

Message

From: Van Tam, Jonathan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D29C846FC8FA4678B419C6F0DC3836F3-JVANTAM]
Sent: 01/03/2020 07:13:58
To: Whitty, Chris [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0b3ee62e0ca04e978730b14f9b416a1e-Whitty, Chr]; Vallance, Patrick (GO-Science) [P.Vallance1@go-science.gov.uk]
Subject: RE: NPIs including social distancing of over 65s

CMO and GCSA only

In my view, the assumptions are relatively conservative in terms of compliance.

Based on my 15+ years of pandemic preparedness and response academic study, and the stark differences to 2009 and the conversations we are having at SAGE now compared with then, I am intrinsically attracted to and inclined to advise either the lower 'yellow' option (which avoids school closure) or the more disruptive green options. The point being that I don't think anything less will adequately mitigate the otherwise appalling NHS over-capacity projections.

JVT

From: Ferguson, Neil M **I&S**
Sent: 01 March 2020 01:27
To: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>; Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>
Subject: RE: NPIs including social distancing of over 65s

With delays, single interventions, and a very, very tentative representation of "mass gatherings". Based on a very quick guesstimation of person contact hours using stats on ticket sales, visits etc.

My definition of mass gatherings includes restaurants and bars – which far outweigh things like sporting fixtures, places of worship, cinema and theatre in terms of person-hours of contact time with people outside the household/school/workplace. Sporting fixtures, cinema, night clubs, places of worship and theatre only represent 40% of the person contact hours that restaurants and bars do. So, taking very risk averse assumptions about transmission, closing just those venues but not bars and restaurants would only reduce transmission outside the household/school/workplace by ~5%, giving <1/4 of the impact in the top row of this table.

Best,

Neil

From: Ferguson, Neil M
Sent: 29 February 2020 23:53
To: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>; Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>
Subject: RE: NPIs including social distancing of over 65s

Yes, understood. And like many things, it likely can't hurt (from a public health perspective), so long as those people don't end up in the pub

From: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>

Sent: 29 February 2020 23:51

To: Ferguson, Neil M [redacted] I&S Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>

Subject: RE: NPIs including social distancing of over 65s

We will try and convey that point qualitatively. But it still helps to convey quantitatively, if it can be done in a way which is robust.

This may fall into the category of things that 'make sense' to the reasonable lay public, but actually don't help (we need to the social science to test this) but it still needs to be taken seriously. As always, explaining why you are not doing things is a great deal harder than explaining why you are.

C

From: Ferguson, Neil M [redacted] I&S

Sent: 29 February 2020 22:59

To: Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Whitty, Chris <Chris.Whitty@dhsc.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>

Subject: Re: NPIs including social distancing of over 65s

I'll try. But it may be more important to convey the underlying science. I think there is a lay impression that transmission risk scales linearly with the number of people in one place. While the available data (which is admittedly sparse) suggests that any scaling is very much less than linear, and if it does exist is more related to density than absolute numbers.

For respiratory diseases, infectiousness seems to scale linearly with viral shedding. Which suggests a linear dose response model - every virion excreted poses a very small risk of infection. What that means is that an infected person can either pose a high risk of infection to a small number of people or a small risk to a large number. The overall number of secondary infections doesn't change greatly, unless the number of contacts is very small. Obviously if a case contacts no-one there is no transmission. And if two people live in a household with limited external contacts, each is at most are likely to infect the other.

It's a hard point to communicate. But it does likely mean that sitting with a small group of people in an enclosed space for several hours (a bar, ski chalet etc) poses more of a risk of secondary transmission than being a spectator in a stadium with 50,000 others.

Best,

Neil

From: Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>

Sent: Saturday, February 29, 2020 10:03:01 PM

To: Ferguson, Neil M [redacted] I&S Whitty, Chris <Chris.Whitty@dhsc.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>

Subject: Re: NPIs including social distancing of over 65s

We will be asked this and there will be pressure to take action, so having something on this would definitely help

Thanks

Patrick

From: Ferguson, Neil M <[redacted] I&S>
Sent: Saturday, February 29, 2020 9:39:57 PM
To: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>; Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>
Subject: Re: NPIs including social distancing of over 65s

You would have to include church services, night clubs, theatres and cinemas to be consistent. Theatres in particular appeal to the at risk age groups.

But I can make a crude estimate of person hours spent at such events and an even cruder estimate of excess transmission risk. I'll try to do by CoP tomorrow.

Best,

Neil

From: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>
Sent: Saturday, February 29, 2020 9:25:41 PM
To: Ferguson, Neil M <[redacted] I&S>; Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>
Subject: RE: NPIs including social distancing of over 65s

Thanks a lot. It is iconic, can be done in a relatively controlled way in some cases (eg matches without crowds) and other countries are doing it, so IF it is possible to model would be useful. It may well not be.

C

From: Ferguson, Neil M <[redacted] I&S>
Sent: 29 February 2020 21:11
To: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>; Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>
Subject: Re: NPIs including social distancing of over 65s

I can add in the single interventions yes. And delay to peak - though it's not long for any of these.

I'll send an update later.

Not sure re mass gatherings - in essence it a very limited form of social distancing. But I don't really know how to parameterise it. I'll think about it and consult though.

Best,

Neil

From: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>
Sent: Saturday, February 29, 2020 9:05:46 PM
To: Ferguson, Neil M <[redacted] I&S>; Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>;

Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>

Subject: RE: NPIs including social distancing of over 65s

This is really useful.

Is there an extended version that

- a. Just has single interventions on their own
- b. (more speculative) adds stopping mass gatherings
- c. Adds in delay?

Many thanks

Chris

From: Ferguson, Neil M <Neil.M.Ferguson@dhsc.gov.uk> **I&S**

Sent: 29 February 2020 20:27

To: Whitty, Chris <Chris.Whitty@dhsc.gov.uk>; Vallance, Patrick (GO-Science) <P.Vallance1@go-science.gov.uk>; Van Tam, Jonathan <Jonathan.VanTam@dhsc.gov.uk>

Subject: NPIs including social distancing of over 65s

Dear all,

As you know, we will be meeting the NHS planning team and colleagues from LSHTM and Oxford tomorrow to finalise proposed severity and healthcare demand estimates for the updated RWC.

In preparation for that, we have examined the effect of targeting social distancing at the over 65s. The assumptions made for the parameters governing the effectiveness of that policy are highly speculative – and would require intense infection control around care homes as well as a high level of policy compliance in those living in their own homes.

Nevertheless, the potential benefits of that policy are substantial – on total deaths more than peak incidence. But combining that measure with case isolation with either household quarantine or school closure might achieve a 30%+ reduction in deaths and a 60%+ reduction in peak hospital bed demand.

A range of scenarios are shown in the attached. Please read the notes as well as the numbers. None of these policies are predicted to give a second peak in transmission.

I will finalise this once the meeting tomorrow has finalised the input assumptions on severity, and then submit to SPI-M-O. But I am fairly confident that the numbers won't change substantially.

Needless to say, while I have quoted impacts to single percentage points, our real ability to predict the impact of policies is nowhere near that level. Largely because we have limited understanding of the extent to which people would actually modify their behaviour.

Feel free to share with others (subject to the many caveats), e.g. David Halpern and CCS, as you see fit.

Best,

Neil

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