Message

From: Orford, Rob (HSS - Primary Care & Health Science) [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=7D38A628177A448789839F37A51FAF75-ORFORD, ROB]
Sent: 24/04/2020 07:57:19
To: HSSG.TAC [hssg.tac@gov.wales]
Subject: FW: IN CONFIDENCE: SAGE: Coronavirus update 6
Attachments: FOR INFORMATION_ SAGE 11 papers.msg

From: Orford, Rob (HSS - Primary Care & Health Science)
Sent: 27 February 2020 16:18
To: Atherton, Frank (HSS - Chief Medical Officer) <Frank.Atherton@gov.wales>
Cc: Lyons, Marion (DHSS - DHP - Public Health) <Marion.Lyons@gov.wales>; NR (HSS - DHP Public Health) NR@gov.wales>; Surman, Neil (HSS - DHP Public Health) <Neil.Surman@gov.wales>; Kamalan, Chrishan (HSS - DHP Public Health) <Chrishan.Kamalan@gov.wales>; Goulding, David (HSS - DHP Public Health) <David.Goulding@gov.wales>; Saeed-Edmonds, Samia (HSS - Planning) <Samia.Saeed-Edmonds@gov.wales>; Situation Cell <Situation.Cell@gov.wales>; Andrew Jones (Public Health Wales) <andrew.jones10@wales.nhs.uk>; NR (HSS-Primary Care & Health Science) NR@gov.wales>
Subject: IN CONFIDENCE: SAGE: Coronavirus update 6

Hi Frank

Not yet official advice – not for wider circulation

Unfortunately the SAGE TC facility was not working today. I have asked to speak with a SAGE representative in order to better understand what information has been agreed by SAGE/COBR for wider circulation by HMG.

Once item for discussion was the priorities for SAGE and included:

- Detect and monitor the outbreak
- Understanding effective actions for clusters
- Understanding measures that alter the shape of the curve
- Model the epidemic for planning purposes
- Generate behavioural science insights
- Ensure NHS trials key interventions
- Consider emerging therapeutic, diagnostic and other opportunities

The SAGE papers add further detail on the RWC and start to quantitate the potential numbers of people at a UK level requiring hospital support and ventilation. Most of the pan-flu assumptions hold but some figures (e.g. duration of hospital stay) will have a significant impact on NHS planning when combined with the numbers of people requiring hospital support. If we estimate the numbers for Wales as being 5% of the UK totals we will see very significant impacts for NHS Wales that would far outstrip capacity for a number of weeks.

It will be important that we start to socialise the estimates for RWC for Wales, the Cabinet discussion next week might be a good opportunity to do this. I am seeking advice from SAGE on this, but I would welcome your steer. I will also discuss with Samia.

The second paper sets out the likely impact of lengthy non-pharmaceutical interventions (self-isolation, social distancing, household quarantine, school closures) in delaying the peak. It would be helpful to get the UK line on how and when this would be rolled out.

NR (TAC Secretariat) and I have discussed establishing the Technical Advisory Cell with Bon and Paul from Resilience (cc'd). Likely that we would set-up now and integrate into the formal Health Desk/ECCW structure when this is established. We will circulate a ToR next week, but I hope that this will model SAGE outputs and usual STACs, enabling us to work efficiently at a strategic level and provide clear scientific advice to WG. Andrew Jones (cc'd) has been added to SAGE group which is positive. Andrew has also raised the question of supporting the Technical Advisory Cell with PHW colleagues.

I hope this is helpful
Rob

From: Orford, Rob (HSS - Primary Care & Health Science)
Sent: 25 February 2020 22:58
To: Atherton, Frank (HSS - Chief Medical Officer) <Frank.Atherton@gov.wales>
Cc: Lyons, Marion (DHSS - DHP - Public Health) <Marion.Lyons@gov.wales>; NR (HSS - DHP Public Health) NR@gov.wales>; Surman, Neil (HSS - DHP Public Health) <Neil.Surman@gov.wales>; Kamalan, Chrishan (HSS - DHP Public Health) <Chrishan.Kamalan@gov.wales>; Goulding, David (HSS - DHP Public Health) <David.Goulding@gov.wales>; Saeed-Edmonds, Samia (HSS - Planning) <Samia.Saeed-Edmonds@gov.wales>
Subject: IN CONFIDENCE: SAGE: Coronavirus update 5

Hi Frank, some supporting notes below (not yet official advice – not for wider circulation).

My main comments would be:

- Need for very clear messaging on future actions to public – including 'collectivism'
- Based on current models demand will significantly outstrip NHS bed capacity for about 8 weeks during epidemic peak.
- Three phases of contain, delay, flatten – must use information available to inform policy. RWC – pan-flu still holds.
- Need for us to ensure consistency, or awareness of NHS England actions/discussions (e.g. deployment of PoCT, involvement in NHS randomised control trials).
- Need to ensure that our flow of information within Wales for planning/response is as good as is practicably possible

SAGE discussion 10 - 25/02/20

Notes from supporting papers

Sensitivity of surveillance (supporting notes from papers):

- The current system is very insensitive, so you won't expect cases to be picked up until prevalence is high
- Therefore it will be very difficult to time interventions with any degree of certainty
- It will be hard to accurately estimate incidence, even when near the peak
- Increasing the surveillance will improve this modestly, rather than massively.

Non-pharmaceutical intervention (NPI) measures (supporting notes from papers):

- NPIs have a logical basis, are generally well understood by the public, and have apparently worked in China. There is evidence that they have impacted on historical epidemics.
- Reduction in transmission reduces R and extends serial interval. Consequently, epidemics tend to be lower and longer. They would have less of an impact on the overall number of cases.
- If R is reduced below 1, then epidemics can be curtailed.

- If NPI are relaxed, R increases again, so can create multiple waves. This could extend transmission of covid-19 into late 2020.
- It is not possible to provide accurate quantitative predictions on the epidemiological impact of interventions. The impact of specific measures are hard to judge as we don't know how much each will reduce transmission (particularly given it is a novel virus)
- Measures that last longer, or that reduce transmission by a greater amount would have a larger short-to-medium impact, but would make it more likely that we would have a second wave.
- Given that the serial interval is ~1 week, blanket interventions will have to be applied for many weeks to have significant impact.
- The impact, and therefore the likelihood of a second wave, might not be measurable from surveillance.
- The impact of NPI depends on behavioural response to the intervention – i.e. the actual change in behaviour rather than the intended change. Consequently, real-time monitoring of relevant behaviour, providing feedback on the outcomes of interventions, would be more reliable than monitoring incidence of infection / disease.
- In particular, it would be important to avoid "perverse outcomes" where an intervention to reduce transmission resulted in changes in behaviour that actually increased transmission (e.g. reducing attendance at sporting events resulted in more crowding in pubs)

Notes from SAGE Discussion

- Number of fatalities Italy & Iran strongly suggests that number of people infected are much higher than reported.
- Likely that UK has seen multiple points of entry
- We should still follow the: contain, delay and flatten curve
- Policy decisions need to be based on the information available (not to wait until data is perfect)
- Surveillance strategy starting in NHS England this week (e.g. screening patients in ICU and GP sentinel practices) will only likely yield results 9 weeks from peak epidemic, significant scaling of surveillance will only add days to sensitivity rather than weeks
- Response should be based on epidemiology of the outbreak when detected
- NHS England discussing use of PoCT for community detection [NHS Wales should consider (if not already) this as a matter of priority]. NHS England might be 10 weeks away from a new PoCT COVID-19 test with an industry partner
- Need for clinical advice on detection of bilateral pneumonia (likely to be 2nd week symptoms). Early symptoms likely to be more general, need to consider hospital care pathway from moderate to severe
- Discussion next Tuesday about critical NHS related modelling questions re: demand and capacity planning
- Discussion about cocooning vulnerable individuals
- Containment - discussions based on household quarantine, social isolation, school closure paper (attached). Will need to consider at a policy level - with information available now, not later. International data suggesting it is possible to reduce transmission to below 1 with non-pharma interventions. But this will only delay transmission...
- Current models suggest that for an 8 week period demand would significantly outstrip NHS bed capacity by over two-fold of current full capacity (e.g. if every bed was emptied and planned care ceased), this could be higher.
- Messaging very important. Has to convey that Government are activing appropriately and that there is a message of collectivism 'we are all in this together'
- Unrest in China, from lack of access to other non-COVID-19 health services e.g. cancer care

Post SAGE Actions

- Email to SAGE Secretariat about NHS England/PHE/SPI-M planning discussions (attached), also asking if AJ from PHW can listen in on SAGE.
- Ongoing question about appropriate information sharing between 4 nations at Gov and operational level.
- Email to CMO about joining bi-weekly meeting – it would be helpful to talk through the NHS E response versus NHS W response.

Best wishes
Rob

From: Orford, Rob (HSS - Primary Care & Health Science)
Sent: 20 February 2020 12:20
To: Atherton, Frank (HSS - Chief Medical Officer) <Frank.Atherton@gov.wales>
Cc: Lyons, Marion (DHSS - DHP - Public Health) <Marion.Lyons@gov.wales>; NR HSS - DHP Public Health) NR @gov.wales>; Surman, Neil (HSS - DHP Public Health) <Neil.Surman@gov.wales>; Kamalan, Chrishan (HSS - DHP Public Health) <Chrishan.Kamalan@gov.wales>; Goulding, David (HSS - DHP Public Health) <David.Goulding@gov.wales>; Saeed-Edmonds, Samia (HSS - Planning) <Samia.Saeed-Edmonds@gov.wales>
Subject: IN CONFIDENCE: SAGE: Coronavirus update 4

Hi Frank, an update from SAGE meeting today (not yet official advice – not for wider circulation):

- Local transmission detected through screening patients with pneumonia in Iran and Singapore (not related to travel).
- Chair has asked for firmer advice for NHS planning (e.g. % that require hospital admission, % requiring respiratory support (e.g. oxygen or ventilation), projection of peak epidemic and flattening the peak. (See attached consensus paper)
- Are colleagues from NHS Wales/WG involved in NHS England planning discussions to share best practise??
- Contact tracing to continue until trigger events detected e.g. local transmission not linked to travel. Number likely to be increased. (see attached paper)
- From cruise ship – 30-50% asymptomatic-mild.
- Likely that UK testing has missed 40% of positives, due to delay in testing versus detectability of virus.
- 75-80% likelihood that virus is already in circulation.
- Discussion on plans for sentinel surveillance in GPs (200-300 samples per week), ICU and Respiratory Failure units.
- Discussion about school closures, maximum impact 30-40% peak reduction if closed just before peak. Assumes children have a significant role in transmission. (see attached paper)
- SPI-B (Behavioural group) developing advice around Comms e.g. self-isolation. Is there a representative from PHW on this group?? Same question for SPI modelling group.

Best wishes
Rob

From: Orford, Rob (HSS - Primary Care & Health Science)
Sent: 18 February 2020 17:10
To: Atherton, Frank (HSS - Chief Medical Officer) <Frank.Atherton@gov.wales>
Cc: Lyons, Marion (DHSS - DHP - Public Health) <Marion.Lyons@gov.wales>; NR (HSS - DHP Public Health)

NR @gov.wales>; Surman, Neil (HSS - DHP Public Health) <Neil.Surman@gov.wales>; Kamalan, Chrishan (HSS - DHP Public Health) <Chrishan.Kamalan@gov.wales>; Goulding, David (HSS - DHP Public Health) <David.Goulding@gov.wales>; Saeed-Edmonds, Samia (HSS - Planning) <Samia.Saeed-Edmonds@gov.wales>
Subject: IN CONFIDENCE: SAGE: Coronavirus update 3

Hi Frank, a difficult discussion to follow today due to numbers of people dialling in/out of the meeting.

However the main points of the discussion were:

- Rate of infection dropping off in China, suggesting containment measures are working (uncertain what will happen when measures are relaxed e.g. people return to work). Growth of outbreak in Japan.
- The Reasonable Worse Case for pan-flu still stands
- Whilst still uncertain the working CFR estimate is currently 0.4%
- Small amount of evidence to suggest children are less affected by illness. Unclear role in transmission.
- Small amount of evidence to suggest no significant impacts on late stage pregnancy (n=9)
- Virus components not detected (at later stages, as most analysis of positives has had delay in detection) in blood or urine, is detected in faeces.
- Environmental persistence studies are showing CoV to be more stable than influenza with a low residual risk on solid work surfaces after 48 hours, with a minimal risk considered to be at 72 hours. Routine disinfection works well.
- There is PHE decontamination guidance, I suspect based on pan-flu – Do we have this??
- Paper commissioned on how to maximise clinical trials opportunities, more to follow.
- Substantive discussion on modelling/projections at Thursday TC.
- Chris Whitty (and Patrick Valance) mentioned an NHS discussion on Monday, assume this is a separate NHS England group (or is it 4 CMOs meeting?). If not are we involved or sighted on NHS England CoV Planning Group?

I have included Samia in this e-mail trail so she is sighted for NHS Planning discussions.

Would it be possible to have a short meeting to discuss where we are??

Best wishes
Rob

From: Atherton, Frank (HSS - Chief Medical Officer) <Frank.Atherton@gov.wales>
Sent: 14 February 2020 08:20

To: Orford, Rob (HSS - Primary Care & Health Science) <Rob.Orford@gov.wales>
Cc: Lyons, Marion (DHSS - DHP - Public Health) <Marion.Lyons@gov.wales>; NR HSS - DHP Public Health) NR @gov.wales>; Surman, Neil (HSS - DHP Public Health) <Neil.Surman@gov.wales>; Kamalan, Chrishan (HSS - DHP Public Health) <Chrishan.Kamalan@gov.wales>; Goulding, David (HSS - DHP Public Health) <David.Goulding@gov.wales>
Subject: RE: IN CONFIDENCE: SAGE: Coronavirus update

Thanks,

v. helpful readout.
We should share future updates on limited circulation to cc recipients within WG

F

From: Orford, Rob (HSS - Primary Care & Health Science) <Rob.Orford@gov.wales>
Sent: 14 February 2020 07:56
To: Atherton, Frank (HSS - Chief Medical Officer) <Frank.Atherton@gov.wales>
Subject: IN CONFIDENCE: SAGE: Coronavirus update

Hi Frank

- SAGE is now sitting twice weekly and I will do my best to join these and update. I must say that the papers circulated from SPI-M-O are pretty good and the conclusions of the discussions are often aligned with the content of the papers. I believe Marion joins the SPI-M-O discussions so she will also have the most up-to-date information.

- The focus of yesterday's meeting was around school closures, delaying the spread and public behaviours. There was also a discussion on prisons.

- The discussion was focussed around the idea of either delaying or flattening the peak of the infection for the UK. There is considerable uncertainty in much of the data and again things like the ship in Yokahama will provide clearer outbreak information alongside information gleaned from the early cases in the UK. Quite a bit of work is going on to understand the likely kinetics of the outbreak and the impact of changing the peak (either flattening or have two) would have as the numbers under the curve would be the same (important for NHS demand/capacity modelling).

- If the disease is not already circulating in the UK, then efforts to contained the virus by US style entry screening coupled with contact tracing/self-isolation may slow the outbreak by a few weeks. More to follow on this.

- Restricting travel within the UK once an outbreak has been confirmed was considered to be more disruptive than helpful in delaying spread of the disease.

- Schools closures were discussed and whilst the data on the coronavirus was unclear closing schools has been shown to flatten or delay spread for pan-flu. The uncertainty arises from a lack of information on infection rates with children, so you can only assume they would spread the disease as they do with others. The longer duration of the illness though would require quite a few weeks closures, and might work best either side of a term end. Disruption of exams and selective closure of some years was also discussed. They noted some behaviour change Brighton Hove, where parents may be self-isolating children. Also the idea of getting

the outbreak out of way before the next flu season was considered. Longer school closures would also likely impact on NHS workforce. More to follow.

- Very little evidence on impact of cancelling mass gatherings e.g. football matches, considered to be an evidence free zone.

- Interesting discussion on behaviours most of which pointed to thought-through logical behaviour of most people, even if it isn't entirely rationale (e.g. buying goods from china, in case the products is contaminated) or isolating children from school, even though the actual risk is very low – this is driven by parents strong desire of wanting to protect children. In pan-flu most people were fairly sceptical (55%) about the impact. Indeed the need to be able to 'activate' people to take sensible approaches was considered more important. Behaviours will be driven by different factors associated with perceived risks (e.g. health, financial, emotional (e.g. family members)) and ability to take action, if action is achievable (e.g. I cannot self-isolate as I need to go to work). Panic is very rare. Civil unrest tends to be associated with underlying tensions e.g. ongoing issues with crime and disorder (think London riots)

- Prisons discussion was interesting as it presents different challenges, as would other types of social housing. Self-isolation in phase I being the key. Once phase II/III is reached and the disease spreads then the challenges are different and not insignificant.

I hope this is helpful, I'm in the office later if you wanted to discuss
Rob

From: Orford, Rob (HSS - Primary Care & Health Science)
Sent: 11 February 2020 12:22
To: Atherton, Frank (HSS - Chief Medical Officer) <Frank.Atherton@gov.wales>
Subject: SAGE: Coronavirus

Hi Frank, useful meeting today. You have these SAGE papers but attaching them again.

A minute of discussion will be shared but happy to discuss the points covered. Although different for a number of reasons and uncertainty in data (e.g. reproduction rate rates (2-3), doubling times (5 days), incubation period (2-14 days), serial interval (3-8 days) % asymptomatic(?), severe infections (2-3%? Based on SARS) mortality of severe (13-20%?), time to death for severe (15-40 days?), at risk populations (similar to SARS? Children?) – some of this data may come from isolated returnees or from cruise ships – which will firm up modelling.

The reasonable worst case scenario for pan-flu is being used for the time being. Wuhan looks to be passing peak infection rate, best guess that UK is 2-3 months behind.

I think there is another SAGE discussion on Thursday, will confirm. Areas to cover include advice for NHS workers, transport workers, mass gatherings – ensuring SAGE reads across to CMO/SPI-M-O actions/advice.

As I understand it Samia is chairing an NHS Wales Planning group, I am happy to contribute to this or other areas as required.

Best wishes
Rob