

Message

From: McLean, Angela SCS (CSA-Personal) [angela.mclean113@mod.gov.uk]
Sent: 25/01/2021 10:55:19 AM
To: Harrison, Rob - CO (OFF-SEN) [rob.harrison@cabinetoffice.gov.uk]; Ben Warner [bwarner@no10.gov.uk]
CC: [redacted] NR @no10.gov.uk; Gardiner, Clare [clare.gardiner@dhsc.gov.uk]
Subject: RE: COVID strategy meeting - modelling requirements

I have emailed Chris and Patrick saying HMT changed the model after I QA'd it and I don't know how. Anything HMT says about infectious disease modelling therefore has no endorsement from me - they are on their own. Given their inability to spot egregious errors in other things they were sent I do not have any confidence in their ability to hack a simple, sensible model.

However, I do think we should be building a fast loop where simple model generates specific questions and sophisticated models address them straight away. Clare, how is JBC getting on with running current SPI-M models?

Angela

From: Rob Harrison <rob.harrison@cabinetoffice.gov.uk>
Sent: 25 January 2021 10:30
To: Ben Warner <BWarner@no10.gov.uk>
Cc: McLean, Angela SCS (CSA-Personal) <Angela.Mclean113@mod.gov.uk>; [redacted] NR @no10.gov.uk; Gardiner, Clare <Clare.Gardiner@dhsc.gov.uk>
Subject: Re: COVID strategy meeting - modelling requirements

Ben,

I don't think we agreed to stop development; we agreed not to develop the model in the way CX asked, or to allow any decisions to rest on it. But we still want to improve this tool and allow us to explain/explore SPI-M's findings.

HMT *very* bruised by last week. They should be OK where we ended up: we have offered an alternative solution to meet CX's requirements, and had lots of input into the commission. In return, they must follow rules of the road for use.

I'm concerned about two scenarios: either that HMT break from the pack, hack the model and use it to create their own spurious plan; or that we undermine all confidence in the toy model, which I still think is a very good addition to the armoury, and has definitely improved the quality of understanding/discussion in policy space.

Very happy to meet in smaller group as a 'governance board' to discuss next steps, with us plus Clare and [redacted] NR Would that be useful?

Rob

On Mon, 25 Jan 2021 at 09:34, Ben Warner <BWarner@no10.gov.uk> wrote:

Hi Rob,

I worry that this email is walking back from the position we agreed on the model. Which was we were stopping development because it was being used to in a way that would mean decision makers would draw incorrect conclusions.

'A very good simple model' – You know what this means, but others will think this means a simple model that can describe reality. It also doesn't allow us to see what is driving results, because it does not have the complexity built into it.

I am particularly concerned in regards to how HMT analysts have/are engaging with this project.

Regards,

Ben

From: Rob Harrison <rob.harrison@cabinetoffice.gov.uk>

Date: Saturday, 23 January 2021 at 09:00

To: Imran Shafi <IShafi@no10.gov.uk>

Cc: "Elizabeth.Perelman" <Elizabeth.Perelman@hmtreasury.gov.uk>, Henry Cook <HCook@no10.gov.uk>,

Stuart Glassborow <SGlassborow@no10.gov.uk>, [REDACTED] <[\[REDACTED\]@no10.gov.uk](mailto:[REDACTED]@no10.gov.uk)>, "Ridley,

Simon - CO (OFF-SEN)" <Simon.ridley@cabinetoffice.gov.uk>, "Bowler, James - CO (OFF-SEN)"

<James.Bowler@cabinetoffice.gov.uk>, [REDACTED] <[\[REDACTED\]@hmtreasury.gov.uk](mailto:[REDACTED]@hmtreasury.gov.uk)>,

[REDACTED] <[\[REDACTED\]@hmtreasury.gov.uk](mailto:[REDACTED]@hmtreasury.gov.uk)>, "York-Smith, Dan - HMT" <Dan.York-Smith@hmtreasury.gov.uk>,"

Simon Case - Cabinet Office - (OFFICIAL)" <simon.case@cabinetoffice.gov.uk>,"

"Gardiner, Clare" <Clare.Gardiner@dhsc.gov.uk>, "Cumming, Fergus" <Fergus.Cumming@dhsc.gov.uk>, [REDACTED]

[REDACTED] <[\[REDACTED\]@no10.gov.uk](mailto:[REDACTED]@no10.gov.uk)>, Ben Warner <BWarner@no10.gov.uk>, "McLean, Angela SCS (CSA-

Personal)" <angela.mclean113@mod.gov.uk>, SPI-M [REDACTED] <[\[REDACTED\]@no10.gov.uk](mailto:[REDACTED]@no10.gov.uk)>,"

Ben Cropper <ben.cropper@cabinetoffice.gov.uk>, Alexander Wilson <alexander.wilson@cabinetoffice.gov.uk>, Chris

Whitty <Chris.Whitty@dhsc.gov.uk>, "Vallance, Patrick (GO-Science)" <P.Vallance1@go-science.gov.uk>,"

emma.payne" <emma.payne@cabinetoffice.gov.uk>, [REDACTED] <[\[REDACTED\]@no10.gov.uk](mailto:[REDACTED]@no10.gov.uk)>

Subject: Re: COVID strategy meeting - modelling requirements

Imran,

Thanks. I should have been clearer that HMT colleagues were part of the discussion and helped shape this commission, with input from CX's office. Look forward to hearing other views. My immediate responses to your questions below.

We have a workable solution to the issue of getting vaccine deployment scenarios to modelling groups.

I've sent this morning for the benefit of those working this weekend but happy to pick up this discussion on Monday.

Rob

On Fri, 22 Jan 2021 at 19:28, Imran Shafi <IShafi@no10.gov.uk> wrote:

Thanks. Useful to hear HMT views on this as well as others in No 10. Some thoughts from me:

- what will be the protocols on making these results public? I would hope they will be kept internal until Ministers have made decisions - will all the academic partners on spi m and sage be comfortable with that? **Normal arrangements apply. Publication of SAGE/SPI-M papers can be deferred if they are relevant to policy under active development. Some of the groups may publish academic papers based on their modelling - SPI-M sec can advise.**
- If we want to tailor scenarios etc in between Sage meetings will we be able to do this with the modellers or will need to go through a full loop every time? **The toy model can be used between SPI-M iterations. Parameters used will be transparent to enable comparison. We will continue development of the toy model to 'shadow' the SPI-M work, explore the results, and shape future commissions.**
- we should not give a defined precise view to modellers on what we think is sustainable nhs capacity, as that will be a judgement taken in the round at the end and needs to be communicated carefully. They should model a range of plausible options on this (which we can agree across dhsc, hmt and us) **Agree on a range of plausible assumptions, to help inform the political choices. Anything shared with the modelling groups would be described as scenarios, not policy.**
- Please can we avoid any reference to a PM/CX meeting in any commission. **The commission below is written for clarity for this distro, and no mention of PM/CX meetings need go outside.**
- What does the above imply for any future use of the toy model? **The toy model remains an important tool which can be used to explore scenarios, inform internal discussions and help shape the asks of SPI-M. It is a very good simple model, but as we've discussed it isn't designed to support consequential decisions on its OWN. It was designed to be used alongside SPI-M modelling to enable us to explore what is driving the results. If conclusions differ, we will be able to explain why this is.**

Imran

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[See recipients listed above]

Subject: Re: COVID strategy meeting - modelling requirements

Imran, all,

Analytical colleagues from No 10, JBC, CTF, SPI-M and HMT (cc) met last night to discuss how best to address this question. This represents our consensus view. I'm also copying Patrick and Chris.

It is theoretically possible, given time, to develop the toy model as described, but this would exceed its current design parameters and the agreed limitations on its use. It might produce results which could mislead decision makers. Angela, as SPI-M chair, would not endorse use of the toy model in this way. Chris and Patrick may wish to comment.

However, one of the intended uses of the toy model was to help us articulate questions for SPI-M, who currently have two full epidemiological models (Imperial, Warwick) which could provide a more robust basis for decision-making. We propose the following commission:

Analysis was presented to the PM and CX on Wednesday showing the impact on Covid patient hospital occupancy of an increase in R of varying magnitudes and at different points between late February and early March, simulating a single easing of NPIs.

At this meeting, the Chancellor asked if, to aid planning in the upcoming budget, the analysis could be extended over a longer time horizon to explore plausible paths for a sustainable pace of easing e.g. modelling a stepped increase in R each month, while remaining below an agreed ceiling for Covid patient hospital occupancy. The modelling should consider the horizon over which a sequence of easements could sustainably reach a level consistent with Tier 1 restrictions (broadly consistent with the overall level of restrictions in September last year) without this ceiling being breached.

The Imperial and Warwick papers presented at Sage 77 provide a basis to address this question if updated with the current estimate of R and the latest data on vaccine roll-out. As with the two previous papers presented to SAGE, the work will need to draw on reasonable best-case, central case and worst case assumptions around vaccine roll-out, efficacy in preventing serious illness leading to hospitalisation (for first and second doses), and in blocking transmission. The parameters used in each case should be set out in a table, identifying those which are most important and sensitive.

One key parameter will be on the sustainable level of Covid patient hospital occupancy. The Warwick paper for Sage 77 made one assumption, but the modelling might usefully consider alternatives pending a ministerial discussion, informed by expert advice, on the sustainable maximum.

To answer this question SPI-M would require the following:

- a) The best data available on projected vaccine deployment.
- b) Greater confidence in the starting conditions, which we expect to improve over the next 1-2 weeks as the full impact of the lockdown, without the confounding effect of the festive period, is known. SPI-M's most recent estimate of R would provide a basis for work to start.
- c) Clarity on the level of hospital occupancy considered sustainable, including at a regional level. This might require a ministerial discussion about risk appetite based on expert clinical input, but meanwhile the modelling could explore some different assumptions.

Subject to (a), which we must resolve today or lose a week (separate correspondence refers), SPI-M intend to present preliminary scenarios on reopening schools to SAGE next week, and a response to the new commission above in w/c 1 February.

No matter how sophisticated the model, all scenarios will have significant ranges of uncertainty due to unknowns including uptake, effect on preventing serious illness, effect on transmission, and public behaviour. We expect these ranges to narrow as new data becomes available between mid-February and mid-March.

Regards, Rob

On Thu, 21 Jan 2021 at 12:43, Rob Harrison <rob.harrison@cabinetoffice.gov.uk> wrote:

Elizabeth, Imran,

The development team (JBC, 10DS, TF, HMT, SPI-M) are meeting this evening to discuss what's possible - we'll update you after that.

Regards, Rob

On Thu, 21 Jan 2021 at 07:39, Perelman, Elizabeth - HMT <Elizabeth.Perelman@hmtreasury.gov.uk> wrote:

Thanks imran, sounds great.

And agreed we definitely need to engage with spi-m, but hopefully this helps us pose a more informed question and be a more intelligent customer of their modelling.

NR

- great if you could follow up with rob.

Thanks

E

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From: Imran Shafi <IShafi@no10.gov.uk>

Sent: Wednesday, January 20, 2021 10:48 pm

To: Perelman, Elizabeth - HMT; rob.harrison; Henry Cook

Cc: S Glassborow; zzDrosenfield; Ridley, Simon - CO (OFF-SEN); Bowler, James - CO (OFF-SEN);

HMT; **NR** - HMT; York-Smith, Dan - HMT; Simon Case - Cabinet Office - (OFFICIAL)

Subject: Re: COVID strategy meeting

Thanks Elizabeth, copying Rob H as Taskforce owner of the model, who can say what is and isn't doable re outputs. We'll also need to engage the more sophisticated SPI-M modelling at the right moment.

We need to reflect on what meetings we need generally next week and will get back to you as soon as we have.

Imran

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From: Perelman, Elizabeth - HMT <Elizabeth.Perelman@hmttreasury.gov.uk>

Sent: Wednesday, January 20, 2021 10:15 pm

To: Imran Shafi

Cc: Stuart Glassborow; Dan Rosenfield; Ridley, Simon - CO (OFF-SEN); Bowler, James - CO (OFF-SEN);

- HMT; Joseph, Kate - HMT; York-Smith, Dan - HMT; Simon Case - Cabinet Office - (OFFICIAL)

Subject: COVID strategy meeting

Imran

Following on from your readout, I have touched base with our team here and said Cx keen for them to work closely with Taskforce over the next week to deliver the Cx's point highlighted below.

Would it make sense to aim to have 3-slides for this time next week, which set out:

- [slide 1] Key assumptions:
 - Vaccine roll out (just use current base case)
 - Take up
 - Efficacy – hospitalisation and death
 - Efficacy – transmission
 - Infection fatality and hospitalisation rate (assume in line with JCVI prioritisation)
 - Length of stay in hospitals
 - Target on NHS capacity (i.e. akin to the 20k or whatever that was referred to in the meeting)
- [Slide 2-3] Results on model:
 - Base case – four simple charts (time series now until Autumn 21): path of NPIs (solving for NHS capacity), infections, hospitalisations, decomposition of R
 - Sensitivities – because as PV said this is about trends and not point estimates.

Obviously modelling is only one data point, alongside current data, assessment of risks etc which need to be taken in the round. But as Dan R said, we can then update/check model against weekly data and it will provide a useful point of reference.

Our team think this is doable using existing CO model and just building it out.

Does that work?

E

READOUT EXTRACT

The PM was keen to understand when we will get further information that guides his choices. Following the meeting, we agreed with CMO that we would get a list of dates setting out by when we will get further data points on the key metrics. CX was also keen that in future discussions, we run through the model in more detail, setting out the key assumptions, and running out beyond the Spring. CMO and CSA both stated that the model would not be able to provide a precise steer on numbers though it could show trends.

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