Ed Humpherson, Director General for Regulation

Stephen Balchin
Head of Profession for Statistics
Department of Health and Social Care
(by email)

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Dear Stephen

NHS TEST AND TRACE STATISTICS (ENGLAND)

Thank you for inviting my team to review your NHS Test and Trace statistics (England) publication. The pace of development of the programme and associated management information has been unprecedented. It is clear that providing these timely statistics is the result of a huge amount of work by individuals across a range of teams and organisations. We welcome the publication of these important data in an orderly release which demonstrates a commitment to the Code of Practice for Statistics.

Our rapid review has focused on the extent to which the statistics are produced and published in line with the expectations set out in the Code of Practice for Statistics. It is based primarily on publicly available information, supported by discussion with you and your team. It has not included a detailed investigation of the statistical methods or quality assurance processes supporting production of these statistics.

We appreciate the openness with which you and your team have engaged with the Office for Statistics Regulation (OSR) and your clear desire to constantly make improvements to the information available. Our review identifies areas we consider priorities for improvement over coming months.

Statistics on people tested for COVID-19 and subsequent contact tracing for those who test positive are essential for several purposes:

i)   to support understanding of the pandemic;

ii)   to manage the test and trace programme;

iii)   to inform the public about the implementation and effectiveness of the programme and enable them to hold government to account.

Without greater clarity on the purposes of this publication and clearer information on how data in this publication fit with other statistics or research outputs, this publication may not serve any of these three aims as well as it should. There are some key questions which the publication is not yet able to answer, such as the impact the programme has on reducing the spread of COVID-19. It is likely that the questions identified cannot all be answered solely through management information from the NHS Test and Trace Programme, but it is important that government seeks to better understand the effectiveness of the programme and its impact on the pandemic outcomes.

A summary of our findings is set out below, with further information provided as Annex A to this letter. We have also provided more detailed feedback to you directly.

Value

The rapid development of these statistics and the improvements that have already been made in the five weeks since the first release should be commended. This first step in publishing information about testing and tracing is an approach that other countries within the UK can look to as they develop their own statistics.

The timeliness of statistics on the NHS Test and Trace Programme is an important part of their value but comes with inevitable trade-offs. More context and greater clarity on the purpose of the publication would enhance the value of these statistics.

A key purpose of the NHS Test and Trace (England) statistics must be to understand how effective the Test and Trace programme is. There are several important questions about the effectiveness of the programme that cannot be answered with the information currently available. In seeking to improve the publication we consider you should prioritise the provision of information which would help to answer these questions. For example: What proportion of those with COVID-19 are not covered by these statistics, perhaps because they are asymptomatic or have symptoms but do not choose to book a test? What is the journey time for an individual from experiencing symptoms to having their contacts advised to isolate? What is the impact of this time lag on the ability to reduce transmission of the virus? And what proportion of people asked go on to self-isolate? Further important questions we think the publication should seek to answer are outlined in Annex A.

There is a range of data on COVID-19 which has been rapidly developed and published. This leads to a confusing landscape. There needs to be greater clarity on the purpose of each publication and how they fit together. The Department of Health and Social Care should take a lead in helping individuals to navigate these data. Signposting readers to outputs that are likely to be of interest would also support navigation across different datasets. For example, the work you have done to improve the data on testing in the wider population (Pillar 2 data) has recently enabled extremely valuable data on the number of positive cases resulting from Pillar 1 and 2 tests by local authority to be added to the [Coronavirus Beta Dashboard](). It would be helpful to link to these data in the publication (as well as the methodology note which currently includes a link). It would also be helpful to link to the gov.uk [Coronavirus Statistics and Analysis page]().

You explained your approach to iteratively developing the publication in order to support timeliness and transparency, taking into account data availability and your assessment of the quality of these data. This means the content of the publication is constantly evolving. To maximise the value of the data in the bulletin and ensure it can be readily understood by the public, you should review the language used and continue your development of the 'Main points' section. A visualisation of the numbers as they flow through the system would support understanding of the end to end process. Two examples of ways other organisations have achieved this are provided in Annex B to this letter.

Quality

You have published a [methodology note]() containing definitions for the many technical terms used throughout the bulletin, as well as a clear explanation of the complex test and trace process. This aids understanding of the statistics.

It would be helpful to provide further information to ensure data are used appropriately and limitations are well understood. For example, an indication of the scale of duplicates in the cases transferred to the contact tracing system would support users in understanding if the data are fit for their particular purpose.

To reassure users about the quality of these statistics, we encourage you to publish more information about your approach to quality assurance in line with the [Government Statistical Service guidance on urgent quality assurance of data](). This should cover quality assurance arrangements and how they reduce the risk of errors.

Trustworthiness

The publication of these statistics is well supported by publication of a [Statement of compliance]() with the Code of Practice for Statistics. For example, this document clearly states that decisions about which data are published are taken independently and based on statistical judgments.

We are pleased to see that the statistics are being published on a regular weekly basis and would encourage the department to more formally pre-announce future publication dates.

You have also demonstrated good practice in your handling of revisions, which are clearly signposted and explained. In future releases we would like to see an indication of the size of revisions, so that users can understand their impact.

As set out in our rapid review guidance you can include a statement in your methodology note such as "These statistics have been produced quickly in response to developing world events. The Office for Statistics Regulation, on behalf of the UK Statistics Authority, has reviewed them against several key aspects of the Code of Practice for Statistics and regards them as consistent with the Code's pillars of Trustworthiness, Quality and Value."

We look forward to seeing these statistics continue to develop.

Yours sincerely

Ed Humpherson
Director General for Regulation

Annex A: OSR Rapid Review findings - NHS Test and Trace (England) statistics

The Office for Statistics Regulation has conducted a [rapid review](#) of the NHS Test and Trace (England) statistics published by the Department of Health and Social Care (DHSC). The review is focused on the extent to which the statistics are produced and published in line with the expectations set out in the Code of Practice for Statistics. We have not undertaken detailed investigation of the statistical methods or quality assurance processes used to produce test and trace statistics. The review is based primarily on publicly available information, supported by discussion with statisticians in DHSC. The findings of the review are set out below. More detailed feedback has been provided to DHSC.

	Strengths	**Weaknesses**	**Recommendations**
Trustworthiness	Proactive approach to gathering feedback and continually improving these statistics. Including publishing details of future development plans (e.g. plan to include testing turnaround times for pillar 1, home testing kit return rates and more on testing in care homes).	Given the iterative nature of development it is understandable that detailed timescales cannot be provided for when improvements will be made to the publication, but some indication of priorities or time scale would be helpful.	**DHSC should publish further information about planned improvements to the statistics, and when they might expect to see these changes.**
	[Statement of compliance](#) with the Code of Practice, committing to the principles and practices within the Code. For example, ensuring that decisions about which data are published are taken independently and based on statistical judgments.		
	Revisions are clearly signposted and explained in the bulletin and data table.		**Future releases should include an indication of the size of revisions, so that users can understand their impact on the data.**
	Orderly release of these statistics on a weekly basis, including commitment to pre-announce future publication dates.		

Quality	The [methodology note](link) contains definitions for the many technical terms used throughout the bulletin, as well as a clear explanation of the complex test and trace process.	The bulletin and methodology note could include more information on definitional choices and definitions e.g. what is a close contact.	**Explanations for methodological choices should be added to the bulletin and methodology note.**
		Although the methodology note is linked to from the [landing page](link) for the publication series, it is not accessible from the pages for each weekly release, and is only linked to towards the end of each bulletin.	**The methodology note should be clearly linked to so that it is easily accessible to users.**
	DHSC highlights "These data should therefore be treated with caution as the system and understanding of the data develops."	The Code of Practice expects producers to explain clearly how they assure themselves that their statistics are accurate and reliable. DHSC could be more transparent about the quality assurance approach taken throughout the preparation of the statistics and how this minimises the risk of errors. This should cover what checks are in place throughout the data production and analysis process e.g. how you make use of comparisons to alternative data sources and sense checks of changes in figures over time, or how you use intelligence from experts such as health bodies dealing with outbreaks.	**To reassure users about the quality of these statistics, DHSC should publish more information about the approach to quality assurance in line with the [Government Statistical Service guidance on urgent quality assurance of data](link). This should cover quality assurance arrangements and how they reduce the risk of errors.**

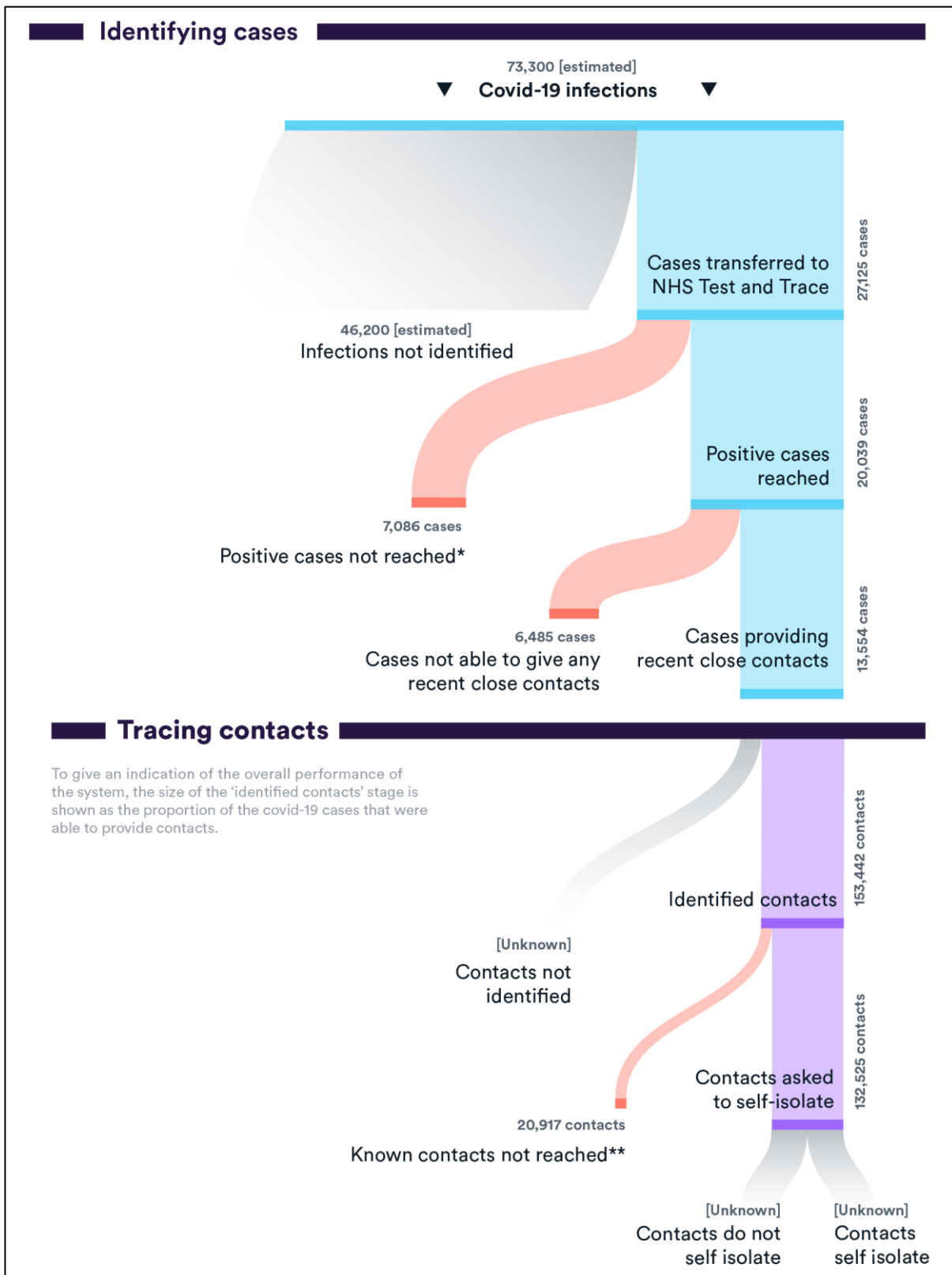|			
	The publication includes a short section on strengths and limitations.	It would be helpful to provide further information to ensure data are used appropriately and limitations are well understood. For example, an indication of the scale of: - duplicates in the cases transferred to the contact tracing system would support users of these data in understanding if the data are fit for their particular purpose. - the number of people with more than one positive test (and why). - the total number of people tested in a week (compared to the number of people newly tested in a given week as given in the publication).	**The data limitations and resulting implications for interpretation should be made clearer in the publication and associated methodology note.**
Value	The statistics are constantly evolving in an effort to meet user need, from both the public and the Test and Trace programme.	The bulletin could be clearer about its purpose and the key messages. Greater clarity on the purpose of the release should support appropriate use of the data in the release.	**The release should include information on its purposes.**
	DHSC gains input to the development of the publication through engagement with users through a user group and via feedback on the value of the data for the NHS Test and Trace Programme.	There are many important questions which the bulletin is not yet able to answer. For example: • How effective is the programme at containing the virus? • What is the journey time for an individual from experiencing symptoms to having their contacts advised to isolate? What is the	**DHSC should continue to develop these statistics, maintaining user engagement activities and striving to answer users' questions where the data allows.** **Questions which support understanding of the effectiveness of the Test and Trace programme should be prioritised.**

		implication of this time lag on the ability to reduce transmission of the virus? • What proportion of those with COVID-19 are not covered by these statistics (because they are asymptomatic or have symptoms but do not choose to book a test)? • What is the level of compliance with the programme, both in terms of providing close contact information and self-isolating when asked to? • What is the effectiveness of the two different approaches to contact tracing – those handled by local health protection teams and those passed to online or call centre operations? • Does the programme provide good value for public money?	**DHSC should consider including a visualisation of the numbers as they flow through the system (see Annex B for examples).**
	The flowchart included in the bulletin makes the process clear and easy to understand.	While the facts are presented it appears that the pace of publication means there is limited time to refine the document.	**The language used and presentation of figures should be reviewed.** **DHSC should continue to develop the 'Main points' section.**
		The publication and associated materials should do a better job of putting the information in the publication in context. For example, it should incorporate discussion about the coverage of the publication relative to estimates of the prevalence of COVID-19 in England i.e. not everybody with COVID-19 gets symptoms and not all of those	**The bulletin should include discussion of how these statistics relate to other data, including the number of people estimated to have COVID-19 in the population, and what this means for the effectiveness of the programme.**

	who get symptoms will go for a test, so the test and trace is only picking up a proportion of those who have COVID-19. A starting point could be the inclusion of a reference to published data on the prevalence of COVID-19 in the general population.	
	The wealth of data being published supports transparency – including outputs published by others but supported by work undertaken by DHSC as part of the NHS Test and Trace (England) Statistics.	The statistics sit in a confusing landscape. Signposting readers to outputs they are likely to be interested in would also support navigation across different datasets. For example, data on the number of positive cases resulting from Pillar 1 and 2 tests by local authority in the Coronavirus Beta Dashboard and the gov.uk Coronavirus Statistics and Analysis page.	**DHSC should take a lead in helping users navigate the range of data available. The publication should more clearly sign-post readers to other relevant sources of information.**

Annex B: Examples of infographics and charts that could be used to visualise numbers as they flow through the system

The following infographic, produced by the Nuffield Trust in its article '*Chart of the week: The knowns and unknowns of NHS Test and Trace*', shows the number of positive cases and their close contacts identified and asked to self-isolate. Some figures are estimated, such as the number of infections not identified by the testing programme, or are marked as unknown, for example the number of contacts not identified. Note that these numbers do not reflect the most recent data.

The following Sankey diagram, produced by the Ministry of Justice, shows the flow of defendants through the criminal justice system. The online version of this chart is interactive and allows the user to hover over each part of the system to see the numbers. The user can also select their year of interest from a choice of ten years and filter the numbers by sex, offence type and offence group.