Thursday 9th July 2020.

Dear Sir David

I am writing to seek your guidance on the recent use of statistics by the Scottish Government in relation to the prevalence of Covid 19 in the community in Scotland and England.

Scottish Ministers have asserted in recent days that that the number of Coronavirus cases in the community is "five times lower" in Scotland than in England¹. The Scottish Government has since provided the sources for its claims. The first is the ONS's publication "Coronavirus (Covid-19) Infection Survey pilot: England, 25 June 2020"². The second is the Scottish Government's publication "Coronavirus: modelling the epidemic in Scotland (issue No.6)",³ also published on 25th June. The Scottish Government's calculations are based on two figures contained within these publications: the upper threshold for cases: 105,000 in ONS's survey of England and 2,220 in the Scottish Government's modelling paper. Applying population share, it then asserts that Scotland's prevalence rate is 4.7 times lower than England.⁴

I would like the ONS's assessment of the Scottish Government's actions in reaching this figure. In particular, two issues appear worthy of attention:

<u>The two figures do not appear to measure the same time period</u>. The Scottish Government's 2,200 figure is a snapshot estimate for the prevalence of Covid 19 in Scotland on 19th June. The English estimated prevalence rate is the average for the period 8-21 June. The time frames involved are therefore not the same

The methodology used in the two data sets and the purpose of the upper bound is entirely different and therefore not comparable. The ONS figures are based on your Infection Survey of more than 25,000 people in England. The lower-upper threshold on the number of positive Covid 19 cases is therefore a measure of mathematical confidence. The Scottish Government's figure is based on modelling, mainly from deaths and hospital admissions, and does not therefore carry the same level of certainty as the data in England. The upper threshold for the Scottish data is also is a planning assumption that is not informed by statistical methodologies, so should not be comparable.

It is also notable that the Scottish Government figures used – the two datasets published on June 25th – have now been superseded by new figures which, using this flawed methodology, suggests that the prevalence rate between England and Scotland is in fact broadly similar.

¹ <u>https://www.scotsman.com/health/coronavirus/coronavirus-scotland-recap-scotland-infection-rate-five-times-lower-england-2902552</u>

²

<u>https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulleti</u> ns/coronaviruscovid19infectionsurveypilot/england25june2020

³ <u>https://www.gov.scot/publications/coronavirus-covid-19-modelling-epidemic-scotland-issue-no-6</u>

⁴ <u>https://twitter.com/ChrisMusson/status/1280482203202437120?s=20</u>

Your attention to these matters would be greatly appreciated.

Yours sincerely,

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