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.

25th August 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.

Please note the reported epidemiology of COVID-19 as it relates to COVID-19 cases, associated deaths, and outbreaks is normally based on notifications to the Computerised Infectious Disease Reporting (CIDR) system. The cyber-attack on the HSE on 14th May 2021 has prevented the routine notification of these data to CIDR. As an interim measure, epidemiological case data are based on the information captured by the HSE COVID Care Tracker. Please note that these data do not represent notified cases and have not undergone the data validation procedures undertaken through CIDR. As soon as all COVID-19 surveillance systems are restored, COVID-19 cases and outbreak data will be validated and updated for the relevant period.

- A total of 12,751 cases have been reported in the 7 days to 24th August 2021 (cases to midnight 23rd August), which is a 4% increase from last week when 12,317 cases were notified in the 7 days to 17th August, and a 45% increase from the last NPHET meeting on 27th July when 8,791 cases were reported in the 7 days to 26th July 2021.
- As of 24th August, the 14-day incidence rate per 100,000 population has increased to 526; this compares with 490 a week ago and compares with 333 at the last NPHET meeting on 27th July.
- Nationally, the 7-day incidence/100,000 population as a proportion of 14-day incidence/100,000 population is 51%, demonstrating that there have been more cases in the last 7 days compared with the preceding 7 days.
- The 5-day rolling average of daily cases is 1,814 as of today, which is a 5% increase from 1,734 week ago (17th August) and a 52% increase from that of 27th July (1,191).
- Of cases notified in the past 14 days, 83% have occurred in people under 45 years of age; and 6% were aged 65 years and older. The median age for cases notified in the same period is 25 years. Disease incidence remains highest in the 19–24-year-old age group.
- Of the 25,066 cases reported in the last 14 days, 3.7% (925) were healthcare workers and 3.6% (899) were determined to be travel-related.
- Data on COVID-19 cases is currently sourced from an extract from the COVID Care Tracker (CCT). The CCT includes self-reported data on vaccine status (if a person reports having received a vaccine and if so, how many doses). This is self-reported by cases during their contact tracing call and no data is available on the timing of when they received their second dose or other data validation. Caution is therefore required in interpretation of this data. Of the 25,328 cases reported in the last 14 days: 24% reported having received two doses of vaccine; 16% reported having received one dose of vaccine; 41% reported having not received any vaccine; and the vaccine status was unknown for 19%.

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- Over the seven days 17th – 23rd August, there has been 131,893 laboratory tests reported in community, private and acute laboratories, this compares with 137,294 laboratory tests in the previous 7 days (10th –16th August). The 7-day positivity rate in the community was 14%.
- From the 17th – 23rd August, there were c.103,806 community referrals. Overall, total referrals have remained stable in comparison to the same time-period last week (0.38% increase). From the 15th – 21st August, the group with the largest number of referrals was the 21-30-year-old age group, making up 19.5% of all referrals. The detected rate for the 21-30-year-old age group is 16%.
- According to the Contact Management Programme (CMP), from 9th - 15th August 2021, the total number of close contacts was 29,375, a decrease of 6% compared with 30,987 the previous week. The average number of cases managed per day decreased from 4,427 to 4,196.
- The mean number of close contacts per case (excluding cases with zero close contacts) for the week ending 22nd August was 3.3, a decrease from 3.4 for the week ending 15th August.
- There were 323 confirmed COVID-19 cases in hospital this morning, compared with 249 last week on 18th August, and with 142 on the morning of the last NPHET meeting on 27th July. There have been 56 newly confirmed cases in hospital in the 24 hours preceding this morning.
- There are currently 56 confirmed cases in critical care, compared with 54 last week on 18th August, and with 27 on the morning of the last NPHET meeting on the 27th July. There were 5 new admissions in the previous 24 hours.
- Of the 195 COVID-19 patients admitted to ICU between 1st April and 14th August 2021, vaccination status was known for 185 patients. Of those where vaccination status is known, 45 had received either one or two doses of vaccine, and 18 received all recommended doses of vaccine before admission to ICU. In total, 10 patients had an epidemiological date 14 days or more after receiving all recommended doses of vaccine.
- Of the 165 laboratory-confirmed COVID-19 deaths notified to HPSC with a date of death between 1st April 2021 and 14th August 2021, 158 of these deaths had COVID-19 vaccination data reported. Of these, 68 deaths were reported in persons having received at least one dose of COVID-19 vaccine prior to death and 30 deaths were reported in persons having received all recommended doses of COVID-19 vaccine prior to death. Thirteen COVID-19 deaths were reported in persons with an epidemiological date 14 days or more after receiving all recommended doses of vaccine.
- As of 25th August 2021, there have been a total of 5,092 COVID-19 related deaths notified in Ireland. This is an increase of 18 notified deaths since the previous weekly update on 18th August (5,074). To date, 34 deaths have been notified which occurred in August, 16 in July and 16 in June.
- In total, 6,496 cases of Delta (B.1.617.2), 77 cases of Beta (B.1.351) and 30 cases of Gamma (P.1) have been confirmed through whole genome sequencing in Ireland to date.
- Other cases of variants of note/under investigation that have been confirmed in Ireland to date: 210 Kappa (B.1.617.1), 74 Eta (B.1.525), 15 Zeta (P.2), 11 Iota (B.1.526), 7 Epsilon (B.1.429), 245 B.1.1.318, and 2 A.27.
- Taq-path S-gene PCR target results by specimen week show that the prevalence of S-gene positivity (proxy for Delta) has increased from 90.3% in week 28 to 98.2% in week 31.

Outbreaks and associated cases are based on those reported up to midnight on 21st August 2021. Week 33 refers to 15th – 21st August 2021. Due to the cyber-attack on system networks, data are limited to an aggregate summary of outbreaks reported weekly to HPSC.

<u>Healthcare setting outbreaks:</u>

- There were 11 new nursing home outbreaks with 56 confirmed linked cases and 2 community hospital/long-stay unit outbreaks with 15 confirmed linked cases reported in week 33.
- There were 5 new acute hospital outbreaks with 13 confirmed linked cases reported in week 33.

- There were 6 new outbreaks reported in residential institution settings (2 in centres for disabilities, 1 in a prison, and 3 in non-specified residential facilities) with 15 confirmed linked cases in week 33.

Vulnerable Groups/ Key Populations outbreaks:

- There were 9 new outbreaks reported involving members of the Irish Traveller community in week 33 with 47 linked cases.

Outbreaks associated with school children and childcare facilities:

- There were 14 outbreaks newly reported in childcare facilities in week 33.

Workplace outbreaks:

- There were 16 workplace outbreaks reported in week 33 across a variety of settings. Of these, 5 were in the construction sector, 4 were related to food/meat production and processing settings and 7 were in "other" workplace types.

Outbreaks associated with hospitality settings:

- There were 8 outbreaks reported related to hotels in week 33.
- There were 10 outbreaks associated with restaurant/café settings reported in week 33 and 3 associated with a public house.

Other Locations:

- The remaining 30 outbreaks in week 33 were across a number of other locations:
    - 1 related to 'other healthcare service';
    - 4 travel-related outbreaks;
    - 2 related to social gatherings;
    - 4 associated with religious/other ceremony;
    - 3 community outbreaks;
    - 5 related to retail outlets;
    - 1 related to other recreation activity;
    - 4 extended family outbreaks;
    - 5 private house outbreaks;
    - 1 in 'other' location.

Disease incidence across the country is currently high. Incidence is very high in those aged 19-24 and 13-18 years old; until recently most of the cases in the latter group were in those aged 16-18 years old, but incidence has also started to increase in those aged 13-15 years old. Incidence may be plateauing or starting to decrease in those aged 16-18 and 19-24 years old, though these trends may be influenced by very strong weekend effects. Incidence in children and older adults has increased as the force of infection grows. Incidence in children aged under 12 years old has been lower than other unvaccinated groups, comparable with incidence in vaccinated adults aged 35-64 years old.

Test referrals are at high levels and the 7-day average national test positivity rate has increased. The growth rate of cases is uncertain with the best estimate currently at 0 to 2% per day. The total number of confirmed cases of COVID-19 in hospital has been increasing at 2% - 4% per day, while the total number of confirmed cases in ICU has also increased. There continues to be relatively low mortality related to COVID-19 and this is being closely monitored.

In summary, the epidemiological situation in Ireland indicates high incidence with an uncertain trajectory. The total number of confirmed COVID-19 cases in hospital and ICU has also increased. While incidence may start to plateau in the coming weeks, we should expect at least transient

increases in incidence with the elevated population mobility and mixing that may be associated with the reopening of schools and higher education. The current epidemiological situation is set against a background of the dominance of Delta in Ireland, a variant which is significantly more transmissible and less susceptible to vaccines than previous variants. This poses a very substantial threat, particularly to those who are not yet fully protected through vaccination.

Managing the Next Phase(s) of the COVID-19 Response

The public health management of the COVID-19 pandemic has evolved and must continue to evolve in light of changing circumstances and risks. While disease incidence is currently high and there is significant uncertainty and concern with regard to the profile of COVID-19 and its impact in the short-term, our vaccination programme will facilitate a transition in our approach to dealing with the pandemic over the medium term.

Significant progress was made in the first half of this year in reducing infection levels following the peak of the wave of infection in late 2020 and early 2021 due to the sustained efforts of people across the country. This, coupled with our vaccination programme progressing at pace and protecting the most vulnerable, has enabled the gradual reopening of large parts of our society and economy. The progressive de-escalation of public health restrictions has been cautious, gradual and phased, with sufficient time between phases to assess the impact.

The NPHET has given consideration to the circumstances and criteria that would facilitate a further easing of the range of public health measures and advices in place and to the range of measures that will either need to continue over the medium term or that can be altered, adapted or removed altogether once those criteria are satisfied. The key considerations informing this advice and the detail of the advice is set out below.

Key Considerations

Our core priorities have remained consistent throughout the pandemic. Focus has remained on protecting those most vulnerable to the severe impacts of COVID-19 and on protecting health and social care, education, and childcare services and these must continue to be prioritised:

- Our management of COVID-19 must continue to recognise that while the virus affects us all, it does not do so equally. Those who are vulnerable to COVID-19 or to the wider impacts of our response to COVID-19, include older people, those living in congregated settings, the medically vulnerable, the Irish Traveller community, the Roma community, migrants, those who are homeless, those living in Direct Provision and those struggling with addiction We must continue to prioritise, protect and support the most vulnerable.

- Our health and social care system, and in particular our hospital system, remains in a fragile position, with the number of COVID-19 patients increasing in recent weeks against a backdrop of a significant backlog of non-COVID care due to both the demand for COVID care in the early part of this year and the recent ransomware attack. The situation in our hospitals remains challenging, with hospitals dealing with increased numbers of patients on waiting lists and with reduced capacity as a result of increasing COVID-19 patients and related infection prevention and control measures. Any further increase in admissions as a result of COVID-19

will place additional pressure on the hospital system and will have a significant impact on the delivery of non-COVID care.

- While children have been less affected by the virus itself, our protective measures have had a significant impact on parents, children and young people in childcare services, primary, secondary and tertiary education, especially those that are vulnerable. Following extended periods of closure in the last academic year, we must minimise the risk of closures given their multiple adverse social, educational, health and economic impacts[1]. These include learning loss, increased risk of dropout, negative impacts on mental health and physical activity and the exacerbation of existing social inequalities.

From the outset of the pandemic, decision making has been informed by seven key ethical principles, namely; minimising harm, proportionality, solidarity, fairness, duty to provide care, reciprocity and privacy. As we enter this new phase, those principles are as relevant as ever. It is recognised that over the course of the pandemic individual rights and freedoms have been restricted, in the interests of public health, which has placed a considerable burden on individuals, communities and society as a whole. In moving forward, it is vital that we continue to ensure that public health measures adopted are equitable, reasonable and proportionate. There is now increased public awareness about COVID-19, how it spreads and how we can protect ourselves against the virus including through our own basic behaviours and vaccination. As we move forward, measures to combat the pandemic will increasingly be voluntary, in the form of evidence-based public health recommendations which will allow individuals to make risk-based assessments for themselves. In that context solidarity will continue to be crucial in fostering and embedding a culture of protecting oneself and others through society-wide collaboration by practising good infection control and reviewing our personal behaviours in light of the greater societal good.

Ireland's COVID-19 vaccination programme continues to make significant progress, with 91.4% of adults aged 18 and over having received one dose and 86.7% of adults now fully vaccinated (data as of 24 August). It is important to note, however, that the vaccine is not maximally effective until 7-14 days after the final dose. This is particularly important in the context of the delta variant, where the first dose of a two-dose regimen offers limited protection against infection. We estimate that approximately 80% of the population aged 18 and older are 7-14 days after their final dose.

Vaccine uptake and completion has been very high in older age groups (ranging from 84% completion in those aged 40-44 years, through to 97% completion in those aged 65-69, to almost universal vaccination, 98-99.5%, in those aged 70 and over). However, vaccination has been offered to younger people relatively recently, and many have yet to receive their second dose. For instance, in those aged 18-29 years, 76% have received their first dose (as of 22 August 2021), 61% have completed all recommended doses, and approximately 50% are 7-14 days beyond their final dose and maximally protected. This cohort of the population, given its size (over 750,000 people), high levels of social contact, and partial vaccination, has the potential to sustain a large wave of infection until such time as it achieves very high levels of immunity.

[1] European Centre for Disease Prevention and Control. COVID-19 in children and the role of school settings in transmission - second update. 8 July 2021. Stockholm: ECDC; 2021

Vaccines are providing very effective protection from severe illness and are fundamentally changing our risk profile. To put this in context, if we model the likely hospitalisation and fatality rates based on (i) the age-related risk of hospitalisation and death with prior variants and (ii) full vaccination being 80% effective in preventing symptomatic infection and 95% effective in preventing severe disease, we predict that hospitalisation rate now should be 1.1 – 1.4%, (vs. 5.2% without vaccination), ICU admission rate now 0.1 – 0.2% (vs. 0.5% without vaccination) and case-fatality rate now 0.17-0.22% (vs. 1.1% without vaccination).

Despite the high level of vaccine efficacy, it is important to recognise that no vaccine is 100% effective and some fully vaccinated persons will develop symptomatic or asymptomatic infections with SARS-CoV-2. Even when fully vaccinated people develop symptoms, these symptoms tend to be less severe than in unvaccinated people. This means they are much less likely to be hospitalised or die than people who are not vaccinated. But some will require hospitalisation, and preliminary evidence suggests that infections in those who have been fully vaccinated tend to be more serious among individuals older than 65 years or who have weakened immune systems or other serious underlying conditions. It is also important to note that people who are vaccinated and get a SARS-CoV-2 infection can still transmit the virus onwards, hence a continuing requirement for some non-pharmaceutical interventions.

Unfortunately, while the risk profile of COVID-19 continues to be impacted in a positive sense by vaccination, we are now dealing with the Delta variant which is more transmissible than other circulating variants and now accounts for over 90% of cases in Ireland. As outlined above, disease incidence is now high, in particular in our younger population who are not yet fully protected through vaccination.

While the outlook over the coming days and weeks is very uncertain, we can expect the situation to get worse before we begin to see an improvement. Revised modelling scenarios calibrated to 11 August 2021 show, for optimistic scenarios, cases counts peaking at 2500-3000 cases per day in mid-September, with later peaks in healthcare demand seeing 500-700 people in hospital and 80-130 people in ICU. Central scenarios show the peak at 3000-5000 cases per day, 750-1300 in hospital and 150-250 people requiring critical care. See Appendix for detailed overview of latest modelling projections. The IEMAG are conducting additional work to update these scenarios, to further examine the possible effects of school opening, and to provide additional detail on possible scenarios beyond October 2021. I expect to be in a position to brief you further in advance of the Cabinet committee.

Moreover, it is very likely that the Delta variant will continue to circulate extensively throughout the autumn and potentially later in the year, particularly among individuals that have not yet been vaccinated. As we have experienced in recent weeks with increasing admissions to hospital and ICU, the increasing incidence of the disease has increased the risk for more vulnerable individuals across all age groups who have either not been vaccinated or who have not been sufficiently protected through vaccination. In addition, and as noted in the NPHET letter of 28 June, while the majority of infections are occurring largely in the young, unvaccinated population, the growing force of infection is resulting in a significant number of infections in older, vaccinated people.

In addition, there is ongoing uncertainty regarding the impact of a new variant(s). Continued evolution of the SARS-CoV-2 virus and the emergence of new variants is inevitable. At a global level, the risk of a new variant emerging with altered biological properties is dependent on the virus mutation rate, the incidence and prevalence of infection, and the advantage a new variant has over other co-circulating variants. Unless there is a substantial shift in the biological properties of the virus, current vaccines

are highly likely to continue to provide significant protection against serious disease. We will need to continue to monitor emerging evidence. Furthermore, there is ongoing uncertainty with regard the length of post-vaccination and post-infection immunity while evidence of the long-term health consequences of COVID-19 continue to emerge; evidence is relation to both will need to continue to be monitored.

COVID-19 will continue to be a global challenge further compounded by an uneven vaccination rollout. International cooperation will be required to facilitate the equitable allocation of vaccines across the world and as a country we must continue to play our part in ensuring equitable access to vaccines.

It also important to note that both the ECDC and WHO have warned that ongoing caution is necessary and that non-pharmaceutical interventions remain essential elements of the public health response to COVID-19 and should remain in place until there is a clear pathway out.

Furthermore, other respiratory viruses including influenza ('flu) and respiratory syncytial virus (RSV) may be more impactful than usual over the coming months because as a population we are more susceptible to these diseases given our reduced exposure last winter, as well differences in the public health behaviours. In addition, noncommunicable diseases including asthma, COPD and strokes are likely to be exacerbated during the winter and coupled with the resurgence of respiratory infectious diseases will put further pressure on our health system.

It should be noted that we know from past experience that we cannot predict with certainty the future trajectory of the disease. Therefore, we cannot fully rule out the reintroduction of measures in the future and we must continue to ensure our response is agile and flexible, with an ability to pivot rapidly and respond to any emerging threat.

NPHET Advice

Notwithstanding the current disease profile and continuing uncertainties in relation to the trajectory of COVID-19, and subject to the continued engagement of younger age cohorts with the vaccination programme in the coming weeks, we will attain a level of vaccine coverage within the population which, together with a number of continued protective measures and ongoing robust public health surveillance and response capacities in appropriate settings, will facilitate a transition in our approach to the public health management of COVID-19 in Ireland.

Accordingly, it is the view of NPHET that it may be appropriate in those circumstances that the public health management of COVID-19 in Ireland transitions, in broad terms, from a focus on regulation and population wide restrictions to a focus on public health advice and personal judgement and personal protective behaviours. The NPHET advises that the following criteria should be met to enable this transition (balance assessment on a collective basis):

1. At least two weeks having passed from the attainment of at least 90% uptake (completion of vaccination) in the population aged 16 years and older; and
2. A point in time assessment that incidence, reproduction number, growth rate, impact and progression of infection to severe disease give confidence that we can suppress the infection sufficiently to minimise the harm of disease; and

3. Hospital and critical care occupancy for COVID-19 are reducing and/or reduced to low levels to protect the health service and ensure the continued provision of non-COVID health and social care services, including in the community; and
4. Public health capacities, which will need to be subject to review and an agreed plan, including in relation to testing, contact tracing, outbreak managements, surveillance and sequencing for COVID-19, will be sufficiently robust to enable the rapid identification, investigation and management of local or regional outbreaks, outbreaks among vulnerable groups, and the emergence of new variants; and
5. The absence of a new variant of concern with significantly increased potential for one or more of the following: greater transmissibility, increased virulence or vaccine escape.

Throughout the pandemic we have relied on a combination and layering of public health measures, including mask wearing, physical distancing, hand and respiratory hygiene, improved ventilation, self-isolation, infection prevention and control, an emphasis on outdoors over indoors, testing and contact tracing, border controls and a range of domestic restrictive measures to suppress transmission. While vaccination is now our most important and effective measure, there will continue to be a need for some public health measures over the medium term to reduce the risk of transmission. Therefore, notwithstanding a transition in the overall approach to the public health management of COVID-19**, the following must remain critical components of our collective response to COVID-19 and will need to be retained and reviewed on a periodic basis until at least Spring 2022**;

- **Clear guidance and communication with the public** on the evolving disease profile and a cultural shift towards embedding individual and collective strategies to mitigate against COVID-19 and other respiratory infections. This will require a refreshed communications approach (see below for further detail)
- A renewed and sustained focus on the importance of rapid **self-isolation** if symptomatic (even if fully vaccinated) or if diagnosed with COVID-19
- **Formal requirements for mask wearing** in healthcare settings, indoor retail and on public transport
- Continued promotion of **vaccination against COVID-19** and **seasonal influenza vaccination**
- Continued wearing of masks, practicing of physical distancing and avoidance of crowded environments based on **individual risk assessment**, and adherence to basic hand and respiratory hygiene
- **Sector specific measures** to ensure a safe environment including in relation to the promotion of rapid self-isolation when symptomatic, and appropriate use of face masks, physical distancing, hand and respiratory hygiene, ventilation and signage
- Advice that **non-essential international travel** (by those eligible for vaccination) should only be undertaken by those who are immune (vaccinated or recovered)
- In line with evolving strategies, ongoing robust **public health surveillance and response capacities** including testing, contact tracing, surveillance and sequencing capacities for COVID-19,
- **Health service preparedness** and response to COVID-19 including:
    - sustained focus on and strengthening of IPC measures
    - ongoing strengthening of health system capacity across public health and community and hospital services, including critical care and isolation capacities, continuation of

appropriate support for non-COVID care in a COVID environment and the revision of regulations governing the quality and safety of Long-Term Residential Care
    - appropriate physical distancing requirements based on local risk assessment and advice from IPC teams
    - continued strong promotion of vaccine uptake among healthcare workers

While the above measures must be maintained over the medium term, and notwithstanding ongoing public health advice that those who have not been fully vaccinated should avoid or exercise very high levels of caution in high-risk environments, it is advised that the following measures can be removed when all of the above criteria have been met;

- Formal requirements/mandates for physical distancing
- Formal advice for mask wearing outdoors and in indoor private settings
- Limits on numbers that can meet in private homes/gardens
- Limits on numbers at outdoor events and engaging in sporting activities outdoors
- Restrictions on indoor sports activities and other indoor leisure/community activities
- Restrictions on religious or civil ceremonies
- Certification of immunity or testing as a prerequisite for access to, or engagement in, any activities or events (with exception of international travel)
- Restrictions on high-risk activities (i.e. nightclubs)
- Requirement to work from home allowing a return to physical attendance in workplaces on a phased and cautious basis appropriate to each sector

In addition, it is proposed that, **subsequent to the above criteria being met**, it would be appropriate that sectors commence the phased reintroduction of spectators/patrons (without the need for certification of immunity) at indoor cultural and sporting events, with institution and maintenance of high levels of basic infection prevention and control standards including in relation to promotion and facilitation of hand and respiratory hygiene and ventilation. Furthermore, all sectors should review and align sector-specific guidance and protocols such that they are appropriate to the transition in approach to the public health management of COVID-19.

The NPHET is conscious that this advice represents a significant shift in our approach. It entails a change from protection at the population level through regulations and restrictions to protection at a personal level, each of us taking simple measures to protect ourselves and others, such as staying home and self-isolating when symptomatic, observing good respiratory and hand hygiene, and wearing a face covering (to protect others from your respiratory droplets and aerosols) in crowded and congregated settings.

Further detail in terms of the proposed approach in the immediate term and following the transition in approach to the public health management of COVID-19 across each element of the response is outlined in the Appendix 2.

Public Health Response

Planning for a transition from open access or mass scale SARS-CoV-2 testing is important because as the harm from SARS-CoV-2 infection declines, the negative impacts of testing at the current scale are likely to become disproportionate to the benefits to human health. It will be essential that changes in the testing process are planned and implemented in parallel with overall changes in the public health

response and public health messaging. This will require a review of the Public Health response to COVID-19, to include testing, contact tracing, outbreak management, surveillance and sequencing. This review will inform an agreed plan and prioritisation framework to enable a robust and rapid response to local and regional outbreaks, particularly amongst vulnerable groups. This plan should address the surge response to new variants of specific public health concern. The HSE has commenced this process and will finalise its strategy for Autumn/Winter 2021/22 to ensure implementation at the point at which the criteria to transition are fulfilled.

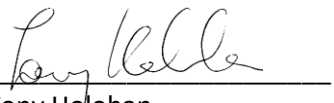
Communications

The new approach outlined above will involve relaxing many restrictions and asking the public to keep informed about the ongoing risks of COVID-19, and to continue to take action to protect themselves and the people around them. This phase will require the health system and Government to find new ways to keep people informed about COVID-19 and any risks that remains. While this step change will be welcomed by most, and signals progress in our work to respond to COVID-19, it will call for a renewed approach to engagement and communication with the public.

Effective behaviour change is influenced by a range of factors, including risk perception, peer influence, regulation, financial concerns and information or communications, among others. People need adequate motivation, capacity and opportunity to take action. This will be a new phase in our management of COVID-19. For this new phase of the COVID-19 response, without the parallel track of significant restrictions, and given the fatigue being seen with the messaging on public health measures, supporting and sustaining the required level of appropriate public health behaviours will be a continuing challenge for all sectors to address.

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

Appendix 1: Supplementary Modelling Information

The scenario models have been revised and updated, based on the experience in recent weeks of the transmission of the delta variant, the success of the vaccination programme, and revised assumptions on the effectiveness of the vaccines in preventing transmission, symptomatic infection and severe disease.

These models suggest that the vaccination programme and the cautious approach taken to the easing of restrictions has prevented a very large number of cases, hospitalisations and deaths, and the population has been afforded considerable protection against the harms of this virus. Nonetheless, the size of the incompletely protected population, those not yet 7-14 days after completing all recommended doses of vaccine, is approximately 20% of all adults and 50% of those aged 18-29 years. This is sufficient to sustain a significant wave of disease between now and the point at which maximum practicable protection of the adult population has been achieved.

We have modelled the likely short-term trajectory of case counts and demand for hospital and critical care. The scenarios involve step changes in effective social contact from the calibration date, with different assumptions on the transmission advantage of the delta variant, specifically:

- a *reduced transmission* scenario where effective social contact reduces to 90% of current levels, with conservative estimates of transmission advantage for the delta variant[2];
- a *minimal change* scenario, where effective social contact remains at current levels, with conservative estimates of transmission advantage for the delta variant;
- an *optimistic* scenario where effective social contact increases by 5%, with conservative estimates of transmission advantage for the delta variant;
- a *first central scenario*, where effective social contact increases by 20%, with conservative estimates of transmission advantage for the delta variant;
- a *second central scenario*, where effective social contact increases by 5%, with higher estimates of transmission advantage for the delta variant; and,
- a *pessimistic scenario*, where effective social contact increases by 20%, with higher estimates of transmission advantage for the delta variant

The vaccination programme is included in the model according to the latest available estimates of vaccine supply and administration, and published estimates of vaccine effectiveness in preventing infection and severe disease.

Given the very high levels of vaccination achieved or anticipated in adults and adolescents, the level of infection over the coming weeks depends greatly on the extent to which children under 12 years of age are susceptible to SARS-CoV-2 infection, and if infected, how likely they are to transmit the infection to others. There is evidence that children under 10 years of age are less susceptible to infection, and given that such infections are often mild or asymptomatic, also less likely to transmit. The models have been adapted to simulate children under 12 years of age being half as susceptible as adults, and a second set of scenarios is generated with this assumption.

The first set of scenarios, where children and adults are equally susceptible, are illustrated in Figure 1, and the impact on demand for healthcare is shown in Figure 2. These scenarios see lower overall case counts than those previously presented, because the uptake of vaccination has been higher that was

[2] The conservative assumptions on transmission advantage are that alpha is 27% more transmissible that ancestral variants, and delta 55% more transmissible than alpha; the higher transmission advantage assumptions are that alpha is 50% more transmissible that ancestral variants, and delta 60% more transmissible than alpha.

assumed in early July 2020. We are currently tracking between the minimal change and optimistic scenarios, which is unsurprising, as the models are calibrated to the level of effective social contact up to early August. However, over the last few weeks, case counts and hospitalisations have been tracking the central scenarios, suggesting that the more conservative estimates of the transmission advantage of delta may be appropriate. It is possible, therefore, that we will track somewhere between the optimistic and central 1 scenarios, with a peak of infection in September 2021 between 3000 and 5000 cases per day, and a later peak in healthcare demand with 750-1300 people in hospital and 150-250 people requiring critical care.

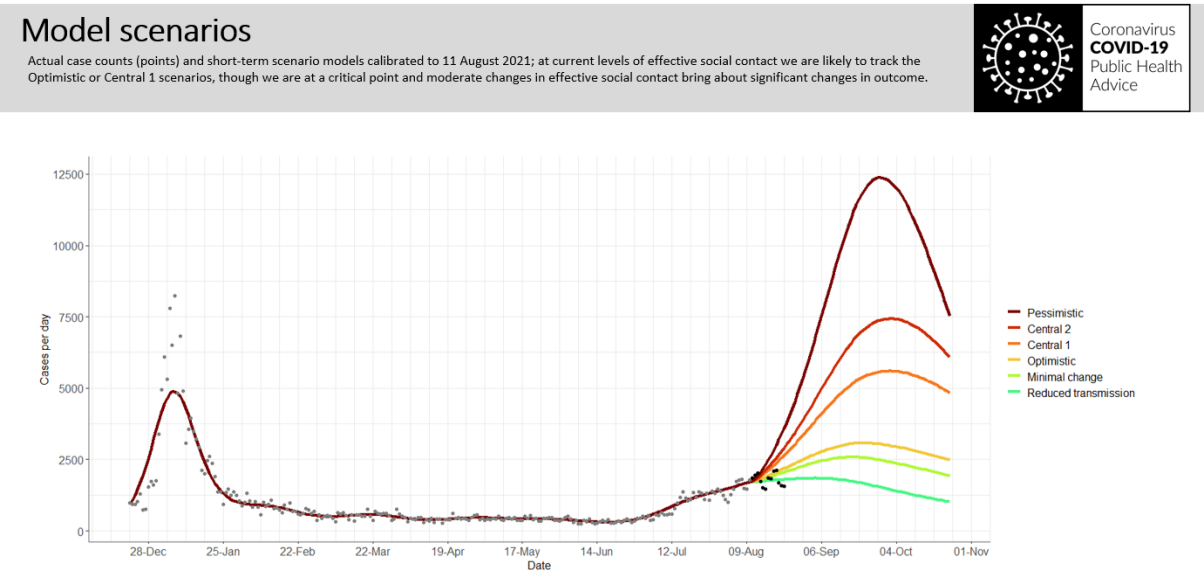


Figure 1: Homogeneous population SEIR model scenario estimates of new cases per day, calibrated to 11 August 2021, where children and adults are equally susceptible to infection and equally likely to transmit. Data are the mean of 1000 runs of the model with different assumptions on asymptomatic fraction, transmissibility of asymptomatic infections, latent period and duration of infectious period. Confidence intervals not shown. Delta variant replaces alpha in July 2021, accounting for 70% of transmissions by 18 July 2021. A step change in close social contact is introduced on 11 August 2021 and maintained constant thereafter. The current vaccination programme is included. Lines are model fits and scenarios, grey points are actuals to the point of calibration, black points are actuals since date from which the model was run.

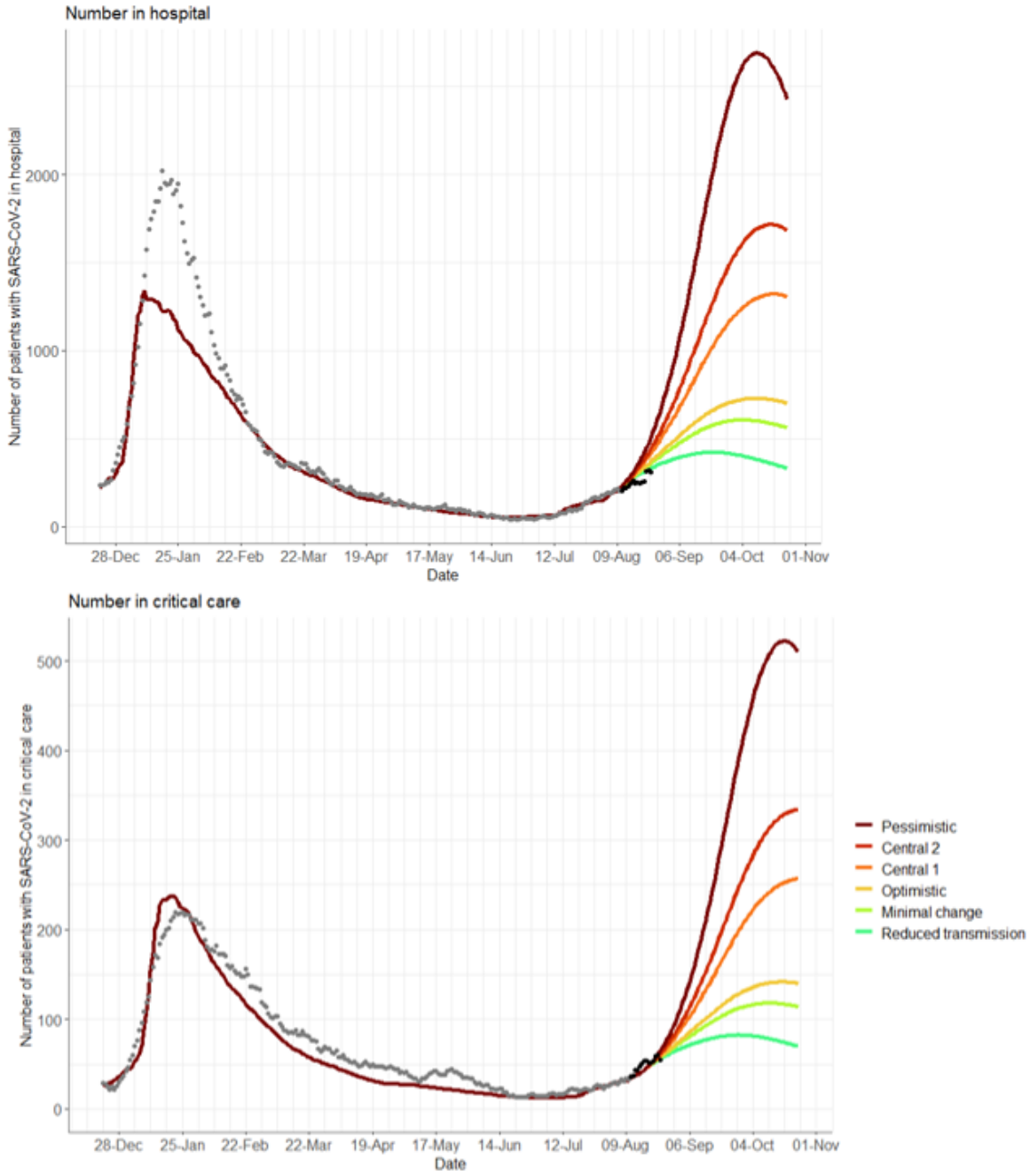


Figure 2: Estimates of numbers of people in hospital and critical care, based on the mean estimated daily cases from the homogeneous population SEIR model from model runs from 11 August 2021, where children and adults are equally susceptible to infection and equally likely to transmit. Vaccination reduces the risk that symptomatic infection will lead to severe disease. The effectiveness of vaccines in this regard is assumed to be similar for alpha and delta variants. The risk of severe disease and mortality is also assumed to be similar for alpha and delta variants. Lines are model fits and scenarios, grey points are actuals to the point of calibration, black points are actuals since date from which the model was run.

The scenarios where children are less susceptible (or less likely to transmit) than adults (Figure 3 and Figure 4) show a lower peak in infections and numbers requiring hospital and critical care, with an earlier peak for the optimistic and central 1 scenarios between 2000 and 3000 cases per day, and a corresponding peak of 400-750 people in hospital and 90-150 people requiring critical care.

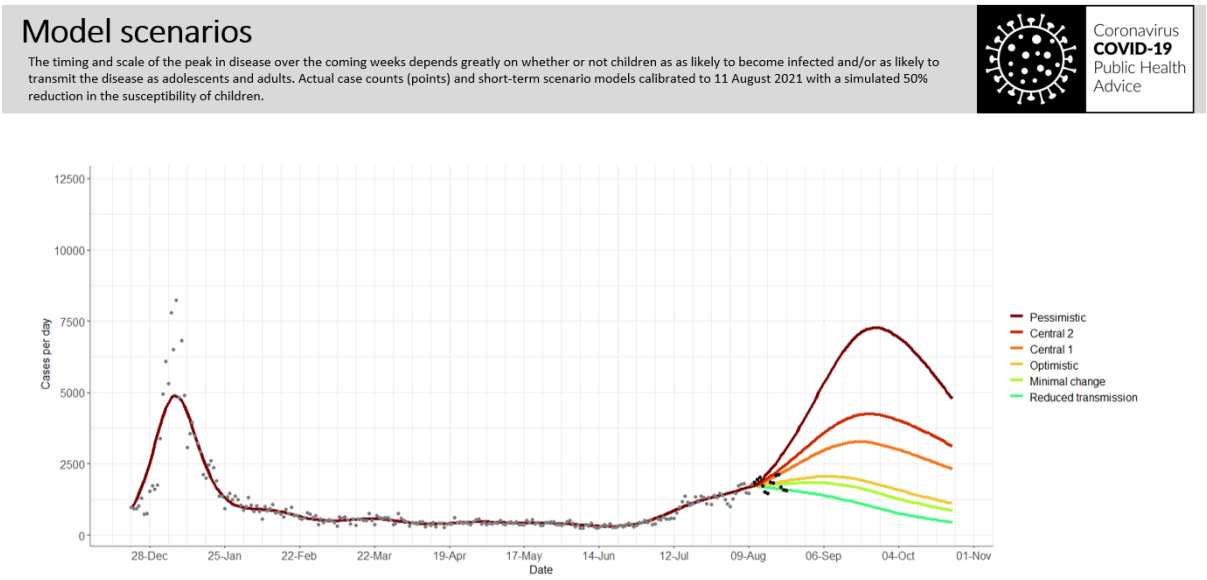


Figure 3: Homogeneous population SEIR model scenario estimates of new cases per day, calibrated to 11 August 2021, where children where children under 12 years old are 50% less susceptible to infection compared to adults.

It is important to state that the scenarios outlined above are in general optimistic about the level of social contact, the transmission advantage of the delta variant, and the susceptibility of children and their contribution to transmission and propagation of the virus. The modelling team are concerned that the level of effective social contact may increase in the coming weeks as schools and higher education re-open, not necessarily due to increased transmission in these educational settings, where there are significant mitigations in place, but due to the additional mobility and social contact that occurs in association with the return to education. If effective social contact over the population as a whole increases by more than 20% in the coming weeks it is likely we will exceed the central 1 scenario.

What is most notable in these scenarios is that following the peak, there is a very slow decline in the level of infection, and an even slower decline in the demand for healthcare. Furthermore, the higher the peak of infection in September, the slower the decline in numbers of cases and numbers in hospital and critical care.

Given the transmissibility of the delta variant, it is very unlikely that vaccination alone, even at very high vaccine coverage, will bring effective reproduction number below 1 and achieve and maintain suppression of the disease. This means that through the winter, possibly in the face of high levels of infection, we will be dependent upon public understanding and persistence with the very basic public health interventions (self-isolating if symptomatic, respiratory etiquette, hand hygiene, physical distancing, face coverings and ventilation) required to minimize the opportunities for the virus to transmit. The higher the level of circulating virus at this point, the greater our vulnerability to significant outbreaks and further surges of disease.

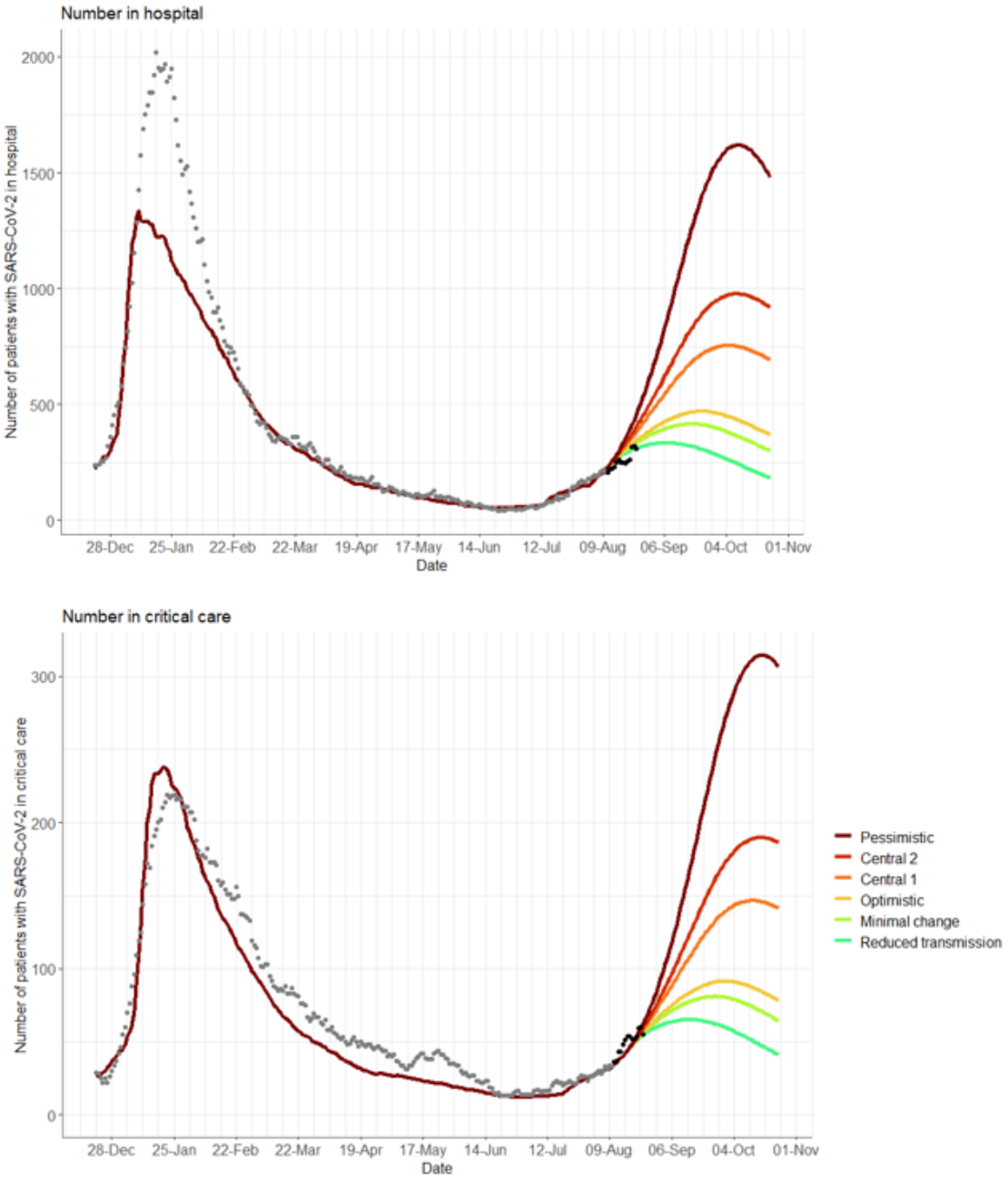


Figure 4: Estimates of numbers of people in hospital and critical care, based on the mean estimated daily cases from the homogeneous population SEIR model from model runs from 11 August 2021, where children are 50% as susceptible to infection as adults.

Appendix 2
Detail of Measures in Immediate Term and Next Phase

The following outlines the proposed approach in the immediate term and in the next phase of the public health management of COVID-19 across each element of the response are outlined below.

Vaccination

Immediate Term

- Vaccinate remaining population of those over 16 years
- Encourage uptake of vaccine among those aged 12-15 years
- Ensure sustained efforts to encourage vaccination, particularly among groups which have proven hard to reach or for whom, to date, uptake has been poor
- Ensure the benefits of vaccination are understood including with regard to cases of COVID-19 occurring in the fully vaccinated

Next Phase

- Continue preparations for the implementation of the booster programme this autumn in line with NIAC advice
- Winter Flu vaccination campaign
- Monitor emerging evidence and data with regard to COIVD-19 vaccination in children
- Continue to support global vaccination programme

Public Health Response: Surveillance and Sequencing

Immediate term

- Maintain and enhance our surveillance capacities and systems to identify outbreaks, with a particular focus on rapid identification and management of outbreaks in vulnerable groups, and monitor trends in the disease profile nationally and regionally;
- Continued strengthening of our genomic sequencing capacities to ensure the prompt identification and investigation of new variants, including sequencing of all travel-related cases

Next Phase

- The HSE's HPSC, in co-operation with the NVRL, ICGP and other surveillance partners, will develop a comprehensive approach to sentinel and other surveillance, including through the GP sentinel surveillance system, acute hospitals surveillance, and wastewater surveillance for Autumn and Winter 2021/22.

Public Health: Testing and Contact Tracing

Immediate Term

The HSE has built a robust testing and tracing system with significant testing capacity. There is currently standing capacity to carry out 175,000 tests per week and to complete full contact tracing for 1,500 detected cases per day. Those who are fully vaccinated and who are identified as close contacts are not required to restrict their movements or be tested for COVID-19 unless symptomatic. However, the current increase in disease incidence is putting pressure on our testing and tracing system and the HSE will need to:

- Target PCR capacity in line with the HSE's prioritization framework

- Transition to close contact testing using validated antigen tests to support PCR capacity in the context of high testing demand
- Prioritise the public health management of outbreaks in higher risk settings according to the HSE's outbreak prioritization framework.

Next Phase

- The HSE will finalise its strategy for Autumn/Winter 2021/22 to ensure implementation at the point at which the criteria to transition are fulfilled.

Self-Isolation/Restricted Movements

Immediate Term

- Continuing requirement for:
    - Those with symptoms to immediately self-isolate and seek a test
    - Those with a positive test result to self-isolate for 10 days
    - Close contacts of a confirmed case to restrict movements unless fully vaccinated
- Increasing proportion of those identified as close contacts (with no symptoms) will not have to restrict movements as fully vaccinated rates increase.

Next Phase

- Appropriate self-isolation of anyone with symptoms and anyone receiving a positive test result will remain an essential component of our response
- Ongoing review of guidance in relation to close contacts.

Physical Distancing

Immediate Term

- Maintenance of existing physical distancing requirements for all people in all public settings
- Those awaiting full vaccination should continue to maintain physical distancing in private settings and should avoid mixing indoors with more than one other household at a time
- No requirement for physical distancing between fully vaccinated people in private settings.

Next Phase

- Removal of formal requirements for physical distancing
- Appropriate physical distancing requirements and visiting guidance in individual healthcare institutions and facilities based on local risk assessment and advice from infection prevention and control teams

Masks

Immediate Term

- Continued application of current mask wearing requirements
- No requirement for mask wearing between fully vaccinated people in private settings

Next Phase

- Individual efforts to wear masks based on individual risk assessment will remain an important component of our collective response to COVID-19

- Formal requirements for mask wearing outdoors and in indoor private settings will be removed
- Continued application of current mask wearing requirements in healthcare settings, indoor retail and on public transport.
- Facemasks may continue to be needed to be worn in other environments as part of sector-specific measures to ensure a safe environment.

Ventilation

Ventilation will remain a core component of our COVID-19 response.

- The HSA has published a new COVID-19 Work Safely Protocol employer checklist on ventilation
- HSE/HPSC have updated guidance, including for non-healthcare settings, to include appropriate references to ventilation and extensive work is taking place with IPC teams on implementation and stakeholder engagement
- While existing guidelines for healthcare facility buildings emphasise the need for adequate space and the move to single-occupancy patient rooms, temporary risk mitigation measures to ensure adequate ventilation to the greatest degree practical may be required in high-risk environments pending new building or refurbishments.
- In healthcare facilities, there is a need for a greater emphasis on capacity for adequate ventilation in design and building refurbishment throughout all areas of healthcare facilities including patient-care and nonpatient care areas.
- Departments/Agencies should continue to review communications on ventilation to ensure appropriate messaging, advice and guidance in relation to ventilation is available and accessible
- Non-healthcare facilities that serve as a base for critical services that must operate through a public health emergency will need to consider design and build for adequate space and ventilation and segregation of indoor air space. This will be less critical for facilities that house services that do not need to operate during a public health emergency or that can operate remote from their core facility during a public health emergency.

Public health restrictive measures

Notwithstanding ongoing public health advice that those who have not been fully vaccinated should avoid or exercise very high levels of caution in high-risk environments, the following measures will be removed;

- Limits on numbers at outdoor events, outdoor sporting activities and in private homes/gardens
- Restrictions on indoor sports activities and other indoor leisure/community activities
- Restrictions on religious and civil ceremonies
- Certification of immunity or testing as a prerequisite for access to, or engagement in, any activities or events (with exception of international travel)
- Restrictions on high-risk activities (i.e. nightclubs)

In addition, it is proposed that, subject to all of the necessary criteria having been met, consideration could be given by the appropriate sectors to the phased reintroduction of spectators/patrons at indoor cultural and sporting events, with institution and maintenance of high levels of basic infection

prevention and control standards including in relation to promotion and facilitation of hand and respiratory hygiene and ventilation. All sectors should also review and align sector-specific guidance and protocols such that they are appropriate to the transition in approach to the public health management of COVID-19.

Workplaces

Immediate Phase

- *Continue to work from home unless essential to be on-site.*

Next Phase

- Individual sectors should enable a return to office working on a phased and cautious basis appropriate to the sector while ensuring continued strong adherence to all of the basic infection prevention and control measures including hand and respiratory hygiene, ventilation, and clear protocols with regard to rapid self-isolation for employees who become symptomatic while at work.
- There will be a need for an ongoing partnership approach between employers and employees to ensure that the importance of self-isolating when symptomatic is understood, communicated and facilitated, such that employees are not disincentivised to identify themselves as symptomatic and stay at home where appropriate.

Border control/travel

Immediate Term

- Advice that non-essential international travel should only be undertaken by those who are immune (vaccinated or recovered)
- Children between the ages of 12 and 17 must have a negative PCR test in order to travel overseas with fully vaccinated or immune parents.
- Children aged 11 and under can travel with fully vaccinated or immune parents and do not need to take a PCR test prior to travelling.

Next Phase

- Removal of requirement for a Digital Green Certificate in order to travel within the EU/UK, subject to ongoing assessment at a European level and advice from the ECDC
- Advice with regard to travel outside of the EU/UK will be kept under ongoing review

Infection Prevention and Control (IPC) in health and social care settings

The emergence of COVID-19 and the associated pandemic has necessitated new ways of working in order to deliver health and social care services in different ways to protect patients, service users and staff. IPC has been well recognised as a key enabler in the delivery and maintenance of COVID-19 and non-COVID-19 health and social care services, including in previous NPHET papers. In particular, IPC has been acknowledged in the Government's *Resilience and Recovery 2020-2021: Plan for Living with COVID-19*, *the HSE Winter Plan October 2020 – April 2021*, both published in September 2020. It is supportive and complementary to other measures, such as outbreak control etc.

COVID-19 has resulted in a very significant increased requirement for IPC supports across the health system since the beginning of 2020. Building on previous work and using established governance structures, an integrated approach to further enhance IPC across the acute hospital and community

sectors was progressed in both 2020 and 2021. Of note, the HSE Antimicrobial Resistance and Infection Control (AMRIC) National Team and structures have proven to be key in providing expert IPC input, guidance and advice.

Immediate Term
A number of co-ordinated and interlinked work programmes are underway to support sustained implementation and enhanced capacity for IPC. These include:

- the *HSE Community IPC Strategy*, developed in line with the recommendations of the *Nursing Home Expert Panel Report* (July 2020),
- the *HSE National Action Plan on Healthcare Associated Infections 2022 - 2027*, currently in development,
- the *HSE Implementation Plan for Antimicrobial Resistance*, which is ongoing,
- and at national policy level, *Ireland's second National Action Plan on Antimicrobial Resistance 2021-2025* (iNAP2), which is currently being finalised.

The learnings and experience related to IPC from throughout the COVID-19 pandemic are a key input and driver of each of these work programmes. This includes the IPC learnings previously identified by NPHET at the meeting on 21st January last.

Next Phase
A continued focus on IPC is required to promote best practice and ensure sufficient and appropriate supports and resources across the health and social care system to protect patients, their families and staff. Work is underway to determine the 2022 requirements. This will be progressed via the relevant strategies and plans.

Nursing Homes and other long-term care facilities
In its Risk Assessment of COVID-19 outbreaks in long-term care facilities in the context of the current vaccination coverage, the ECDC[3] has highlighted the need to ensure all necessary protective measures remain in place. The substantial package of non-financial supports currently in place should continue to be made available and there should be a continued improvement trajectory with regard to the strengthening of regulation in these settings.

The HSE, HIQA and relevant stakeholders should continue to progress the short to medium term recommendations of the COVID-19 Nursing Homes Expert Panel with a particular emphasis on:

- the development of Community Support Teams
- an Integrated Infection Prevention and Control Strategy for the Community
- the development of the role of the GP Lead
- the development of guidance for the composition and role of Clinical Governance Committees and enhancement of adult safeguarding services.
- continued assurance from the HSE and HIQA to the Minister in line with their statutory responsibilities

[3] European Centre for Disease Prevention and Control. COVID-19 outbreaks in long-term care facilities in the EU/EEA in the context of current vaccination coverage, 26 July 2021. ECDC: Stockholm; 2021

Acute Hospital Care and Community Care

Key learnings from the pandemic must continue to be applied to ensure that acute hospitals are protected and prepared to continue to deliver care in the context of COVID-19 and beyond. In particular, these learnings include the need to increase critical care capacity, which will be addressed through the continued implementation of the Strategic Plan for Critical Care.

The pandemic has also led to unprecedented disruption of normal healthcare activity in the primary care setting and exacerbated historical capacity deficits. The HSE's organisational response should continue to be governed by a prioritisation of service delivery where appropriate, while efforts to expand capacity through the Enhanced Community Care programme and other initiatives must continue to be supported.

Continued strengthening of our health and social care system will be required to ensure capacity is in place for potential increased user needs following the pandemic including with regard to increased frailty, scheduled care, long-term effects of COVID and missed screening.

Public Health Engagement and Public Health Communication

Immediate Term

- Continue to encourage unvaccinated cohorts to comply with the public health advice and to come forward for vaccination at the appropriate time
- Continue to communicate the role of non-pharmaceutical interventions in breaking the chains of transmission
- Continue to combat misinformation and disinformation in relation to vaccination and the wider public health measures against COVID-19.

Next Phase

- Development of a targeted communications campaign to support the transition in the management of COVID-19
- Ensure the public are aware of the precautions they need to take to protect themselves and their families from COVID-19 on an ongoing basis, to include not going to work/social events if symptomatic, mask-wearing as appropriate in some public places, public health advice on international travel, the requirement for vaccine boosters etc.
- Evolve from issuing daily statistics on the pandemic to making information on the status of the disease publicly available online
- Encourage vaccinated cohorts, particularly those who remain anxious, to resume their former lives
- Public engagement to understand the impact the pandemic has had on people's health and wellbeing.

Education

The HSE is currently working with the Department of Education to plan for and optimise the approach to COVID-19 in educational settings in the forthcoming academic year 2021/22. In addition, there has been considerable preparation for a significant increase in onsite attendance in the tertiary education sector in the next academic year within the framework of the Safe Return Plan which was developed with cross-stakeholder engagement and published in June 2021.