From:	Jeremy Farrar [J.Farrar@ I&S
Sent:	13/03/2020 18:51:46
To:	Ferguson, Neil M [neil.ferguson@ I&S ; John Edmunds [John.Edmunds@ I&S
Subject:	Re: UKG and COVID

k

Agree

Message

Was much better. Not accepting – "we'll have that ready in a few weeks time' – more urgency (with one or two exceptions!) and I think a shift will follow in next 48-72 hours. Has to!

Can you share the modelling you do on "Regarding policies, I am modelling lockdown (no schools, reduced workplaces, no social life outside the home) and then a less intense option of no social life (what Italy is doing)" as soon as you can - I will use that through my channels

Keep in touch, shout if you need anything

From: Neil Ferguson OBE FMedSc	i <neil.fergus< th=""><th>on@ I&:</th><th>S ⊳</th><th></th><th></th><th></th><th></th></neil.fergus<>	on@ I& :	S ⊳				
Date: Friday, 13 March 2020 at 18	3:43						··
To: Jeremy Farrar <j.farrar@< td=""><td>I&S ⊳,</td><td>"john.edmu</td><td>nds</td><td>I&S</td><td><john.edmunds@< td=""><td>I&S</td><td>></td></john.edmunds@<></td></j.farrar@<>	I&S ⊳,	"john.edmu	nds	I&S	<john.edmunds@< td=""><td>I&S</td><td>></td></john.edmunds@<>	I&S	>
Subject: Re: UKG and COVID					-		

I think the message got across. I still think part of the issue is Chris hoping it won't be as bad as we say.

I was amazed that Chris and Patrick hasn't appeared to have previously asked the question of Steve as to whether the NHS could cope with what the govt policy would likely produce.

John - we have refined age specific hospitalisation and critical care estimates (IFR the same) which we will share with NHSE tomorrow. They're a bit lower than the RWC ones. Not enough to make a qualitative difference, but perhaps significant in terms of peak capacity threshold driven policies. If you want to harmonise, I will share with you first thing.

I will be switching to using them for modelling over the weekend.

Second, we might harmonise a bit on interventions and triggers. I think it would be helpful both for SPI-M and SAGE. I have run both pulses and off triggers. The latter is more robust to uncertainty in policy efficacy and R. But gives variable and perhaps unpredictable durations, and longer "on" periods (likely 5+ weeks).

I think a key issue is duration of pulse I can get the same outcomes with long pulses far apart or short pulses close together. Which is preferred will not be our choice.

Regional triggering also key.

Regarding policies, I am modelling lockdown (no schools, reduced workplaces, no social life outside the home) and then a less intense option of no social life (what Italy is doing).

Best,

From: Jeremy Farrar <j.farrar@< th=""><th>I&S</th><th>ł</th></j.farrar@<>	I&S	ł
Sent: Friday, March 13, 2020 6:02:08	PM	
To: John Edmunds <john.edmunds@< td=""><td>I&S</td><td>ł</td></john.edmunds@<>	I&S	ł
Cc: Ferguson, Neil M <neil.ferguson@< td=""><td>1&S</td><td>6</td></neil.ferguson@<>	1&S	6
Subject: Re: UKG and COVID		

Thoughts?

On 13 Mar 2020, at 13:19, John Edmunds < John.Edmunds@ I&S > wrote:

The more effective our interventions are the more we extend the epidemic. I don't really see the point of extending it, unless you go for really extending it properly, which means much more aggressive measures have to be put in place (perhaps in bursts, as we modelled).

John

 From: Neil Ferguson < neil.ferguson@</td>
 I&S

 Date: Friday, 13 March 2020 at 12:19

 To: Jeremy Farrar < J.Farrar@</td>
 I&S

 Subject: RE: UKG and COVID

On one point – I think we have to be driven by what NHSE say they can cope with, rather than secondguessing. I share the assessment that they won't cope, even if planned mitigation goes perfectly. But perhaps one approach would be to ask directly at SAGE what the gap is between maximum surge capacity and our "best case" mitigation scenario. That might then focus minds on the need for more intense interventions, even at the cost of extending the epidemic.

Neil

From: Jeremy Farrar <j.farrar@ 1&<="" th=""><th>S þ</th><th></th><th></th><th></th><th></th><th></th></j.farrar@>	S þ					
Sent: 13 March 2020 10:10				_		
To: John Edmunds <john.edmunds@< th=""><th>1&S</th><th>; Ferguson,</th><th>Neil M</th><th><neil.ferguson@< th=""><th>l&S ⇒</th><th></th></neil.ferguson@<></th></john.edmunds@<>	1&S	; Ferguson,	Neil M	<neil.ferguson@< th=""><th>l&S ⇒</th><th></th></neil.ferguson@<>	l&S ⇒	
Subject: Re: UKG and COVID				·		

Ok....I have warned PV

I need to be clear and constructive.

Can you do me a favour and send me bullet points of what you think UKG should do -1 have my own ideas, but I need to say what I am going to say and provide a constructive set of things to now do.

From: "john.edmunds@ 18	s "< <u>Joh</u>	n.Edmunds@	I&S	Þ
Date: Thursday, 12 March 202	20 at 22:22			
To: Jeremy Farrar < J.Farrar@	I&S	>, Neil Fergus	son OBE	FMedSci

<<u>neil.ferguson@</u>I&S Subject: Re: UKG and COVID

- 1. The data are crap and hopelessly out of date, so we have little situational awareness. The daily figures are a joke and the guestimate of 5-10,000 cases is probably too low.
- 2. The measures just announced will do very little. Not quite sure just how many cases will escape, but I suspect a fair few.
- 3. We will have to do a lot more to manage this epidemic. The current plans will overwhelm the NHS almost straight away. We need much more stringent control measures if we want to slow it down. Not necessarily now, but soon. Very soon.
- 4. There is an obsession with not getting an autumn/ winter epidemic later this year. This seems to be the tail wagging the dog. We are going to get a massive epidemic in the summer with hundreds of thousands of deaths, so that we don't coincide with the piddling little flu epidemic in the winter, which we can vaccinate against anyway. If you want to properly lower the peak, then it will have to be spread out for a long time.

From: Jeremy Farrar <j.farrar@ i&s=""></j.farrar@>
Date: Thursday, 12 March 2020 at 22:10
To: John Edmunds < <u>John.Edmunds@</u> I&S >, Neil Ferguson
< <u>neil.ferguson@</u> I&S
Subject: Re: UKG and COVID
Main concerns?
From: "john.edmunds I&S <john.edmunds@ i&s<="" td=""></john.edmunds@>
Date: Thursday, 12 March 2020 at 21:25
To: Jeremy Farrar < J.Farrar@ I&S >, Neil Ferguson OBE FMedSci
<neil.ferguson@ i&s=""></neil.ferguson@>
Subject: Re: UKG and COVID
NO I AM NOT.
From: Jeremy Farrar < J.Farrar@ I&S
Date: Thursday, 12 March 2020 at 21:05
To: John Edmunds < John.Edmunds@ I&S >, Neil Ferguson
<neil.ferguson@ i&s=""></neil.ferguson@>
Subject: UKG and COVID
Are you both comfortable with the plans UKG have not in place, the pace of actions and the changes

they are making?

Good if we could talk again before SAGE.

Jeremy

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health research. We are a politically and financially independent foundation.

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