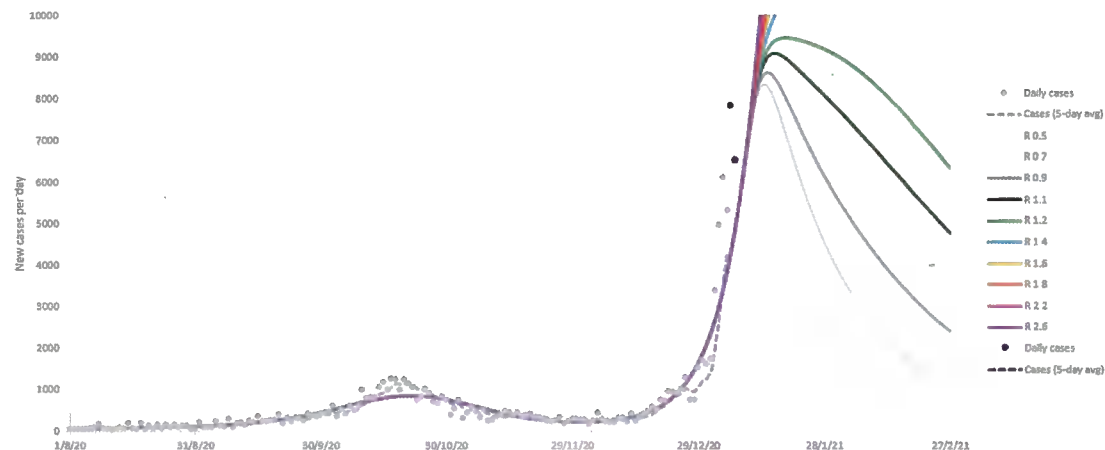
The last two weeks have seen a very rapid acceleration in the spread of SARS-CoV-2 infection, with day-on-day growth in cases in the order of 12-14%. The reproduction number is now estimated at 2.4-3.0, which is very high. Over the course of summer 2020, while Level 2 measures were in place, the

highest observed reproduction number was 1.4-1.8. Similarly, in the first two weeks of December, R was estimated at 1.6-1.8. However, over the Christmas period, we have seen a very significant increase in viral transmission and reproduction number. While it is not yet possible to separate out the role of increased socialization and social contact from the potential role of the new B.1.1.7 variant, it is likely that the new variant has, at least since the week beginning 21st December 2020, contributed to this major increase in transmission and reproduction number.

Figure 1: Modelled Projections of Cases Numbers at different R scenarios

What do our models tell us?

Model calibrated to case data until 5 January 2021. R varies over a wide range thereafter



Model projections of the number of new cases per day. The model is calibrated with daily case counts to 5 January 2021 (grey); R varies between 0.5 and 2.6 thereafter. Case counts from 6 January onwards are shown in black. This is a scenario model only. It is not a forecast, nor does it imply or anticipate any future policy decision.



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Given this very rapid growth, our models are pessimistic about the trajectory of the disease over the coming weeks. If the measures taken between 26th December, 31st December and 6th January succeed in bringing reproduction number below 1.0, our models show a peak case count between 8,000 and 8,500 per day around 13th January 2021, and a decline in cases throughout January to between 2,600 and 5,600 cases per day by the end of January.

However, there is some evidence that the rate of transmission may have started to decrease over the last 7-10 days. The average number of close contacts of adult confirmed cases is decreasing rapidly from a peak of 4.7 on 28th December 2020 to 3.0 on 5th January 2021. Furthermore, when cases are examined by the date on which the laboratory specimen was taken, there is a possible inflection point on 30th December 2020 which suggests that case numbers may be starting to plateau. This raises the possibility of a more optimistic trajectory over the coming weeks, with a peak of 5,000-6,000 cases per day now, and 1,100-2,900 cases per day by the end of January. We will have updated projections when the impact of recent measures becomes clearer over the next week to 10 days.

Given these projections for case numbers, and assuming the age profile of cases remains unchanged, we now project that there will be 1,200-2,200 people in hospital and 200-400 people in ICU by mid-January if transmission and incidence do not decrease radically in the coming week.

Figure 2: Model projections of hospital in-patient numbers

Model projections of hospital in-patient numbers

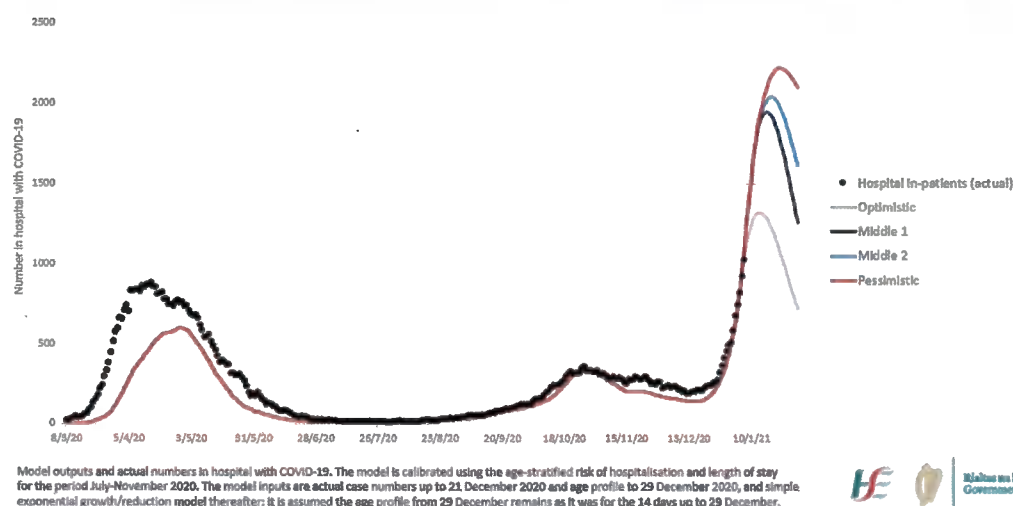
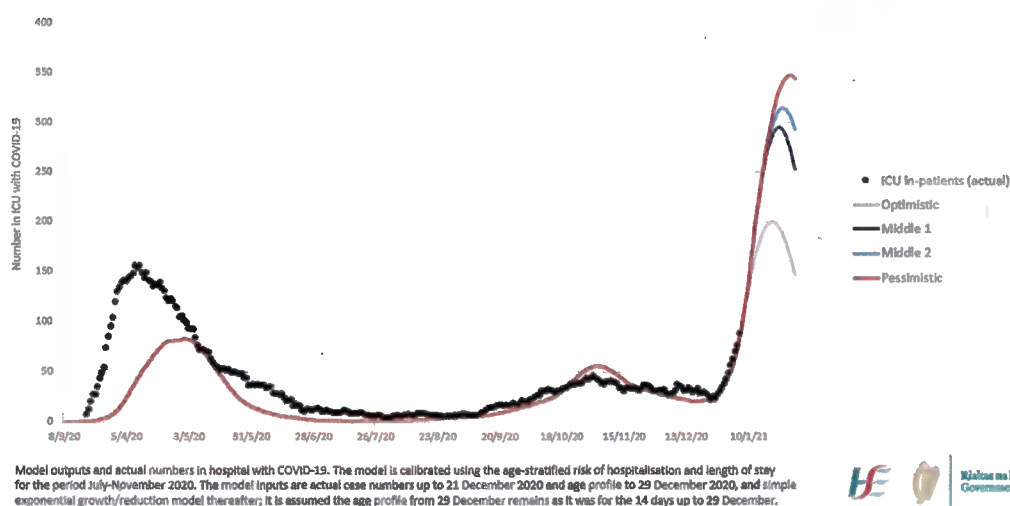


Figure 3: Model projections of ICU patient numbers

Model projections of ICU numbers



Addressing the likely impact of vaccination on incidence and severity of disease over the course of the coming months, and the implications for the management of the pandemic, is now a priority for the modelling group. This will depend on the rate at which the vaccine is administered to different age cohorts and risk groups, and such evidence as it emerges on the effect of vaccination on the transmission of the virus (as opposed to protection of the individual from severe disease).

In summary, the rapidly escalating epidemiological situation as set out continues to be the most concerning observed since the onset of the pandemic in Ireland. The level of infection in the country is increasing at great speed with the 5-day case average per day at 5,525 and 14-day incidence at 819

per 100,000. Of significant concern, disease incidence is very high across all age groups and still rising, especially among young adults. Disease incidence in those aged 65 and older remains high and a notable cause for concern given the particular vulnerability of this group to the morbidity and mortality associated with this disease. Incidence in those aged 18 and younger, although high, remains at or below population average. Growth rate was 12%-14% per day over the last 14 days and the best estimate of reproduction number is extremely high at 2.4-3.0, the highest level since estimates have been produced. The very high growth rates suggest the novel SARS-CoV-2 UK Variant of Concern (VOC) 202012/01 (also known as B.1.1.7) is now playing a role in accelerating transmission.

We are seeing ongoing marked increases in the number of confirmed COVID-19 cases in hospital. In addition, the number of COVID-19 patients in intensive care units is rapidly rising and sadly deaths have also begun to increase. The substantial detrimental impact of widespread viral transmission is also being observed in the number of new outbreaks occurring in health and social care settings, including in acute hospitals and long-term residential care facilities. The average number of close contacts of confirmed cases increased from 2.8 in early December to a peak of 4.7 on 28th December and is now falling rapidly (3.0 on 5th January) which offers some degree of hope that disease transmission may be interrupted. Ireland continues to experience a severe third wave of infection, with older and vulnerable individuals a key concern. The current epidemiological situation gives rise to immense ongoing concern and represents a grave and active threat to all key public health priorities which include the protection of vulnerable groups and the continuation of care across all areas of the health and social care system.

As you will be aware, while testing activity continued at pace over the holiday period, there were some delays in the formal notification of COVID-19 positive tests to the Department of Health. As the laboratory data is provided directly to the Contacts Management Programme (CMP), this did not impact the management of cases and contacts but has impacted on the daily reported cases. With thanks to the exceptional work of the Health Protection Surveillance Centre, Public Health Departments, and the Office of the Chief Information Officer, over the past few days, the backlog of positive lab results to be notified has been cleared. Therefore, all cases notified today have had their positive laboratory result within the past 48 hours and are an accurate reflection of the current epidemiological profile of the disease.

Impacts on Health and Social Care Services

The NPHET also noted the effect that the widespread level of the virus has on the delivery of non-COVID care, including the deferment of all but essential time-critical elective care in our hospitals and the pausing/reduction of some community services in order to meet the highest priority needs in residential, community, and home delivered services. The situation across all settings is continuing to deteriorate in line with growing case numbers.

In our acute hospital system, the situation is one of extreme pressure. The increase in the numbers of patients hospitalised with COVID-19, which is expected to continue to rise over the coming days, will further reduce the ability of our hospitals to provide safe, high-quality care. Such a scenario presents a significant risk to both patients and staff, who have been working in extremely challenging circumstances for some time now. Surge plans are in place across Hospital Groups and individual hospitals which have been reviewed in the last 2 weeks and are being activated as required; the system is already curtailing non-urgent work on inpatient, day-case and OPD services. Time-critical scheduled care continues to be provided, including in cancer and renal services. Acute hospitals are providing outreach and increased off-site treatment for vulnerable groups.

The possible loss of staff due to COVID-19 infection or isolation requirements as a result of close contact with a confirmed case remains the single biggest concern for the provision of cancer services

and other time-critical care. The delivery of the COVID-19 vaccination programme will need to remain agile and responsive to this and other emerging concerns.

The pressures experienced with the acute hospital system are replicated across other health and social care services. In the primary care setting, GPs are also experiencing severe pressure with just over 45,000 GP referrals for COVID-19 testing over two days, 4th and 5th January. Community Assessment Hubs had 232 scheduled appointments in the week ending 3rd January, compared with 240 over 4th and 5th January.

Similarly, the current level of new long-term residential care outbreaks over the past few weeks is of grave concern. There have been 41 new nursing home outbreaks since midnight 2nd January with 101 open outbreaks in nursing homes and 33 open outbreaks in disability centres. Of particular concern is the current number of daily outbreaks which is as high or greater than rates seen in April 2020; the current number of outbreaks is a threefold increase from mid-December. While monitoring by the HSE and HIQA continues, alongside ongoing significant supports, this level of disease in congregated long-term care is unavoidable while levels of community transmission remain high. Sadly, this will inevitably lead to increased morbidity and mortality in these settings. Similar to the pressures experienced in acute hospitals, staff absenteeism is increasing, with the HSE reporting that 880 nursing home staff are on COVID-19 related leave. This will create substantial challenges to the provision of staffing supports for nursing homes. It is critically important that all nursing homes review their infection prevention and control processes and their contingency planning to mitigate such risks as far as possible. The high level of disease and reduced staff availability directly impacts on the ability of community older people and disability services to continue to deliver safe services and may lead to a requirement for prioritising the delivery of home care. Having regard to this, the enhanced mobilisation of community and support coordination services, through the COVID-19 Community Call Forum initiative, is vital for the coming weeks and months in order to provide community supports and safe wellbeing check-ins.

The current epidemiological profile and the already apparent strains on our health and social care services outlined above remain extremely concerning. However, with the continued efforts and sacrifices of frontline workers, healthcare professionals and the greater public, I believe the current set of measures will be effective in bringing this virus back under control. Even though some further deterioration in key indicators of disease transmission is expected over the coming days, the public health measures now in place have the potential to quickly reduce rates of community transmission and, over time, improve our ability to protect the most vulnerable in society, return our health and social care system to normal operation, and facilitate a safe return to education for our children.

The NPHET, of course, remains available to provide any further advice and recommendations that may be of assistance to you and Government in relation to ongoing decision-making processes in respect of the COVID-19 pandemic. As always, I would be happy to discuss further, should you wish.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Tony', followed by a horizontal line and several large, overlapping loops.

Dr Tony Holohan
Chief Medical Officer

Chair of the COVID-19 National Public Health Emergency Team

cc. Ms Elizabeth Canavan, Department of the Taoiseach and Chair of the Senior Officials Group for COVID-19