Title: Knowledge of self-isolation rules in the UK for those who have symptoms of Covid-19: a repeated cross-sectional survey study

Short title: Knowledge of covid self-isolation rules

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Data availability statement:

The data are owned by the UK's Department of Health and Social Care, so no additional data are available from the authors.

Conflict of interest:

All authors had financial support from NIHR for the submitted work. RA is an employee of the UK Health Security Agency (UKHSA); HWWP has received additional salary support from Public Health England and NHS England; HWWP receives consultancy fees to his employer from Ipsos MORI and has a PhD student who works at and has fees paid by Astra Zeneca; NTF is a participant of an independent group advising NHS Digital on the release of patient data; RW has undertaken research and consultancy for companies that manufacture smoking cessation medications (Pfizer, GSK). All authors are participants of the UK's Scientific Advisory Group for Emergencies or its subgroups. There are no other financial relationships with any organisations that might have an interest in the submitted work in the previous three years and no other relationships or activities that could appear to have influenced the submitted work.

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What is already known on this topic

- Adherence to self-isolation in people who develop key COVID-19 symptoms is low in the UK.
- One reason why people may not be adhering to self-isolation rules may be because of lack of knowledge.

What this study adds

- Knowledge of self-isolation rules is sub-optimal.
- Younger people, men, those living in England (compared to Scotland, Wales and Northern Ireland), and those living in more deprived areas were less likely to know about self-isolation rules.

Abstract

Background: Failure to understand the rules and procedures regarding self-isolation when symptomatic with Covid-19 may have contributed to the low level of adherence found in the UK. We investigated knowledge of these rules and factors associated with knowledge.

Methods: Data were drawn from repeated weekly/fortnightly online surveys of nationally representative cross-sectional samples of approximately 2,000 UK adults each from 9 November 2020 to 2 June 2021 (40,544 responses from 33,568 participants). We computed a composite measure of knowledge of what self-isolation means by combining item responses. We investigated associations between knowledge of self-isolation rules, with survey wave, socio-demographic characteristics (age, gender, UK nation, rural/urban area, index of multiple deprivation), trust in government, and participants' belief that they had received enough information about self-isolation.

Results: 87.0% (95% CI 86.7% to 87.4%, n=33,541/38,533) of participants knew that if they had symptoms of COVID-19 they should 'self-isolate'. However, only 58.3% (n=22,451/38,533, 95% CI 57.8% to 58.8%) knew about all the main rules regarding what that meant. Younger people had less knowledge than older people, and men had less knowledge than women. Knowledge was lower in people living in England versus those living in Scotland, Wales, and Northern Ireland. The pattern of association with trust in government was unclear. Knowledge was lower in people living in a more deprived area and those who did not believe they had enough information about self-isolation. Knowledge was lower in December 2020-January 2021, compared with before and after this period.

Conclusions: Fewer than 60% of adults in the UK between November 2020 and June 2021 appeared to know all the main rules regarding self-isolation if symptomatic with Covid-19. Knowledge was lower in younger than older people, men than women, those living in England compared with Scotland, Wales or Northern Ireland, and those living in more deprived areas.

Keywords: COVID-19, knowledge, understanding, self-isolation, regulations

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Introduction

In the UK, people with the main symptoms of COVID-19 (as described by the National Health Service [NHS]: high temperature; new, continuous cough; a loss or change to sense of smell or taste) are required get a polymerase chain reaction (PCR) test to check if they have COVID-19.(1, 2) They should also not have visitors until they get their test result and only leave their home to have a test.(1) However, surveys suggest that over 50% of people with COVID-19 symptoms in the UK have been failing to adhere fully to these rules.(3, 4) This will have contributed to high transmission rates. Not regarding COVID-19 as a potential cause for symptoms may contribute to low adherence.(5) The need to carry out everyday activities such as working and shopping also appears to be a causal factor in many cases.(3, 6) Lack of knowledge of the rules and procedures for self-isolation may also be a factor. Research has shown that knowledge of rules for self-isolation is low among the general public in the UK,(4) but higher among the subset of symptomatic people who are known to NHS Test and Trace.(7) Understanding factors influencing knowledge can inform policies and interventions for improving knowledge of and adherence to self-isolation rules.

The devolved nations (Scotland, Wales, and Northern Ireland) have differed in some of their rules to reduce COVID-19 spread.(8, 9) However, self-isolation rules have been the same across the UK. If knowledge of self-isolation rules varies substantially across nations, this could provide a basis for learning from those that perform better. Research throughout the pandemic has shown that adherence to rules is poorer in certain sociodemographic groups such as men and younger people.(3, 10) Lack of trust in Government has also been associated with non-adherence.(10, 11) Investigating whether knowledge of rules is also lower in these groups could identify target groups for interventions and inform communications aimed at increasing knowledge. If knowledge of self-isolation rules has improved over time there may be less of an imperative to intervene to improve it; but if it has remained at an unacceptable level or worsened, remedial action is indicated.

The aims of this study were to investigate the UK public's knowledge of self-isolation rules if one has COVID-19 symptoms, and whether knowledge varies by nation, socio-demographic characteristics (gender, age, rural/urban area, deprivation), trust in government, participants' beliefs that they have received enough information about self-isolation, and changes over time. We also investigated whether a change in question wording affected responses.

Methods

The analysis plan was published prior to undertaking the analyses at https://osf.io/neyau/.

Design

A series of weekly (or occasionally fortnightly) cross-sectional, UK-wide, nationally representative surveys were conducted by BMG Research on behalf of the Department of Health and Social Care over the course of the COVID-19 pandemic. We analysed these data as part of the CORSAIR study ([the COVID-19 Rapid Survey of Adherence to Interventions and Responses study]).(3) For the current paper, we used data from wave 32 to wave 51 (9 November 2020 to 2 June 2021). We selected these waves as there were no changes to the true / false statements for the outcome variable over this time.

Participants

Participants (n≈2,000 per wave) were recruited from two specialist research panel providers, Respondi (n=50,000) and Savanta (n=31,500). They were eligible for inclusion if they were aged 16 years or over and lived in the UK. Quotas were applied based on age and gender (combined). After completing the survey, participants were then unable to participate in the subsequent three waves. Participants were reimbursed in points that could be redeemed in cash, gift vouchers or charitable donations (up to 70p per survey wave).

Study materials

Outcome measures

To measure knowledge about Government rules and procedures for those with symptoms of COVID-19, we asked participants a series of true / false questions regarding statements about actions that people should carry out "if you have symptoms of coronavirus". Statements included self-isolating, being able to go out: to the shops for essentials; to the shops for non-essentials; for exercise; for work; to meet people from another household; as well as being able to go out if you were wearing a face covering or if symptoms were only mild (see supplementary materials for full items).

We computed a knowledge score by combining responses to four items that would involve the contact of a symptomatic person with people from other households in an indoor space (going out to the shops for essential items, going out to the shops for non-essential items, to meet up with friends or family indoors, having someone over to one's home). Participants were coded as being "correct" for this item if they identified that all four answers were false.

The wording of the knowledge question focused on what the respondent could do ("if you have symptoms of coronavirus, you …"). This may have led respondents to personalise their responses, for example correctly asserting that they need not self-isolate if they have had a PCR test which has come back negative. To test this, in wave 47 and 48, half the sample, selected at random, received an alternative version of the wording ("If someone develops symptoms of coronavirus, they …") and half received the original wording.

Explanatory factors

We asked participants for their age, gender, what country they live in, and full postcode. From their postcode, we derived whether they lived in a rural or urban area (except for respondents who lived in Northern Ireland), and an index of multiple deprivation (in quartiles).(12)

Participants were asked to what extent they agreed that information from the Government about coronavirus could be trusted, and that they had enough information from the Government and

other public authorities on self-isolation. Both questions were answered on a five-point scale from "strongly agree" to "strongly disagree".

Ethics

This work was undertaken as part of service evaluation of the marketing and communications conducted by the Department of Health and Social Care, and, following advice from the University Research Ethics Subcommittee, was exempt from requiring ethical approval.

Power

A sample size of 2,000 allows a 95% confidence interval of plus or minus 2% for the prevalence estimate for a survey item with a prevalence of around 50%. We then pooled data from multiple survey waves, providing greater power for analyses of relationships between variables.

Analysis

Prevalence of knowledge of rules if symptomatic was assessed using percentages and 95% confidence intervals.

We conducted a generalised estimating equation (GEE) to investigate associations between socio-demographic factors (nation, gender, age, urban/rural area, index of multiple deprivation), psychological factors (trust in Government, perceived sufficiency of information about self-isolation), survey wave and key knowledge scores, adjusting for all variables ($p < 0.05$ 2-tailed). The GEE adjusts for individuals completing the survey on more than one occasion.

To investigate whether changing the phrasing of the question affected responses, we conducted χ^2 tests comparing responses to the amended version ("If someone develops symptoms…") of the knowledge items to the original wording ("If you have symptoms…"; waves 47 and 48 only).

Data were weighted based on age, gender and Government Office Region to reflect targets based on data from the Office for National Statistics.(13) The GEE was conducted on unweighted data.

Results

There were 40,544 responses included in the weighted sample, from 33,568 participants. 50.9% of respondents were female (n=20,654/40,544) and mean age was 47.7 years (standard deviation 18.6 years, range 16 to 93 years).

While 87.0% (95% CI 86.7% to 87.4%, n=33,541/38,533)[1] of responses identified that if participants had symptoms of COVID-19 they should self-isolate, knowledge for individual statements varied (Table 1). 58.3% (n=22,451/38,533, 95% CI 57.8% to 58.8%) scored correctly on our derived knowledge measure, with the most incorrectly answered statements that if they had symptoms of COVID-19, they could go out for a walk or some other exercise (60.8% answered correctly) and go to the shops for groceries/pharmacy (66.5% answered correctly).

Table 1. Endorsement of individual statements for knowledge of self-isolation (correct answer shown in bold).

The Government has issued advice on how people should help prevent the spread of coronavirus if they have symptoms. If you have symptoms of coronavirus, you: [total n=38,533]	True, % (n)	False, % (n)	Don't know, % (n)
should self-isolate	**87.0 (33,541)**	7.8 (3,008)	5.1 (1,984)
should get a test, but can go out as normal while you are waiting for the result	13.8 (5,051)	**79.1 (28,883)**	7.1 (2,574)
could be eligible for self-isolation payments (if you are on benefits and/or a lower income and cannot work from home)	**61.4 (23,650)**	11.0 (4,250)	27.6 (10,633)
can go out if your symptoms are mild	7.2 (2,789)	**86.5 (33,337)**	6.2 (2,407)
can go to the shops for groceries/pharmacy*	27.8 (10,727)	**66.5 (25,612)**	5.7 (2,193)
can go to the shops for things other than groceries/pharmacy*	17.2 (6,630)	**77.3 (29,776)**	5.5 (2,126)
can go for a walk or some other exercise	31.9 (12,300)	**60.8 (23,436)**	7.3 (2,797)
can go out to work if you cannot work from home	26.5 (10,208)	**67.8 (26,134)**	5.7 (2,191)
can go out to help or provide care for a vulnerable person	24.9 (9,605)	**67.2 (25,911)**	7.8 (3,017)
can go out if you're wearing a face covering	23.7 (9,144)	**69.4 (26,758)**	6.8 (2,631)
can go out to meet up with friends and/or family that you don't live with, indoors*	10.8 (4,144)	**84.4 (32,535)**	4.8 (1,854)
can go out to meet up with friends and/or family that you don't live with, outdoors	16.6 (6,378)	**78.0 (30,048)**	5.5 (2,107)
can go out to spend time outdoors for recreational purposes (including to sit in parks etc)	26.4 (10,190)	**67.3 (25,917)**	6.3 (2,426)
can go out to get a test to see if you have coronavirus	**69.2 (26,677)**	20.9 (8,062)	9.8 (3,794)
can have someone who you don't live with over to your home*	10.3 (3,972)	**84.3 (32,492)**	5.4 (2,069)

* Included in derived key knowledge measure

Knowledge on the composite knowledge measure was associated with being older, female, living in Scotland, Wales, and Northern Ireland (compared with England), and disagreeing that information from the Government about COVID-19 could be trusted (Table 2). Incorrect knowledge was associated with living in a more deprived area and disagreeing that they had enough information from the Government and other public authorities about self-isolation. Analyses investigating survey wave indicated that there was no secular trend; knowledge was poorer in December 2020-January 2021 compared to early November 2020.

[1] In wave 47 and 48, half the sample received an alternative version of the wording and are therefore not included in these analyses.

Table 2. Factors associated with correctly identifying the key knowledge measure. Frequencies reported are based on weighted data. Adjusted odds ratios from the generalised estimating equation (GEE) are based on unweighted data. Bolding signifies significant associations (p<.05).

Factor	Level	Key knowledge incorrect (total n=16,082), (%) n	Key knowledge correct (total n=22,451), (%) n	Adjusted odds ratio (95% CI) for getting key knowledge measure correct †	*p*
Survey wave	9 to 11 November 2020 (wave 32)	39.6 (803)	60.4 (1,226)	Reference	-
	16 to 18 November 2020 (wave 33)	42.4 (872)	57.6 (1,187)	0.95 (0.84 to 1.08)	.42
	23 to 25 November 2020 (wave 34)	40.6 (823)	59.4 (1,202)	1.01 (0.89 to 1.15)	.82
	30 November to 2 December 2020 (wave 35)	40.9 (839)	59.1 (1,212)	0.99 (0.88 to 1.13)	.92
	7 to 9 December 2020 (wave 36)	46.1 (971)	53.9 (1,134)	**0.76 (0.67 to 0.86)**	**<.001**
	14 to 16 December 2020 (wave 37)	47.0 (951)	53.0 (1,071)	**0.75 (0.66 to 0.85)**	**<.001**
	21 to 23 December 2020 (wave 38)	47.9 (966)	52.1 (1,049)	**0.75 (0.66 to 0.85)**	**<.001**
	28 to 30 December 2020 (wave 39)	46.4 (940)	53.6 (1,088)	**0.77 (0.68 to 0.87)**	**<.001**
	4 to 6 January 2021 (wave 40)	42.5 (867)	57.5 (1,175)	**0.85 (0.75 to 0.97)**	**.01**
	11 to 13 January 2021 (wave 41)	39.9 (799)	60.1 (1,206)	1.03 (0.90 to 1.17)	.67
	25 to 27 January 2021 (wave 42)	41.5 (832)	58.5 (1,175)	0.95 (0.84 to 1.08)	.43
	8 to 9 February 2021 (wave 43)	39.5 (796)	60.5 (1,218)	1.08 (0.95 to 1.22)	.25
	22 to 23 February 2021 (wave 44)	38.0 (765)	62.0 (1,247)	1.09 (0.96 to 1.24)	.19
	8 to 9 March 2021 (wave 45)	40.5 (814)	59.5 (1,197)	1.05 (0.92 to 1.19)	.47
	22 to 23 March 2021 (wave 46)	41.4 (849)	58.6 (1,203)	0.99 (0.87 to 1.12)	.82
	6 to 7 April 2021 (wave 47)	39.2 (392)	60.8 (608)	1.09 (0.92 to 1.29)	.31
	19 to 21 April 2021 (wave 48)	39.2 (391)	60.8 (607)	1.09 (0.93 to 1.28)	.27
	4 to 5 May 2021 (wave 49)	38.6 (775)	61.4 (1,234)	**1.18 (1.04 to 1.35)**	**.01**
	17 to 19 May 2021 (wave 50)	40.3 (816)	59.7 (1,208)	1.07 (0.94 to 1.21)	.33
	1 to 2 June 2021 (wave 51)	40.5 (820)	59.4 (1,204)	1.05 (0.93 to 1.20)	.43
Age (per decade) ‡	Range 16 to 93 years	M=44.9, SD=19.2	M=49.7, SD=18.0	**1.13 (1.12 to 1.15)**	**<.001**
Gender	Male	49.0 (9,186)	51.0 (9,575)	Reference	-
	Female	34.8 (6,838)	65.2 (12,794)	**1.75 (1.67 to 1.83)**	**<.001**
	Other	40.6 (41)	59.4 (60)	**1.70 (1.08 to 2.66)**	**.02**
	Prefer not to say	43.6 (17)	56.4 (22)	1.81 (0.89 to 3.71)	.10
Nation	England	43.4 (14,047)	56.6 (18,352)	Reference	-
	Scotland	31.4 (1,012)	68.6 (2,210)	**1.62 (1.48 to 1.77)**	**<.001**
	Wales	36.5 (676)	63.5 (1,177)	**1.21 (1.09 to 1.35)**	**<.001**
	Northern Ireland	32.7 (346)	67.3 (711)	**1.73 (1.10 to 2.73)**	**.02**
Area	Urban	42.8 (13,497)	57.2 (18,050)	Reference	-
	Rural	37.7 (2,275)	62.3 (3,765)	1.03 (0.97 to 1.10)	.37

Index of multiple deprivation	1st quartile (least deprived) to 4th quartile (most deprived)	M=2.7, SD=1.1	M=2.5, SD=1.1	**0.89 (0.87 to 0.90)**	**<.001**
Information from the Government about covid-19 can be trusted	Strongly agree	47.0 (2,129)	53.0 (2,397)	Reference	-
	Agree	39.0 (5,033)	61.0 (7,876)	**1.36 (1.26 to 1.46)**	**<.001**
	Neither agree nor disagree	43.9 (4,451)	56.1 (5,685)	**1.24 (1.15 to 1.34)**	**<.001**
	Disagree	37.9 (2,352)	62.1 (3,860)	**1.58 (1.45 to 1.72)**	**<.001**
	Strongly Disagree	45.8 (1,563)	54.2 (1,846)	**1.29 (1.17 to 1.42)**	**<.001**
	Don't know	50.6 (362)	49.4 (353)	1.04 (0.88 to 1.23)	.65
To what extent do you agree or disagree that you have enough information from the Government and other public authorities with regards to … self-isolation	Strongly agree	39.9 (4,276)	60.1 (6,444)	Reference	-
	Agree	38.2 (7,479)	61.8 (12,084)	1.05 (1.00 to 1.11)	.06
	Neither agree nor disagree	56.1 (2,688)	43.9 (2,105)	**0.60 (0.56 to 0.65)**	**<.001**
	Disagree	43.7 (1,074)	56.3 (1,381)	0.93 (0.85 to 1.02)	.13
	Strongly Disagree	52.2 (344)	47.8 (315)	**0.79 (0.66 to 0.93)**	**.006**
	Don't know	64.5 (220)	35.5 (121)	**0.48 (0.38 to 0.59)**	**<.001**

† Adjusting for survey wave, age, gender, nation, area, index of multiple deprivation, trust in information about covid-19 from the Government, thinking you have enough information about self-isolation.

Comparison of item phrasing

Changing the phrasing of the question from "if you have symptoms of coronavirus, you…" to "if someone develops symptoms of coronavirus, they…" had only a small effect on participant responses (Table 3). The percentage of respondents correctly responding to statements concerning going to the shops for groceries/pharmacy, going out for exercise, caring for a vulnerable person, going out if wearing a face covering, and going out to meet people from another household outdoors was slightly higher when the question was phrased to refer to another person, than when phrased to refer to themselves.

Table 3. Endorsement of individual statements for knowledge of self-isolation for original and alternate wording of the item.

The Government has issued advice on how people should help prevent the spread of coronavirus if they have symptoms.	If you have symptoms of coronavirus, you [total n=1,988];			If someone develops symptoms of coronavirus, they [total n=2,011]:			*p*
	True, % (n)	False, % (n)	Don't know, % (n)	True, % (n)	False, % (n)	Don't know, % (n)	
should self-isolate	87.9 (1,756)	7.1 (142)	5.0 (100)	87.1 (1,751)	7.5 (150)	5.5 (110)	.72
should get a test, but can go out as normal while you/they are waiting for the result	15.3 (305)	77.5 (1,550)	7.2 (144)	15.6 (314)	77.2 (1,552)	7.2 (145)	.95
could be eligible for self-isolation payments (if you/they are on benefits and/or a lower income and cannot work from home)	61.3 (1,225)	10.7 (214)	28.0 (560)	63.1 (1,268)	9.7 (194)	27.3 (548)	.40
can go out if your/their symptoms are mild	8.3 (166)	85.9 (1,717)	5.8 (116)	7.5 (150)	85.8 (1,725)	6.8 (136)	.30
can go to the shops for groceries/pharmacy*	25.5 (510)	69.4 (1,387)	5.1 (102)	22.0 (442)	71.5 (1,437)	6.6 (132)	**.008**
can go to the shops for things other than groceries/pharmacy*	19.1 (381)	75.9 (1,516)	5.1 (101)	17.8 (358)	76.2 (1,533)	6.0 (120)	.30
can go for a walk or some other exercise	29.7 (594)	62.9 (1,256)	7.4 (148)	25.6 (515)	65.9 (1,325)	8.5 (171)	**.01**
can go out to work if you/they cannot work from home	23.5 (469)	70.1 (1,401)	6.4 (128)	20.4 (411)	73.2 (1,473)	6.3 (127)	.06
can go out to help or provide care for a vulnerable person	23.8 (475)	69.5 (1,390)	6.7 (134)	21.1 (425)	69.5 (1,398)	9.3 (188)	**.003**
can go out if you're/they are wearing a face covering	23.4 (468)	70.8 (1,415)	5.8 (115)	19.9 (401)	73.5 (1,479)	6.5 (131)	**.02**
can go out to meet up with friends and/or family that you/they don't live with, indoors*	12.6 (252)	82.7 (1,654)	4.7 (93)	12.0 (242)	83.0 (1,670)	5.0 (100)	.78
can go out to meet up with friends and/or family that you/they don't live with, outdoors	22.0 (440)	73.6 (1,471)	4.4 (88)	19.4 (391)	74.9 (1,507)	5.6 (113)	**.04**
can go out to spend time outdoors for recreational purposes (including to sit in parks etc)	26.8 (535)	68.1 (1,361)	5.1 (102)	24.3 (489)	69.6 (1,400)	6.1 (123)	.10
can go out to get a test to see if you/they have coronavirus	67.5 (1,350)	23.2 (463)	9.3 (186)	66.9 (1,347)	22.8 (458)	10.3 (207)	.57
can have someone who you/they don't live with over to your/their home*	11.6 (231)	83.5 (1,670)	4.9 (98)	11.1 (223)	82.7 (1,663)	6.2 (125)	.18

Discussion

Only 58% of respondents correctly identified all the key self-isolation rules although 87% knew in some sense that they should self-isolate if they had symptoms of Covid-19. These rules were mandated by law from September 2020 having previously been recommendations.(14, 15) The two most common reasons incorrectly endorsed for leaving home when symptomatic were to go out for exercise and for essential shopping. These were both actions that were allowed for the general population under lockdown measures,(16-18) but not under self-isolation rules. Other poorly understood rules included not going out to help or care for vulnerable people, and not going out to work where you could not work from home. This is important given potential spread to those most clinically vulnerable to COVID-19 and to the large number of contacts made in the workplace.(19, 20)

We found lower rates of understanding of self-isolation rules than another study, which found that 80% of people who had tested positive for SARS-CoV-2 and were in the NHS Test and Trace system fully understood self-isolation requirements.(7) However, many people with COVID-19 symptoms do not request a test, or complete only lateral flow tests, and therefore do not enter the NHS Test and Trace system.(3, 21) Ensuring that everyone understands the basic principles of self-isolation means that even those who do not enter the test, trace, and isolate system are well-placed to adhere to self-isolation rules.

There is no clear evidence of a long-term trend in knowledge about self-isolation rules. However, understanding was poorer in December 2020 to January 2021 compared to early November 2020. This may have been due to confusion over changing rules over the Christmas period. In the UK, the self-isolation rules for contacts of cases changed on 16 August 2021. From this date, people who have been double jabbed, or who are under the age of 18 years, no longer have to self-isolate but are advised to have a polymerase chain reaction (PCR) test instead.(22) How this may affect understanding of self-isolation rules if you become symptomatic is unknown, but it is likely that that a complex and changeable rules environment will negatively impact on knowledge.

Groups with lower knowledge of self-isolation rules were younger people, men, and those living in more deprived areas. These groups have consistently been found to have lower adherence to rules throughout the pandemic.(3, 4, 23) Lack of knowledge may be contributing to lower adherence. Congruent with this idea is our finding that knowledge of self-isolation rules was lower among people who disagreed that they had enough information about self-isolation. Knowledge was also worse among people living in the England compared to other UK nations. We are not sure why this is the case. Communication strategies to increase knowledge of self-isolation rules should be designed to reach groups with lower knowledge, ensuring that the correct channels, media and messengers are being employed to promote engagement.

The UK Government introduced £500 support payments for people who meet specific criteria on 28 September 2020 to increase adherence in areas of higher deprivation.(15) It was striking that the percentage of people responding ‘don’t know’ to our item asking about knowledge of this payment far exceeded ‘don’t know’ responses for any other item, suggesting a high degree of uncertainty in the population. Support payments will only encourage people to engage with the official test, trace and isolate systems if people are aware that they exist and that they might be eligible for them. Government estimates suggest that, in England, under 4 million people would be eligible for this support payment [total England population 56.5 million (24)].(15) Therefore, few people in the study may be eligible for this payment. Clearer communication about this should be a priority.

The pattern between knowledge of self-isolation and believing that information from the Government about COVID-19 can be trusted was not clear. Although analyses identified a significant

difference, rates of knowledge were similar for those who strongly agreed (53%) and strongly disagreed (54%) that information could be trusted. This is likely because of the large sample size and ability to detect small differences within the data.

Changing the phrasing of the wording of a question relating to self-isolation from being personally relevant to relating to someone else had a small impact on responses. While participants were statistically significantly better at correctly responding to statements when the question was phrased to relate to "someone" rather than themselves, in practice, they only differed by up to three percentage points.

One strength of this study is that it used a large sample, weighted to represent the UK population. This means that we were able to detect very small differences within the data. Limitations include the use of an online survey. We cannot be sure that online panel respondents are representative of UK population in terms of knowledge and beliefs. However, associations within the sample are likely to mirror those in the general population.(25) Surveys were cross-sectional, therefore we cannot imply a direction of causation.

Adherence to self-isolation in people who have symptoms of COVID-19 is low. While people know they should self-isolate if symptomatic, knowledge of individual rules is variable. Incorrect knowledge of self-isolation rules, in particular those in which a symptomatic individual would come into contact with people from other households indoors, could contribute to virus transmission as people continue to carry out everyday activities. Knowledge was lower in younger people, men, people living in England, and people living in more deprived areas. Increasing knowledge about self-isolation rules and procedures may increase adherence to self-isolation and decrease virus transmission.

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Supplementary materials – measure of knowledge of Government rules if symptomatic

The Government has issued advice on how people should help prevent the spread of coronavirus if they have symptoms.

If you have symptoms of coronavirus, you:

- can go out if your symptoms are mild (false)
- can go to the shops for groceries/pharmacy (false)*
- can go to the shops for things other than groceries/pharmacy (false)*
- can go for a walk or some other exercise (false)
- can go out to work if you cannot work from home (false)
- can go out for a medical need, or to donate blood (true)
- can go out to help or provide care for a vulnerable person (false)
- can go out if you're wearing a face covering (false)
- can go out to meet up with friends and/or family that you don't live with, indoors (false)*
- can go out to meet up with friends and/or family that you don't live with, outdoors (false)
- can go out to spend time outdoors for recreational purposes (including to sit in parks etc) (false)
- should self-isolate (true)
- should get a test, but can go out as normal while you are waiting for the result (false)
- could be eligible for self-isolation payments (if you are on benefits and/or a lower income and cannot work from home) (true)
- can go out to get a test to see if you have coronavirus (true)
- can have someone who you don't live with over to your home (false)*

SCALE

- True
- False
- Don't know

* Included in derived knowledge measure that would involve contact with people from other households.

Alternative phrasing of the question, used in waves 47 and 48 (split sample, half of participants)

The Government has issued advice on how people should help prevent the spread of coronavirus if they have symptoms.

Please tell us, for the following options, if you think they are true or false?

If someone develops symptoms of coronavirus, they:

- can go out if their symptoms are mild (false)
- can go to the shops for groceries/pharmacy (false)*
- can go to the shops for things other than groceries/pharmacy (false)*

- can go for a walk or some other exercise (false)
- can go out to work if they cannot work from home (false)
- can go out for a medical need, or to donate blood (true)
- can go out to help or provide care for a vulnerable person (false)
- can go out if they are wearing a face covering (false)
- can go out to meet up with friends and/or family they don't live with, indoors (false)*
- can go out to meet up with friends and/or family they don't live with, outdoors (false)
- can go out to spend time outdoors for recreational purposes (including to sit in parks etc) (false)
- should self-isolate (true)
- should get a test, but can go out as normal while they are waiting for the result (false)
- could be eligible for self-isolation payments (if they are on benefits and/or a lower income and cannot work from home) (true)
- can go out to get a test to see if they have coronavirus (true)
- can have someone who they don't live with over to their home (false)*

SCALE

- True
- False
- Don't know