

NI COVID 19 Modelling Group Conference call on 17th April 2020

Attendees

Ian Young DoH (Chairperson)

Paul Montgomery DoH

NR DoH

Declan Bradley PHA

Janice Bailie PHA

NR SIB

Rob Brisk CAH

Adele Marshall QUB

Frank Kee QUB

Current situation

- Ian reported that modelling in England suggested R_0 was currently in the region of 0.8-0.85 and modelling in ROI suggested a R_0 of between 0.7-1. Paul McWilliams indicated that his assessment was that R_0 was closer to 1 in Northern Ireland.

NI models

- Ian confirmed that a number of issues will need to be considered in future NI modelling including changes in R_0 . Ian highlighted that R_0 cannot model changes to the opening of schools and clarified that if measures were to be relaxed the NI COVID 19 modelling group would need to consider how R_0 could be calculated.
- Ian suggested that NISRA evidence was showing that one third of deaths was not captured by hospital deaths.
- Ian indicated that the NI COVID 19 modelling group will need to prepare to be able to analyse future social distancing scenarios e.g. if NI aligns with the future COVID 19 social distancing policies of England, ROI or establishes their own approach.
- Frank outlined the approach to estimating R_0 from the recent John Edmunds paper which was based on the previous POLYMOD study. In particular, sample survey data was used to derive a contact matrix of the number of recent direct contacts in terms of age group and type of contact following the lockdown in the UK. R_0 is proportional to the dominant eigenvalue in the contact matrix. In the POLYMOD study the R_0 value was estimated to be 2.6 whilst the John Edmunds study found that there was a 73% reduction in the average daily number of contacts (from 10.8 to 2.9) in the UK following the lockdown which would suggest that the R_0 reduced from 2.6 to 0.62. However, the scale of the sample surveys planned for England would not be possible for NI, with one option being to work with the ROI, depending on the extent to which there was alignment in the approach to social distancing.

- Ian confirmed that he had written to Kevin Sweeney in NISRA to ascertain if questions could be added to the survey they were planning to start in 4-5 weeks.
- Ian explained that he had a discussion with Ernst and Young to ascertain what modelling work they are undertaking for DoH. Ian reported that Ernst and Young are modelling the supply side impact of COVID 19 and confirmed that the NI COVID 19 modelling group are focusing on the demand side (number of cases, deaths).
- Ian asked the analysts to provide estimates for each week over the next six weeks on a rolling basis for the following scenarios:
 - A best case scenario
 - A reasonable worst case scenario
 - Actual projections of what you think may happen

Ian reminded the analysts that data would continue to be required on a weekly basis (before Friday 12 noon).

- Rob informed the group that the Southern HSC Trust has a flow and control meeting every day and that medical students were now also going to assist with data collection. Ian highlighted the need to consider a governance framework for managing data flows.
- **NR** provided an update on the COVID 19 SIR model he had developed and indicated he would now model for six week estimates.
- Adele reported that she was continuing to process the coding of the model she is developing which was employing survival analysis and conditional probability.
- Ian asked the group to consider whether the NHS model should continue to be the default model for NI. Ian indicated that the issue would be considered the following week.
- Declan informed the group that SPI-M had presented short run forecasts (at country level) and Warwick University provided the forecasts for NI.

Actions

- All to consider if the NHS model should continue to be the default model for NI.
- Analysts to continue to provide estimates before noon each Friday.