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26th November 2020

Via email to Private Secretary to the Minister for Health

Dear Minister,

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

Overview

On 15th October, the NPHE recommended that the country move to Level 5 restrictive measures as provided for in the 'Resilience and Recovery 2020-2021: Plan for Living with COVID-19'. The purpose of that recommendation was 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 services for health needs unrelated to COVID-19; to enable safe provision of childcare services and to ensure that schools could remain open.

At that time, transmission of COVID-19 was out of control in that the growth rate of the epidemic was accelerating, the number of cases and the number of hospitalisations were increasing faster than had been predicted via modelling, the number and scale of outbreaks within nursing homes and amongst the Irish Traveller community was increasing, the public health operational response was constrained and there was growing evidence that health system capacity would be overwhelmed if stronger measures were not taken urgently.

Over the past five weeks, through widespread commitment and adherence to the public health restrictions put in place by Government, much of the potential impact of this second wave has been averted, the objectives advised by the NPHE have been met and transmission of the disease has reduced significantly. This is particularly evident by reference to the experience of almost all other countries in Europe. In early October, Ireland was mid-table in Europe in terms of disease incidence. The measures in place since then have seen a sharp reduction in incidence, hospitalisation, critical care admissions and mortality. In that time period, most of Europe continued on a path of increasing incidence which led to levels of hospitalisation, ICU admission and mortality which have been largely averted in Ireland by the Government's pre-emptive action.

In addition to the implementation of population-level restrictions, other contributory protective factors may have included, but are not exclusive to, the enhanced behavioural changes in vulnerable population groups (e.g. older persons) and the various infection, prevention and control measures implemented across a range of vulnerable settings since the onset of the pandemic and which have been continuously enhanced over recent months.

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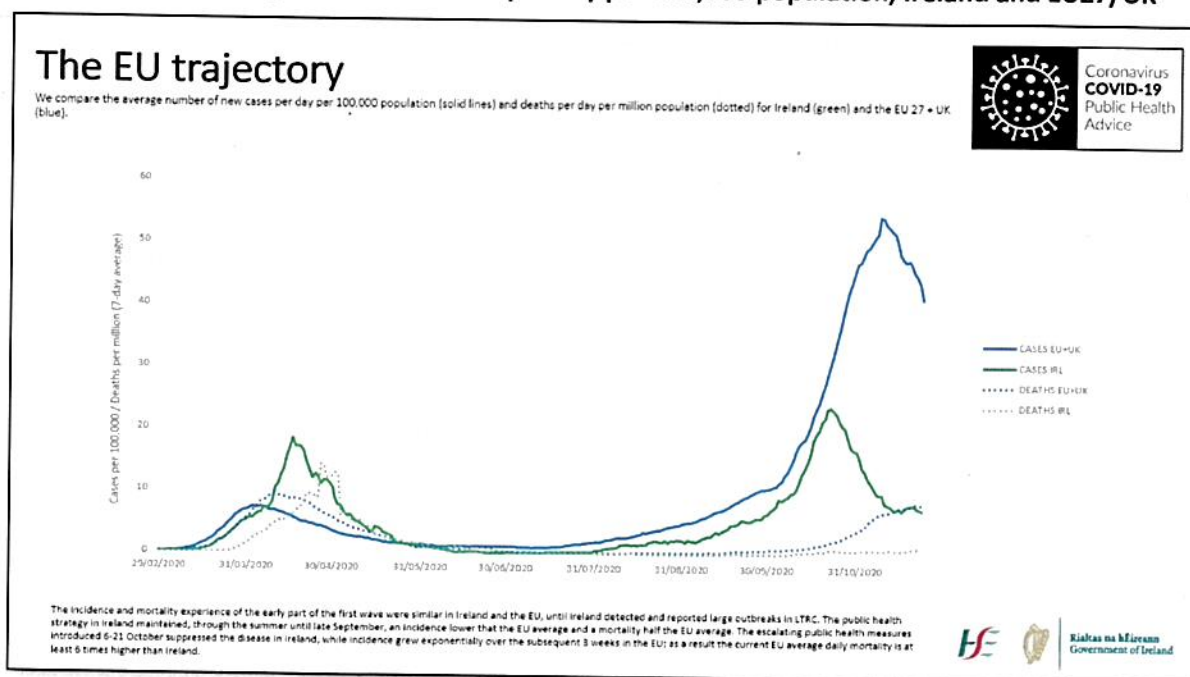
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Impact of recent measures and comparison with international experience

The public health strategy in Ireland maintained, through the summer until late September, an incidence lower than the EU average and a mortality half the EU average; at the beginning of September, Ireland was reporting approximately 2 cases per 100,000 people per day, compared to the EU27/UK average of 5 per 100,000 per day.

Ireland and the EU27/UK then saw exponential growth in case numbers, followed by significant mortality; this second wave began in late June and early July, and accelerated rapidly in early October. The escalating public health measures introduced in Ireland between 6 and 21 October 2020 suppressed the disease in Ireland, while incidence grew exponentially over the subsequent 3 weeks in the EU27/UK (Figure 1) (Appendix 2). As a result, the EU27/UK experienced an average peak incidence that was more than twice that of Ireland (54 cases per 100,000 people per day versus 23 cases per 100,000 people per day) and the current EU27/UK average daily mortality is at least 6 times higher than Ireland (8.2 deaths per million per day versus 1.3 deaths per million per day in Ireland). If case numbers and mortality in Ireland had followed the EU27/UK average, this trajectory would have resulted in a peak incidence of 2,600 cases per day in Ireland in early November, and a current death rate of approximately 40 deaths per day.

Figure 1 Average number of cases per day per 100,000 population, Ireland and EU27/UK

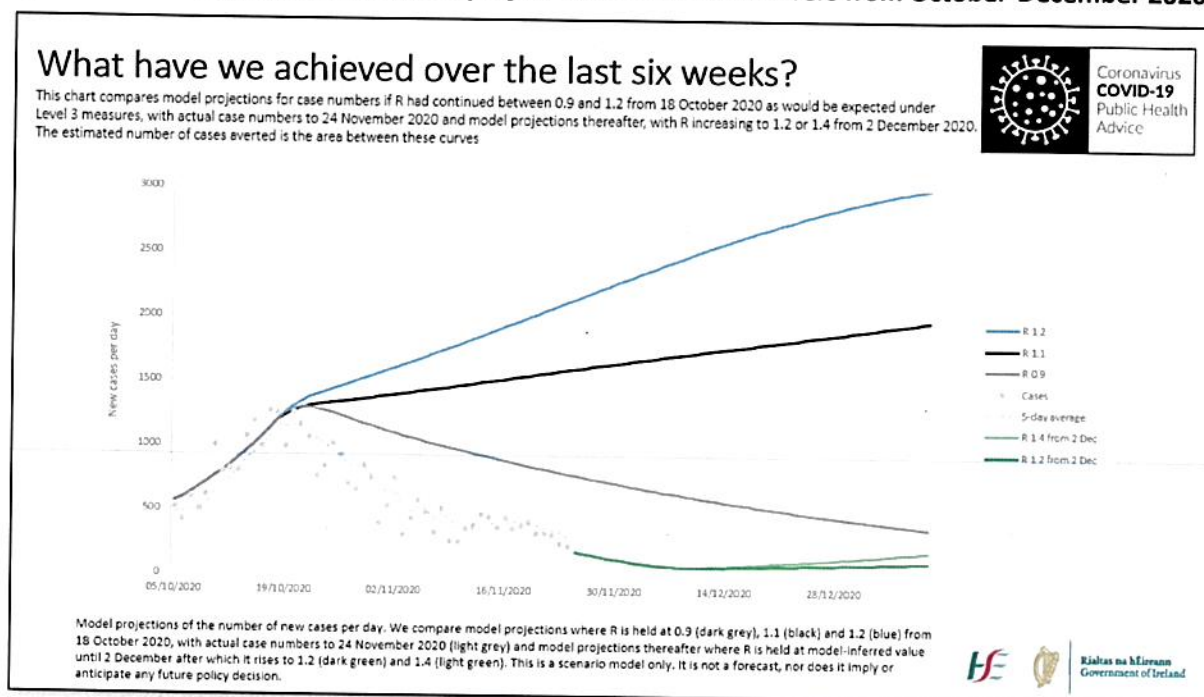


We have also examined the likely impact of the public health measures introduced from 15th to 21st October in Ireland by comparing model projections of likely case numbers if Level 3 measures had been maintained from that date (assuming R between 0.9 to 1.2) with actual case numbers to 24th November.

Our modelling estimates show that, even if some of the gains of the last 6 weeks are lost (if R increases to 1.2 from 1st December), the public health measures introduced are likely to have prevented

between 21,000 and 54,000 cases to end-November 2020 (Figure 2). The prevention of these cases would, in turn, have averted between 800 and 2,200 hospitalisations, between 130 and 320 ICU admissions and between 100 and 270 deaths to the end of November 2020. The lower bound of these estimates is where R is assumed to continue at 0.9 from late October; the upper bound is where R is assumed to continue at 1.2; all estimates assume the age profile of cases, and severity and mortality, remain as they were in the July-September 2020 period (this is a conservative assumption, as the incidence in older persons has increased in the course of the second wave).

Figure 2 Comparison of model projections with case numbers from October-December 2020



Current Epidemiological Trends and Disease Modelling

Epidemiological Data

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

- A total of 2,278 cases have been notified in the seven days to the 24th November, compared with 2,895 in the previous seven days, representing a 21% decrease;
- As of 24th November, the 7- and 14-day incidence rates per 100,000 population are 48 and 108, respectively; these compare with peak rates of 173 (21st October) and 310 (26th October), respectively;
- Nationally, the 7-day incidence as a proportion of 14-day incidence is 44%, demonstrating that there have been fewer cases in the last 7 days compared with the preceding 7 days;
- The 5-day rolling average has decreased from a peak of 1,204 on 21st October to 293 on 24th November;
- 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 past 14 days is 35 years;

- The proportion of cases notified in the over 65 age group is stable. In the last seven days 12.3% of cases notified were aged over 65, this compares with 12.9% of cases notified in the previous seven days; however, we continue to observe high incidence in older persons;
- We continue to see a high proportion of infections in healthcare workers who account for 13% of all reported cases in the last 14 days. In the week from 15th November to 21st November, 70% of cases associated with healthcare workers were located in acute hospitals or nursing homes;
- There has been a reduction in the national 14-day incidence, however seven counties have a 7-day incidence as a percentage of 14-day incidence greater than 50% indicating an increase in cases in the last seven days compared with the previous seven days;
- The daily growth rate of the disease has disimproved from -5% to -7% (rapid decline in cases) to approximately zero for the last 7 days;
- The best estimate of the reproduction number (R) is currently 0.7 to 1.0;
- A total of 77,919 tests were undertaken in the last seven days. The 7-day average test positivity rate has decreased from 3.9% to 2.7% in the last week;
- Excluding serial testing the positivity rate is estimated to be 4.7% over the last 7 days;
- There are currently 269 confirmed COVID-19 cases in hospital, compared with a peak of 354 on 27th October. The 7-day average of daily newly confirmed cases in hospital is 12, compared with a peak of 28 in the week to 28th October. The total number of cases in hospital has stabilised but is not decreasing;
- There are currently 36 confirmed cases in critical care, compared with a peak of 47 on 1st November. The 7-day average of daily admissions to critical care is 2, compared with a peak of 3 in the week to 1st November. The total number of cases in critical care has stabilised but is not decreasing;
- To date, there have been 94 deaths notified with a date of death in November. This compares with 37 and 119 deaths notified (to date) with a date of death in September and October, respectively. Of the 94 deaths that have occurred in November; 37 are associated with nursing homes and 26 are associated with hospital outbreaks.

Further relevant information

- An additional 772 new clusters were notified in the week to midnight 21st November 2020 (week 46). There were 5,639 open clusters nationally;
- In the same week, 52 open clusters were associated with nursing homes and community hospital/long-stay units and there were 53 open clusters associated with acute hospitals;
- There were 5 new clusters notified in nursing homes/community hospitals with 19 linked cases, a reduction on the previous week (140 cases); there were also 8 new clusters notified in acute hospitals with 28 linked cases;
- Twenty new outbreaks in workplace settings were notified in week 47, there are currently 121 open outbreaks in workplaces;
- There were 19 new outbreaks in schools (this does not necessarily indicate that transmission in the school setting was strongly suspected) with 53 linked cases in the last week;
- A range of mobility data suggest that current measures have resulted in reduced mobility in the population in recent weeks following the introduction of level 5 measures, but at higher levels than in spring 2020;

- The average number of close contacts has decreased from approximately 5-6 per confirmed case at the end of September to approximately 3.5 per confirmed case in late October/early November; this indicator has increased to 3.8 per in recent days;
- As of 24th November, the 14-day incidence per 100,000 population in Northern Ireland is 327 cases, this is more than 3 times the 14-day incidence in the Republic of Ireland which is currently 106 per 100,000 population. The 7-day incidence per 100,000 population in Northern Ireland is 130 cases, this is more than 2.5 times the 7-day incidence in the Republic of Ireland which is currently 48 per 100,000 population;
- The latest estimates (week 46) from EuroMOMO show substantial overall excess all-cause mortality for participating European countries, coinciding with a reported increase in COVID-19 cases in several countries. This is driven by a very substantial excess mortality in some countries, while other countries observe normal mortality levels. The excess all-cause mortality is seen primarily in the age group of 65 years and above, but also in the age groups of 15-44 and 45-64 years. To date during wave 2 there has been no excess all-cause mortality observed in Ireland.

In summary, this country has made substantial progress over the last five weeks with significant suppression of viral transmission which resulted in daily average counts and 14-day incidence per 100,000 population reducing from 1,200 to 293 per day and from 307 to 108, respectively. While the decline in case numbers stalled between 11th and 19th November, further improvement has been noted in recent days. Equally importantly, the efforts made by the people of Ireland have greatly reduced the *force of infection*, the rate at which the disease is now likely to spread; reducing the risk of resuming priority social and economic activities.

However, most estimates of R and growth rate reflect the recent stasis, with the current growth rate close to zero and the best estimate of R at 0.7-1.0. In addition, there is persistent and delayed incidence in healthcare workers and notification of healthcare setting outbreaks, and the number of confirmed cases in hospital, critical care, and COVID-19 deaths are not decreasing which gives rise to significant concern. In addition, the incidence in older persons, a population group who are most vulnerable to this disease, remains high.

Disease modelling

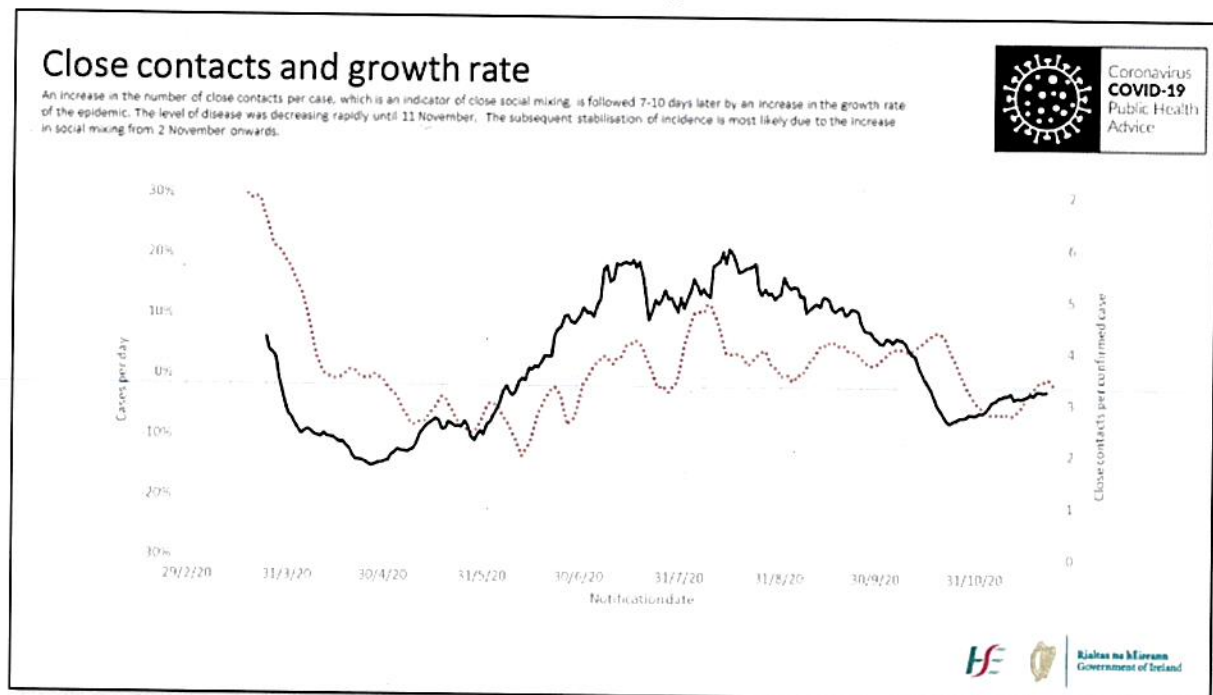
It is recognised that it is difficult to determine with certainty (i) the effect of any specific public health intervention on viral transmission and incidence of infection or (ii) the rate of transmission or population average reproduction number that might be associated with any given level of the Framework for Restrictive Measures set out in *Resilience and Recovery 2020-2021: Plan for Living with COVID-19*. Correlation and temporal association do not necessarily imply causation, there are important confounding factors, and it is clear that the relationship between the formal public health measures and the human behaviours that lead to viral transmission are complex. As noted by the WHO, multiple psychological, societal and cultural factors changing on an ongoing basis increase the complexity of planning for COVID-19 response transitioning.

We know from data on the number of close contacts per case, our best indicator of the level of close social contact in the population (Figure 3), and behavioural survey data that the population frequently anticipate a change in measures, modify their perceptions of risk and then vary their response

accordingly over time. Nonetheless we have examined carefully the data available, with the following conclusions:

- The restrictions that applied to most of the country during July to September, broadly equivalent to Level 2, appears to be associated with a reproduction number (R) in the range 1.2 – 1.6
- Level 3, with hospitality closed, as applied to Dublin and Donegal appears to be associated with R in the range 0.9 – 1.2
- Level 5 appears to be associated with R of 0.6 – 0.9.

Figure 3 Close contacts per confirmed case and growth rate in cases



It is not possible to determine the effect on viral transmission of the additional restriction, within Level 3, prohibiting visits between households, given that the measure was applied in a dynamic situation and for a period of only 6 days. We are mindful, however, of international evidence, including the evidence synthesis provided by UK SAGE, which suggests that the closure of hospitality might reduce R by between 0.1 and 0.2, which accords with our national data, and that the prevention of mixing between households might have an equivalent effect on R.

This gives us a basis for modelling possible scenarios if restrictive measures are eased from 1 December 2020. We note at the outset that if, at some future point, case numbers start to rise again, it will be **important to intervene early to bring transmission back under control**. We know from previous modelling work that it would be possible to suppress transmission with a 3-week intervention only if it begins as case numbers approach **400 cases per day**. We have modelled, therefore, a set of scenarios where, from 1 December 2020, R varies from 1.1-1.2 (what might be expected under Level 3 restrictions with hospitality closed and limited visits between households) and 1.4-1.6 (what might be expected with hospitality open or increased visits between households). The model is influenced

by the rapid decline in case numbers over the last four weeks, and assumes this will continue until early December 2020. This establishes an optimistically low starting point (less than 100 cases per day). Given these initial conditions, if R is maintained below 1.2, case numbers remain low, but for R of 1.4 or greater, we would **exceed 400 cases per day in January 2021. If we start with higher case numbers in early December, this threshold will be breached sooner.**

It is inevitable that there will be increased visits between households and social mixing over the Christmas period. We have modelled a period of more intense interaction by increasing R to 2.0 from 22 December 2020 to 6 January 2021. The effect of this depends on the background reproduction number in the weeks leading up to Christmas:

- if this is in the range 1.4 to 1.6 we see a rapid acceleration of the disease, with exponential growth beyond 400 cases per day in very early January 2021
- even in the very controlled scenario where R is held at 1.2 from 1 December to 21 December 2020, and returned to that level from 7 January 2021, modelling suggests that the level of disease in January 2021 will present a real and substantial threat to the ongoing protection of public health and of the most vulnerable, the protection of health and social care services (including non-COVID care) and the protection of our schools and education system.

It is useful to compare our current situation and likely future trajectory with our position in June 2020. During the summer, restrictions were slowly and progressively eased, from a very low force of infection (somewhere between one-tenth and one-twentieth of what we will have in early December). Reproduction number increased above 1.2 in the course of July 2020 but, given the very low case numbers and force of infection, it took many weeks for the level of disease to reach critical levels. The above modelling scenarios can be summarised in the following terms: if restrictions are eased now, to a similar extent but more rapidly than in the summer, from a higher baseline force of infection, in winter and over the Christmas period (with higher levels of indoor congregation, travel, social activity and inter-household and intergenerational mixing) a third wave of disease will ensue much more quickly and with greater mortality than the second.

Given the current epidemiological situation and the modelling data as set out above, and notwithstanding the very significant progress that has been made over recent weeks and the appropriateness of now moving to ease measures, the NPHET was therefore of the view that a cautious approach is required, that it will not be possible to provide for an easing of measures across all sectors and that difficult choices therefore need to be made if the progress to date and the objectives of protecting public health, the vulnerable and the essential public services of health, childcare and education are to be protected.

Key considerations relating to easing of measures

The very real and substantial progress achieved in recent weeks has been such that it is now appropriate to ease some of the measures which are currently in place in line with the recommendations set out below. However, it should be very clearly understood that, given the prevailing cases numbers and reproduction number, the epidemiological situation remains fragile.

For this very important reason, the experience of other developed countries and as advised by the World Health Organisation (WHO) and the European Centre for Disease Prevention and Control

(ECDC), the transition out of measures such as are currently in place in Ireland should be gradual and staggered and will require strict monitoring with possible reintroduction of measures should there be a new increase in cases.

In considering its recommendations, NPHET was particularly aware of the importance at an individual and societal level of the upcoming festive period and the very understandable desire of people to gather with family and friends.

The NPHET acknowledged that irrespective of formal measures or guidance which might be put in place, the Christmas and New Year period will bring with it:

- increased levels of domestic and international travel
- increased levels of interaction and socialisation between people
- increased levels of inter-generational mixing, and
- significant reframing of 'households' as students and those working away from their family homes return to those homes over the festive period.

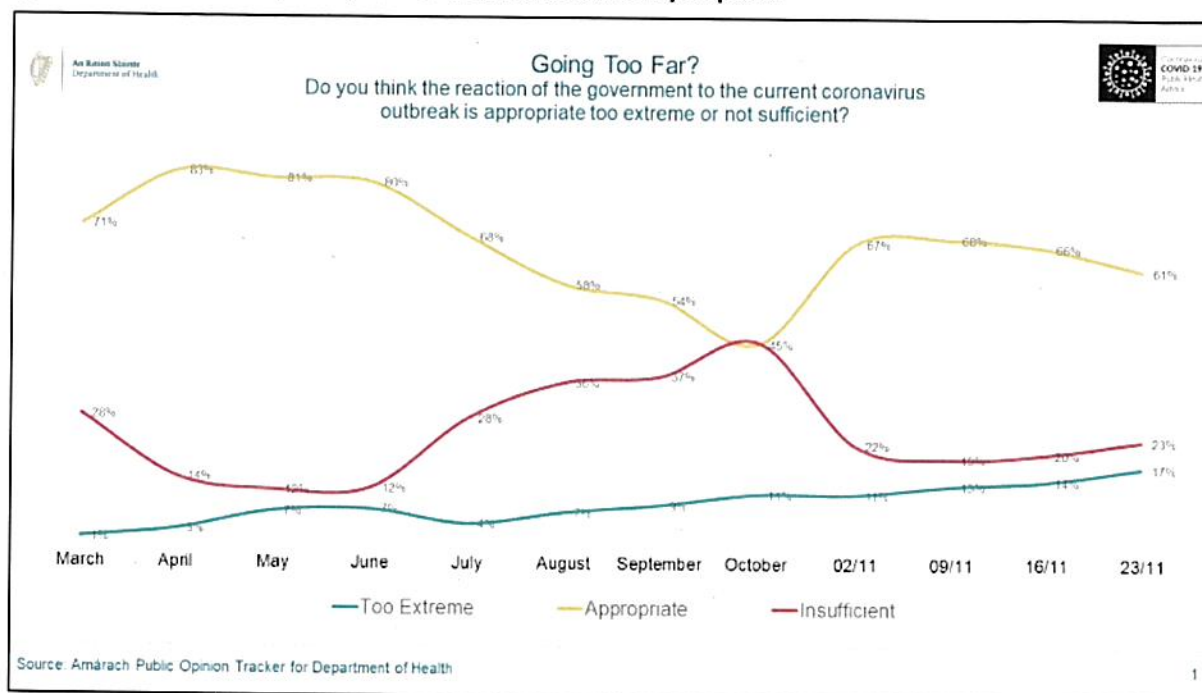
Given that this combination of activities is likely to have a very substantial impact on levels of social contact over the period, there is a need to prioritise and make choices about which elements of discretionary social contact should take precedence over others.

In considering those choices, the NPHET was acutely aware of the burden that the most recent period of restrictions has already placed on families, communities, businesses and organisations across the country. It acknowledged the determination and solidarity shown by people in adhering to the public health advice and guidance to date; in doing so, they have protected themselves, their families and the most vulnerable in their communities. This has not been in the case in many other countries across Europe. The NPHET reiterated the importance of continued public buy-in to protective measures over the coming months, notwithstanding both the understandable fatigue with the measures and the very encouraging developments with regard to potential vaccines. In this regard, the NPHET emphasised the importance of clarity, simplicity and consistency with regard to the messaging and guidance with regard to public health measures over the coming period.

The NPHET was also cognisant that while our core priorities have been largely protected as a result of the significant progress which has been made over the past number of weeks, this should not be taken for granted and the progress achieved remains fragile. As has been demonstrated by the experience internationally, it is of vital importance to keep this disease under control if we are to protect those who are most vulnerable, avoid undue impact on our healthcare system and the staff who work within that system, including with regard to the provision of non-COVID care, and if we are to continue to keep our schools and education system and childcare services open.

The NPHET also had regard to the behavioural research on people's attitudes, plans and expectations for the upcoming festive period (**Appendix 3**). Of note, a large majority of people believe that the measures currently in place are appropriate (61%) or insufficient (23%) (Figure 4). In addition, the NPHET noted that the data shows that 65% of respondents would be happy to have a quieter Christmas than usual this year and that the public do not want a 'normal' Christmas at the expense of increased infections and tighter restrictions again in January 2021.

Figure 4 Public perception of measures currently in place



For all of the above reasons, the NPHET advises that a **phased and stepwise approach should be applied** in line with best international advice and practice and as was previously applied in Ireland in the earlier phase of the pandemic. This will allow for the assessment of the cumulative effects of lifting restrictions and the impact of the holiday season in advance of any further relaxations.

As already highlighted, the NPHET is concerned that the disease trajectory could once again turn quite quickly. Given recent experience in Ireland and more generally across the EU, we know how difficult it is to effectively arrest and reverse the trajectory of the disease and prevent transmission to vulnerable groups once community transmission becomes widespread. It will be imperative that early, proactive action is taken if the profile of the disease deteriorates significantly to enable a shorter period of restrictions.

The recommendations below are being provided at a time when there has been very encouraging news in relation to vaccine trials and there is now widespread optimism that vaccines will become available in 2021. However, until there is certainty regarding their safety and efficacy and until there has been a significant proportion of the population vaccinated, there will be a continued need for vigilance and the application of non-pharmaceutical public health interventions. But these developments should strengthen our resolve and give us new momentum to sustain and build on the progress we have made over recent weeks.

Key recommendations

Detailed advice in relation to the easing of current measures over the coming period is set out in **Appendix 1**. In broad terms, the NPHET advises:

- the application of enhanced Level 3 measures for an eight-week period from the 2nd December
- a further easing of some measures for two weeks over the Christmas and New Year period itself from 21st December to 3rd January in recognition of the societal importance of the upcoming holiday period. This includes a relaxation in relation to domestic travel, visits to private homes and long-term residential care facilities and religious services
- the full reinstatement of enhanced Level 3 measures after the holiday period as a proactive strategy to mitigate in so far as possible the impact of inevitable increased levels of socialisation and, consequently, disease transmission over the festive period.

Household Visits

The NPHET is very conscious of the significant impact of restrictions on household visiting. The NPHET advises that it is appropriate to allow some easing of this restriction from the 2nd December with a further relaxation for the two-week period over Christmas as follows:

- Visits to private homes should be allowed from **one other household to a maximum of 6 visitors** from the 2nd December. It is proposed that, for those who are part of a support bubble, the bubble counts as one household and it may meet one other household
- Visits to private homes of up to **a maximum of 6 visitors from 3 other households** should be allowed for the two-week period. Communications should however emphasise that **gatherings of this scale should only happen on a small number of occasions and that the safest way to celebrate the holidays is with members of your immediate household**. It is appreciated that this will mean a very different Christmas for many, but it is imperative that we continue to keep levels of congregation and inter-household mixing as low as possible. For those who are part of a support bubble, the bubble continues to count as one household.

Domestic Travel

The NPHET advises that domestic travel restrictions should be relaxed on the 2nd December to enable travel within a county without any restrictions in line with Level 3. The NPHET further advises that all domestic travel restrictions should be lifted for the two-week period over Christmas. **Communications should emphasise that travel should however be kept to a minimum, with no more than one significant trip over the period.** Everyone should continue to be encouraged to avoid non-essential travel and to stay within their local area as much as possible. Public transport bodies should ensure protective measures are in place to manage increased demand, including providing more services over longer hours during peak periods. For those that are traveling to spend a period of time over the holidays with family or friends, it is advised that they **should restrict their movements in so far as possible prior to travel**, especially if they are planning to visit/reside with vulnerable persons during this period, and to be cognisant of reduced capacity on public transport and consider travelling early.

Travel to and from Northern Ireland

Given the current high incidence of the disease in Northern Ireland, as a public health measure the NPHET advises against all non-essential travel both to and from there.

Hospitality Sector

The NPHET gave particular consideration to the reopening of the hospitality sector, both in terms of Level 3 measures that are to apply for the next eight weeks and the easing of some measures which will apply over the two-week holiday period. While acknowledging the substantial impact that continued restrictions are having on this industry, and also the desire by many to be able to return to hospitality settings, the NPHET is of the view that the risks associated with socialisation in these settings remain too high at current infection levels, particularly in the context of the other forms of socialisation and interaction between people, families and across generations that will inevitably happen over the coming weeks. In particular:

- there is a growing body of evidence that indoor environments like bars and restaurants are high risk due to the increased likelihood of crowded spaces, prolonged and intense contact with others, poor ventilation, and noise levels, and the higher risk associated with certain activities including dining, drinking, singing or shouting
- hospitality settings and gatherings in social settings such as bars and restaurants have been associated with super-spreading events and transmission in social settings, both in Ireland and internationally, and have been significantly associated with an increased number of secondary cases compared with transmission in family households.

The NPHET therefore recommends that the hospitality sector remain closed (with the exception of take-away and delivery) over the eight-week period. This should not be seen as a reflection on the sector itself, which has made tremendous efforts in making premises as safe as possible for staff and customers, but rather it is a recognition that many of the key risk factors for COVID-19 transmission and clustering of cases are common characteristics of these settings. Of note, **if some element of hospitality is retained, the NPHET is of the view that the recommended easing of measures with regard to household mixing over the two-week festive period as set out above could not also take place.**

Religious Services

The NPHET gave specific consideration to the issue of religious services. While recognising the inherent risks associated with indoor gatherings, potential congregation outside of services and the potential heightened vulnerability of those attending, the NPHET advises that religious services should be permitted for the **two week period** between the 21st December and 3rd January, with strict protective measures in place. The NPHET advises that current guidance is reviewed to ensure services are managed in as safe a manner as possible, with particular attention given to the avoidance of congregation before and after events and choir/carol singing. It is also recommended that the wearing of face masks (not visors) is advised in all places of worship.

Face Masks

The NPHET also gave consideration to an evidence summary undertaken by HIQA in relation to the use of face masks. Based on the evidence in relation to the efficacy of face masks and practice in other countries, the NPHET recommends:

- the use of face masks (not visors) in all communal areas in indoor workplaces, including shared offices, corridors, and other shared workspaces
- the use of face masks (not visors) in all places of worship

- the use of face masks (not visors) in busy or crowded outdoor spaces, where there is significant congregation and where social distancing may not be possible, including busy shopping areas.

Communications

The NPHET recommends a comprehensive communications campaign, providing clear and simple advice on how to have a safe Christmas. The future trajectory of the disease will be dependent on the decisions and actions of every individual across the country, and the NPHET asks everyone to keep their social contacts low over the coming period and appeals to all sectors, organisations, businesses and regulatory authorities to take all the necessary steps to ensure services are reopened safely.

Monitoring and enforcement

There is a firm responsibility on employers and organisations to ensure that workplaces, venues, events and other activities over the coming weeks adhere to public health advice and guidelines, and on relevant authorities and regulatory bodies to ensure that the measures advised and agreed are then subsequently applied, monitored and enforced. People should **continue to work from home unless absolutely necessary to attend in person**.

International Travel

The NPHET expressed its considerable concern that international travel over the coming period will undermine the progress achieved by the country in recent weeks. Given the profile of the disease in Europe and, notably, in North America, and the continuing risks associated with travel, NPHET strongly advises against all non-essential travel, in particular during the forthcoming holiday season.

In light of the establishment of the ‘traffic light’ system for international travel, NPHET recommends continued clear messaging on the need to follow public health advice following essential travel. It is important, in the light of the EU “traffic light” system provision in relation to persons travelling for an essential function or purpose, including “an imperative family reason”, that this should be confined to limited situations, such as travel for a funeral or essential healthcare reasons.

For travel that does proceed, NPHET strongly advises:

- that passengers travelling into Ireland strictly adhere to the advice to restrict their movements for 14 days if they do not avail of PCR testing before or after travel
- that those who have taken a pre-departure PCR test before travelling to Ireland should continue to closely monitor for any symptoms due to the risks associated with the incubation period of the virus, and immediately self-isolate and seek medical advice if any symptoms do arise
- that, for those opting for a test at least 5 days after arrival, the period of restricted movements should only end when they have received a not-detected result, and not from the point the test is taken
- that strong multilingual advice be provided to passengers arriving into the country, detailing the official advice around restricting movements, PCR test protocols and reference to the prevailing public health restrictions

- that passengers limit their interactions with family members and friends, especially where persons are at particular risk should they contract COVID-19.

This advice is vitally important for those who, for imperative reasons, are coming to Ireland and those who may travel out of Ireland for Christmas and then return. The NPHET acknowledges that it may be difficult for those who would wish to travel at this time of the year to refrain from doing so on this occasion, but believes that the risks associated with the importation of COVID-19 through international travel will be understood by all those who wish to ensure that the incidence of COVID-19 in Ireland continues to be carefully controlled.

Health system preparedness and future Public Health operational response

Health system preparedness

As part of its considerations informing the set of recommendations, NPHET reviewed the current position in relation to the delivery of health services across primary, community, social and acute settings. As would be expected given the scale of this pandemic, and as similarly experienced internationally, COVID-19 has presented an unprecedented challenge to the operation of the health system across all settings, and the pandemic has required a substantial response to ensure protective measures are in place to ensure provision of both COVID-19 and non-COVID care.

In particular, it is clear that in Ireland, as elsewhere around the world, there has been less provision of non-COVID healthcare in 2020 than in previous years. This reduced utilisation of non-COVID health services may be correlated with negative health outcomes in the immediate, medium and long-term. In managing and responding to the COVID-19 environment, the focus for the remainder of this year and into 2021 must therefore be to continue to safely deliver COVID-19 and non-COVID care side by side; to maximise the volume of non-COVID care and “catch-up” on lost delivery where possible; and to embed reform in the delivery of services. This will be supported by significant investment in health services in 2021, although it is acknowledged that there will be a time-lag before the benefits of investment become apparent.

The level of COVID-19 in the community will inevitably be a key determinant of the level of care that can be delivered across all settings, and of the associated risk to both healthcare workers and service users:

- Notwithstanding good infection prevention and control (IPC) practice, increased community transmission would be likely to drive outbreaks in hospitals and residential care facilities, resulting in closure of services where necessary;
- Where outbreaks occur, these services are impacted by the loss of staff on COVID-19 leave; other services are impacted due to the need to redeploy staff;
- Any necessary redeployment of staff to respond to urgent COVID-19 needs would impact the level of non-COVID care that can be delivered;
- Significant numbers of COVID-19 cases would lead to increased demand for primary and acute health services, displacing non-COVID care and potentially leading to an overwhelmed system in which quality care is not delivered and outcomes are poorer;
- Irrespective of infection rates, services have had to be reconfigured to provide for the required physical distancing and IPC COVID-19 requirements with an impact on levels of service available;

- All health and social care services have to be provided in a COVID-19 context irrespective of the rate of transmission.

The challenge of COVID-19 has significantly impacted on the health system's ability to maintain business continuity, staff capacity, service delivery models, infection, prevention and control and patient and staff safety. The priority must be to maximise the provision of services across all areas of service need, in order to support attainment of the best possible outcomes across the population in the short, medium and long term.

Public health operational response to COVID-19

While the potential deployment of safe and effective vaccines are on the horizon, it must be expected that the pandemic will last for at least several more months. There is a need, therefore, to continually assess and improve the public health operational response underpinning the control of transmission of COVID-19 in the community. As noted in the Government's *National Action Plan in Response to COVID-19*, published in March, and as reiterated in the more recently published *Resilience and Recovery 2020-2021: Plan for Living with COVID-19*, public health measures including case detection, robust and timely contact tracing and disease surveillance are central to our ongoing approach and hence there must continue to be a concerted focus on building public health workforce capacity, with sustainable end-to-end processes across the continuum of the public health response.

The key principles required to underpin and further enhance the ongoing public health operational response to COVID-19 were agreed by the NPHET at its meeting on 19th November 2020:

1. Streamlined national governance and organisational model, with vertical and horizontal integration and a focus on a robust regionalised response
2. A public health-led response with appropriately devolved leadership, responsibility and accountability, & resourced as such
3. Integrated IT systems and data, with a focus on ensuring access to data and resources to facilitate analysis and intelligence-led action at local level
4. Community engagement and partnership, with promotion and empowerment of voices to actively inform and engage at local level
5. Performance measurement to facilitate assessment within and between regions, with indicators which reflect the continuum of the public health response.

Following further discussion, a set of supporting actions were outlined and discussed. Further detailed engagement will now take place between the Department of Health and the HSE, with a view towards ensuring the implementation of these actions in the short-term, thereby supporting the continued development of a fast, dynamic, agile, integrated and intelligence-led public health response organised at local level.

Long term residential care facilities

With regard to the general wellbeing of those living within long term residential care the NPHET agreed updated and enhanced visiting guidance where, for critical and compassionate grounds, residents can receive a weekly visit by one person at levels 3 and 4 and a fortnightly visit by one person at level 5. In line with operational advice these should come into effect on 7th December.

Conclusion

In conclusion, while significant progress has been made in reducing the incidence of the disease the five-day case average remains at a high level of approximately 300 cases with a reproduction number which is likely to increase above 1 in the weeks following easing of measures. Ireland is in a very precarious position where we are vulnerable to a sudden sharp increase in incidence. The advice of the NPHET is that we do not have the flexibility to enable resumption of hospitality in restaurants and bars if we are to enable an easing of the current prohibition on mixing between households while protecting the core objectives of protecting public health and those who are most vulnerable, and the ongoing provision of essential health and social care, education and child care services.

The health services remain particularly vulnerable. Hospitalisations and admissions to critical care have not fallen very substantially over the time. We remain especially vulnerable to a rise in reproduction number given the ongoing high case numbers per day and the high likelihood of significantly increased socialisation given the time of year. In simple terms many people may not follow public health advice to limit social activity. A rise in disease incidence is likely to be compounded by significant inter-generational mixing in the Christmas period given that different generations of families come together at this time more than any other time of the year. This may result in a significant rise in infection among the most vulnerable who are most likely to require hospitalisation, ICU admission and in whom mortality will be highest.

It is clear also that early action will be necessitated if there is a significant increase in incidence from current levels so that we can ensure that any such action is as short as it may reasonably be. To this end the NPHET will continue to monitor closely the effects of the move to Level 3 in the coming weeks and will continue to provide advice through the Minister for Health to Government.

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.

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

Appendix: Advice to Government in relation to the easing of Level 5 measures

Overall Approach to Easing Current Public Health Restrictive Measures

The NPHET, taking note of the current status of the COVID-19 disease in Ireland, the pandemic situation globally and the current overall public health risk, advises that the Government give consideration to adopting the following approach for the easing of current measures:

- Similar to the approach earlier in the pandemic, and in line with international advice and practice, measures to be eased on a **gradual and incremental basis** with sufficient time between phases to assess impact.
- This should commence with an **initial easing of measures at a national level to an enhanced Level 3** of the “Framework for Restrictive Measures in Response to COVID-19” on the 2nd December. These measures should remain in place for three weeks to support efforts to maintain or further reduce the incidence of disease in advance of the holiday period and the additional easing of measures. Details of specific measures are outlined below.
- **A further relaxation of some measures for the two weeks** from 21st December to 3rd January in recognition of the societal importance of the upcoming Christmas/New Year holiday period. Given the current profile of the disease and the risks associated with an increase in gatherings over the holiday period, NPHET does not envisage a move to Level 2 at that stage, but rather a **package of tailored measures**. Details of proposed measures are outlined below.
- **Enhanced Level 3 measures should then be fully re-instated** for a further three-week period to enable a full assessment of the impact of the holiday period. Further decisions on public health measures will be dependent on the epidemiological situation at that time.
- It is important to caution that the trajectory of the disease remains unpredictable. The epidemiological situation will continue to be monitored and there is no certainty that more restrictive measures will not have to be recommended over the coming weeks if there is a significant deterioration in the situation.

Application of Level 3 Measures from 2nd December

The NPHET advises the application of Level 3 measures in full from the 2nd of December. In relation to specific measures within Level 3, the NPHET advises the following:

- **Visits to private homes should be allowed from one other household.** It is proposed that for those who are part of a support bubble, the bubble counts as one household and may meet one other household.
- **Hospitality (restaurants and bars)** should open for take-away and delivery services only. It is advised that outdoor services should not open at this stage. Hotel restaurants and bars should only be open for indoor service to residents.
- **Retail businesses and public transport operators** should ensure that protective measures are in place, including any additional measures necessary to manage the potential increase in demand over the period. There are specific concerns in relation to large shopping centres, and robust

measures will be required to ensure appropriate flow of customers through these centres and to ensure that there isn't congregation. Alternative options should continue to be promoted including online shopping with Irish stores and click and collect.

- People should continue to **work from home** unless absolutely necessary to attend in person.
- The vast majority of **further education and higher education** programmes should continue to be online, with exemptions only for essential on-site activities including practicals, laboratory and clinical placements.
- While **domestic travel restrictions** will be relaxed to enable travel within a county without any restrictions, people should continue to be encouraged to avoid non-essential travel and to stay within their local area as much as possible.
- **Visiting in long term residential care facilities** will continue to be restricted aside from critical and compassionate circumstances. However, in recognition of the impact of ongoing restrictions on the emotional and mental wellbeing of long-term residents, family, and friends, revised guidelines are being put in place to enable each resident to have one visitor per week as a compassionate measure. This will commence from the 7th December.
- The wearing of **face coverings** should be advised for busy and crowded outdoor spaces, where there is significant congregation and social distancing isn't possible, including busy shopping areas.

Further Easing of Measures for Two Week Holiday Period

In recognition of the social and cultural importance of the holiday period, the NPHET advises that consideration should be given to easing restrictions for two weeks (21st December – 3rd January) in the following areas:

- There should be no **domestic travel restrictions** over the period. Communications should emphasise that travel should however be kept to a minimum. Everyone should continue to be encouraged to avoid non-essential travel and to stay within their local area as much as possible. Public transport bodies should ensure protective measures are in place to manage increased demand in a manner consistent with public health guidelines, including providing more services over longer hours during peak periods.
- **Visits to private homes of up to a maximum of 6 visitors from 3 other households** should be provided for to allow close family and friends to meet over the period. Communications should however emphasise that gatherings of this scale should only happen on a small number of occasions and that the safest way to celebrate the holidays is with members of your immediate household. It is appreciated that this will mean a very different Christmas for many, but it is imperative that we continue to keep levels of congregation and inter-household mixing as low as possible. For those who are part of a support bubble, the bubble counts as one household.
- In recognition of the importance of **religious services and ceremonies** at this time of year for people from many religious backgrounds, provision should be made to allow places of worship to open with all necessary protective measures in line with current public health guidance. The NPHET advises that current guidance is reviewed to ensure services are managed in as safe a manner as possible, with particular attention given to congregation before and after events and choir/carol singing. It is also advised that face coverings be worn at religious services.

- **Hospitality (restaurants and all bars nationally)** should open for take-away and delivery services only. It is advised that outdoor services should not open at this stage. Hotel restaurants and bars should only be open for indoor service to residents.
- **Visiting in LTRC:** An additional visit per resident over the holiday period should be provided for. Facilities will need to put in place arrangements to ensure that visits over this peak period can be managed safely.
- **Specific Christmas activities:** There are a range of activities where specific advice will need to be developed by relevant authorities in the coming weeks. This includes maintaining vital voluntary and statutory services for vulnerable groups over the holiday period (e.g. charity Christmas dinners for vulnerable persons), and traditional holiday activities.
- **Spending Christmas with Family/Friends:** In general, it is acknowledged that many people (e.g. students, young professionals etc.) may travel to their family home / spend the holiday with close friends for a period of time over the holidays. It is advised that if individuals are planning to reside in a dwelling different to their normal residence over the holiday period, they should:
 - restrict their movements in so far as possible prior to travel; this is particularly important if individuals are planning to visit/reside with vulnerable persons during this period,
 - take no more than one significant trip over the period, and
 - be cognisant of reduced capacity on public transport and consider travelling early.

Accompanying Advice and Communications

The NPHET underlines the importance of communications over the coming period to ensure proposed measures are easily understood (at an individual, business and organisation level) and clear guidance and advice is provided so that people can understand the risks attaching to different activities and are supported in making informed decisions and can start to prepare safe options for celebrations. Key messages should orientate around this Christmas being different, with the focus on celebrating with those most important to you. Communications should be clear and consistent. Specific public health advice should be developed to support safe visiting and safe travelling, and considerations in relation to inter-generational mixing.

Communications should continue to emphasise core public health measures and risk management tools:

i. Basic public health measures

Basic public health measures continue to be our best line of defence and should continue to be communicated strongly, including:

- wash your hands frequently;
- practise good respiratory hygiene;
- maintain physical distancing of at least 2 metres distance between yourself and other people;
- avoid touching your eyes, nose and mouth;
- remember that this disease spreads easily in crowded environments, therefore avoid crowded places as much as possible, leave if a location becomes overcrowded and physical distancing becomes difficult;

- everyone should be vigilant of the symptoms of the virus and should self-isolate and seek medical care as quickly as possible if they have even mild symptoms, including flu-like symptoms.
- all confirmed cases of COVID must self-isolate, while contacts of a confirmed case and those that have travelled from abroad must restrict their movements
- wear a face mask when shopping, on public transport, and in all indoor and outdoor situations where it is not possible to maintain a physical distance of 2mtrs.

ii. **The DATE Public Health Checklist (distance, activity, time and environment)**

Everybody in society should exercise their own judgement and take personal responsibility for decisions that they make about the risk of infection to themselves and to others in different situations. This will be especially important over the coming period. The Public Health Checklist (distance, activity, time and environment) is intended to provide assistance to individuals and families, as well as organisations, business etc. in making decisions about how to assess the risk of different activities and take actions to lower the risk of spreading infection:

- **Distance:** The risk of infection increases the closer a person is to another person with the virus and the amount of time spent in close contact with that person. Therefore, it continues to be important to keep a safe distance from people who are not from our households.
- **Activity:** The risk of infection spread is greater when people are engaged in certain types of activities, e.g., where there is direct contact, including physical contact with other people, such as where work, travel, activities like certain sports, or services that require people to be in direct contact.
- **Time:** Reduce close contacts and duration of contact with people outside your household. People should continue to restrict their close contacts to as small a number as possible and duration of contact should be as short as possible, while also maintaining strict social distancing (2 metres distance). Close contacts are the people you regularly spend time in close contact with, such as your family, children, parents, and very close friends. If you become infected, these people could also become infected and would have to go into self-isolation due to their close contact with you.
- **Environment:** There is growing evidence that the risk of infection spread is greater in certain environments than others, e.g., crowded situations, indoor environments that are not well-ventilated. It is important that people assess the risk in different situations and structure their environment to lower the risk as much as possible.
- In addition to the above, host vulnerability is of particular relevance to the holiday period. Older people (aged 70 years and over) and those with pre-existing chronic conditions are more likely to experience severe consequences from COVID-19 infection and will need to take greater care over the period.

Appendix 2: Comparative analysis of European COVID-19 epidemiological situation across infection waves 1 and 2 with a focus on severe health outcomes (hospitalisations, critical care, and mortality)

Background

Most countries in the European region continue to experience a situation of serious epidemiological concern. As of 24th November 2020, 29 European Union (EU)/European Economic Area (EEA) Member States and the United Kingdom (UK) reported 14-day incidence/100,000 population greater than 100, and of these, 15 reported rates higher than 500. Ireland currently has a 14-day incidence rate of 103 which is the third lowest in the region. The 14-day death notification rates were above 10 per 100,000 population in 13 out of 31 countries with the highest rates reported in the Czech Republic (21.5) and Belgium (20.2).

During wave 2 all European countries reached a disease level greater than that observed during the first infection wave with the recent higher rates most likely related to more extensive testing but nonetheless indicating the presence of significant transmission¹. Notably, age-specific notification rates since July 2020 display a different profile compared to spring/early summer 2020 (March-May 2020). In the spring/early summer, the age-specific incidence rates were highest in older people. Since July 2020, incidence has been highest among younger age groups, particularly 15-24-year-olds and 25-49-year-olds, with the increases in younger age groups occurring prior to those observed in people aged 65 years and older¹. According to the European Centre for Disease Prevention and Control (ECDC), these changing trends are also likely to be influenced by changes in testing practices over time. During the spring, few European countries had capacity for extensive testing of mild or asymptomatic cases, and thus testing was concentrated in hospitals and among more severe cases, which tended to be among older age groups¹.

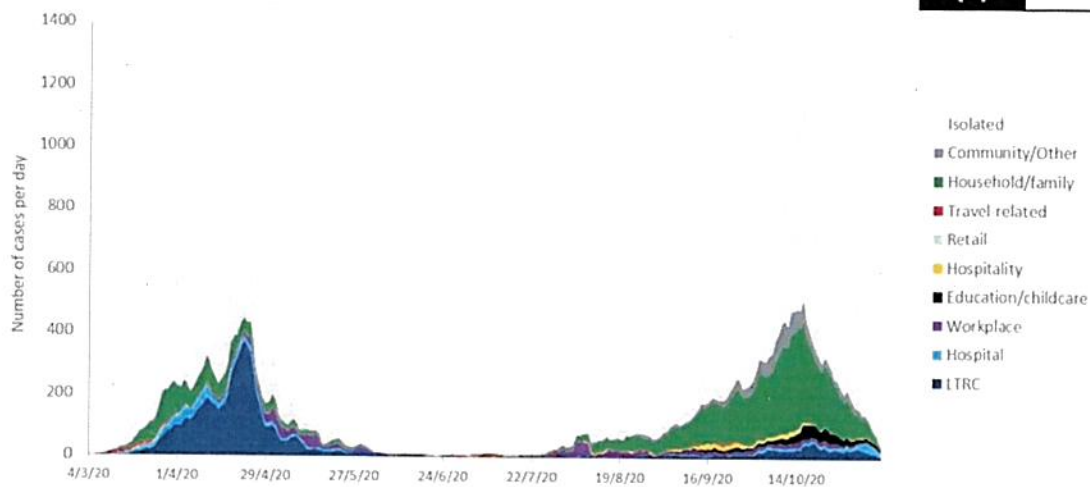
According to data reported to ECDC, the case fatality rate in several EU/EEA countries is currently lower than that observed in March and April 2020¹. As mentioned previously, this is likely influenced by increased case finding, as more younger and asymptomatic cases are identified. However, the ECDC has also noted reduction in case fatality among older cases, hospitalised patients and patients admitted to critical care. The ECDC cite logistic regression analysis of the European Surveillance System (TESSy) data in relation to case fatality in patients with COVID-19 admitted to intensive care (N=25,094), which indicate that case fatality remained substantially lower during the second wave (August – November) after adjustment for age, gender, country and the number of comorbidities (adjusted Odds Ratio Aug-Nov 0.23 [0.22-.25]). Improved clinical management of cases may be contributory (e.g. use of corticosteroids, management of Acute Respiratory Distress Syndrome (ARDS), recognition of the role of hypercoagulability in the severely unwell).

Cases by outbreak type in Ireland

Differences in outbreak profile in Ireland are noted when comparing waves 1 and 2 with a preponderance of notified outbreaks and associated cases occurring in long-term residential care facilities in wave 1 compared with wave 2 where outbreaks and associated cases have been predominantly located in households/families (Figure 1). This has significance for the difference in morbidity and mortality observed between the two waves with long-term care facility outbreaks representing impact on a subgroup of the population that is particularly vulnerable to the severe outcomes associated with COVID-19. Increased testing and surveillance capacity/processes are factors that should be acknowledged in making comparisons between the two waves.

Cases by outbreak type

Cases by outbreak type since beginning of pandemic. It is easier to detect linkages between cases in residential, workplace and educational settings than in social community and hospitality settings. Community transmission will be amplified in the household/family setting.



The number of cases that are isolated (not associated with an outbreak) and that are associated with different types of outbreak. 5-day moving average, cases dated by date of specimen collection. A significant number of recent cases classified as isolated will, upon further investigation, be linked to outbreaks.



Figure 1. Cases by outbreak type, March-November 2020 (Source: IEMAG)

Incidence trends in the EU/UK, March – November 2020

In spring 2020 Ireland observed a more pronounced increase in 14-day incidence compared with the EU/UK average with likely contributory factors including the rapid increase in testing capacity in this country over short months leading to comparatively greater case finding to some other countries (Figure 2). Following the introduction of significant restrictive non-pharmaceutical interventions across the EU/UK (including Ireland) in response to wave 1, the region achieved substantial viral suppression and low incidence over the summer months. From August 2020, incidence increased across most of the EU/UK with Ireland tracking a similar 14-day incidence trajectory to the EU/UK average. In late October 2020, divergence was observed between the 14-day incidence trend in Ireland compared with the EU/UK average, with Ireland seeing a 66% decrease from 330 (27th October 2020) to 103 (24th November) while the EU/UK average reached a peak of 613 (13th November), reducing only slightly over recent weeks (578 on 24th November).

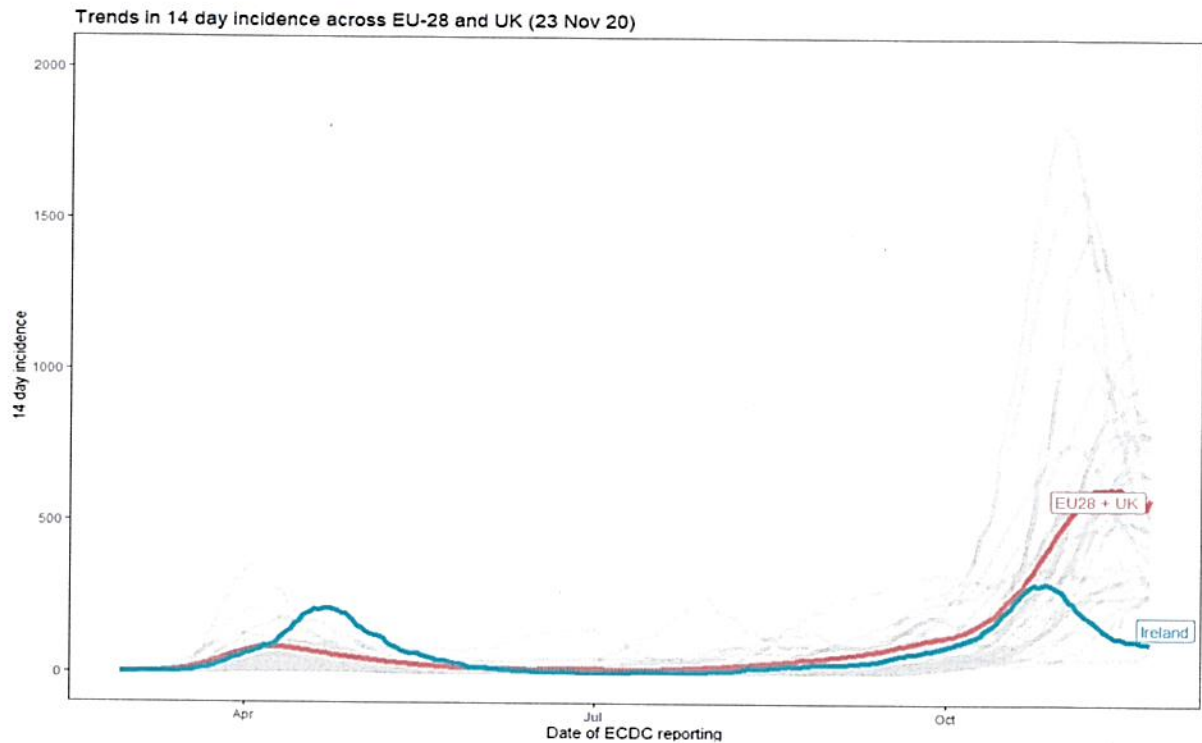


Figure 2. Trends in 14-day incidence/100,000 in EU/UK, March-November 2020 (data reported to ECDC as of 23rd November 2020)

Figure 3 illustrates 14-day incidence/100,000 population trends across a selection of EU countries (Belgium, Denmark, France, Germany, Italy, the Netherlands, Sweden and the UK) compared with Ireland. All included countries experienced an increase in incidence during the spring followed by a period of low disease levels over the summer. Since late summer/early autumn, all displayed countries experienced a second surge of infection, with rapid increases to high levels of incidence in absolute terms in countries such as Belgium, France, the Netherlands, and Italy. In contrast, although a second surge has been observed in Ireland since the summer, the country interrupted the upward trend seen up to late October and has since achieved substantial reduction in disease incidence over the last five weeks.

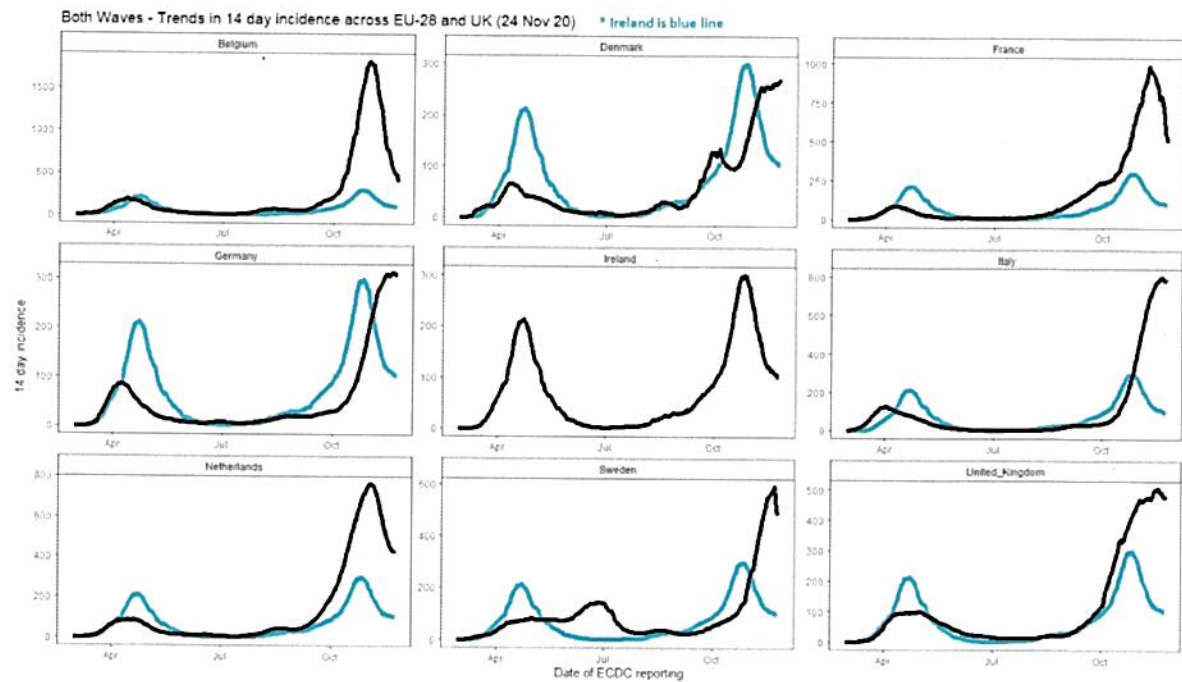


Figure 3. 14-day incidence/100,000 trends for Ireland and selected countries in EU/UK, March–November 2020 (data reported to ECDC as of 23rd November 2020)

Hospitalisation and critical care trends in EU/UK, March – November 2020

During the first wave Ireland experienced a surge in weekly hospitalisations of patients with COVID-19 which was lower than the EU/UK average where data were available (Figure 4). Ireland has observed increasing weekly hospitalisations/100,000 since August with that trajectory first stabilising (peak 4.45, week 43) and then slowly reducing over recent weeks (1.88, week 46). This is in marked contrast to growth in average weekly hospitalisations per 100,000 people in the EU/UK over the same period (peak 18.8, week 44) which has only recently appeared to stabilise (18.0, week 46). Of the selected countries, Belgium and France have experienced rapidly increasing and high absolute levels of weekly hospitalisations/100,000 compared with other countries such as Germany and Ireland (Figure 5).

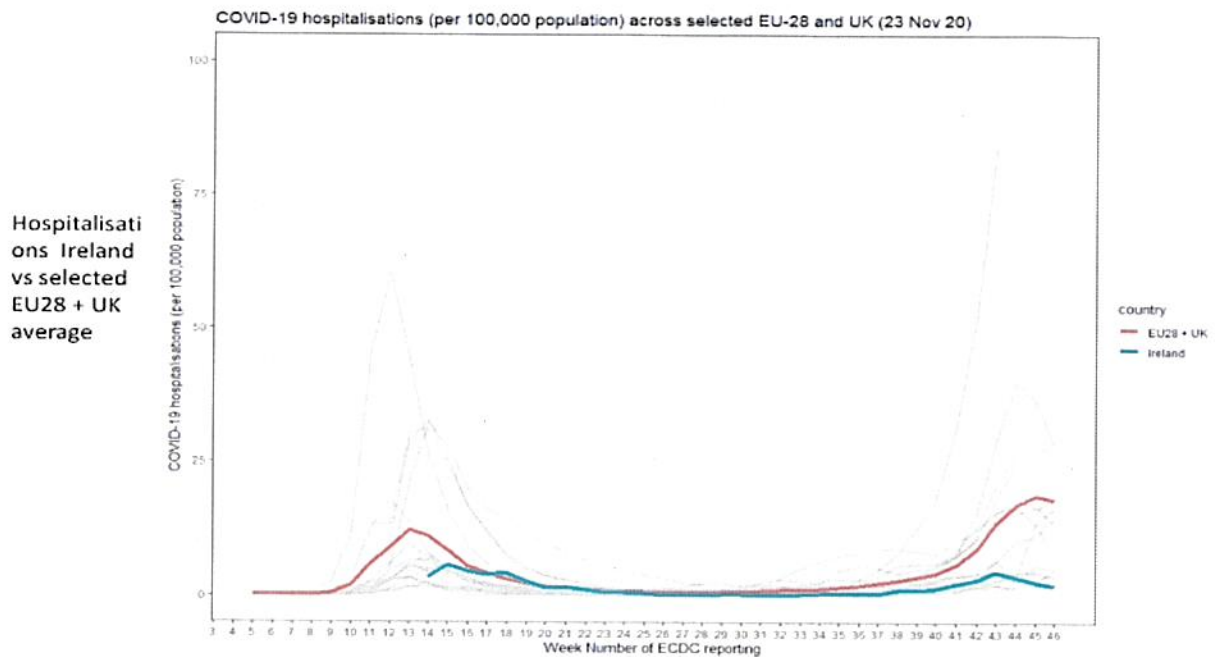


Figure 4. Weekly COVID-19 hospitalisations per 100,000 population in the EU/UK and Ireland, March-November 2020 (data reported to ECDC as of 23rd November 2020)

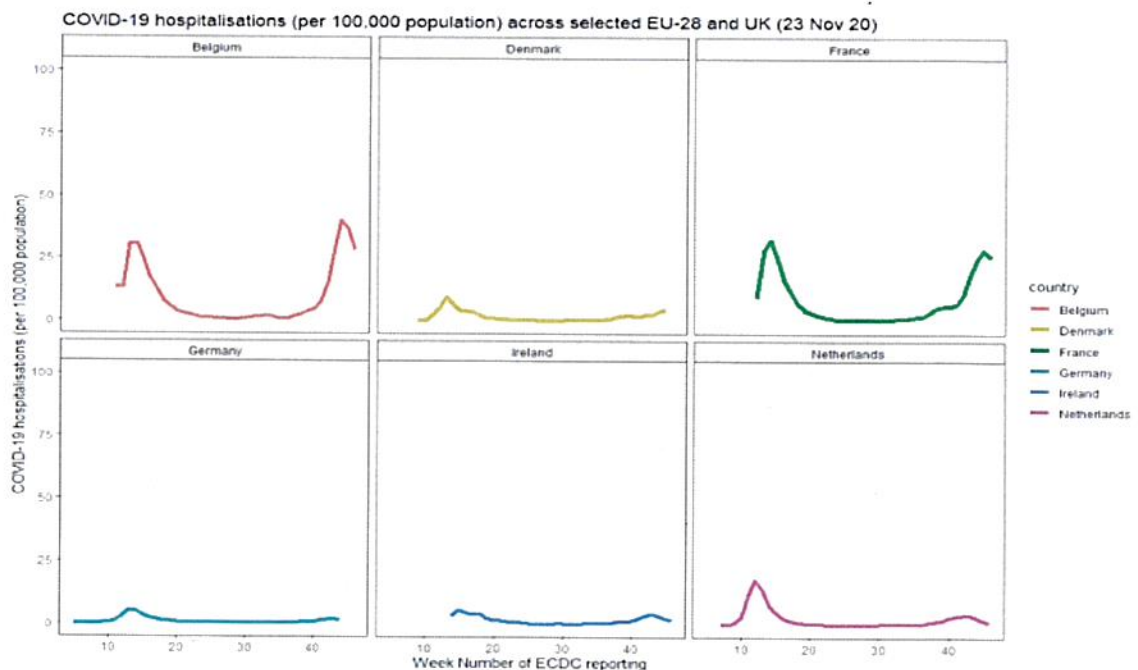


Figure 5. Weekly COVID-19 hospitalisations per 100,000 population across selected EU countries, March-November 2020 (data reported to ECDC as of 23rd November 2020)

In the first wave Ireland experienced a surge in weekly COVID-19 Intensive Care Unit (ICU) admissions which ran lower than the EU/UK average (Figure 6), noting that data were only available for eleven countries including Ireland. Ireland has observed increasing ICU admissions since August/September (peak 0.39, week 45) with that trajectory having stabilised over recent weeks

(0.33, week 46). This is in marked contrast to the rapid growth in average weekly ICU admissions per 100,000 people in the EU countries where data were available (peak 3.06 in week 45, reduced to 2.96 in week 46).

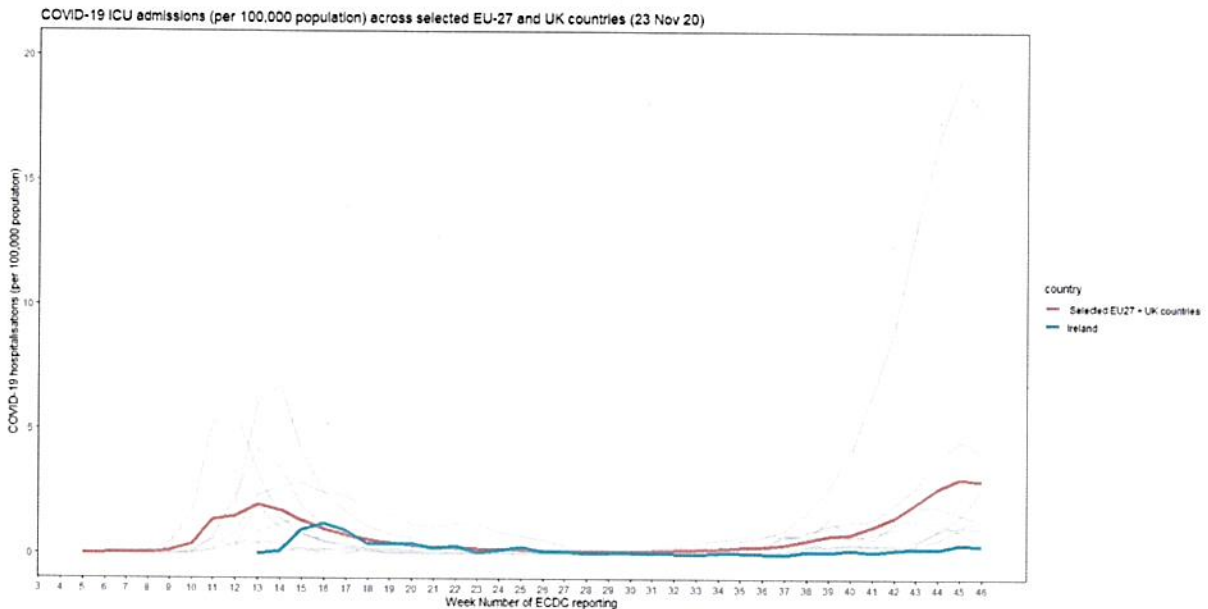


Figure 6. Weekly COVID-19 ICU admissions per 100,000 population across selected EU countries, March-November 2020 (data reported to ECDC as of 23rd November 2020)

Note: EU ICU data were only available for the following countries

"Cyprus", "Czechia", "Estonia", "France", "Greece", "Ireland", "Latvia", "Malta", "Netherlands", "Spain", "Sweden"

Mortality trends in EU/UK, March – November 2020

In spring 2020 Ireland experienced a first wave of deaths associated with COVID-19 with a large proportion of mortality occurring in residential care facilities. Substantial mortality associated with COVID-19 was also observed in other countries across the EU/UK. However, in comparing Ireland with other countries it should be noted that individual jurisdictions employ differing methodologies for the reporting of COVID-19 deaths. From the outset Ireland reported deaths that occurred in both hospital and the community as well as associated with both probable and confirmed cases of COVID-19. This was not the case in some other countries, particularly earlier in the pandemic. Moreover, Ireland rapidly increased testing in the spring leading to increased case finding, and therefore the likely identification of more deaths associated with COVID-19, in comparison with some other countries.

Ireland has seen increased reporting of COVID-19 related deaths since August 2020 with subsequent stabilisation of this trend (1.51 as of 24th November) (Figure 7). This stands in contrast to the EU/UK average 14-day mortality/100,000 which has been rapidly increasing since August/September (10.7 as of 24th November).

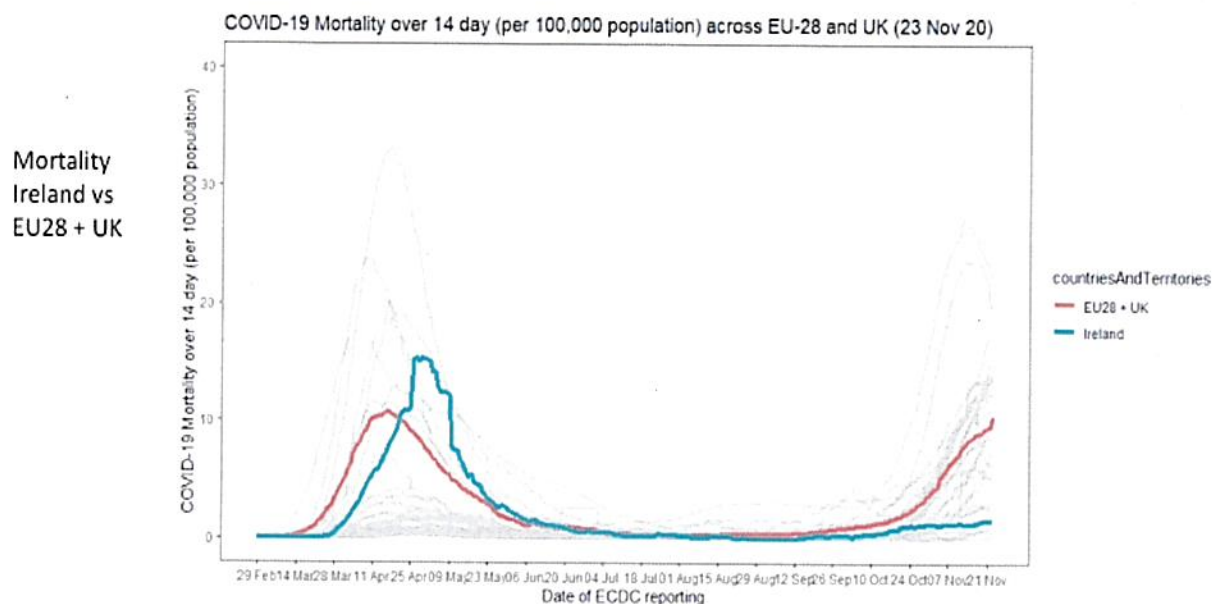


Figure 7. COVID-19 mortality/100,000 in Ireland and EU/UK, March–November 2020 (data reported to ECDC as of 23rd November 2020)

Some countries such as Belgium, Italy and France have experienced very elevated mortality during wave 2 when compared with other countries such as Ireland and Denmark (Figure 8).

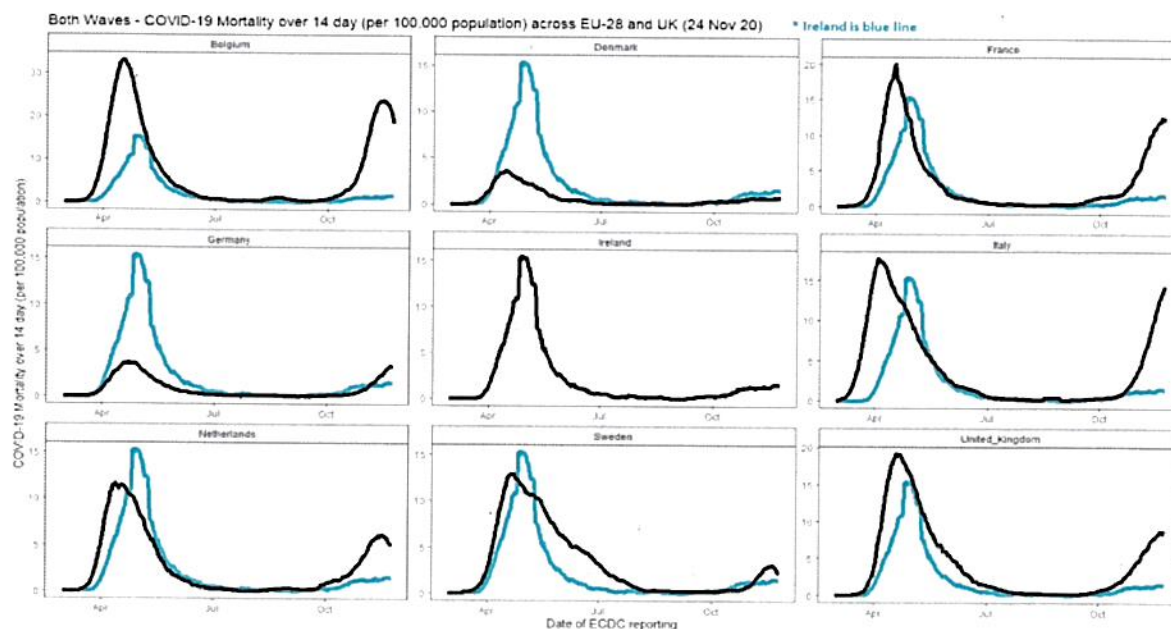


Figure 8. 14-day mortality/100,000 trends for Ireland and selected countries in EU/UK, March–November 2020 (data reported to ECDC as of 23rd November 2020)

Comparison of excess mortality in Europe between waves 1 and 2

The first wave of COVID-19 in the spring, both in Ireland and across Europe, impacted older people. This contributed to all-cause mortality rates that exceeded those of previous years, particularly in

older age groups. As noted by ECDC in its recently published rapid risk assessment on mortality in long-term care facility residents, data reported to the European monitoring of excess mortality for public health actions (EuroMOMO) network by 22 participant European countries demonstrated significant all-cause excess death in pooled estimates, particularly in Belgium, France, Ireland, Italy, the Netherlands, Spain, Sweden, Switzerland and the UK².

During the second wave, as of week 45, excess mortality was observed in Belgium, France, Italy, the Netherlands, Slovenia, Spain and Switzerland, with Austria, Portugal and the UK reporting increasing excess death at already moderate or low levels. This recent excess all-cause mortality was attributed mainly to people aged 65 and older but has also been noted in younger age groups (15-64 years), with the greatest excess seen in those aged 75-84 years and 85 years and older².

There has been no excess mortality observed in Ireland during the second wave (sources: Central Statistics Office (CSO)³ and Health Protection Surveillance Centre (HPSC) Weekly Mortality Report – Week 47), noting that CSO data only extend to September, and in respect of the HPSC data, there are limitations in terms of delayed registration of deaths associated with COVID-19.

Conclusion

In summary, as with many countries across Europe during wave 1 in spring 2020, Ireland experienced substantial COVID-19 transmission with consequent morbidity, mortality, and impact on acute hospital and critical care. Following the introduction of significant population level restrictions in response to wave 1, Ireland followed a similar disease trajectory to many other European countries during the summer with low case numbers growing consistently from August to significantly elevated levels of community transmission in late October, particularly in younger age groups. This was followed by increased incidence in older age groups, hospitalisations, critical care admissions, and sadly, deaths. However, after the introduction of Level 5 measures, Ireland diverged from European neighbours in terms of disease trajectory. Since then we have seen a substantial reduction in disease incidence commensurate with a stabilisation or reduction in terms of hospitalisations, critical care admissions and deaths. It is reasonable to conclude, given the disease trajectory/modelling prior to the application of level 5 measures along with the trends seen in many other European countries in recent months, that Ireland averted substantial disease transmission and its associated morbidity, mortality and pressure on healthcare capacity and delivery. In addition to the implementation of population-level restrictions, other contributory protective factors may include, but are not exclusive to, the enhanced behavioural changes in vulnerable population groups (e.g. older persons) and the various infection, prevention and control measures implemented across a range of vulnerable settings since the onset of the pandemic and which have been continuously strengthened over recent months.

Acknowledgements: Statistics and Analytics Unit (Department of Health), the Irish Epidemiological Modelling Advisory Group (IEMAG), the Health Protection Surveillance Centre (Health Service Executive - HSE), the Departments of Public Health (HSE), the Contact Management Programme (HSE)/laboratories, relevant data sources as listed and their contributors

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Survey Evidence on Attitudes, Plans and Expectations for Christmas 2020

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Introduction

Christmas 2020 presents a unique challenge in Ireland's ongoing efforts to contain COVID-19 and the issue has provoked much public debate throughout November. This paper digests some survey evidence collected in the last two weeks that gives insight into where public opinion stands on some of the dilemmas involved. It also provides evidence on plans for Christmas that are already underway and quantifies some relevant expectations.

The survey results themselves attest to the significance of the issue, with more than a third (37%) of respondents saying that Christmas this year will be more important to them and their family than usual (versus 7% "less" and 50% "same"). Another sizeable minority (43%) expect disagreements within their family about how to handle COVID risks when making Christmas arrangements. As of November 16th, the majority (55%) of the population had not made concrete plans for Christmas.

The next section gives a brief description of the data source. For ease of reference the findings are then arranged by research question in numbered sections as shown below. (Note that the term "should" here refers to the public's opinion).

1. Should we have Christmas as usual?
2. Will people relax their attitude to public health guidelines over the Christmas period?
3. Should special consideration be given to Christmas?
4. Should pubs and restaurants be allowed to open for Christmas?
5. Should people be allowed to visit other households?
6. Should people be allowed to travel?
7. Should restrictions be lifted in early or mid-December?
8. Is public behaviour anticipating public health guidelines?

About the data

This paper describes data collected on November 9th and 16th via two modules (different questions each time) of the weekly Public Opinion Tracking Survey, conducted by Amárach Research on behalf of the Department of Health. The sample is approximately 1,600 each week. A quota-based system is used to match the socio-demographic characteristics of the sample to the national adult population based on Census figures. Data are then weighted to further improve the match. Responses are collected from Amárach's SmartPoll panel, which is an online panel of 6,000 adults throughout Ireland, regularly refreshed through recruitment. Panellists receive text messages and email invitations to complete surveys via phone, tablet, laptop or desktop computer. Results are typically published within a day at <https://www.gov.ie/en/collection/6b4401-view-the-amarach-public-opinion-survey/>.

There are a few small points to bear in mind when interpreting the results. Firstly, in some cases the percentage figures reported below in answer to specific questions do not add up to 100% because a proportion of respondents have responded that they "don't know" (or didn't enter a response). In some instances the proportion of "don't knows" is instructive and is highlighted. Secondly, the data

were gathered shortly after positive news in relation to possible vaccines and so it is possible that this influenced responses. No questions were asked about a vaccine specifically.

1. Should we have Christmas as usual?

One possibility is that a large proportion of the general public, wanting relief from the strictures of public health guidance, would like simply to have a normal Christmas, even at the cost of increased infections and tighter restrictions again in January. The data reject this view. Asked to agree or disagree with the statement "I am happy to have a quieter Christmas than usual this year", 65% selected "agree" or "strongly agree", compared to 16% who selected "disagree" or "strongly disagree". When shown the statement "It would be better to let everyone enjoy Christmas and New Year's Eve, even if we have to go back to Level 5 in January", 56% disagreed and 28% agreed, with 37% disagreeing strongly versus just 10% agreeing strongly.

This desire to be cautious has already influenced both intentions and expectations. Asked whether they would "avoid some meetings with friends and family this year even if others go ahead and meet", 72% agreed, including 63% of those aged under 35. One-in-four survey respondents expected to spend less money on Christmas this year and most expected to have fewer people for Christmas dinner than usual (46%, versus 44% "the same" and just 2% "more").

It might be thought that this willingness to scale back Christmas activity would not extend to children's activities. Again, the data do not support this. While 24% said they supported children having a normal Christmas, even if it meant more restrictions in January, 70% wanted continued restrictions on children's activities. Almost half (48%) of parents with children under 10 had already talked to their children about Christmas being "different this year".

2. Will people relax their attitude to public health guidelines over the Christmas period?

Another possibility is that people will be more likely to ignore guidance or violate restrictions over Christmas, making the measures less effective. The survey does indicate a more relaxed attitude to restrictions over Christmas, but the effect is relatively small. When asked whether they currently follow recommendations to prevent the spread of coronavirus, 56% of people report that they "very much" do so (a maximum 7 on the scale). This drops to 48% when asked how likely they will be to follow these recommendations over the Christmas period.

Figure 1 presents the full distributions of responses. It reveals a shift towards the middle of the scale, rather than a substantial number of people planning to disregard recommendations. The implication is that some people may be more inclined to push boundaries, but very few will plan to abandon guidance altogether. It is also possible that the responses reflect some ambiguity surrounding what the restrictions in place over Christmas are likely to be.

Expectations that others will follow recommendations over Christmas tend to be lower. Just 3% think other people are very likely (a '7') to follow recommendations over Christmas and 44% gave a response below the mid-point of the scale. This compares to data collected by ESRI back in May, in which 5% responded with a '7' to the same question (although not in relation to Christmas) and 39% gave a response below the mid-point of the scale. Hence, while people expect others' attitudes to restrictions to relax over Christmas, the effect is quite small and largely consistent with previous findings.

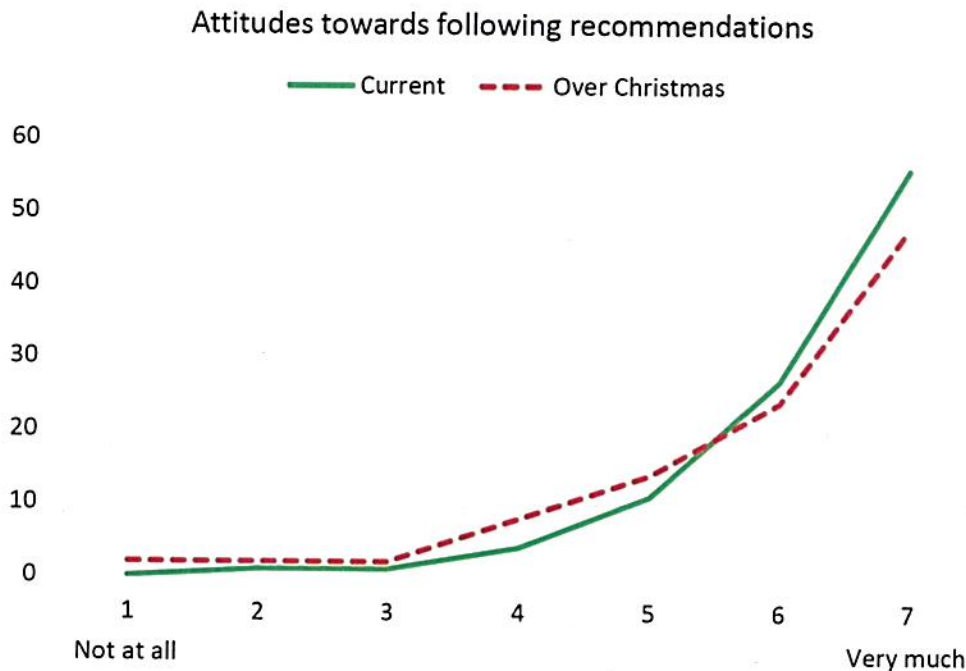


Figure 1. Attitudes to following recommendations currently (solid green) and over Christmas (dashed red). The small shift in the distribution implies that some people plan to relax their attitudes. However, the overall effect is not large and very few plan to abandon guidance altogether. (Scales range from 1 'not at all following' to 7 'very much following' for current recommendations, and 1 'not at all likely to follow' to 7 'very likely to follow' over Christmas).

Source: Amárach Public Opinion Tracking Research 09/11 and Christmas Module

Overall, there is no indication in the data that people anticipate a dramatic drop in compliance with public health recommendations over Christmas, in themselves or others. Nevertheless, it is likely that some people will push the boundaries perhaps more than they have during the pandemic to date. What form this might take is not clear from the survey questions asked (although Section 5 below is perhaps indicative).

3. Should special consideration be given to Christmas?

When asked directly whether special consideration should be given to easing restrictions at Christmas, 46% agreed, compared to 27% who disagreed and 28% who were undecided. These proportions were broadly consistent across age groups and gender.

People were asked how they would like to spend the Christmas period and Christmas day, bearing in mind that easing restrictions at Christmas might mean tighter restrictions in early 2021. The vast majority, 85%, said they would prefer to spend quality time with close friends and family over the Christmas period, rather than seeing a lot of friends and family and risking 2021 restrictions. On Christmas day and on New Year's Eve, 89% would rather have a quiet day with close family than a big day with extended family and friends. Differences across age-groups were modest, with 84% and

83% of under 35s preferring a quiet Christmas and New Year's Eve respectively, compared to 90% and 91% of people aged 35 and over.

On Christmas activities outside the home, 33% said choirs should be allowed to sing at carol services and 19% said they would attend a choir service if they were allowed. When asked about Christmas services in local churches, 63% said they would prefer continuing restrictions on mass or religious services, while 32% said they would attend mass if their local church was open. The overwhelming majority, 92%, said they would prefer workplace parties do not go ahead in order to reduce the possibility of further restrictions in 2021.

4. Should pubs and restaurants be allowed to open for Christmas?

The public are cautious about re-opening pubs and restaurants. A large majority (83%) thought that, if pubs and restaurants re-open, restrictions (e.g. for social distancing) should be in place. Very few (just 6%) wanted these to be relaxed altogether for the Christmas period, knowing that restrictions might be required again afterwards. This majority was similar across socio-demographic subgroups, with little difference between those aged under 35 (80% prefer restrictions) and over 55 (84%), or between men (81%) and women (85%).

Nevertheless, again based on the trade-off question format, a majority (58%) wanted to see pubs and restaurants open (with restrictions) rather than remain closed completely over the Christmas period. Almost 1-in-3 (32%) preferred the latter option in order to reduce the possibility of tighter restrictions again in early 2021. Again, there was broad agreement across socio-demographic subgroups.

A majority (80%) said they would rather stay in with a few friends than have a night out over Christmas. Notably, this held true for younger people too, although the majority was smaller (71%). Thus, 7-in-10 young people preferred to socialise at home over the Christmas period, to reduce the possibility of tighter restrictions in early 2021.

5. Should people be allowed to visit other households?

When asked what they were worried about personally over Christmas, respondents were most likely to say "reduced social contact" (64%) and "the health of family and friends" (63%). "Prolonged restrictions" (45%) and "the economy" (32%) featured less prominently.

A large majority (76%) were of the view that guidance should remain in place over Christmas for older people to restrict their movements and to avoid visiting other households and receiving visitors. This majority was larger still among older adults (80% of over 55s versus 72% of under 35s). The figure climbed to 84% for maintaining guidance to "vulnerable people" (which was not defined in the question).

The survey did not test support for a specific rule or a limit on the number of household visits that might be recommended, but it did ask about plans already in place. Many people were already planning to limit visits. Figure 2 (left) shows that 40% of respondents were not planning to visit another household this Christmas. It is noteworthy that one third had yet to make up their minds. Many may therefore be waiting for official guidance. Of the 27% who were planning to visit other households, however, more than two-thirds thought they would visit at least two. The implication is

that, if these plans are carried out, a small minority of individuals could account for a substantial proportion of household visits. The survey did not ask about receiving visitors.

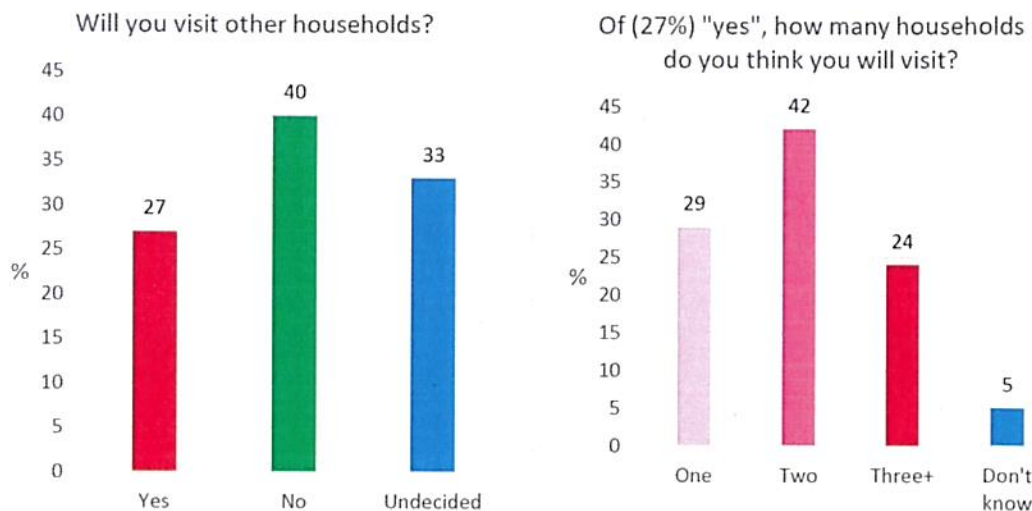


Figure 2. Plans for household visits (reported on November 16th). Many people do not plan to visit another household at all over Christmas, although one third have not yet decided (left). Of the 27% who do plan to visit other households, most think they will visit more than one (right).

Source: Amárach Public Opinion Tracking Research 16/11 and Christmas Module

6. Should people be allowed to travel?

Asked whether people should be allowed to visit relatives and friends anywhere in Ireland at Christmas, 49% supported and 34% opposed the idea. Answers differed by gender, with 45% of men and 53% of women in support. There were differences by age groups too, with 57% of people aged under 35 supporting visits anywhere in Ireland, compared to 47% of people aged 35 and over.

When asked to make the trade-off between friends and family coming home from abroad for Christmas and the possibility of tighter restrictions in 2021, 60% thought that family and friends should not come home. This reduced to 50% for those under 35. It is important to note that the question did not ask about allowing travel from abroad with adherence to quarantine and testing requirements.

7. Should restrictions be lifted in early or mid-December?

Asked directly when they think restrictions in general should be eased, 65% of people said they would prefer restrictions to be eased in mid-December rather than on 1st December. Even when asked about the current strictest Level 5 restrictions, 54% of people said they should be kept in place longer than the start of December if it would mean fewer restrictions for Christmas and New Year. A majority of 60% said they would prefer to see restrictions eased for one week of Christmas only rather than easing on 1st December, in order to avoid further restrictions in 2021. This was a consistent majority across age groups and gender.

Most people (52%) would prefer to have a shorter build up to Christmas this year compared to 26% who disagreed with this. As outlined above, most are in favour of restrictions on pubs and restaurants. Opinion is split on shopping, with 43% of people preferring shops to open in early December with normal hours versus 42% preferring them to open later in December with increased hours. However, asked when shops should open bearing in mind that earlier opening may increase the possibility of further restrictions in 2021, 51% said they would prefer shops to open only in mid-December.

In general, women were keener to see shops open sooner. This is notable, because the weekly survey results generally report that women support greater restrictions than men. Previous work on the division of household labour would be consistent with much of the organisational work being undertaken by women.

8. Is public behaviour anticipating public health guidelines?

One possibility is that members of the public have learned to make plans and behave in ways that anticipate forthcoming changes to public health guidance. Indications of reduced social contact immediately prior to the move to Level 5 have been attributed to anticipatory behaviour. In general, however, it is difficult to assert with confidence that a particular change in behaviour is undertaken in anticipation of specific changes to guidelines. This is because periods preceding such changes typically involve changes in other variables that may also be driving behaviour; it is not easy to tease time-varying factors apart. In particular, when case numbers (and other public announcements) indicate that the virus is spreading, behaviour is likely to become more cautious regardless of the public health guidelines.

Nevertheless, there is relevant data in both the Christmas surveys and the tracking survey more generally to suggest that the behaviour, expectations and plans of a substantial proportion of the public do reflect some anticipation of future outcomes and events in relation to the coronavirus.

Only a minority of respondents had a plan for Christmas by November 16th, despite 72% having discussed it with their family. Almost 1-in-6 say that they “won’t plan”. The general expectation is for fewer people at Christmas dinner and fewer social interactions generally. These figures are consistent with people waiting for announcements in relation to guidance and expecting restrictions on the extent of social activity.

In general, the tracking survey suggests that people’s behaviour throughout the pandemic has changed gradually in response to perceived risk as well as in response to announcements. Figure 3 (top left) charts the average response to a question, which has been collected every week since March, about how worried people are on a 1-to-10 scale. Alongside (top right), we plot the proportion of people saying that they are staying at home rather than going out. Finally, because people are often concerned that self-reported behaviour exaggerates compliance, we show (bottom) proportion of people who state that almost all or the majority of other people are following guidance (this was only collected after May).

In the top two panels, there is a clear step-change in behaviour associated with the original lockdown announced in March and a relatively sudden change in both series when this ended in May. Since then, changes in levels of worry and behaviour, while still substantial and significant, have become more gradual. It is also notable that the general pattern of these charts closely resembles charts showing the number of close contacts of positive cases over time. Together, these data series

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are consistent with either anticipatory behaviour or, more simply, people adapting their behaviour in response to the same public data that constitutes the primary input to policy decisions (e.g. reports of daily case numbers, hospitalisations, etc.).



Figure 3: Measure of personal worry, a self-reported compliance behaviour (staying at home rather than going out) and perceptions of the compliance of others, over the course of the pandemic to-date. The pattern is consistent with behaviour responding in part to media reporting of the spread of the disease.

Source: Amárach Public Opinion Tracking Research

Conclusions

How cautious do the public want to be?

Given the above results, on average, the population would like a balance to be struck. The large majority of people think that Christmas should be quieter this year and many have partly planned for this already. Yet most people do want some relaxation of restrictions for Christmas. What do people think is a reasonable balance?

Across the two surveys multiple questions made the trade-off between easing restrictions for Christmas and the potential longer-term consequences explicit. Most of responses to these questions are referred to in specific contexts in earlier sections, but it is worth considering the sweep of responses across contexts.

When asked as a general question (i.e. not about specific activities like going to church, shopping, visiting, etc.), clear majorities supported keeping Level 5 restrictions in place into December if it means fewer restrictions for Christmas and New Year. They also supported a shorter build up to Christmas in terms of opening businesses, and waiting to lift restrictions until mid-December or for a short period around Christmas only.

The November 9th survey asked 13 questions that required people to trade off the benefits of relaxing a specific restriction for Christmas against the fact that this might lead to tighter restrictions again afterwards. These surrounded: seeing friends and family, socialising on Christmas Day itself, nights out, New Year's Eve, pubs and restaurants, shops, household visits, travel, workplace parties, religious services, and children's activities. In every case, the majority did not support easing the restriction at the expense of the longer-term, with a single exception: the majority would like to see pubs and restaurants open at Christmas with social distancing restrictions rather than remain closed. In only two cases did the minority wanting the restriction lifted exceed 30%: opening shops on December 1st and permitting religious services over Christmas.

Looking across the sweep of general and specific questions, therefore, a clear majority of the public want a cautious approach to predominate for most aspects of Christmas 2020. This level of caution expressed by the public arguably exceeds that typically expressed in current debate in the media, although clearly this is a subjective judgement.

Two key behavioural principles for managing Christmas

While a clear majority want a cautious approach, the data show that different people hold different views about the appropriate way to handle Christmas during the pandemic. This is challenging from a policy perspective, given the need for solidarity in coordinating our behaviour to combat the spread of COVID-19. In this context, two principles based on substantial bodies of behavioural evidence might be useful to reiterate.

First, the scientific evidence unambiguously shows that cooperation with collective action is made more likely by clear and repeated communication of why the behaviour requested clearly generates a desired collective outcome, i.e. one that is "best for all". People need to understand the connection between the behaviour and the outcome and to believe that the large majority of others will also engage in the behaviour. This is why it is vital to talk about those who are complying with guidance as much, indeed preferably more than, those who are not. From this point of view, the fact that the surveys demonstrate that a high proportion of the population expect and have planned a quieter Christmas than usual is an advantage.

Second, behavioural evidence across multiple domains shows that simplicity matters. In the current context, simple rules (e.g. everyone should do X no more than twice) are easier to self-police and more likely to benefit from informal social disapproval that is known to deter those most inclined to transgress. Overall, then, simple rules of demonstrable benefit for a collective outcome are those most supported by behavioural science.