SPI-M-O: Consensus Statement on COVID-19

Date: 3rd March 2021

All probability statements are in line with the framework given in the Annex.

Summary

1. SPI-M-O's best estimates for **R in the UK and all four of its constituent nations are between 0.7 and 0.9.** These estimates are based on the latest data, available up to 1st March, including hospitalisations and deaths as well as symptomatic testing and prevalence studies.

2. SPI-M-O is confident that R is below 1 across all NHS England regions, although the upper limit of the range for the North East and Yorkshire is 1. The epidemic continues to decrease across all nations and regions, but transmission is heterogeneous more locally, which contributes to the variation in R estimates and will be important for future patterns as restrictions are eased. While R is below 1, prevalence is still high across the country with levels above observations seen between early May and late September 2020.

3. There are some indications that the rate of decline in infections is starting to slow, and even suggestions from other data sources, such as the REACT study, that there are some *slight* upticks in infections within some regions, including West London.

4. SPI-M-O estimates that there are between **11,000 and 25,000 new infections per day in England.**

Incidence and prevalence

5. Combined estimates from seven SPI-M-O models, using data available up to 1st March, suggest there are between **11,000 and 25,000 new infections per day in England**.

6. The ONS community infection survey for the most recent week of the study (21st to 27th February) estimates that an average of **248,100 people had COVID-19** in the community in England (credible interval **224,900** to **271,700**). The survey does not include people in care homes, hospitals, or prisons. Estimates from across the four nations of the UK are:

England	248,100 (credible interval 224,900 to 271,700)
Scotland	15,600 (credible interval 11,000 to 21,300)
Wales	10,600 (credible interval 7,300 to 14,800)
Northern Ireland	5,700 (credible interval 3,300 to 8,900)

Reproduction number and growth rate

7. For small daily changes, the growth rate is approximately the proportion by which the number of infections increases or decreases per day, i.e. the rate at which an epidemic is growing or shrinking[1].

8. SPI-M-O's consensus estimates for the **growth rates in the UK and in England are between -5% and -3% per day**. SPI-M-O's national and regional estimates of growth rates are summarised in Table 1 and Figure 3.

9. The reproduction number is the average number of secondary infections produced by a single infected individual. R is an average value over time, geographies, and communities. This should be considered when interpreting the R estimate for the UK given the differences in policies across the four nations.

10. SPI-M-O's best estimates for **R in the UK and all four of its constituent nations are between 0.7 and 0.9.** SPI-M-O's agreed national estimates are summarised in Table 1 and Figures 1 and 2. R is an indicator that lags by two to three weeks, and these estimates are based on the latest data available up to 1st March.

11. SPI-M-O is confident that R is below 1 in all NHS England regions, although the upper limit of the range for the North East and Yorkshire is 1. The regional R estimates can be seen in Table 1 and Figure 4, with a general pattern of decrease and / or flattening trends. Some data sources, such as the most recent report from the REACT survey, suggest there may be upticks in certain areas, particularly in West London. This highlights that there may be some variation at a sub-regional level. It is important that these areas are monitored carefully over the coming weeks, particularly once measures start to be relaxed. It is advisable to learn more about communities and settings that have slower rates of decline and where the areas with the first signs of growth are.

12. Although R is below 1, prevalence remains sufficiently high that only two doublings[2] would be needed to return levels to those seen at the start of 2021. As a result, relaxation of measures will need to be done carefully.

Annex: PHIA framework of language for discussing probabilities

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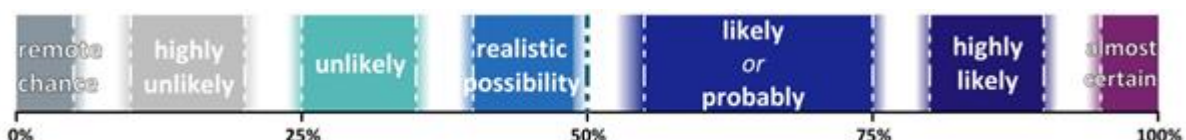
[1] Further technical information on the growth rate can be found in Plus magazine
[2] Footnote for release: This should read "slightly over two".

Table 1: Combined estimates of R values and growth rates in the UK, four nations, and NHS England regions (90% confidence interval) [3]

Nation	R	Growth rate per day
England	0.7 to 0.9	-5% to -3%
Scotland	0.7 to 0.9	-6% to -2%
Wales	0.7 to 0.9	-7% to -3%
Northern Ireland	0.7 to 0.9	-5% to -2%
UK	**0.7 to 0.9**	**-5% to -3%**

NHS England region	R	Growth rate per day
East of England	0.6 to 0.8	-8% to -4%
London	0.6 to 0.8	-7% to -4%
Midlands	0.7 to 0.9	-5% to -3%
North East and Yorkshire	0.7 to 1.0	-5% to -2%
North West	0.7 to 0.9	-6% to -4%
South East	0.6 to 0.8	-8% to -4%
South West	0.6 to 0.8	-8% to -5%

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[3] The estimate intervals for R and growth rate may not exactly correspond to each other due to the submission of different independent estimates and rounding in presentation. R estimate intervals for the UK may not exactly correspond to its constituent nations for the same reason.

Figure 1: SPI-M-O groups' estimates of median R in the UK, including 90% confidence intervals. Bars represent different independent estimates. The grey shaded area represents the combined numerical range and the black bar is the combined range after rounding to 1 decimal place. The UK estimate of R is the average over very different epidemiological situations and should be regarded as a guide to the general trend rather than a description of the epidemic state.
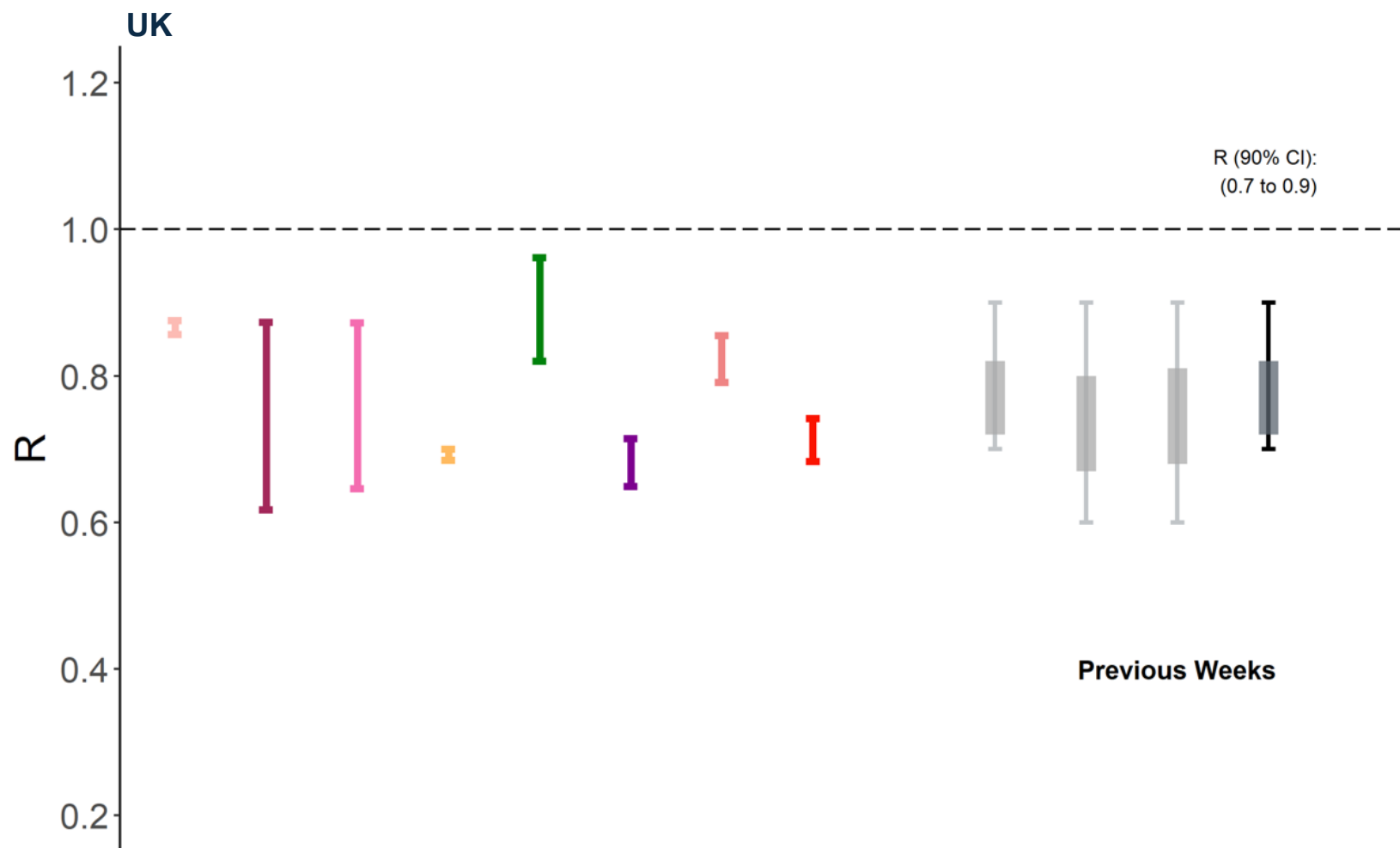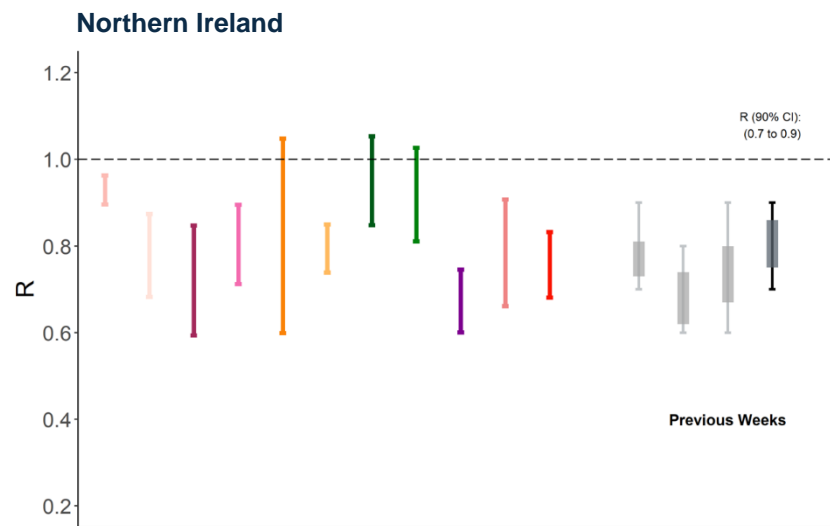
Figure 2: SPI-M-O groups estimates of median R in the four nations of the UK, including 90% confidence intervals. Bars represent different independent estimates. The grey shaded areas represent the combined numerical range and the black bars are the combined range after rounding to 1 decimal place.
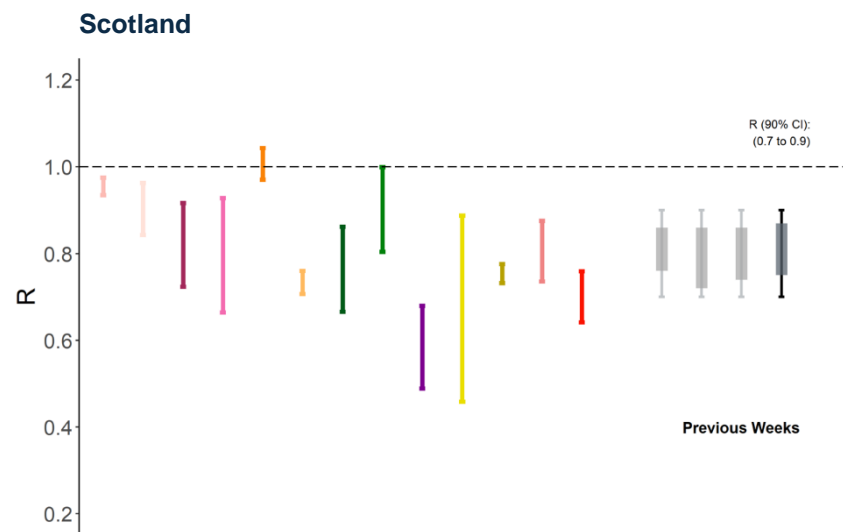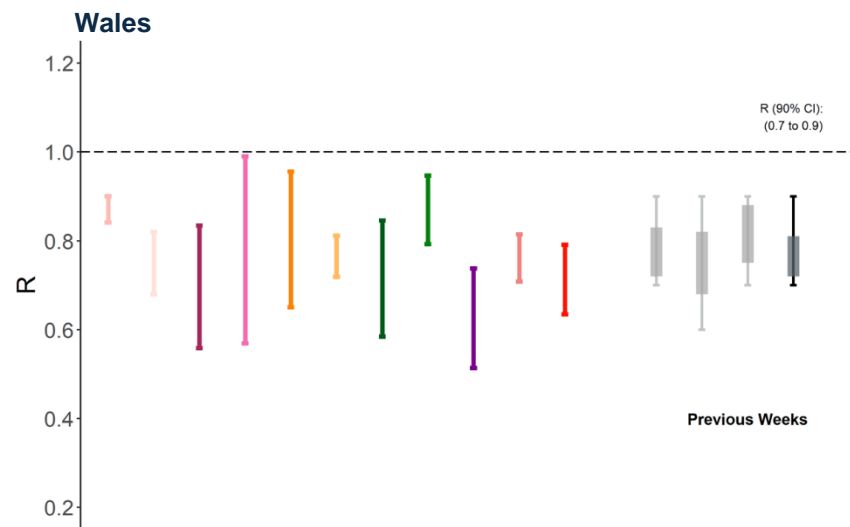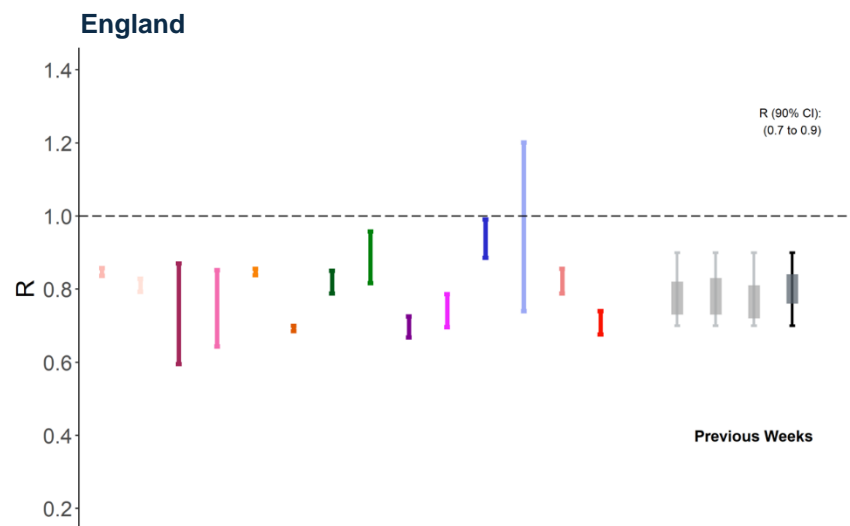
Figure 3: SPI-M-O groups' estimates of the growth rate in NHS England regions, including 90% confidence intervals. Bars represent different modelling groups. The grey shaded areas represent the combined numerical range and the black bars are the combined range after rounding to 2 decimal places.
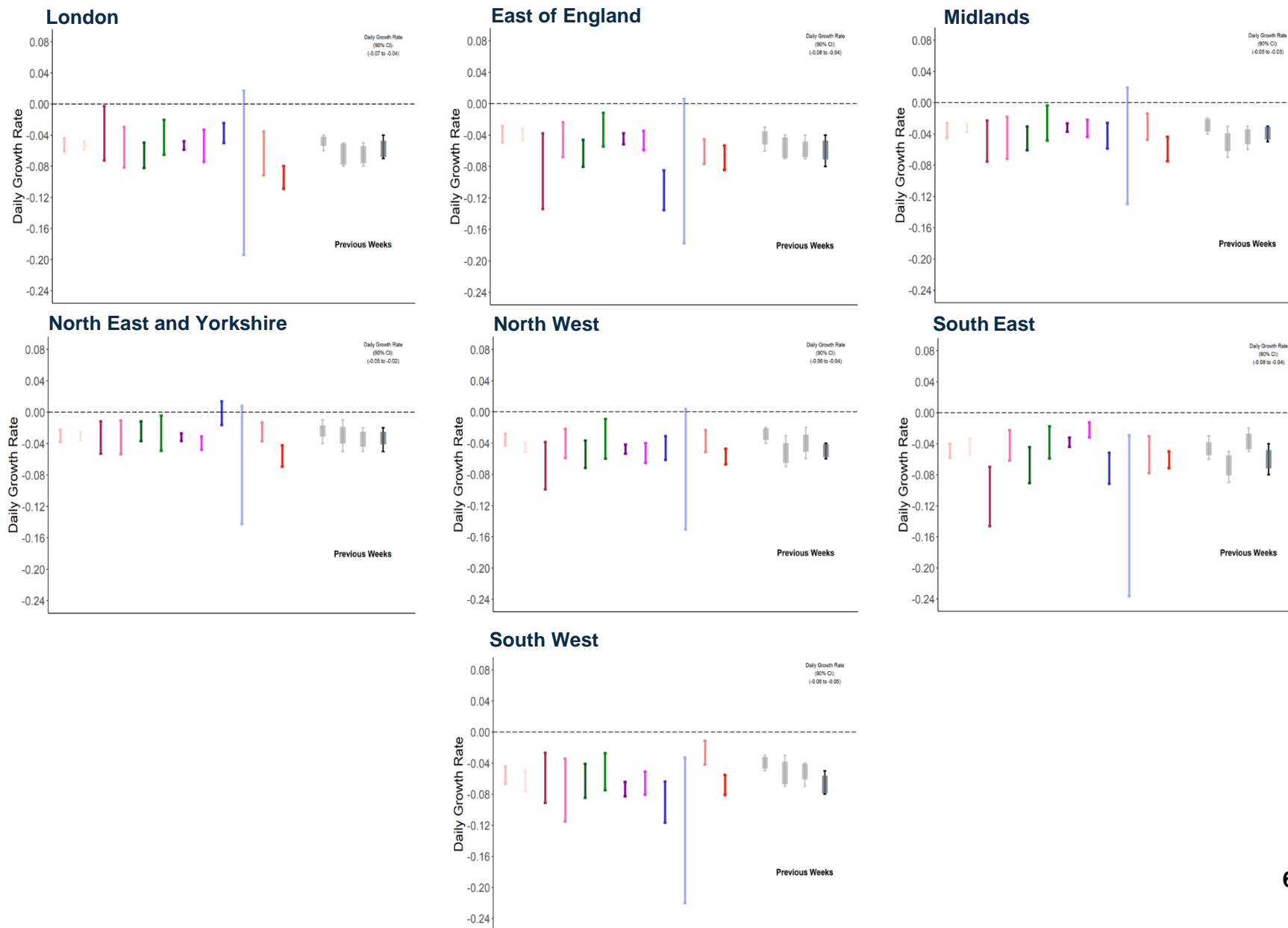
Figure 4: SPI-M-O groups' estimates of median R in the NHS England regions, including 90% confidence intervals. Bars represent different independent estimates. The grey shaded areas represent the combined numerical range and the black bars are the combined range after rounding to 1 decimal place.