# Factors associated with requesting an antigen test and self-isolating after developing symptoms of coronavirus

14th July 2020

## Key findings

We used DHSC polling data to investigate factors associated with two behaviours key to the success of the Test, Trace and Isolate (TTI) system which currently have very poor levels of adherence: requesting an antigen test, and self-isolating after having developed symptoms of coronavirus. Due to the difference between the TTI systems in the different nations, we restricted the sample to England only.

Requesting an antigen test

1. Of people who reported experiencing symptoms of coronavirus (cough, high temperature / fever, or loss of sense of smell or taste) in the last week, onlyapproximately **11% report requesting an antigen test.**
2. In those who have not experienced symptoms of coronavirus in the last week, **intention to request a test if symptomatic is also low**, but has been **increasing** (latest survey wave 45%, data collected 8-10 July).
3. There was no evidence for associations between sociodemographic or other factors and reporting having requested a test if you became symptomatic.
4. **Greater intention to request an antigen test** was strongly associated with **knowing the symptoms of coronavirus,** **knowing who is eligible to request a test**, **greater perceived effectiveness of antigen testing** as a way to prevent the spread of coronavirus, and **increased confidence in being able to book** an antigen test and **return** a home-testing kit.

Self-isolation

1. Of people who reported experiencing symptoms of coronavirus (cough, high temperature / fever, or loss of sense of smell or taste) in the last week, approximately **18%** reported **not leaving home at all** since developing symptoms.
2. In those who have not experienced symptoms of coronavirus in the last week, **intention not to leave home at all** after developing symptoms of coronavirus is much higher, at approximately **69%**.
3. **Having left home since developing symptoms** of coronavirus was strongly associated with **not knowing the key symptoms of coronavirus**, **being a key worker**, **having a dependent child**, **lower socioeconomic grade**, having a possible **mental health morbidity** (as measured by PHQ4) and having a **household member with a chronic illness**.

## Recommendations

1. **Increasing knowledge about the key symptoms of coronavirus** (cough, high temperature / fever, and loss of sense of smell or taste) is likely to **decrease the percentage of people leaving home after developing symptoms of coronavirus, and increase intention to request an antigen test**.
2. **Increasing knowledge about who is eligible to request an antigen test,** and **how to request an antigen test** are likely to increase intention to request an antigen test, influencing later behaviour (requesting an antigen test if you develop symptoms of coronavirus).
3. **Communications which demonstrate how easy it is to request and return a home-testing kit** are likely to increase intention to request an antigen test, in turn influencing behaviour (requesting an antigen test if you develop symptoms of coronavirus).
4. Intention to adopt protective behaviours is lower in males. **Targeted communications to males should be prioritised.**
5. **Specific communications for key workers,** stressing that they should not leave home for work or other reasons if they develop symptoms of coronavirus, **should be prioritised.**
6. **Greater financial and social provisions will help people with caring responsibilities** (i.e. for dependent children, or household members with chronic illnesses) and **with greater financial difficulties,** which is likely to increase the percentage of people who do not leave home at all if they develop symptoms of coronavirus.

## Requesting an antigen test

### Self-reported behaviour

We investigated whether participants who reported experiencing symptoms of coronavirus in the last week (cough, high temperature / fever, loss of sense of smell, or loss of sense of taste) requested an antigen test. We merged data from 25 May (when the question was introduced to the survey) to 8 July to give larger sample sizes (n=849).

* **Overall, 11% of participants who developed symptoms of coronavirus requested an antigen test.** There were no significant differences by survey wave (lowest percentage requested: 8%, data collected 25-27 May; highest percentage requested: 14%, data collected 8-10 June).
* Not requesting an antigen test was associated with region (those in the West Midlands were less likely to request a test, compared to those in the East Midlands). No other factors were associated (Table 1).
* Self-reported reasons for not requesting a test (questions introduced to survey from 8th June, n=501) were: 19% didn’t think symptoms were coronavirus; 16% symptoms improved; 16% worried what friends or family would think if tested positive (NB – only asked from 29 June); 15% didn’t think eligible for test; 15% symptoms were only mild; 15% didn’t want to use a test that could have gone to someone else who needed it more; 15% hadn’t been in contact with anyone who had coronavirus recently; 14% thought only needed to self-isolate; 13% didn’t know how to request test; 12% worried about employer reaction if tested positive (NB – only asked from 29 June); 10% didn’t want to know results of a test; 10% sure/had already had coronavirus, so didn’t see reason for test; 9% thought test would be uncomfortable / painful; 7% didn’t know what test involved; and 7% didn’t think test would be accurate.

**Table 1. Testing, self-reported behaviour**. Associations with reporting that you requested a test in those who had symptoms of coronavirus.

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|  | **Reported requesting an antigen test if symptomatic oneself (n=97/849)** |
| Not associated | Survey wave, gender, age, presence of a dependent child in the household, having a medical condition that makes you more susceptible to complications from coronavirus, having a household member with a chronic illness, working, ethnicity, education, living alone, marital status, being self-employed, living in a more deprived area, socio-economic grade, being a key worker, speaking English as your first language, possible mental health morbidity (as measured by PHQ4), attribution of symptoms to coronavirus (NB – only asked from 15 June), knowledge of symptoms of coronavirus (cough, high temperature, and loss of sense of smell or taste), worry about coronavirus, perceived risk of coronavirus (to oneself, friends and family, and people in the UK), number of outings in past week, thinking you have enough knowledge about testing (including who is eligible and how to get tested), thinking you have enough knowledge about contact tracing programmes (such as NHS Test and Trace), knowledge of who is eligible to get tested if they develop symptoms (NB – only asked from 8 June), perceived effectiveness of testing, confidence that if you wanted to you could book an antigen test, confidence that if you wanted to you could go to a drive-through testing centre, confidence that if you wanted to you could get a home-testing kit delivered, confidence that if you wanted to you could return a home-testing kit by post (NB – only asked on 25 to 27 May), confidence that if you wanted to you could return a home-testing kit by courier (NB – only asked from 1 June), perceived credibility of the Government, self-reported markers of financial difficulties, would worry what others thought of me if I tested positive for coronavirus (NB – only asked from 29 June). |
| Small effect – less likely to have requested a test | Region (those West Midlands less likely than those in the East Midlands to request a test). |

### Intended behaviour

We investigated whether participants who had not developed symptoms of coronavirus (cough, high temperature / fever, loss of sense of smell, or loss of sense of taste) would request an antigen test if they developed symptoms. We merged data from 25 May (when the question was introduced to the survey) to 8 July (n=11,234).

* **Overall, 39% of participants reported that they would request an antigen test if they were to develop symptoms of coronavirus.** Those in later survey waves were more likely to intend to request a test (lowest percentage requested: 34%, data collected 25-27 May; highest percentage requested: 45%, data collected 8-10 July).
* Due to the large sample size, we were able to detect small differences between groups. Therefore, we have considered the strength of associations in our reporting.
* **Strongly associated with intending to request an antigen test** if you developed symptoms of coronavirus were: **knowing the symptoms of coronavirus**; **knowing who is eligible to request an antigen test**; **greater perceived effectiveness** of antigen testing; and **increased confidence** in being able to return a home-testing kit by post or courier (Table 2).
* Other factors exerted smaller effects on intention to request an antigen test if you developed symptoms of coronavirus. **Lower intention** to request an antigen test was associated with: **being male, living alone, lower perceived risk of coronavirus to people in the UK and friends/relatives,** greater self-reported markers of **financial difficulty**, thinking that you **did not have enough information about testing, lower confidence** that could **go to a drive-through testing centre** and **get a home-testing kit delivered,** and **lower perceived credibility of Government.**
* Self-reported reasons for not intending to request a test if you developed symptoms of coronavirus were (questions introduced to survey from 8th June, n=4,762): 23% don’t know how to request test; 21% don’t think eligible for test; 18% thought only needed to self-isolate; 13% wouldn’t want to use a test that could have go to someone else who needed it more; 12% symptoms were only mild; 11% didn’t think symptoms were coronavirus; 10% symptoms improved; 8% don’t know what test involves; and 7% don’t think test would be accurate, 6% if hadn’t been in contact with anyone who had coronavirus recently; 5% thought test would be uncomfortable / painful; 3% think have already had coronavirus, so don’t see reason for test; 3% worried about employer reaction if tested positive (NB – only asked from 29 June); 2% wouldn’t want to know results of a test; and 2% worried what friends or family would think if tested positive (NB – only asked from 29 June).

**Table 2. Testing, intended behaviour**. Associations with reporting that you would request a test if you developed symptoms of coronavirus.

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|  | **Reported requesting an antigen test if symptomatic oneself (n=4,423/11,234)** |
| Medium / large effect – more likely to intend to request a test | Identifying cough, high temperature, and loss of sense of smell or taste as symptoms of coronavirus, knowing who is eligible to get tested if they develop symptoms (NB – only asked from 8 June), greater perceived effectiveness of testing, confidence that if you wanted to you could book an antigen test, confidence that if you wanted to you could return a home-testing kit by post (NB – only asked on 25 to 27 May), confidence that if you wanted to you could return a home-testing kit by courier (NB – only asked from 1 June). |
| Small effect – more likely to intend to request a test | Later survey wave, region (those in South East more likely to intend to request a test compared to those in the East Midlands), being female, older age (those aged 65 to 74 years more likely to intend to request a test compared to those aged 16 to 24 years), higher level of education, being married / partnered, living in a more deprived area (second quartile compared to least deprived), higher perceived risk of coronavirus (to friends and family, and people in the UK), thinking you have enough knowledge about testing (including who is eligible and how to get tested), confidence that if you wanted to you could go to a drive-through testing centre, confidence that if you wanted to you could get a home-testing kit delivered |
| Not associated | Having a medical condition that makes you more susceptible to complications from coronavirus, having a household member with a chronic illness, working, being self-employed, being a key worker, worry about coronavirus, perceived risk of coronavirus (to oneself), number of outings in past week, thinking you have enough knowledge about contact tracing programmes (such as NHS Test and Trace). |
| Small effect – less likely to intend to request a test | Region (those in London less likely to intend to request a test compared to those in the East Midlands), age (those aged 25 to 34 years less likely to intend to request a test compared to those aged 16 to 24 years), having a dependent child in the household, black or minority ethnicity, living alone, lower socio-economic grade, speaking English as your first language, possible mental health morbidity (as measured by PHQ4), self-reported markers of financial difficulty, lower perceived credibility of the Government, would worry what others thought of me if I tested positive for coronavirus (NB – only asked from 29 June). |

## Self-isolating (not leaving the home at all) since developing symptoms

### Self-reported behaviour

Participants who reported experiencing symptoms of coronavirus in the last week (cough, high temperature / fever, loss of sense of smell, or loss of sense of taste) were asked whether they were staying at home for 7 or 14 days, and to report reasons why they had left their home since developing symptoms. We merged data from 25 May (when the question was introduced to the survey) to 8 July to give larger sample sizes (n=849).

* **25%** of people who developed symptoms of coronavirus in the last week reported that they were **staying at home for 7 or 14 days.**
* **18%** of people who developed symptoms of coronavirus in the last week reported **not having left home at all since developing symptoms.**
* Only a minority who report that they are staying at home are self-isolating. Only **23%** of those who reported that they were staying at home for 7 or 14 days reported that they **had not left home at all since having developed symptoms** (vs 16% who had not selected that they were staying at home for 7 or 14 days, *p*=.02).
* We investigated factors associated with reporting not having left the home since having developed symptoms.
* Reporting **not having left the home** **at all** since developing symptoms of coronavirus was strongly associated with **knowing that high temperature/fever, cough, and loss or change to sense of smell or taste are symptoms of coronavirus** (Table 3).
* **Having left the home** since developing symptoms of coronavirus was strongly associated with being a **key worker, having a dependent child, lower socioeconomic grade, having a possible mental health morbidity and having a household member with a chronic illness.** This may be due to caring responsibilities.
* Having left the home since developing symptoms of coronavirus was also associated with increased markers of self-reported financial difficulties and lower perceived credibility of the Government.
* Self-reported reasons why people had left their home since they developed symptoms were: 17% to go to the shops for groceries/pharmacy; 15% symptoms did not persist; 14% to go to the shops, for things other than groceries/pharmacy; 14% symptoms got better; 14% to go for a walk or some other exercise; 13% for a medical need other than coronavirus; 13% don’t think it is necessary to stay at home; 12% symptoms were only mild; 12% to help or provide care for a vulnerable person; 11% to go out to work; 11% too lonely; 10% too depressed or anxious; 10% to meet up with friends and/or family; 9% symptoms got worse; and, 7% too bored.

**Table 3. Isolating, self-reported behaviour.** Associations with not having left home since having developed symptoms of coronavirus.

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|  | **Reported not having left home since developing symptoms of coronavirus (n=151/849)** |
| Medium / large effect – more likely not to have left home at all | Identifying cough, high temperature, and loss of sense of smell or taste as symptoms of coronavirus. |
| Not associated | Region, survey wave, gender, older age, having a medical condition that makes you more susceptible to complications from coronavirus, working, index of multiple deprivation, ethnicity, education, living alone, marital status, being self-employed, speaking English as your first language, worry about coronavirus, perceived risk of coronavirus (to oneself, friends and family, and people in the UK), attributing symptoms to coronavirus (NB – only asked from 15 June), perceived effectiveness of staying at home for 7 days if symptomatic, perceived effectiveness of staying at home while symptomatic, confidence that if you wanted to you could stay at home for 7 days. |
| Small effect – less likely not to have left home at all | Self-reported markers of financial difficulty, lower perceived credibility of the Government. |
| Medium effect – less likely not to have left home at all | Presence of dependent children in the household, having a household member with a chronic illness, lower socioeconomic grade, being a key worker, possible mental health morbidity (as measured by PHQ4). |

### Intended behaviour

Participants who had not developed symptoms of coronavirus (cough, high temperature / fever, loss of sense of smell, or loss of sense of taste) were asked whether they would stay at home for 7 or 14 days, and to report reasons why they would leave their home if they developed symptoms. We merged data from 25 May (when the question was introduced to the survey) to 8 July (n=11,234).

* **74%** of people reported that they **would stay at home for 7 or 14 days** if they developed symptoms of coronavirus**.**
* **69%** of people reported that they **would not leave home at all** after developing symptoms.
* 72**%** of those who report that they would stay at home for 7 or 14 days also report that they **would not leave home at all after developing symptoms of coronavirus** (vs 61% who had not selected that they would stay at home for 7 or 14 days, *p*<.001).
* We investigated factors associated with reporting that you would not leave home at all after developing symptoms.
* Due to the large sample size, we were able to detect small differences between groups. Therefore, we have considered the strength of associations in our reporting.
* Reporting **intending** **not to leave home at all** after developing symptoms of coronavirus was strongly associated with **older age** (Table 4).
* Other factors exerted smaller effects on intention not to leave home at all. **Men** were less likely to select that they would not **leave home at all if they developed symptoms of coronavirus**, as were those with a **dependent child, higher education, lower socioeconomic grade**, who were **key workers,** had a **possible mental health morbidity**, **perceived a lower risk** of coronavirus, **did** **not correctly identify key symptoms** of coronavirus, self-reported markers of **greater financial difficulty**, **had been out more in the past week**, **perceived lower effectiveness** of staying at home for seven days upon developing symptoms of coronavirus, and who had **less confidence** that they could stay at home for seven days.
* Self-reported reasons why people would leave their home after developing symptoms were: 11% if symptoms got worse; 10% for a medical need other than coronavirus; 5% if symptoms did not persist; 5% if symptoms got better; 4% to go to the shops for groceries/pharmacy; 4% to go for a walk or some other exercise; 2% if symptoms were only mild; 2% to go to the shops, for things other than groceries/pharmacy; 2% to go out to work; 2% don’t think it is necessary to stay at home; 2% to help or provide care for a vulnerable person; and, 1% to meet up with friends and/or family.

**Table 4. Isolating, intended behaviour.** Associations with intention not to leave home at all after developing symptoms of coronavirus.

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|  | **Reported not having left home since developing symptoms of coronavirus (n=7,765/11,234)** |
| Medium / large effect – more likely to intend not to leave home at all | Older age. |
| Small effect – more likely to intend not to leave home at all | Being female, living in a more deprived area (third quartile compared to least deprived), speaking English as your first language, worry about coronavirus, perceived risk of coronavirus (to oneself, friends and family, and people in the UK), identifying cough, high temperature, and loss of sense of smell or taste as symptoms of coronavirus, perceived effectiveness of staying at home for 7 days if symptomatic, perceived effectiveness of staying at home while symptomatic, confidence that if you wanted to you could stay at home for 7 days. |
| Not associated | Survey wave, working, ethnicity, marital status, being self-employed, perceived credibility of the Government. |
| Small effect – less likely to intend not to leave home at all | Region (those in London less likely to intend to request a test compared to those in the East Midlands), presence of dependent children in the household, having a medical condition that makes you more susceptible to complications from coronavirus, having a household member with a chronic illness, higher education (degree-level or equivalent), living alone, lower socioeconomic grade, being a key worker, possible mental health morbidity (as measured by PHQ4), self-reported markers of financial difficulty, higher number of outings in past week. |

Datasets used:

* Department of Health and Social Care weekly tracker (data collected 25 May to 8 July 2020).
  + Tracking DHSC marketing, coronavirus attitudes, beliefs, knowledge, reported behaviour, satisfaction with Government response, credibility of Government.
  + The financial difficulties item combines: “I am struggling to make ends meet”, “I am skipping meals I would usually have”, and “I am finding my current living situation difficult”.
  + Data collected weekly (Monday to Wednesday) since late January 2020.
  + N~2000 per wave.
  + Market research company commissioned: BMG Research.

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

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