Minutes of the NERVTAG Subgroup on Clinical Risk Stratification: Sixth meeting

Date & Location: 10:00 – 11:30, 22nd June 2020 - Via telecon only

In attendance:

Julia Hippisley-Cox (JHC) (Chair), Emma Petty (Secretariat)

NERVTAG Members: Peter Horby (PH), Andrew Hayward (AH), Calum Semple (CSm)

Sub-group members: Elizabeth Williamson (EW), Ruth Keogh (RK), Karla Diaz-Ordaz (KDO), Harry Hemingway (HH), Jonathan Benger (JB), Carol Coupland (CC), Ashley Clift (AC), Aziz Sheikh (AS), Ronan Lyons (RL), John Robson (JR), Jonathan Valabhji (JV), [redacted], Ewen Harrison (EH), David Spiegelhalter (DS), Frank Kee (FK), Tony Williams (TW), David Coggon (DC), Susan Jebb (SJ)

DHSC Observer: [redacted]

JCVI Observer: Ruth Parry (RP)

1.0 Welcome

1.1 The Chair welcomed everyone to the meeting and introductions of members were made. No apologies were recorded. Three new members (TW, DC & SJ) were welcomed to the subgroup. The Chair noted that AC was collecting the competing interest forms and any outstanding forms should be submitted .

2.0 Minutes and matters arising

2.1 The minutes of the last meeting were reviewed and were agreed with no amendments .

2.2 The actions were reviewed. The Chair informed members that the work with NHS digital on the coding lists was ongoing. The Chair thanked members for providing comments on the protocol and press release. The protocol (v1.12) should be published today (22nd June). NM advised that NHS England is aware of this proje ct and that the work will be included in the implementation plan for clinical stakeholder consultation. The Chair informed members that data from PHE provided better definition of who is undergoing specific cancer treatments, together with radiotherapy data and this ha s been incorporated into the model. JB added that to flow new data into GP systems will not be a simple or quick task, but the long-term options could be considered. JHC proposed a practical solution whereby the tool is configured to give a prompt to GPs t o check if a patient has received treatment for cancer in the last 12 months. The available data flows were discussed.

- *Action 6.1:* ***JHC*** *to work with NHS digital and the devolved authorities to co - ordinate the list of codes required to validate the model*

- *Action 6.2: **JHC** to configure model to produce a prompt to GPs to check if patient has received treatment for cancer in the last 12 months*
- *Action 6.3: **JB** to consider long term options of possible changes in data flow to provide information of patients who have undergone cancer therapy in the last 12 months or whether GP systems will need a prompt to check if a patient has received cancer therapy*

2.3 The actions regarding updates of the protocol and consideration of region would be discussed under agenda item 4. The actions on the press release had been completed. NM noted that consideration will be made for the discussion with the National Clinical Directors as part of the stakeholder consultation.

3.0 Policy update and publication of protocol and comms

3.1 NM advised members that an announcement on shielding was expected for 5 pm today (22nd June). The publication of the protocol will be handled separately from the announcement. The priority will now be to map out the engagement of potential stakeholders. A risk stratification implementation board has been established, who meet on a weekly basis to consider policy development and includes input from various stakeholder groups and government departments. NM confirmed that the UK CMOs and senior clinical advisors had been advised of the final policy position for today's announcement. It was noted that the press release refers only to the clinical tool, which is the priority of the project.

3.2 TW raised an issue with in appropriate coding in relation to shielding. NM responded that the tool should be more individualised and take risk factors into account in a cumulative way. The issue with current inappropriate coding would be considered separately from the sub group.

4.0 Model development update

a. Update on models and initial results
b. Update from Stats group on region

4.1 The Chair informed members that the model was being finalised and would take into account comments following the publication of the protocol, with the potential inclusion of additional risk factors. The predictors have been determined. The model currently considers three outcomes: mortality, hospital admission and a composite outcome ; however, the value of the composite indicator is less than anticipated. Members agreed that the model should focus on the other two outcomes. Suspected COVID-19 could be considered as an outcome in future iterations.

- *Action 6.4: **JHC** to focus analysis on two main outcomes for the model (hospital admission & mortality) and not include the composite outcome.*

4.2 CC described the analyses to consider shielding outcomes, using different options for shielded conditions to review the ranking and noted that there were only slight differences. Shielding is not currently included as a factor in the model; however, a question could be included to ask if an individual is on the shielded list. Members

discussed whether the differences in analyses may change as more data becomes available. The impact of timings of the interventions on the available data was also discussed, noting that it can be difficult to disentangle the effect of shielding . It was agreed that the Stats group would reconvene to consider the inclusion of shielding and update the sub group at the next meeting.

- *Action 6.5:* ***Stats group*** *to consider whether the shielding list should be used with the protocol and the analyses and update at the next meeting (meeting invite sent for 8.30 am 29th Jan 2020)*

4.3 CC advised members that the issue of region had been considered. The production of a transportable risk, not tied to region, would allow validation of the model outside of England. Analyses stratified by region showed little difference. Evaluation analyses will be run within regions to compare discrimination and calibration across regions. I n analyses stratified by region, the effects of ethnicity persisted. For operationalising the model, region will not be included in the final version . The Chair suggested that the various evaluation analyses could be included in a supplement to the final p aper.

4.4 Members discussed the use of region as a surrogate for exposure and how underlying local incidence rates could be considered. There may be a possibility to link test and trace data with local incidence data and combine this with personal risk. It was noted that there is no historical data for COVID-19 and the initial data is from hospital cases, which makes calibration against community incidence difficult.

4.5 The Chair demonstrated the academic calculator and members discussed the presentation of the results. It was suggested that the interface should be user tested.

4.6 Members queried the inclusion of an urban/rural factor. It was noted that this data is no longer collected; however, it may be possible to include it at a later date if required. Members questioned whether it was possibly to retrospectively fit in level of exposure, using serology data and considered the accuracy and value of such data. The tool could be developed to determine risk during the epidemic of an average person, which could later be tweaked to be adaptive to local circumstances. The level to which exposure should be taken into account was discussed. It was suggested that these issues, together with the limitations of the approach with the current available data could be discussed the final paper.

4.7 Members considered whether the rankings might change depending on the baseline exposure levels and the importance of geographical factors. The concept of determining the risk of vulnerability for possible outcomes once someone bec omes infected was discussed. This could be subsequently combined with the prevalence of infection at that time and in that locality to obtain an estimate of overall risk. It was noted that region was an important factor, but this level of importance may ch ange in the future. An estimate score of relative risk for vulnerability could be produced which wouldn't vary. The prevalence of infection in the local area could then be used to dictate behaviour for those over a certain score.

4.8 It was suggested that the model should also take into account COVID-19 treatments , such as dexamethasone.

4.9 The Chair noted that part of the work was to identify risk factors, initially based on no data and to review these as more data becomes available. The next stage will consi der

further factors, such as the introduction of a vaccine and possible mutations to the virus. The Chair advised members that some conditions not currently on the shielded list are showing as high risk in the models, such as Down's syndrome, and questioned how these conditions should be handled. It was noted that Down's syndrome has also been associated with increased risk from other infections. The current shielded list will be maintained until the stratification tool is available. There is a panel proces s for the addition or removal of groups to the list, with recommendations made to the UK CMOs. The Chair proposed to write a research letter presenting the evidence for the increased risk for adults with Down's syndrome. Members discussed whether Down's syndrome should be separated from learning disability for the model.

- *Action 6.6:* **JHC** to write a short paper on the number of cases and evidence of increased risk with Down's Syndrome for DCMO and publication as a research letter, with input from AC, AH & others. **Members** to volunteer to help with paper

5.0 Model validation update including data access and governance approvals

5.1 The Chair advised members that the model is not ready for external validation currently. A validation pack will be produced for use with external data sets. The Chair asked for contacts within NHS Digital who could assist with the coding lists needed for validation.

- *Action 6.7:* **JHC** to request NHS digital contact from JB to assist with coding lists

6.0 Patient engagement

6.1 SJ noted that the press release didn't include anything from patient or public representatives. It was noted that the public will be very invested in this work and that there could be some inclusion in the press release.

6.2 AC informed members that 5-10 patient representative opinions had been obtained on the lay summary, which will be collated into a report. No requests had been made for comments on the press release but including a public acknowledgement could be investigated.

- *Action 6.8:* ***JHC & AC*** *to consider inclusion of patient/public view in press release*

7.0 Professional engagement and piloting in GP practices

7.1 The Chair noted that, with the publication of the protocol, there will be opportunities to engage with stakeholders.

8.0 Implementation

8.1 DS confirmed that tests could be rapidly run on formats for the tool with the general population to consider comprehension and behaviour intention . There is a challenge with how to communicate small numbers which vary over orders of magnitude with individuals and ensuring that a false sense of security is not given. There was a suggestion of using comparators with other risks and the use of ranking by risk since

this may be stable despite variations in absolute incidence of a virus over time . Members considered formats of other risk tools, such as covid age and heart age, and what might be applicable for the risk stratification tool. However, DS noted that there was no single correct way to communicate risk and there may be concerns with fixing on age especially if the comparison was always with a white male. The Chair noted that this is complex since the UK BAME population generally has a younger age distribution. CC noted it is easier to see how an age-based concept might apply to chronic disease affecting an organ with increases steadily with age (such as the hear t disease), but less easy to see how it might work with an infectious disease in a pandemic which varies over time. It was suggested that using age may be a difficult concept to use for this context. This issue may need to be explored further.

9.0 General discussion

9.1 No matters were raised for this item.

10.0 Summary of actions and next steps

10.1 It was confirmed that the list of actions and the draft minutes would be circulated to members. It was hoped that a draft of the final paper would be available in the next two weeks and that the draft validation statistics could be reviewed at the next meeting.

11.0 AOB

11.1 No matters were raised for this item.

12.0 Date of next meeting

12.1 The Chair proposed that the next meeting would be held on Tuesday 30th June 2020 at 2.45pm. The meeting was closed at 11.44 am.