

Message

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**Sent:** 28/01/2020 20:20:04  
**To:** William Warr [WWarr@no10.gov.uk]  
**CC:** [REDACTED] PD [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=15fb014e89294ab5b3c88e5918782c8e]; [REDACTED] PD  
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[REDACTED] PD [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2ff9661092c5453aa67b231e819b9653]; [REDACTED] PD  
[REDACTED] PD [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b61225d69db54bba9caa49f5fe6b7d68-]; Reed, Emma  
[REDACTED] PD [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=173f921982a14676bd2ddede2616bc10-EReed2]; Van Tam, Jonathan  
[REDACTED] PD [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d29c846fc8fa4678b419c6f0dc3836f3-JVanTam]; Vallance, Patrick (GO-Science) [P.Vallance1@go-science.gov.uk]; Permanent Secretary [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c95fac41d7c24f8ba5faa2072856bcd-f-Permanent S]  
**Subject:** RE: Contingency plans for virus. Official Sensitive

Dear Will

Sorry for the delay I have been back to back. I am ccing Patrick Vallance, and some of the key people here so they are aware of what I have sent. This is written informally for you (ie not for wide forwarding) but can be turned into a more formal note for Ministers if needed.

We are working on 4 scenarios, but in practice only 2 are probably worth considering for planning at this point.

- 1) China has a major outbreak but brings it under control ( $R < 1$ ) demonstrating it can be done. There are cases seeded out to other countries, including almost certainly the UK, but these do not lead to sustained onward transmission (there may be a few secondary cases). This is the current situation. The main aim of current UK planning in public health terms is ensure we do not have outbreaks from index travellers, so that if the epidemic is brought under control it has had minimal impact on the UK.
- 2) The other is the opposite end of the risk scale and is our reasonable worst case scenario for which plans are also being developed. With  $R$  of 2-3, mortality of maybe 2% (wide confidence intervals around both of these and all other numbers), a doubling time currently of maybe 3-5 days and an incubation period of mean 5d this could within the next few weeks become widespread and turn into a significant pandemic relatively quickly. Currently it looks as if most (probably the great majority) of the mortality is in older people or those with pre-existing health conditions, but this is still an appreciable mortality, and above that for example seen in the 2009 H1N1 (swine flu) pandemic. We would have to use our current flu pandemic plans as a base case, but without a vaccine or antivirals.
- 3) What makes this a difficult dichotomous decision is that the economic consequences of over-calling can be substantial, but the mortality and social consequences of under-calling are even more substantial. To put some numbers on the economic effects: one World Bank estimate is that the SARS epidemic, which killed less than 1000 people (cf maybe 8000 people a year killed by flu in the UK in an average year) took \$40Bn off the global economy due to reduced trade etc. It will take a few weeks before it becomes clear whether the substantial efforts of the government of China have reduced  $R$ , and if so by how much and whether it is now below 1.
- 4) *Currently* the priority is to prevent any UK transmission. If there was worldwide transmission (which may be the scenario within weeks) this would cease to be a realistic goal but we *might* be able to slow the initial upswing