

Message

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**Sent:** 20/02/2020 2:43:45 PM  
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**Subject:** OFF SEN - Technical Update on Cov-19  
**Attachments:** Paper 1 - SPI-M consensus statement FINAL.pdf; Paper 2 - SPI-M school closures.pdf; Annex to Paper 2.pdf

**Update** on scientific understanding of Covid-19 and UK options, including modelling of schools closure impacts. Full SAGE papers are attached – the mark-up in Paper 2 is mine to highlight the key points. I highlight just new information below:

Headlines:

**Paper 1 – Consensus on virus:**

- no change in basic understanding of transmission and infection rates.
- Implications of Chinese transmission rate in the UK would translate to 80% of population being affected – but not all symptomatic. (Para 6)
- Some think that sustained UK transmission could start within weeks, others that it may have already started (para 16)

Notes from 20/02/2020 SAGE discussion:

- It is still unclear whether the UK has domestic transmission yet – the 9 UK confirmed cases were infected overseas.
- Urgent work on modelling and detecting UK spread has been commissioned in today's meeting – minutes will be shared when available.

**Paper 2 – Consensus view of school closure:**

- While data is poor, we are now seeing children testing positive – in all cases symptoms are mild. Schools closure modelling now reflects the role of children as carriers (para 3)
- Three models have been produced now – while there are differences in results, there are commonalities in results:
  - Larger impacts seem when closures occur earlier in the course of an outbreak in the UK. (para 7)
  - Closures will slow the rate of transmission but do little to alter the total number of cases. (para 8)
- All models are based on blanket UK school closure.
- The differences mean that the estimates of the impact of closures vary significantly and are sensitive to the reproduction number (currently around 2-3 secondary infections per primary infection). The assumptions driving these differences are being further examined by the modellers (para 12). This means that at the moment we cannot be confident on the actual level impact.
- Some of the diversity of output is shaped by behavioural assumptions on connections and mixing of children and adults in schools, homes, workplaces and communities. More work is underway to understand patterns of interactions and their changes (para 13).
- **Long school closures will be required to have significant impact – 6 weeks or longer (para 14)**
- Thought should be given to linking closures to existing holiday closures – but the **timing will be critically influenced by when a UK epidemic starts.** (para 16)
- The wider behavioural consequences of longer closures are not well understood, and can't be factored into the current disease modelling (para 20 and 23).
- DfE analysts and data owners are talking to the SPI-M modelling group about providing data to inform different, more limited, strategies for staged or differential closures (e.g. by region or non-exam years only)

AI

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