**Changes in behaviour if you think you have ever had coronavirus or have had it confirmed by a test**

### 14th April 2020

OFFICIAL SENSITIVE, not to be shared beyond SPI-B / SAGE

Key highlights:

* People who think they have had coronavirus are less likely to correctly identify the key symptoms of coronavirus.
* This group are also less likely to adhere to certain social distancing measures (meeting friends/family and going out to the shops for non-essential items) and are less likely to intend to adhere to self-isolation measures if someone in their household develops symptoms.
* A key challenge for communicators will be to maintain uptake of protective behaviours in the group who, by virtue of a test result or inference, believe they have had coronavirus.
* Self-diagnosis will continue to grow in the community. Given that this is linked to behaviour change, communications targeted at this group should be considered.

Background

* Governments across the world are planning to use testing (antibody and antigen) as a key component to inform their exit strategy from a period of stringent “lockdown” measures. This topic has also gained attention from the mass media.
* There will likely be widespread behavioural implications of such testing.
* These may be positive effects, e.g. feeling safe to return to work if antibody positive and motivated to remain at home if antigen positive.
* However, there may also be negative effects, e.g. decreased adherence to social distancing measures, not keeping up good hand and respiratory hygiene and not using PPE if antibody positive.
* Available tests are of varying quality and may not always correctly classify people as having/not having antibodies or antigens.
* At present, the best data we have on behavioural responses to such tests comes from people who, rightly or wrongly, believe that they have had coronavirus.
* These data can be found in the weekly tracker surveys conducted by DHSC and the daily tracker survey conducted by the Cabinet Office.

DHSC Weekly Tracker Surveys, Wave 10 (30 March to 1 April 2020, n=2012) and Wave 11 (6 to 8 April, n=2002)

* 10.1% of participants (n=406) think they have had coronavirus or have had it confirmed by a test (89.9% think not, n=3608).
  + Of these, only 56 have had it confirmed by a test.
* Those who think they have had coronavirus or who have had it confirmed by a test are less likely to:
  + correctly identify cough and high temperature / fever as key symptoms of coronavirus (aOR 0.53, 95% CI 0.42 to 0.66).
  + intend to stay at home for 14 days if someone in your household developed symptoms of coronavirus (aOR 0.59, 95% CI 0.44 to 0.79).
  + wash their hands “more than usual” when they get home (aOR 0.71, 95% CI 0.57 to 0.90).
* Those who think they have had coronavirus or who have had it confirmed by a test are more likely to:
  + go out to the shops for items other than groceries/pharmacy (aOR 1.58, 95% CI 1.22 to 2.05) and to meet up with friends and/or family that they don’t live with (aOR 2.20, 95% CI 1.45 to 3.32).
* No difference in:
  + intention to stay at home for seven days if you developed symptoms of coronavirus (aOR 0.81, 95% CI 0.62 to 1.06).
  + washing their hands when they get into work (NB- restricted sample; aOR 1.00, 95% CI 0.79 to 1.26), before eating or preparing food (aOR 0.87, 95% CI 0.70 to 1.09), or after coughing, sneezing or blowing their nose (aOR 0.87, 95% CI 0.69 to 1.08).
  + going out to the shops for groceries/pharmacy more than once in the last seven days (aOR 0.98, 95% CI 0.78 to 1.22) and going out to work (aOR 1.14, 95% CI 0.86 to 1.49).

Cabinet Office Daily Tracker Surveys, 5-6 Aprilto 10-11 April, n~1600 per wave (total 9953 in sample)

* 8.7% of participants (n=862) think they have had coronavirus or have had it confirmed by a test (91.3% think not, n=9091).
  + Of these, only 23 have had it confirmed by a test.
* Those who think they have had coronavirus or who have had it confirmed by a test are more likely to have left the home in the last 24hrs to: pick up medicine (aOR 1.42, 95% CI 1.07 to 1.91), to travel to work if could not work from home (aOR 1.33, 95% CI 1.05 to 1.68), to provide care for those who need it (aOR 1.44, 95% CI 1.03 to 2.00), to visit the homes of friends or family (aOR 1.83, 95% CI 1.08 to 3.11), to meet people in outside places (aOR 2.38, 95% CI 1.18 to 4.91).
  + No difference in leaving the home in the last 24 hours: to shop for basic necessities (aOR 1.12, 95% CI 0.94 to 1.33), to exercise (aOR 1.03, 95% CI 0.86 to 1.22), for another reason (aOR 0.88, 95% CI 0.57 to 1.37).
  + No difference in how informed people feel about social distancing (used linear regression, unstandardised B=.03, 95% CI -.01 to .07, β=.02).
* Those who think they have had coronavirus or who have had it confirmed by a test are more likely to report that they are finding it difficult to stick to social distancing rules (aOR 1.39, 95% CI 1.10 to 1.75).
  + No difference in how easy or difficult they think other people are finding it to stick to social distancing rules (aOR 1.06, 95% CI 0.89 to 1.26).
* There was no difference in thinking the current rules about staying at home and only going out under limited circumstances should now be relaxed (NB – very skewed sample so wide confidence interval, aOR 1.68, 95% CI 0.97 to 2.93, p=.07).

Limitations

* All data presented here are self-reported. We cannot tell if this self-reported behaviour reflects actual behaviour.
* Intentions are not always predictive of behaviour. For example, in the DHSC data, while 50% people report intending to stay at home for seven days if they developed symptoms, only 26% report that they are staying at home for seven days because they have developed symptoms of coronavirus in the last seven days.
* Most people are adhering to social distancing guidelines, so analyses are based on skewed samples and should be taken with caution.
* Other surveys (e.g. by [Savanta](https://info.savanta.com/hubfs/Covid-19%20assets/Full%20data%20set%20PDFs/Savanta%20Coronavirus%20Daily%20Tracker%20-%206th%20April.pdf?utm_campaign=UK_2020_03_Covid-19_tracker&utm_source=COVID%20-19%20DAILY%20SLIDE%20DECK%20PDF%206TH%20APRIL&utm_medium=COVID%20-19%20DAILY%20SLIDE%20DECK%20PDF%206TH%20APRIL&utm_term=COVID%20-19%20DAILY%20SLIDE%20DECK%20PDF%206TH%20APRIL&utm_content=COVID%20-19%20DAILY%20SLIDE%20DECK%20PDF%206TH%20APRIL) and [YouGov daily tracker](https://docs.cdn.yougov.com/30jdoza2ri/YouGov%20-%20Daily%20coronavirus%20tracker%2023%20Mar%20-%208%20Apr.pdf)) have asked participants if they think they have ever had coronavirus and have asked about their behaviour. However, we do not have access to the raw data to analyse them. Claims made in this report would be stronger if findings were replicated across different datasets.
* The impact of self-diagnosis on behaviour may be different to the impact of a test on behaviour. However, note that self-diagnosis will continue to grow in the community. Messaging directed to this group may be important.

*Please note that this work has been conducted rapidly and has not been peer reviewed or subject to normal quality control measures.*

Datasets used:

* Department of Health and Social Care weekly tracker
  + Tracking DHSC marketing, coronavirus attitudes, beliefs, knowledge, reported behaviour, satisfaction with Government response, credibility of Government.
  + Data collected weekly (Monday to Wednesday) since late January.
  + N~2000 per wave.
  + Market research company commissioned: BMG Research.
  + *This survey is not designed to collect the views of NHS workers and respondents in this sample working in the NHS are not representative of the wider NHS workers in general. In particular, the sample in the survey is of NHS staff who have time to participate in on-line polls. In the context of a major public health crisis this poses very substantial limitations.*
* Cabinet Office daily tracker
  + Tracking coronavirus attitudes, beliefs, reported behaviour, satisfaction with Government response, credibility of Government.
  + Data collected daily since mid-March.
  + N~1600 per wave.
  + Market research company commissioned: YouGov.

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