

IEMAG

Minutes of meeting – Wednesday 17 November 2021

Attendees: Philip Nolan (Chair), Brendan Murphy, Cathal Walsh, Darren Dahly, Elizabeth Hunter, Guy McGrath, James P Gleeson, Jim Duggan, Mark Roantree, Seán Lyons

Apologies: Chris Brunsdon

Secretariat: Darragh Turner, Denis Ryan, Fiona Tynan

Chair's Update

- The Chair summarised the current modelling projections and discussed recent challenges with modelling and interpretation. The Chair focused the meeting on how the group might interpret and progress the current models, with particular focus on the homogenous and age-cohorted models, and how the projections may translate into hospital admissions.

Homogeneous and Age Cohort Model Update

- Parameters to account for waning immunity have now been included in both the homogenous and age-cohorted models.
- Reasons for the discrepancy between the two model outputs are being explored. A sudden change in social contact or differing assumptions on prior infection-induced immunity were both possibilities. There is difficulty accounting for the level of population immunity as the undetected fraction is unknown. The models give a wide range of possibilities, and this uncertainty must be acknowledged when interpreting results.
- Next steps include running the models using undetected fractions of 0.4 and 0.6 as a sensitivity check and considering the likelihood of intense inter-generational social mixing over the festive period.

Conversion to Hospitalisation ICU

- Simple admissions modelling was predicting hospital and ICU admissions well until July 2021 however has since been underestimating admissions. The group discussed possible explanations for this including waning vaccine effectiveness, increased risk of hospitalisation with Delta variant, possibility of emerging variants, case ascertainment issues, differences in age profiles, supply of hospital beds, and avoidance behaviours.
- It was noted that admission probability decreases during a surge.

Agent Based Modelling

- Work to incorporate contact tracing and the impact of extended family networks over the festive season into the agent-based model is ongoing.
- While the available data would suggest that the impact of the suspension of contact tracing in schools would have had minimal effect, the possibility of using the agent-based model to explore this issue was discussed.

AOB

- The Geospatial Group is looking at the impact of large sporting events on case numbers and will update the group when outputs are available.

Epidemiology Modelling

Actions:

1	PN to circulate most recent dataset.
2	JPG and JD to run models using undetected fraction of 0.4 and 0.6 as a sensitivity analysis and with view to exploring if effective social contact levels are reducing.
3	BM to produce GAM fits.

Healthcare Demand Modelling

Actions:

1	PN to share recent age-cohorted outputs with SL for trialling through CHUP model.
2	DD and CW to review paper on hospitalisation risk for Delta variant and consider if Irish data on hospitalisation risk over time could be looked at in a formal statistical model.

Geospatial Mapping/Modelling

Actions:

1	GMG to update the group when work on mass gatherings and hospital admissions is complete.
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Agent-Based Modelling

Actions:

1	EH and DD to explore if the agent-based model could be used to explore the impact of the suspension of contact tracing in schools.
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Next Meeting: 8 December 2021, 11am