

SPI-M: views on intervention timings in advance of tomorrow morning's SAGE

Steven Riley I&S
To: "Ferguson, Neil M" I&S

12 March 2020 at 12:05

NP -

My plans for this are:

1) Circulate to the team here. I will explain that you and I have different voices in UK Gov (as do many members of the team) and that you gave very helpful comments. I know you share some of the concerns raised in the paper but that you have a different view about some assumptions. Don't feel you have to comment ! :) But feel free to. I will read any comments very carefully and reply politely.

2) Improve the note and circulate for the WHO call tomorrow. As long as I make it clear that I am making assumptions about R0 changes, I do want that group to see the dynamic regime I outline.

3/4) Look at age-specific cocooning in the same framework. Use the stochastic version to get an accurate assessment of the deaths in the elderly given a certain efficacy of cocooning. The R0 drop will be less of an issue because it will only be a per-case probability of avoiding that is important. But it will be interesting to see what the population susceptibility looks like on the other side. I also worry about everyone else being infectious enough once we have completely re-organised our society to protect the over 55s. Again, we could easily end up in a low R0 purgatory.

4/3) Think about submitting this as an opinion / article if the current set of interventions in the UK is stringent enough that it might be likely to land us in an R0=1 regime or close. I will offer to include members of the team here that might want to join. If I don't get enough support, I'll seek help from outside! I would still love for this to be report on our site, but I understand that may not be possible.

One last point. I know you don't make decisions, but you could be asked at SAGE directly if you think ongoing containment should be a new policy. Obviously, you are going to give your opinion! But please consider the very specific dynamic regime I outlined in the note as a mechanism of "failure" of mitigation, and our experience observing populations respond to SARS, Ebola and MERS. I do accept that behavioural science exists that there may be evidence that R0 stays high that I have not seen, but given the general lack of understanding of the threat, I am sceptical that that work has been done well enough to overcome my strong prior from SARS, Ebola and MERS.

Thanks again for handling the most difficult aspects of gov interactions.

best

Steven

On Wed, 11 Mar 2020 at 19:58, Ferguson, Neil M <I&S> wrote:
Sorry I haven't had time to reply - snowed under. Let's try to talk tomorrow

Best,

Neil

From: ste.riley I&S on behalf of Steven Riley I&S
Sent: Wednesday, March 11, 2020 3:03:14 PM
To: Ferguson, Neil M I&S
Subject: Re: [External] SPI-M: views on intervention timings in advance of tomorrow morning's SAGE

Hi Neil,

I understand. But I don't believe they will have a model for the virus keeping Rt below 1. I cannot believe that is better than us doing it.

I always like my work :) but I believe the implications of the note are important for exactly this point. I don't think it matters how bad proactive economic lockdown is, because reactive economic lockdown will be worse. That's very different to not caring about people who will suffer hardship.

Not sure I can publish this but I do want to get the ideas out. If I took actual numbers out of table 1 and went for very good peer review (science), would you consider joining as an author (and inviting the rest of the team).

Cheers

Steven

On Wed, Mar 11, 2020, 11:28 AM Ferguson, Neil M I&S wrote:

I understand your view. But just bear in mind the Treasury advice is that 6 months of intense social distancing - sufficient to achieve $R < 1$, is predicted to drive deep recession and massive business failures and job losses. I spoke to someone on the US Fed interest committee last night. The epidemic is already going to cause a larger recession than the 2008 crash, even with massive bailouts and rescue packages. These effects will resonate for years, especially among the most disadvantaged. As I've said many times, I don't think there is a clear cut best strategy.

Best,

Neil

From: I&S on behalf of Steven Riley I&S
Sent: Wednesday, March 11, 2020 11:04:32 AM

INQ000269369_0001

From: I&S On Behalf Of Steven Riley
Sent: 11 March 2020 09:56
To: Ferguson, Neil M I&S
Cc: WOOLHOUSE Mark I&S; Graham Medley I&S; Chris Jewell I&S; Daniela De Angelis I&S; SPI-M <SPI-M@dhsc.gov.uk>; Andre.Charlett@phe.gov.uk; Chris.robertson I&S; <daniela.deangelis@phe.gov.uk>; I&S; Ian Hall <ian.hall@phe.gov.uk>; John Edmunds <John.Edmunds@phe.gov.uk>; I&S; Jonathan Read <jonathan.read@phe.gov.uk>; I&S; Julia Gog <jrg20@phe.gov.uk>; I&S; Baguelin, Marc J M <m.baguelin@dhsc.gov.uk>; I&S; Matt Keeling <matt.keeling@dhsc.gov.uk>; I&S; Nick Gent <nick.gent@phe.gov.uk>; Allen, Paul <Paul.Allen@dhsc.gov.uk>; NR
Subject: Re: [External] SPI-M: views on intervention timings in advance of tomorrow morning's SAGE

Please Neil, stop referring to my view of my role.

I am 100% happy with the comments I have made verbally and in writing. I have worked for many years on science where a policy is recommended at the end of the paper. Our entire REF impact concept is based on this. I understand that I don't make the decision. And I understand this is incredibly difficult for those who do.

Best

Steven

On Wed, Mar 11, 2020, 9:38 AM Ferguson, Neil M I&S wrote:

Regarding para 2 - you may feel it's not your job Steven, but perhaps not one shared by SAGE and govt. We're not here to determine policy, clearly, but our role is to give advice on what interventions might work, their likely effectiveness and the risk/uncertainties involved. Current UK policy has been very directly informed by SPI-M work. We will not be listened to if we now say "we think containment is preferable but can't tell you how you might achieve that".

I would also note that there is now significant momentum behind the current strategy. A huge amount of effort is going into operational planning right now. Government is aware of the projected incidence, health system demand and mortality impact. Though I personally would like to be reassured that the Cabinet is aware of what that will look like in reality.

The current view is that - with difficulty - this can be handled. Policy will not change unless we can demonstrate convincingly (rather than rhetorically) that the strategy will fail, and/or propose a concrete "better" alternative. There is limited appetite for intense social distancing policies - it has taken considerable work to move the government to the likely current strategy.

From: I&S On Behalf Of Steven Riley
Sent: 11 March 2020 09:12

[See recipients listed above]

Subject: Re: [External] SPI-M: views on intervention timings in advance of tomorrow morning's SAGE

Thanks for the comments.

Mark - I agree that these are both ways mitigation can fail, but I think you jump past a key part of the result. We have always assumed mitigation would succeed to some degree because of the momentum of the epidemic. The note illustrates that mitigation can fail and lead to a very long bad experience. As would the absence of protection.

Neil - I strongly disagree that it is our job to say how containment might work. The policy might have been better stated as successful attempted containment. But there are redundancies there. If the government attempts containment, it will immediately become a substantial proportion of all government effort. It is in no way reasonable for us to know exactly what strategies those hundreds of people will choose. Nor is it reasonable for us to say it will succeed or fail. It is entirely reasonable for us to observe how many other countries

have devoted substantial proportions of government to this objective as a stated policy. The level of threat from COVID in terms of deaths is comparable with prior UK experiences where rapid innovation has been a key factor in our success.

Before the meeting, can we agree that economics have to be part of our discussion to some degree. If they were not, then containment is obviously the only choice. We will need to take a view on the cost differences between illustrative scenarios and our degree of confidence in those cost differences. We don't need to be certain to take a position, but nobody else will.

A comment about the death rates in the table on the note. I would like to highlight that very very effective age-based cocooning with an otherwise relatively fast epidemic in young ages is a form of mitigation not represented in my note. I totally accept that could work to reduce the death rate. But it's a new idea and needs a lot of careful thought and planning and resource. To the degree that we might want to pause the epidemic for three weeks and then restart with that as a careful plan. We have no empirical evidence that it can work at all. From where we are now, to expect it will work naturally, seems very risky. But even without an explicit intervention, it describes a mechanism by which a strange form of herd immunity may accumulate with far lower death rates than those stated in the table on the note. We could model it, but it shouldn't distract too much from other options right now. And if it were to become the stated policy, it needs a lot of resource quickly.

Best

Steven

On Tue, Mar 10, 2020, 8:56 PM Ferguson, Neil M <[redacted]> wrote:

While I do not see completely eye to eye with Steven on this (or on the plausibility of the scenarios he presents), I think it merits discussion.

I think the key issues right now are (a) ensuring policy makers really understand what even successful mitigation would look like (in terms of mortality and health system impact), and (b) giving a fairly hard-nosed evaluation of the feasibility of achieving containment for 12+ months without completely locking down society (with the social and economic (and likely health) impacts that would entail.

I do feel strongly that we should focus on providing an evidence based assessment of what the policy choices are and their likely impacts, rather than advocate for a particular policy. At least in our role on SPI-M.

That is said from a perspective that I personally don't see any easy decisions here. Whatever policy choices are made, the next few months will see profound impacts on the UK.

Best,

Neil

From: WOOLHOUSE Mark <[redacted]>
Sent: Tuesday, March 10, 2020 7:42:36 PM

[See recipients listed above]

Subject: Re: [External] SPI-M: views on intervention timings in advance of tomorrow morning's SAGE

Dear Steven,

This is an interesting analysis. My interpretation is that you have identified another way in which the delay policy could fail. There are others too of course. Not least, as was mentioned at SPI-M the other day, the possibility that post-infection immunity is partial, temporary or non-existent.

I agree that epidemic duration has to be factored in, both with regard to the cumulative pressure on the health system and the cumulative social and economic costs of BSIs.

Kind regards,

INQ000269369_0004

From: Graham Medley { I&S }
Sent: 10 March 2020 08:59

[See recipients listed above]

Subject: Re: [External] SPI-M: views on intervention timings in advance of tomorrow morning's SAGE

Dear Steven

Many thanks for this. I think that this is a very useful statement of an alternative view. Certainly as the gap between the S. Korea and Italian experiences grows we should continually review our position, as much in the position of being infectious disease population biologists/epidemiologists as modellers.

I would be very grateful if everybody could have a read of this and let me or others know their opinion. Essentially Steven is questioning the current approach of "mitigation" rather than going for "containment" more strongly. If there is strong feeling then we should discuss and decide what our collective view is.

Best wishes

Graham

Graham Medley
Professor of Infectious Disease Modelling
Director of CMMID
Dept of Global Health and Development
London School of Hygiene and Tropical Medicine
<https://www.lshtm.ac.uk/aboutus/people/medley.graham>

On 10 Mar 2020, at 08:37, Steven Riley { I&S } wrote:

Please see attached a draft note that was originally motivated by our discussion of "most likely" epidemic under current policy. The curve for UC here represents my best guess.

May I stress this is not for circulation outside UK Gov without my prior permission.

best

Steven

On Mon, 9 Mar 2020 at 22:55, Chris Jewell { I&S } wrote:

This email originates from outside Imperial. Do not click on links and attachments unless you recognise the sender. If you trust the sender, add them to your safe senders list <https://spam.ic.ac.uk/SpamConsole/Senders.aspx> to disable email stamping for this address.

I would agree with Graham as to the process. Since we are currently in a situation of wide uncertainty, I would be inclined to implement CI soon as the least disruptive countermeasure. The policy should subsequently be reviewed on a weekly basis as we learn from further case reports. Policy should, in my view, remain open to continual review and adaptation as much as is reasonably practical.

Chris