Modelling update 08/11/20:

1) We have been asked to provide updated modelling to take account of the following scenario:

- From 13th November close contact services such as hairdressers and beauticians will be able to re-open by appointment.

- Retail will continue, and hospitality will reopen in a graduated and controlled manner.

- Cafes, coffee shops and unlicensed premises will open from the 13th.

- Hotels and all restaurants will be permitted to reopen, (including hotel restaurants) with alcohol sales prohibited in their bar from 13th November for a further 2 weeks.

- Pubs and bars will be permitted to sell sealed off sales from the 13th

- Wet pubs will reopen on 2 December.

- Competitive sports fixtures can recommence from 23rd November in line with the Health Protection (Coronavirus, Restrictions) (No. 2) (Amendment No. 9) Regulations (NI) 2020.

-School sports will recommence on Friday 13th to get children and young people active again

- The household restrictions remain. These include the mixing of households in private homes and gardens, marriages and funerals, indoor sport, and indoor attractions and libraries, and will reflect the Health Protection (Coronavirus, Restrictions) (No. 2) (Amendment No. 9) Regulations (NI) 2020 in those particular areas.

- Also a view on driving lessons restarting from 13th

2) It is not possible to model for individual relaxations, as there is too much uncertainly around the impact of the individual changes described above to allow this to be done with an acceptable level of confidence.

3) We have therefore treated the above proposal as a package and have estimated the impact from 13th Nov and 2nd December based on our experience to date. This includes the following:

- Rt was around 1.4 – 1.6 prior to 16th October

- Rt has fallen t0 0.7 – 0.8 at present (for cases)

- we have continued to assume that Rt will be 0.9 during the second two weeks of the current restrictions.

4) Based on the above considerations, we have assumed that Rt will rise to 1.0 (low), 1.15 (medium) or 1.3 (high) from 13th November.

5) From 16th November Rt will rise to 1.2 (low), 1.3 (medium), or 1.5 (high).

6) The results of modelling using these parameters is shown in the Annex a) and b).

7) Under all of these scenarios, further intervention to prevent hospital capacity from being overwhelmed will be required at some point between 1st and 15th December.

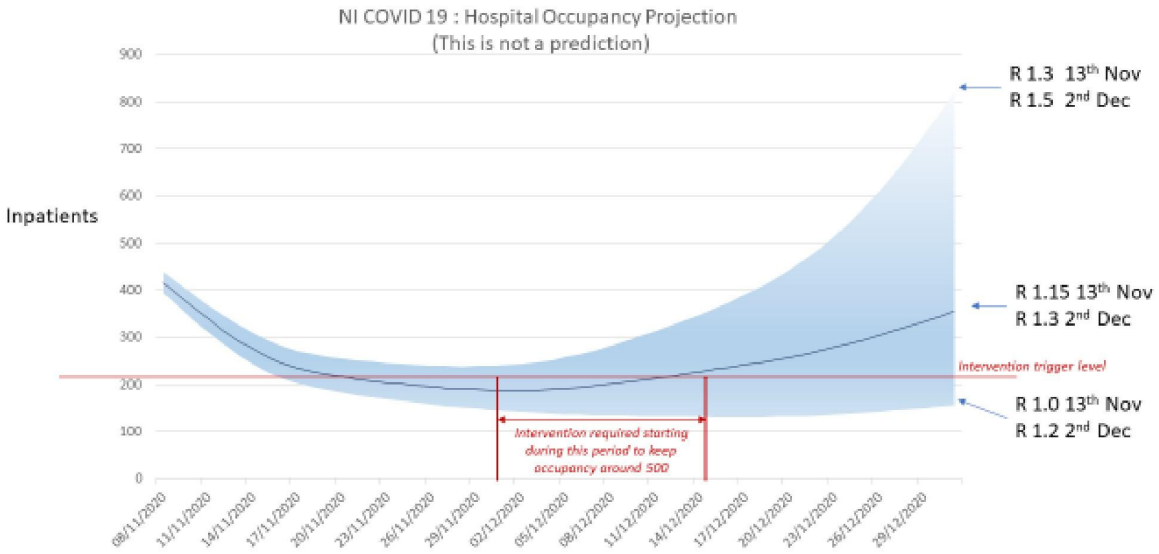
8) The number of hospital deaths will be between 150 and 370 by the end of December under these scenarios, and total COVID deaths are likely to be 300 – 800 based on the ratio of deaths in the community and non-COVID excess deaths during the first wave of the epidemic. Deaths will continue to increase in January and numbers will be significantly greater without further intervention.

9) As can be seen from Annex c), hospital capacity is currently near 100% and has been exceeded on a number of recent days. It would only be possible to deal with an increased number of COVID admissions by downturning other services. This might lead to a greater number of deaths, which is difficult to model with any confidence.

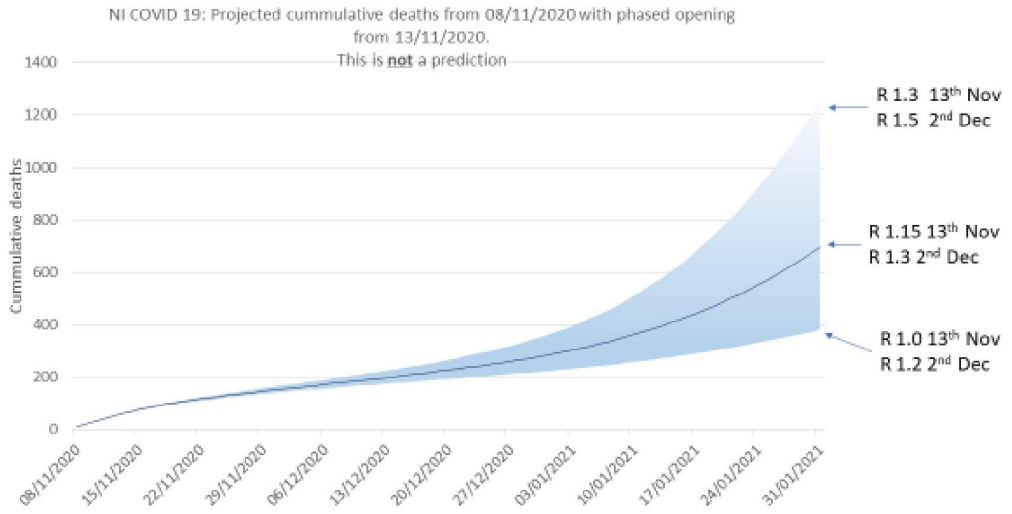
10) There remains considerable uncertainty about the impact of the proposed relaxations; it is not possible to provide more accurate modelling in relation to this.

Annex:

a)


NI COVID 19 : Hospital Occupancy Projection
(This is not a prediction)
Inpatients
900
800
700
600
500
400
300
200
100
0
R 1.3 13th Nov
R 1.5 2nd Dec
R 1.15 13th Nov
R 1.3 2nd Dec
R 1.0 13th Nov
R 1.2 2nd Dec
Intervention trigger level
Intervention required starting during this period to keep occupancy around 500
08/11/2020
11/11/2020
14/11/2020
17/11/2020
20/11/2020
23/11/2020
26/11/2020
29/11/2020
02/12/2020
05/12/2020
08/12/2020
11/12/2020
14/12/2020
17/12/2020
20/12/2020
23/12/2020
26/12/2020
29/12/2020

b)


NI COVID 19: Projected cummulative deaths from 08/11/2020 with phased opening from 13/11/2020.
This is not a prediction
Cummulative deaths
1400
1200
1000
800
600
400
200
0
R 1.3 13th Nov
R 1.5 2nd Dec
R 1.15 13th Nov
R 1.3 2nd Dec
R 1.0 13th Nov
R 1.2 2nd Dec
08/11/2020
15/11/2020
22/11/2020
29/11/2020
06/12/2020
13/12/2020
20/12/2020
27/12/2020
03/01/2021
10/01/2021
17/01/2021
24/01/2021
31/01/2021

c)

Total hospital bed occupancy in Northern Ireland vs. Capacity