ROYAL STATISTICAL SOCIETY

DATA | EVIDENCE | DECISIONS

ROYAL STATISTICAL SOCIETY'S RESPONSE TO DHSC'S POLICY PAPER: TRANSFORMING THE PUBLIC HEALTH SYSTEM

Introduction

This is the response from the Royal Statistical Society (RSS) Covid-19 Task Force to the DHSC's paper setting out reforms to the public health system in England.

High-quality data and good statistical practice will be vital to the success of UKHSA. The following answers set out some important ways in which statistical excellence will help the new agency achieve its goals.

Q1. What do local public health partners need most from UKHSA?

Local public health partners need UKHSA to provide and share timely, fine-scale geographical analyses that maximise precision by borrowing strength, as appropriate in statistical, epidemiological and subject-matter terms from neighbouring geographical areas and from the recent past.

Q2. How can UKHSA support its partners to take the most effective action?

Effective action stems from a combination of subject-matter expertise with efficient data-collection, insightful analyses and prompt dissemination of results. Transparency about the strengths and weaknesses of data-collection, how to remedy any data gaps, and thereby improve the precision of analyses to maximum effect are essentially matters of statistical science. Therefore UKHSA should be responsive to the analysis needs of its partners and establish an interactive dialog with partners to tailor its analytical delivery.

Partners include the four nations of the UK. It is important that UKHSA capitalizes on the best that the four nations offer, for example in timely registration of all deaths or national protocol for the conduct and reporting of toxicology at forensic autopsy, rather than seek to harmonize on the lowest common denominator.

Q3. How do you think the health protection capabilities we need in the future should differ from the one we have had to date?

Many of the problems associated with NHS Test & Trace have been due to design-failures to anticipate that effective infection control required linkage across a range of data-systems whose inter-operability was, at best, achieved by fuzzy matching. In addition, NHS Test & Trace has lacked transparency about the difficulties that analysts faced; and hence insufficient attention was paid to taking remedial action which should have included remedies put in place at no additional cost by paid consultants who took too narrow a view of their infection control mandate.

In addition, a major failure of NHS Test & Trace was failure to institute from the outset and in partnership with local public health teams, random visits to those in self-isolation to learn efficiently about how soon – during their intended quarantine – these at-risk contacts [either a) in the household of index cases or b) external close contacts] tested positive for SARS-CoV-2. Earlier detection would have meant early tracing of *their at-risk contacts*. Random home-visits would also

have documented robustly the extent of non-compliance with self-isolation: and determinant thereof.

When NHS Test & Trace was finally asked to account for its contribution to infection control, its claim rested mainly on the public's access to PCR-testing without any heed being paid to the effect of lockdown in wave 1 when access to testing was limited but infection controls were implemented nonetheless.

Q4. How can UKHSA excel at listening to, understanding and influencing citizens?

Randomised surveys are a pillar of real time disease surveillance systems. Throughout SARS-CoV-2, both infection and attitude surveys have been invaluable. While, in the context of Covid, the importance of these surveys has been clear – in other contexts they have faced problems of participation and it is important to clearly explain to citizens how these surveys will be used and why they are important. Anonymous surveillance through safe access routes will remain important and we believe that this should be part of UKHSA's portfolio – with public trust ensured through high standard of protection of confidential personal information.

Rather than UKHSA being merely influential, their competence in design and analysis and the peer-reviewed nature of their work should and will make their findings "go to" and compelling. The public can generally be relied upon to heed well-grounded inferences which are also competently communicated. Communication is not talking down but conversing with. Honest communication of uncertainty is challenging, but critical to gain and maintain public trust. The UKHSA should consider creating a user's forum implicating a diversity of social partners and the public.

We would also urge UKHSA to abide by the UK Statistics Authority Code of Practice for Statistics. This is important for giving the public confidence that any statistics that are published are of a high quality and are trustworthy. It is particularly important for a body such as UKHSA to ensure independence from ministerial control one questions such as how data are collected and when, in the public interest, analyses are published.

For example, the Joint Biosecurity Centre holds vast quantities of data but gives the impression that it needs ministerial clearance to publish its findings rather than that it is it primarily accountable to UK citizens. Independence of analysis is a key pillar for trustworthiness: visibly abiding by the Code of Practice – in this and other respects – would clearly demonstrate trustworthiness.