

MODELLING THE COURSE OF THE COVID EPIDEMIC AND THE IMPACT OF DIFFERENT INTERVENTIONS AND RECOMMENDATIONS– A4 BRIEFING NOTE

Background

1. On the 16th October the Executive introduced a range of restrictions to limit the transmission of COVID and to avoid the risk that the Health and Social Care system would be overwhelmed. The restrictions were introduced for four weeks from the date on which the regulations were made, i.e. 16 October, and are therefore due to expire at midnight on Thursday 12 November.
2. In the initial 2 weeks of restrictions R for cases has been reduced to a little above 0.7 in NI as a whole, in line with previous modelling assumptions. This demonstrates that the restrictions are effective.

Key Points

3. Modelling the course of the COVID epidemic and the impact of different interventions depends on assumptions about the value of R_t (the reproductive number) at different time points in the future. Modelling from a range of UK groups suggests that full lockdown as before with schools open would result in R_t a little less than 1. Full lockdown with schools closed and the hospitality sector open (and current mitigations) would also result in a value of R_t a little less than 1 or possibly greater than 1. It is not considered likely that R_t can be less than 1 with both schools and hospitality open.
4. Any relaxations compared with full lockdown will raise R_t a little, with society working fully as normal equating to an R_0 value of 2.8.
5. The Executive has previously indicated that maintenance of R_t at less than 1 should be viewed as a key policy objective.

6. It is expected that the value of R may increase slightly with the return of schools this week.
7. The impact of non-pharmaceutical interventions (NPIs) is not expected to be fully apparent for between 2-3 weeks after implementation, subject to adherence by the population. With a sustained increase in the number of confirmed infections and hospitalisations, to avoid the health service being overwhelmed actions in the form of additional NPIs are therefore required a minimum of 21 days before the HSC would otherwise reach that point.
8. Updated modelling has been conducted for a range of scenarios, which indicate that a further non-pharmaceutical interventions (NPIs) in the form of a two week extension to the current restrictions would be needed to avoid the Health and Social Care system becoming overwhelmed.
9. Under all of the models considered an additional intervention or interventions would be required early in 2021 at the latest.

Departmental Views/Implications

10. Due to the short timescale, it has not been possible to consult across the Department. The following comments have been derived from previous considerations of Covid measures;
11. The proposed extension to restrictions in NI must be considered in the context of new lockdowns across the UK, most recently in England. The combination of UK wide restrictions will impact on NI agri-food markets and is likely to cause short term disruption.
12. For example prices could fall for those sectors (e.g. red meat, dairy, fish, vegetables) with high exposure to hospitality sector and could be reflected back throughout the supply chain. Although an anticipated increase in demand from

retail may take care of displaced product, those producers very closely linked to hospitality with a short supply chain, (e.g. artisan producer supplying restaurants) would be impacted significantly with no market for their produce.

13. Any extension of restrictions which impact on the Christmas season will be economically and logistically challenging for the food sector as whole, across primary producers, processors and retail/food service. This is particularly important for seasonal produce such as turkeys, certain vegetables and horticultural/plants specifically for the Christmas market
14. There will be ongoing impacts on rural communities that are already vulnerable to isolation, poverty and fuel poverty.

Recommendation/Line to Take

15. **In light of the current status of the epidemic, the response to the restrictions of 16th October, the modelling above and the likely pressures on the Health and Social Care system before Christmas, CMO and CSA recommend that the current restrictions are extended for a further period of 2 weeks after the 12th November. With this extension, it may be possible to avoid further intervention before Christmas, though this cannot be guaranteed.**
16. **In this context, I recommend that the Executive:**
 - a. **Agrees a two week extension of the current restrictions; and**
 - b. **In recognising the particular impact on the hospitality sector, gives urgent consideration to any mitigating financial support measures brought forward by the Minister for the Economy.**