

To: Sir David Norgrove, Chair of UK Statistics Authority

17 March 2021

From: Professor Sheila M. Bird OBE MA PhD CStat FFPH FRSE FMedSci DCs (Hon: Edin)

Dear Sir David

**Monitored Lateral Flow Tests (trice during 8-19 March 2021) for asymptomatic secondary pupils on their return to school**

In respect of the above policy, England's secondary pupils, parents, head-teachers, statisticians, parliamentarians, journalists and public have a right to expect:

- A. **openness** about relevant prior data held by NHS Test & Trace & **disclosure** of DfE/PHE's prior planning assumptions;
- B. **explanation** for denying PCR-adjudication of asymptomatic pupils' LFT-positives as part of **properly informed consent** for and from head-teachers, parents and secondary pupils;
- C. **bespoke data-collection to enable rapid reporting of uptake & results of 1<sup>st</sup> LFTs** (separately from 2<sup>nd</sup> LFTs and 3<sup>rd</sup> LFTs) & **statistical thinking in action**.

The Royal Statistical Society COVID-19 Taskforce issued its statement on schools on 5 March 2021, please see <https://rss.org.uk/RSS/media/File-library/News/2021/RSS-statement-on-surveillance-in-schools-5-March-2021.pdf>.

With asymptomatic infection prevalence low in mid-March 2021 (around 2 per 1000) and a likely sensitivity of INNOVA Lateral Flow Test (LFT) in asymptomatic secondary pupils of around 40% (based on mainly adults in Liverpool) but specificity of 998 per 1000, the Taskforce did not anticipate that DfE/PHE would deny pupils PCR-adjudication of their LFT-positive results. Hence, when interviewed by Nick Robinson on TODAY programme at 07.21hrs on Saturday, 6 March, I was **shocked: to learn on-air** that a pupil's negative PCR-adjudication was being ignored, the child had to continue in self-isolation for a further 8-days as did his parents and sibling.

The RSS Taskforce statement asked for disclosure of DfE/PHE's prior planning assumptions and includes an illustration for use in visualizing their impact in the context of asymptomatic INNOVA LFT-screening of secondary pupils on return to school. In addition to planning assumptions for uptake of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> LFT-test, **other still undisclosed prior planning assumptions** relate to

- i) Prevalence of SARS-CoV-2 infection in asymptomatic secondary pupils
- ii) Sensitivity of INNOVA LFT for asymptomatic infected secondary pupils
- iii) Specificity of INNOVA LFT for asymptomatic uninfected secondary pupils.

All three cannot sensibly be collapsed as "99.6% accuracy".

*Please seek to bring these **three prior planning assumptions** immediately into the public domain, together with the date of their agreement - presumably before 8 March 2021.*

The RSS Taskforce also asked for **openness about relevant prior data held by NHS Test & Trace**, such as the ct-value distribution for asymptomatic secondary pupils whose LFT-positive was PCR-confirmed. NHS Test & Trace also holds information on the percentage that was **PCR-negative** of PCR-confirmations in respect of asymptomatic university students whose INNOVA screening test was LFT-positive prior to their return home for Christmas. Thirdly, NHS Test & Trace holds information on the percentage that was **PCR-negative** of PCR-confirmations in respect of secondary pupils whose INNOVA screening test was LFT-positive in January 2021.

*Please seek to bring these **relevant prior data held by NHS Test & Trace** into the public domain.*

**Robust explanation** for denying PCR-adjudication of asymptomatic secondary pupils' LFT-positives in England (**not** in Scotland) is needed since asymptomatic hauliers' LFT-positives are subject to PCR-confirmation. Difference appear ageist and inconsistent **unless** informed by the relevant prior data held by NHS Test & Trace. The statistical thinking behind any explanation needs to be scrutinized against DfE/PHE's prior planning assumptions. Professor Chris Whitty avoided being drawn on the issue when questioned on 9 March by Greg Clark, chairman of the House of Commons Science and Technology Select Committee, who – along with other parliamentarians – had been receiving questions from constituents, please see [transcript online](#). The Committee is following up on the matter.

*Please seek to bring **the explanation for denying PCR-adjudication for secondary pupils' LFT-positive screening-result** immediately into the public domain.*

**Properly informed consent** from head-teachers, parents and pupils requires frankness about all three of the above missing parts from the performance monitoring jigsaw.

The data-systems that NHS Test & Trace relies upon, and struggles with, are oft ill-designed to answer pertinent questions about infection-control; and ill-support performance monitoring for testing initiatives. Consider, for example, how many months it has taken for sub-optimal adoption of the July 2020 recommendations by the Royal Statistical Society COVID-19 Taskforce on how to glean greater intelligence from Test, Trace and Isolate about asymptomatic infections in those self-isolating and their adherence to quarantine, please see <https://rss.org.uk/RSS/media/File-library/Policy/RSS-COVID-19-Task-Force-Statement-on-TTI-final.pdf>. Too often, the need for quality assurance is used as an excuse – including to House of Commons Select Committee on Science and Technology - when experimental statistics could, and should, be put into the public domain in a timely fashion.

*Please seek to end the **refrain of quality assurance as a bar** to bringing timely experimental statistics into the public domain. Frankness about unresolved problems posed by the need for fuzzy matching across data-systems is essential.*

The pity is that NHS Test & Trace cannot identify 1<sup>st</sup> LFT-positives by secondary pupils on their return to school (8-19 March); and has not yet de-duplicated secondary pupils' serial LFTs prior to March 2021. **Statistical thinking ahead** should have anticipated the difficulty now faced because analytical teams have faced similar LFT-related problems before. **Statistical thinking in action** would have designed a **minimally sufficient system for data-collection** - each evening from secondary schools - **to enable rapid reporting across England of uptake & results of 1<sup>st</sup> LFTs** (separately from 2<sup>nd</sup> LFTs and 3<sup>rd</sup> LFTs).

*Please encourage official statisticians to consider that efficient data-acquisition remains a key part of statistical science and to make their voice heard in how performance monitoring of infection control and other policies is designed<sup>1</sup>. Late evidence is wasted evidence.*

**Let me end by congratulating colleagues:** at NHS Test & Trace and at DHSC on the earnest efforts they do make to work with the data-systems that confront them. Hence, effort is being made to follow up my suggestion that - as a matter of urgency (if not already done . . . ) – analysts at NHS T&T do their best to link **timely PCR-confirmations for LFT-positives by secondary-age children during 8-12 March** [using alternative definitions for timely]; and to publish the number and percent PCR-negative on Monday 22 March to mark the end of the 3-monitored LFTs; with a corresponding analysis presented on 29 March for secondary pupils' LFT-positives in 15-19 March.

Due to design-failures in the March monitoring of England's secondary-school-LFT policy, analysts may have to resort to reporting PCR-adjudications for secondary-age children (eg 12-16 years) rather than all secondary-pupils on return. But their unbiased best is underway to "recover" at least some information – despite DfE/PHE's avowed intent to ignore **PCR-negatives** - on the performance of monitored INNOVA-LFTs for asymptomatic screening of secondary pupils on their return to school in mid-March.

The issues raised in this letter may recur. For example, secondary schools could be asked to re-institute monitored LFTs (thrice) when secondary pupils return after Easter. Hence, sorting both PCR-adjudications and data-acquisition may be pressing.

One of your predecessors as UKSA-chair famously described a knife-crime press-release as **egregious**. The current failure to monitor properly DfE's policy of LFTs thrice on secondary pupils' return to school is a statistical cause celebre in its own right.

By contrast, the 2021 Census was a pleasure as well as an obligation to complete.

Kind regards.

Yours sincerely,



Cc: Ed Humpherson, Director of the Office for Statistics Regulation

1. Royal Statistical Society Working Party on Performance Monitoring in the Public Services (chair: **Bird SM**). *Performance indicators: good, bad, and ugly*. *Journal of the Royal Statistical Society, Series A* 2005; 168: 1 – 27.