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

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

30th December 2020
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 epidemiological profile of COVID-19 has continued to deteriorate very substantially since the NPHET met last week on the 23rd December:

- A total of 8,016 cases have been notified in the 7 days to 30th December, which is a 61% increase on the previous 7 days in which there were 4,992 cases; and a 324% increase on the 7 days to 9th December in which there were 1,889 cases;
- As of 30th December, the 7- and 14-day incidence rates per 100,000 population have increased to 168 and 273, respectively; these compare to rates of 105 and 153 on the same day last week, and rates of 40 and 80 on 9th December;
- Nationally, the 7-day incidence as a proportion of 14-day incidence is 62%, demonstrating that there have been substantially more cases in the last 7 days compared with the preceding 7 days;
- The 5-day rolling average has increased rapidly from 785 on 23rd December to 1,213 today and is 4.2 times greater than the figure for 9th December (286 cases);
- Of cases notified in the past 14 days, 65% have occurred in people under 45 years of age; the median age for cases notified in the same period is 35 years;
- In the last 14 days, 10% of cases notified were aged over 65; incidence rates are now increasing across all age groups;
- There has been an increase in the 14-day incidence rate in the country overall, however 25 counties now have a 7-day incidence as a percentage of 14-day incidence greater than 50% indicating an increase in cases in the last 7 days compared with the previous 7 days;
- The best estimate of the reproduction number (R) is currently 1.6-1.8. R is now estimated to be higher than at any point since last March. The current daily growth rate of cases is 7-10%.

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This compares with daily growth rate of 7-9% at the last NPHET meeting on 23rd December. The doubling time is currently 7-10 days.

- A total of 103,683 tests were undertaken in the last 7 days. The 7-day average test positivity rate has rapidly increased to 9.3% on the 29th December from 5.0% last week on the 23rd December;
- Excluding serial testing, the test positivity rate has also rapidly increased over recent days. It was 12.8% over the 7 days to 30th December, up from 7.2% over the 7 days to 23rd December, and up from 5.2% in the 7 days to Friday 18th December.
- According to contact management programme data, 24 counties have test positivity rates great then 5% and 15 counties have positivity rates great than 10%.
- There are currently 454 confirmed COVID-19 cases in hospital this morning, compared with 239 on 23rd December. There have been 69 newly confirmed cases in hospital in the preceding 24 hours;
- There are currently 37 confirmed cases in critical care, compared with 25 on 23rd December. There have been 6 admissions in the last 24 hours.
- To date, there have been 123 deaths notified with a date of death in December. This compares with 126 and 158 deaths notified (to date) with a date of death in October and November, respectively. Of the 110 deaths so far in December, 40 have been associated with hospital outbreaks and 38 have been associated with nursing home outbreaks.

Further relevant information includes:

- There were 10 new clusters notified in acute hospitals with 57 linked cases in week 52.
- There are currently 57 open clusters associated with 23 acute hospitals. In total, 990 cases have been linked to these outbreaks with 48% (475) of these cases related to healthcare workers. There have been 71 deaths linked to these outbreaks. Four acute hospital outbreaks have more than 100 linked cases each.
- There were 13 new clusters notified in nursing homes/community hospitals with 146 linked cases in week 52; There are 7 new clusters in the current week with 39 associated cases.
- There are currently 47 open clusters associated with nursing homes. 974 cases have been linked to these outbreaks with 41% of these cases related to healthcare workers. There have been 54 deaths linked to these outbreaks.
- There have been 21 outbreaks associated with schools in week 52 with 43 linked cases (although transmission in the school setting has not necessarily been established in these outbreaks).
- There were 2 outbreaks in the Irish Traveller community in week 52 with 12 linked cases. This is a decrease from the previous 2 weeks when there were 60 cases notified amongst Irish Travellers in week 51 and 48 cases in week 50.
- A range of mobility and compliance data suggest that movement and social contact in the population have increased significantly since the introduction of Level 3 measures.
- The number of close contacts during week ending 27th December was 33,390, a 119% increase (more than double) compared to the previous week.
- As of 28th December, the 14-day incidence per 100,000 population in Northern Ireland was 524, this more than double the 14-day incidence in the Republic of Ireland (246 per 100,000 population as of 29th December). The 7-day incidence per 100,000 population in Northern

Ireland was 305, which is double the 7-day incidence in the Republic of Ireland (152 per 100,000 population).

Modelling Projections

The latest modelling scenarios, calibrated using case data to 29 December 2020, show a very challenging time ahead even if we achieve immediate suppression of viral transmission sufficient to bring R below 1.0 (Figure 1). The model scenarios can be summarised as follows:

- If R is reduced to 1.4 from today, we will see at least 2000 cases per day on average by 9 January 2021, and 3000 cases per day by 23 January 2021.
- If R is reduced to 1.1 from today, we will see 1800 cases per day by 6 January 2021, rising to 1900 per day by the end of January.
- If viral transmission is suppressed, bringing R to 0.9 from today, we will peak at around 1800 cases per day in early January, and have about 1200 cases per day by the end of January.
- It is unlikely that significant suppression will be achieved in so short a time frame, so actual case numbers are likely to exceed these latter projections.

The age profile of cases in this third wave is older than in the second wave, and as such we are seeing earlier and more significant increases in hospitalisations (Figure 2). When the above scenarios are applied to a simple age-stratified model of hospitalisation, assuming the age profile of cases remains as it was over the last 14 days:

- for R=1.4 we project 800 people with COVID-19 in hospital by 15 January 2021, and 1300 by the end of January;
- for R=1.1 we project 800-900 people with COVID-19 in hospital throughout January
- for R=0.9 the numbers in hospital with COVID-19 should peak at over 700 in mid-January
- a more sophisticated model of healthcare demand and capacity gives higher projections, from a low of 1000 for R=0.9 to a high of 2000 by end of January 2021 for R=1.4

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

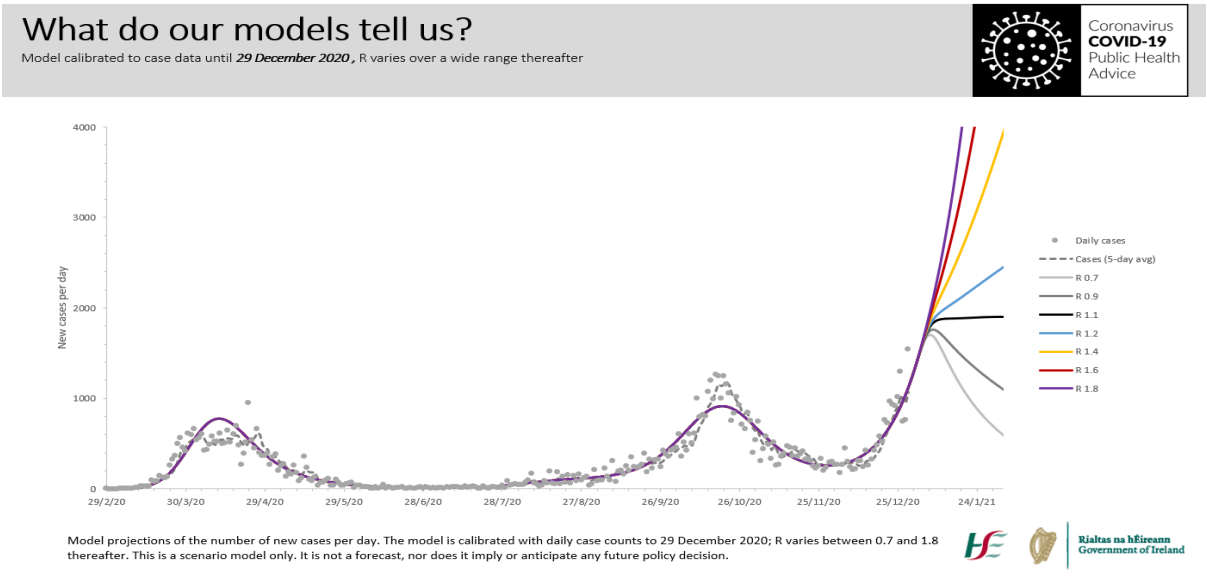
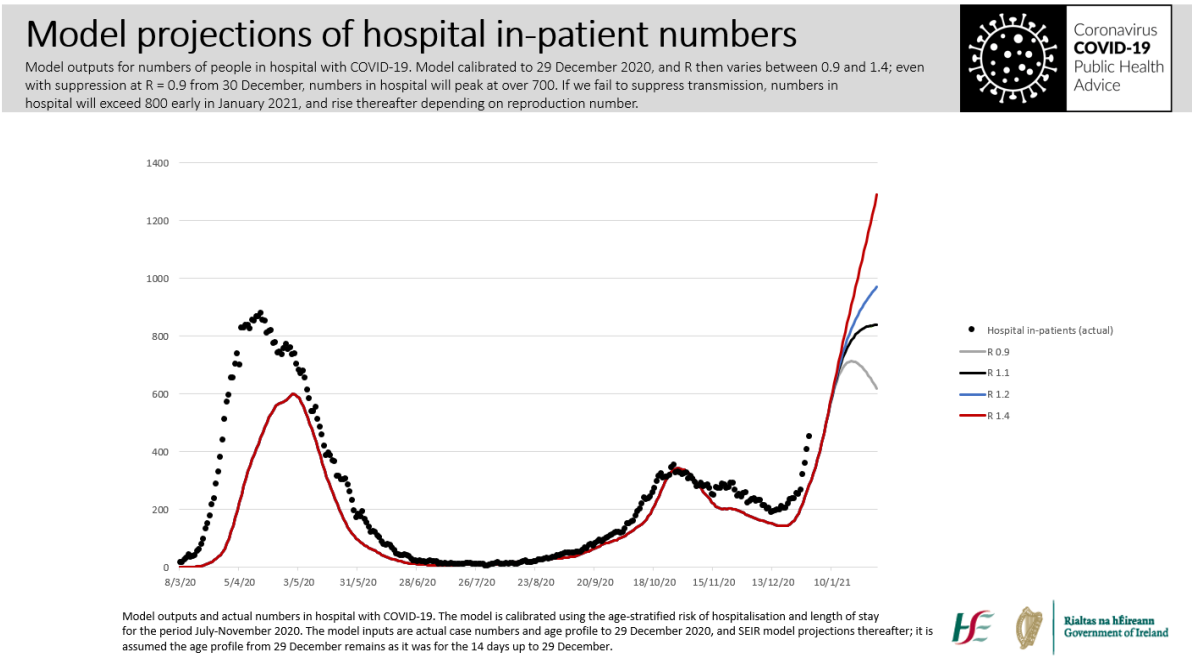


Figure 2: Model projections of hospital in-patient numbers



Summary of Epidemiological Situation

In summary, the epidemiological situation as set out is the most concerning observed since the onset of the pandemic in Ireland. The level of infection in the country continues to increase very rapidly with the 5-day average per day at 1,213 cases and the 14-day incidence at 273 per 100,000. Of significant concern, disease incidence is rising across all age groups, especially in those aged 19-24 years. Growth rate is estimated to be at least 7-10% per day with a doubling time of 7-10 days. Growth rates are now greater than those seen approaching the peak of the second wave. The best estimate of reproduction number is very high at 1.6–1.8, the highest level since estimates have been produced. The average number of close contacts has been increasing and is now approximately 6 per case, with recent increases in mobility observed leading up to Christmas. The number of confirmed COVID-19 cases in hospital is rapidly increasing, the number of COVID-19 cases in intensive care may be starting to increase and, while deaths per day are static at this time, they are likely to increase very soon in line with an expected lag effect. Ireland is now experiencing a third wave of infection, with older and vulnerable adults an ongoing key concern and at high risk of significant morbidity and mortality. The current epidemiological situation gives rise to immense concern and represents an immediate and grave 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, and the continued delivery of education and childcare services.

Novel Variants and ECDC Rapid Risk Assessment

The NPHET also received an update on the two novel variants of the virus: the UK variant VOC 202012/01 (also known as B.1.1.7), and the South African variant 501.V2. The ECDC published a Rapid Risk Assessment on the variants on the 29 December 2020[1].

- The ECDC Assessment states that preliminary analyses indicate that the UK variant has increased transmissibility compared to previously circulating variants, while the South African variant is associated with a heightened viral load and may have increased transmissibility. It also states that there is no evidence to date that either variant is associated with higher severity of infection. UK researchers estimate that the UK variant has an increased transmission rate of 50-70% compared with other variants in the United Kingdom.
- As of 26 December 2020, more than 3,000 cases of the UK variant, confirmed by genome sequencing, have been reported from the UK. The ECDC report that the new UK variant has been detected in 14 EU/EEA/Swiss countries (up to 29 December): Denmark (46), Portugal (21), Italy (14), Iceland (13), Netherlands (11), Spain (9), Ireland (7), Belgium (4), Switzerland (2), Germany (2), Finland (2), Norway (2), France (1) and Sweden(1). It has also been detected in 10 other counties - Japan(8), India (6), Israel (5), Australia (4), Canada (4), S Korea (3), Jordan (2), Hong Kong (2), Lebanon (1), and Singapore(1).
- More than 300 cases of the South African variant have been detected in South Africa. The ECDC report that 2 cases of this variant have been detected in the UK and 1 case in Finland to date.
- Genomic tests on the 24 December 2020 confirmed the presence of the UK variant in Ireland. It has already been reported that seven cases out of 77 which underwent genomic sequencing carried the VOC 202012/01 mutations. Further sequencing will take place over the coming weeks to establish the extent of the presence of both variants in Ireland. The NPHET also had a preliminary discussion on the development of a surveillance strategy to guide this sequencing process and it will consider this matter further next week.

The ECDC Rapid Risk Assessment concludes the level of risk as follows:

- The probability of the two novel variants being introduced and further spread in the EU/EEA is currently high, and due to increased transmissibility, the impact in terms of hospitalisations and deaths is assessed as **high**, particularly for those in older age groups or with co-morbidities.
- The probability of increased circulation of <u>any</u> SARS-CoV-2 strains and this placing greater pressure on health systems in the coming weeks is considered to be **high** due to the festive season and, **higher still**, in countries where the new variants are established.
- The impact of this increased pressure on health systems is considered to be **high** even if current public health measures are maintained. Therefore, the overall risk of an increased impact on health systems in the coming weeks is assessed as **high**.

The ECDC recommend the following for delaying the introduction and further spread of these variants: targeted and representative sequencing, enhanced testing, contact tracing and isolation, and the avoidance of non-essential travel. In addition, Member States are recommended to continue to advise their citizens of the need for non-pharmaceutical interventions in accordance with their local

[1] Risk Assessment: Risk related to spread of new SARS-CoV-2 variants of concern in the EU/EEA (europa.eu)

epidemiological situation and national policies and, in particular, to consider guidance on the avoidance of non-essential travel and social activities.

NPHET Advice

The continuing overarching objectives of NPHET's recommendations are to: protect public health in the first instance, particularly in relation to those most vulnerable to the severe outcomes of COVID-19; to ensure the safe delivery of health and social care services for care needs unrelated to COVID-19; to enable safe provision of childcare services and to ensure that schools remain open.

In light of the accelerating rate of deterioration in incidence of disease, the rapid increase in hospitalisations, growing concerns about the increased transmissibility of the UK and South African variants, and most recent ECDC advice, the NPHET remains extremely concerned about the current situation and the potential consequent implications for morbidity and mortality. It is further concerned that there is now a very considerable risk that the continued protection of the above core priorities will be jeopardised in the short term.

The NPHET reiterates its view that the current set of measures will not be sufficient to interrupt transmission patterns to the extent necessary. The NPHET is of the view that the virus is circulating in the community at such a level that it requires strict "stay at home" measures (with exemptions provided only for those activities and services that are essential in nature) to significantly and comprehensively reduce opportunities for contact and further transmission of the disease. **The NPHET advises that this will require, at a minimum, the implementation of and adherence to the full suite of Level 5 measures as set out in the Government's Plan for Living with COVID-19. The NPHET recommends that these measures are put in place as a matter of urgency and remain in place for a period of six weeks.**

However, the NPHET cautions that the situation remains extremely fragile, with disease incidence and hospitalisations accelerating faster than the most pessimistic modelling scenarios had projected. It is likely that there is still some element of under-reporting as a result of the festive period, and coupled with the potential additional risks posed by the UK and South African variants, the NPHET is worried that there could be a further acceleration in incidence and severity indicators in the coming days. The NPHET therefore cautions that the additional Level 5 measures recommended may not be sufficient to bring the disease under control and that additional measures may be required if there is a continued deterioration over the coming period. The NPHET will continue to monitor the situation closely in the coming days.

The NPHET today gave specific consideration to the reopening of schools next week. The NPHET was of the view that schools should reopen as planned. However, the NPHET did note that the high and rising levels of community transmission will become a risk to the ongoing provision of education at primary and secondary level unless these levels of transmission can be addressed. NPHET will continue to review this issue over the coming weeks.

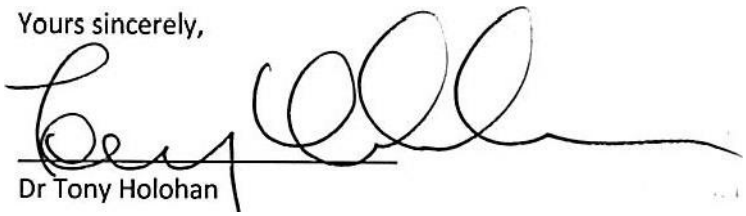
The NPHET also reiterated its concerns of the 23 December in relation to the pressure being experienced across all aspects of the health service. In particular, the level of demand across the full testing and contact tracing pathway, including general practice, swabbing, laboratory testing, contact

tracing and case and outbreak management by public health departments, is likely to be unsustainable in the short term. The level of disease has now exceeded containment and, as such, we are now in a mitigation phase. The NPHET emphasised that the role of testing changes considerably when disease transmission is at the level currently being experienced – and can no longer be expected to control the disease. Everyone needs to behave as if they are close contacts and to restrict their movements by staying at home, except for essential purposes; it is only through the collective actions of everyone that we can hope to interrupt chains of transmission, prevent further spread, reduce the intensity of the epidemic and to slow down the increase in cases.

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,



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