

RAPID RESEARCH IN COVID-19 PROGRAMME

Testing and trust: Public perceptions, expectations, and experiences of COVID-19 testing in Scotland

AIMS

COVID-19 testing is a cornerstone of long-term pandemic control. Public trust in the value and accuracy of testing is essential to the success of the government's testing strategy. This rapid qualitative study, involving 70 participants aged 19–85, investigated public understandings, expectations, and experiences of COVID-19 testing in Lothian, Scotland. In addition, the study investigated how people understand the purpose and value of COVID-19 tests and sought to identify the social factors that influence people's willingness to undergo testing and follow government guidelines, as well as the ways in which people's perceptions and experiences of testing affect trust in government and health services. The primary aim of the project was to provide rapid feedback to the government and institutions involved in the administration of COVID-19 testing to help improve the efficacy of testing programmes. The second aim of the project was to contribute to social understandings of testing and diagnosis within the fields of sociology and anthropology of medicine.

KEY FINDINGS

- Participants are highly motivated to seek testing and 'do the right thing' regarding government guidelines. Undergoing testing is often seen as a duty to loved ones and wider society. In addition to its public health and medical functions, testing is valued for providing personal reassurance and enabling social intimacy and freedom of movement.
- The testing system depends on multiple relationships of trust: in government, technology, health workers, private contractors, other members of the public, family members, and oneself. Participants demonstrate high levels of trust in the Scottish government, the national health system, and testing technologies. They are less trusting of the UK government, private testing providers, online systems, and their own ability to correctly collect a test sample.

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- People experience testing as a process rather than a discrete technical event. That process spans recognising symptoms and triage, accessing a test, taking a sample, and waiting for and interpreting results. At each stage, the testing process entails a significant and often unacknowledged ‘diagnostic burden’ of time, energy, and resources for the individual and their relatives.
- The diagnostic burden includes the weighing up of information from multiple sources, the interpretation of ambiguities in testing criteria and symptoms, the navigation of online bureaucratic systems, the organisation of testing logistics, the management of uncertainties around results, the matching of government guidelines to individual circumstances, and the handling of the repercussions of a positive or negative result. This burden is managed within social relationships and is often carried disproportionately by women.
- There is often a disconnect between the presentation of testing as straightforward in government documentation and personal experiences of testing as a social process in which multiple challenges are encountered. The gap between representation and experience can generate uncertainty, undermine trust in the government response, and weaken commitment to government guidelines.

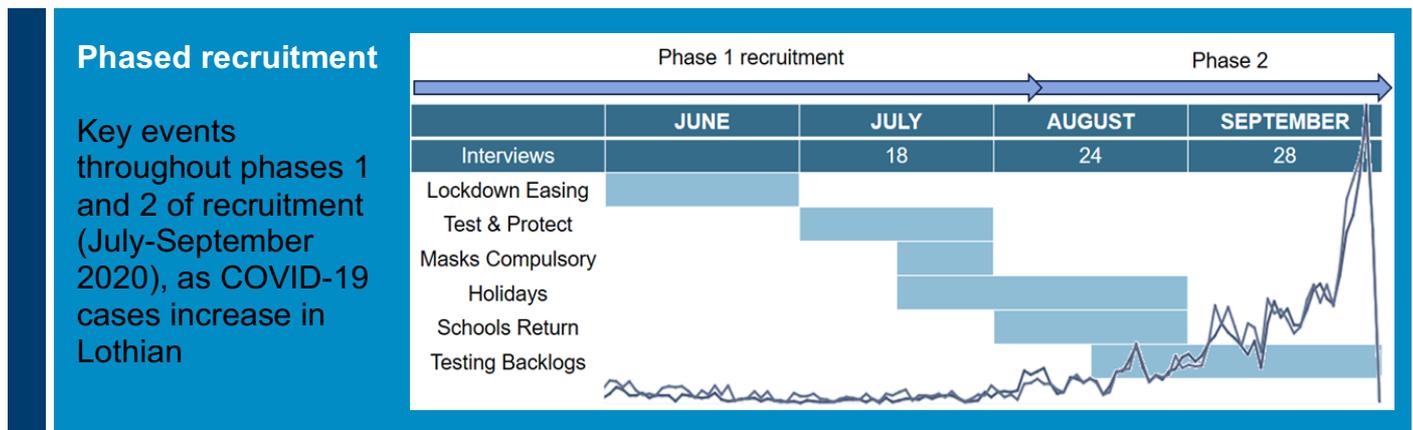
WHAT DID THE STUDY INVOLVE?

Between June and September 2020, we interviewed adult members of the public based in the Lothian health board area about their perceptions, expectations, and experiences of COVID-19 testing. The general public were targeted through social media accounts, mailing lists, community groups, and information posters displayed in public places. The goal of this study was to capture a wide range of views on and experiences of testing and to contextualise those views and experiences in people’s social, economic, and professional relationships. Our sample was not therefore intended to be statistically representative of the demographic makeup of the Lothian area. Nonetheless, to ensure that we collected data on as wide a range of testing experiences as possible, our second phase of recruitment targeted particular high-risk groups who were under-represented in the initial volunteer uptake, including men; people from black, Asian, and ethnic minority (BAME) backgrounds; and people aged over 65.

Due to COVID-19 restrictions, recruitment and interviews took place remotely. Volunteers registered through our project website (blogs.ed.ac.uk/testingandtrust) and filled in a short registration survey before choosing an interview slot either online (via Microsoft Teams) or by telephone. Interviews followed a topic guide that covered personal experiences of COVID-19, testing experiences and meanings, understandings and expectations of tests, test results and behaviour, thoughts on testing information, and opinions of the UK and Scottish government testing strategies. Owing to the semi-structured and participant-led nature of the interviews, not all participants were asked all questions on the topic guide. Instead, interviews followed the interests and experiences put forward by participants, allowing us to structure the interviews around participant concerns. Where participants had direct experience of testing, we followed their accounts through the ‘testing process’ in close detail.

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Semi-structured interviews took place against the backdrop of a continually evolving epidemiological situation, and iterative changes to the topic guide tracked unfolding events. Participants' concerns and the content of the interviews often reflected changes recently made to testing strategies and controversies that were prominent in the public media at the time of the interview (figure 1). Testing in Lothian increased steadily throughout the study, peaking toward the end of data collection in September, during which the majority of those with testing experiences (27) in our sample were interviewed.



Analysis was inductive and thematic, and involved the identification of patterns through close reading and team-based discussion of the data. Transcripts were iteratively coded using the qualitative analysis software package NVivo (version 12). Coding followed the research framework outlined in the topic guide but was kept flexible so we could identify emerging themes in the data. This allowed for themes to change over time in response to key events that occurred during data collection and changing participant concerns.

WHAT WERE THE RESULTS AND WHAT DO THEY MEAN?

In total we interviewed 70 members of the public, aged 19–85. This included individuals from a wide range of age groups, employment situations, and ethnic backgrounds. Our sample included 49 women and 21 men. Eight participants were from black, Asian, or ethnic minority backgrounds. Six participants were currently employed as healthcare workers. Eight participants were aged over 65. Twenty-seven participants had direct experience of undergoing COVID-19 testing (defined as undergoing a test themselves, arranging a test for another person or collecting a swab sample for another person).

We found that people place significant value on testing, both for its medical and public health functions and for its social and practical benefits.

Testing is helpful in that it provides certainty and reassurance in the face of changing social norms

People expressed uncertainty about the correct way to behave in a pandemic. For example, how one greets or interacts with family, housemates, and strangers in a range of settings; whether it is okay to send a child to nursery with a cold but no COVID symptoms; or whether it is socially acceptable to meet with elderly parents. These uncertainties persist even when people try to follow government guidelines and pertain to social norms rather than legal rules.

In this context, testing is valued as an aid that helps people navigate social norms and conventions. It additionally provides scientific and moral reasoning for the disruption or continuation of certain social behaviours. In particular, a negative test can provide reassurance that one's behaviour around others is appropriate and harmless. One potential risk is that, by providing reassurance, a negative test result leads people to relax their adherence to guidelines such as social distancing. It is therefore crucial that public messaging communicates the fact that a negative test result only tells a person they were negative at the point at which the sample for the test was collected; they continue to be at risk of acquiring the infection even after they have completed the test.

'I think after I had the result, I was definitely way more like at peace with the fact that I could just socialise. Because as well my nieces and nephews and my grandmother as well, just in general it just made me more calm that I wasn't a potential vector for all of these family members and stuff. So in that sense I think it did change my behaviour.' (Student, male, 30, TTID68.)

The existence of a well-functioning testing system contributes to a sense of social solidarity

Testing involves many inconveniences and sacrifices, not least the requirement that households self-isolate following a positive test result. However, respondents saw their commitment to testing as a gesture of community spirit and social solidarity whereby they are able to contribute to the response both for their own benefit and for the benefit of more vulnerable people in society. Participants acknowledged that testing could be an unpleasant and inconvenient process, yet most accepted this as part of their civic 'duty' and saw it as bound to their desire to be a 'good citizen'.

'I kind of felt there was a bit of a duty upon ourselves to go and be tested, because if we did have it, it's better to know so we don't spread it. [The swab] was really quite unpleasant, I was retching in the car and stuff. Again, up the nose, that was really sore as well, it goes right to the back, so kind of painful, uncomfortable. If I had to have that test again specifically, again, it's the duty thing. You have to do it. You don't really get a choice. But I would prefer another option.' (Civil Service worker, male, 28, TTID30.)

'I feel like it's my duty to get my kid tested [again], even though it wasn't pleasant.' (University lecturer, 33, female, TTID51.)

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'I was pretty sure my daughter just had a cold, but obviously the symptoms were such that you kind of feel like you absolutely have to do your duty, and certainly not spread it to other bits of the NHS. So I was really sure she didn't have it but it was just the pressure of having to do the right thing.' (NHS healthcare worker, female, 46, TTID85.)

The existence of a well-functioning testing system provides reassurance that social solidarity exists and that 'everyone is in it together'. Equally, when the testing system is not perceived to be working well—for reasons we discuss below—people's trust in others and in the government may be affected and the sense of social solidarity eroded.

People use population-level data to guide everyday decision making

People valued access to local and national testing data to guide decision making and behaviour. A large number of participants described using apps (e.g., Zoe Global Ltd.'s COVID Symptom Study app) and websites or dashboards to keep up to date with local data on COVID-19 trends, including testing data. Respondents found this information to be useful for a number of reasons; for one, it offered reassurance (that, for example, their area had a relatively low transmission rate), or else it helped them make decisions about whether to visit people in different areas (this research was carried out prior to the introduction of a tiers system). Some claimed they would be more risk-averse if they could see local case numbers rise and speculated that being able to see the local situation reflected in maps and statistics would help the public comply with government measures and guidance.

'I would do things differently if [cases] started to grow. We'd go back to shopping delivered or my wife wouldn't let me go to the shop, even in a face mask and what have you. I think it would make you more aware, I think it would make everybody a little more sensitive, I think it would make them behave better.' (Furloughed rugby club staff, male, 68, TTID81.)

However, several people reported difficulties in accessing such information and, despite the perceived usefulness of testing data, expressed concerns about its availability and accuracy. Many suggested that easy access to local testing data through trusted government sources would aid individual decision making and behaviours.

'People might make different choices in life to try and prevent the spread of the disease. I'm not saying they would, but I just think if the data was readily shared, that might make compliance about the rules better [...] I don't think it's straightforward. You'd have to know where to look, it's not something that's routinely published.' (Office worker, female, 50, TTID88.)

'I think it would be useful information, but I don't know where to get it. I really don't know where to get that information.' (Retirement home resident, female, 85, TTID78.)

Testing is a social process

Our research shows that diagnosis is a more social, protracted, and distributed process than formal representations of the system can suggest. Overemphasis on testing targets and the test as a single event can obscure people's experience of testing as a social process that is entangled with multiple relationships and that can require significant effort and personal sacrifice to complete.

Testing as a social process

The testing experience is shaped by interconnections between the testing process, relationships of trust and the social, economic and emotional burden of diagnostic work. This burden is often disproportionately managed by women through social relationships within and between households.



Reporting on testing data often places significant emphasis on setting and reaching targets for testing capacity, but people do not always feel that these statistical reports of success reflect their experience of the system.

'There was all a big shout that the UK government [was] going to be able to do 100,000 tests a day, and the Scottish government [was] going to be able to do 20,000 tests a day [...] I think generally the information about testing has been very mixed; I don't think there has been clarity and, again, you're always hearing about more and more messages of people trying to get tested and the system's not working.' (Furloughed rugby club staff, 68, male, TTID81.)

The testing process depends on multiple relationships of trust: trust in the government to understand their needs and make evidence-based decisions; trust in the healthcare system to deliver a high-quality service; trust that the testing technology is accurate; trust that others are getting tested when they experience symptoms and comply with self-isolation guidelines if they test positive; and, perhaps most important, trust in oneself to interpret symptoms correctly, take a self-administered test correctly, and make the right decision regarding self-isolation and compliance with government guidelines. In fact, a key finding was that the testing process relies for its success on members of the public undertaking a substantial burden of responsibility across the testing stages of triage, access, testing, and results. This burden is often unappreciated and unsupported in government communications and policies. We found that, while the vast majority of study participants expressed their commitment to complying with Test and Protect guidelines, the lack of acknowledgement and support for the work undertaken by members of the public has the potential to erode trust at multiple points in the system.

Triage: The testing process begins well before someone books a test

Prior even to experiencing symptoms, people are embedded in social networks that affect their decision making, ability, and motivation to seek out a test. Perceived levels of exposure, workplace conditions, anxiety over the health status of oneself or others, other people's stories of testing, local data on COVID-19 cases, and media stories about asymptomatic spreaders all affect public trust in testing prior to the emergence of any symptoms and explain why asymptomatic individuals may seek out a COVID test.

Once symptoms develop, people realise they are personally responsible for determining whether they need to be tested. In most non-COVID diagnostic situations, the decision to test is taken in partnership with a GP, who evaluates a patient's symptoms before prescribing a test. Left to their own judgement, many people reported difficulties in deciding whether symptoms warranted a COVID-19 test. 'Continuous cough' and 'fever' were experienced as ambiguous. In the absence of clinical judgement, decision-making often involved advice and discussion with family members or others.

'I still didn't find it very clear. And sometimes kids will cough a bit at bed time but then wake up the next morning and they're not coughing. I don't know. It still feels like a grey area to me, the cough part. The temperature and fever [are] really clear, but the cough part is not. I think I'd just take their temperature and we've never needed to get a test for a temperature, but I think if you had a sustained high temperature for more than 20 minutes apart or something, that would probably be enough for me.' (Female, 42, TTID76.)

'My son had a cough which I was pretty sure was the aftermath of a cold that he'd had, and yes, I was going on whether what he had constituted a 'continuous' cough. But one of the teachers at school kind of commented and said, "Well, maybe you should get a test." So I had decided to order a test and keep him and my daughter off school (...) I chatted to my husband and yes, he kind of thought maybe it was a bit unnecessary, but I managed to persuade him that yes, it was the thing to do. So yes, and I guess my mum to some extent as well, I'd spoken to my mum about it.' (Employment advisor, 52, Female - TTID101)

In moments of doubt, most participants booked a test ‘to be on the safe side’ and to avoid social stigma around illness symptoms (sneezes, wet cough) at school or in the workplace, or because they felt pressured by others to do so. But, in some cases, difficulties encountered in accessing a test and/or self-isolating while waiting for results led people to interpret the guidelines liberally; for example, some people reported waiting to see if a temperature went down before self-isolating and booking a test. Decisions to test often conflicted with the conviction that symptoms did not indicate COVID-19. The realisation that others must be making similarly arbitrary decisions erodes trust in the efficacy of a communal response.

‘I wasn’t going to get tested because I thought you needed two symptoms and I just had fever, but my wife said no even with one symptom you should go, so I said okay.’ (Investment firm manager, 37, male, TTID104.)

‘I think the only thing would be I would be a bit more cautious on what constitutes a new continuous cough. I really would like guidance around that. Like, if my kid is coughing because they have a runny nose, is that a COVID cough? Is that a cough that’s significant enough to get a COVID test for?’ (University lecturer, 33, female, TTID51.)

Some interviewees spoke of experiencing hesitance associated with concerns over whether they would be ‘wasting resources’ or ‘taking away’ tests that frontline healthcare workers needed more than them, in doing so making clear the civic expectations and relationships of trust in other members of society that have grown around testing.

‘I would feel worried about wasting a test on myself if it was a possibility that someone else could use it more. Maybe someone who works with vulnerable people directly.’ (Care home administrator, 29, male, TTID63.)

Access: Government representations of testing as easily accessible conflicted with people’s experiences of practical challenges

Many respondents viewed the accessibility of the testing system as a test of the government’s competence and understanding of people’s everyday lives and constraints. Willingness to contribute to a collective response was accompanied by the expectation that the government would provide the means and support for people to participate:

‘In Scotland, even from my own personal experience, there were no tests available, there was no help structure for anyone who had COVID to actually get the test. It just wasn’t possible, so [...] a lot of the time [I] felt very alone and you always think your government or your country is trying to support you and trying to help in some way, and I never had that feeling [...] So yes, I did not feel I could trust Scotland.’ (Undergraduate student, 19, female, TTID64.)

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'I think you can put a moral demand on the government that states they actually have a duty to provide this for the people in the country. And if they're not, then they're really failing in one of their most basic duties.' (Postgraduate student, 30, male, TTID68.)

'I don't think it should just be "trust people", but I think it should be easy. I think you should make it as easy as possible for people to do the right thing. You can't put up insurmountable areas and then say, "Why aren't people taking responsibility?" It should be easy and expected to do the right thing and there should be support.' (University lecturer, 33, female, TTID51.)

Individuals navigating the government's online testing platform encountered a variety of practical issues: booking errors, a lack of slots in their area, and/or difficulties in negotiating transport in a COVID-safe way. In some cases, despite efforts to comply with guidance and high motivation to 'do the right thing', participants claimed it was not always easy due to the locations of testing centres and inadequate access to transport.

'I ended up going down to Carlisle, driving 100 miles or whatever, having to stop for petrol, which was ridiculous, there were signs up saying, "Limited travel in North West England," and they'd sent me there. I was really, really effed off with that, and thinking, "This is complete and utter chaos." [...] So the testing, I think, is a shambles, or has been a shambles at times, or they created test centres and then not had them available, and I think the website's failing. I think you shouldn't be entering information so many times to find out it's hundreds of miles away.' (NHS healthcare worker, 46, female, TTID85.)

'I got out the car to have a look at the whiteboard and realised that it was saying that that facility was closed and that you had to report somewhere else, which I wasn't familiar with at all (...) There was no signage at all to help you get to where it was supposed to be. I was literally given a junction name off the motorway from this whiteboard and a sort of rough street name, and I managed to find it by sheer luck, actually. The signage was really bad.' (Art teacher, 38, Female, TTID18).

'If you've driven to Galashiels with a five-year-old and they've had to wait an hour and a half for a test, it's an awfully long time for that child not to go to the toilet, for example. Because that's three and a half hours out of the house, and you shouldn't really be stopping on the way if you've gone for a COVID test.' (Female, 42, TTID76).

People expressed a sense of disconnect between the system and their personal circumstances. Many felt that the time they had taken off work—to organise a test for themselves or their child, to drive to a testing centre, and to wait in self-isolation for the results—had not been sufficiently recognised by the government. This phase tests relationships of trust both in the testing system (judged by availability, efficiency of delivery, processing, communication, etc.) and the workplace (where possible financial and social penalties are associated with time off work). In some cases, people either did not feel able to follow guidelines for self-isolation or else interpreted the guidelines flexibly to allow for personal needs and constraints.

Test: People are often unprepared for the physical experience of testing

Swabbing correctly is a complex task. In cases of self-testing, interviewees felt burdened by the expectations placed upon them and questioned the lack of support from trained medical staff on site.

'It felt as if it was, for want of better phrase, tickling my brain; you know, rubbing into—the throat swab actually really made me sick. It was such a deep, deep throat swab that they took. I've heard of other people, you know, "Oh no, it was fine, I didn't feel it". I just think I would worry about the reliability of self-swabbing, to be honest.' (Office worker, 50, female, TTID88.)

Formal guidelines present the self-test as straightforward, but participants did not always find the instructions easy to follow and often worried they had collected the sample incorrectly. In cases where staff took the swab sample, some participants questioned whether they had done so effectively.

'Because no one's ever done it, so you don't know what you're doing at the beginning. You never—it actually took me half an hour to know what I'm doing. You have to read everything over and over (...). To be honest, it just makes you feel like a fool. You don't know what you're doing.' (Security guard, 30, male, TTID42.)

Testing younger children relies on trust relationships with parents—predominantly mothers—and other adults. Swabbing younger children and children with special needs represents an emotional and physical challenge for which many people felt unprepared.

'I knew a lot about it, but it was a lot more traumatic to do it on a child and it was traumatic for my children [...] When I saw the instructions, it was just a mismatch between what you have to do as a parent and the way that it was being talked about in the instructions. There was a drawing where the instructions made you feel like you should be able to do this happy thing and make a funny face and give a toy or do something and it's going to work. And I did all of those things with my first son and as soon as I started the test, he just freaked out.' (University lecturer, 33, female, TTID51.)

'I think if they were being administered by a nurse then, particularly for children, I'd have a bit more confidence that they were going to be accurate [...] But for children, where it's being administered by a parent, it's kind of a tough spot to be in—to administer a very uncomfortable, painful test to your own child. So to then expect parents who aren't trained to do it accurately ... leaving it to the parents makes me think that I really don't believe that they're accurate.' (Business owner, 38, female, TTID75.)

'I've had friends who have autistic children who have been really distraught by the testing [...] They're not going into the system because it was so stressful and upsetting for them.' (NHS healthcare worker – occupational therapist, 46, female, TTID85.)

Negative testing experiences were linked to a distrust of privately contracted testing services and the non-integration of testing services with the broader healthcare system. People expressed concerns about untrained personnel performing tests at testing centres and the potential for incorrect sampling.

'It probably helps if it's a health professional involved in that, it might give somebody some confidence that people know what they're doing and it's not just Joe Bloggs poking you with a stick. It might help from some public confidence point of view.' (NHS healthcare worker – respiratory nurse, 39, female, TTID09.)

'I think you would feel better if it's being managed by the NHS; I think it's more likely to be trusted. If you're saying it's being managed by an external company, a private company, I think that would be different. People may then think, a private company, it's financially related, you know, that's why you would worry about what would they do with the data.' (Office worker, 50, female, TTID88.)

'[The drive-thru test] was really quite unpleasant, I was retching in the car and stuff. Again, up the nose, that was really sore as well, it goes right to the back, so kind of painful, uncomfortable, whereas at the GP I think it was only—I don't know what, he did it differently, but it wasn't sore or painful. It may be the fact he's medically trained, but yes, that was much more pleasant as an experience.' (Civil servant, 28, male, TTID30.)

Results: People don't always take test results at face value, and instead interpret them in light of their full testing experience

A negative result sometimes creates a sense of reassurance and safety, and enables social obligations and interactions at home and at work to resume. But test results are not always taken at face value and are often interpreted in the context of the diagnostic suspicion that led people to get a test initially (e.g., risk of exposure in the workplace, knowledge of local prevalence, observations of other people's behaviour, close contact with a confirmed case, and/or combination or severity of symptoms).

'I suffer from anxiety, which I didn't actually before the pandemic. I suppose they [results] gave me reassurance.' (Civil servant, 28, male, TTID30.)

'They [test results] both came back negative, which was really very puzzling to us. It's still very puzzling to me, like how we came into direct contact with somebody who stayed at the flat, and not to get it seemed really quite wild.' (Postgraduate student, 32, female, TTID16.)

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Receiving a test result that conflicts with initial diagnostic suspicions can raise doubts about the quality and accuracy of tests, healthcare staff, or sampling techniques. Some interviewees also referred to public discourses about high rates of ‘false positives’, which fed into anxieties over the validity of test results and reported testing data. Participants overwhelmingly indicated their willingness to follow government guidelines on test results but, in practice, when specific guidelines (e.g., self-isolation) conflict with social, practical, and economic needs, some participants interpret them flexibly without necessarily seeing this as breaking the rules.

‘A little bit of me was worried because it was self-administered [...] you know, the level of false negatives of the self-administered test, so that’s what I was trying to avoid [...] I’d seen how badly [my daughter] was gagging, trying to find the back tonsils and then trying to do the nasal bit. So it’s a possibility she didn’t do it properly. I was 85 per cent sure that was correct.’
(NHS healthcare worker – occupational therapist, 46, female, TTID85).

Throughout the testing process, the disconnect between the apparently straightforward process presented by government guidance—whether regarding criteria for testing, booking systems, self-test instructions, or self-isolation rules—and the real challenges that arise when those guidelines meet individual circumstances creates space for uncertainty and ambiguity that has the potential to undermine public trust in the wider pandemic response.

WHAT IMPACT COULD THE FINDINGS HAVE?

Our findings suggest that there is both public demand for testing and that people are willing to go to considerable efforts to make the testing system work, despite the considerable inconvenience and personal sacrifice this sometimes demands. Nonetheless, many respondents felt that their contributions to the testing system were unrecognised and unsupported. Our findings therefore suggest that more can be done to make the testing system easier for people to participate in and to show appreciation for the contribution members of the public are making to the pandemic response. Potential implications for policy and practice are summed up in the following recommendations:

- Improve the visibility and accessibility of up-to-date testing and case data at national and local levels via trusted (NHS or Scottish Government) sources. Provide explanations of data reporting.
- Improve public guidance to address ambiguities in the testing criteria. For instance, provide examples of scenario-based decision making to help people decide whether or not to book a test, and provide clarity on what will be expected of people during the testing process.
- Improve transparency of booking system algorithms and decision making so that people do not feel at the mercy of an arbitrary system. Use language that conveys appreciation for the effort that testing requires and acknowledge the difficulties people may face in accessing/undergoing/acting upon testing.
- Address public scepticism about private testing contractors through greater transparency around the awarding of contracts and/or by emphasising links to the NHS.
- Increase the number of local walk-in testing centres in the community setting.

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- Enhance trust in test results and improve the testing experience by providing pre-test counselling and training, especially in scenarios where people are expected to collect a swab sample from themselves or others. For instance, through the creation of short videos (including accessible and child-friendly content) and/or the offering of tailored advice for testing children or people with disabilities. Consider the procurement of 'accessible' tests with less invasive sampling techniques for use with children and people with disabilities.
- Use language in the delivery of results that acknowledges the challenges people face when complying with guidelines and appreciates the sacrifices people are making. Emphasise the contributions of individual actions to a societal response. Remove barriers to self-isolation through improved economic and practical support.

HOW WILL THE OUTCOMES BE DISSEMINATED?

Findings have been disseminated to academic, policy, and public audiences via a variety of media:

- **September 2020:** A live webinar was held at the University of Edinburgh at which we presented preliminary findings to academics and stakeholders.
- **October 2020:** The PI presented preliminary findings at a live webinar on rapid COVID-19 research in Europe, hosted by the Network of Universities from the Capitals of Europe.
- **November 2020:** Publication of a research brief on the project website and personal dissemination to over 50 stakeholders.
- **November 2020:** Publication of six case studies on the project website.
- **November 2020:** Publication of an opinion editorial summarising the study findings in *The Scotsman* newspaper.
- **November 2020:** Draft of academic article for public health journal completed (planned submission to *Lancet Public Health* in December 2020).
- **November 2020:** Draft of academic article for social science journal completed (planned for submission to *Medical Anthropology* in January 2020).

Future research: We have been awarded a bespoke grant by the University of Edinburgh's Vice Principal of Research to take this research forward in relation to the asymptomatic testing of students currently being rolled out at Scottish universities prior to the Christmas holiday break. This research will draw on our findings in order to understand student experiences of the testing process, investigate differences between PCR and asymptomatic testing processes, and examine the impact of testing on student behaviour. This research will result in (i) a research brief for the Scottish Government and Scottish universities that will reflect on potential improvements that could be made to the testing programme for future operations (ii) an academic article that reflects on students' uptake and their experiences of asymptomatic testing, as well as how test results impact their behaviour.

CONCLUSION

This study confirms that COVID-19 testing is a social process in which members of the public are active participants who take on a significant burden of the responsibility for making the UK's testing system work. High levels of public motivation to contribute to a society-wide response to COVID-19 suggest an opportunity to engage members of the public as willing partners in a national testing strategy. We found that people overwhelmingly want to get tested, despite test results having little individual clinical value and entailing significant costs and inconvenience. However, unmet expectations encountered at various stages throughout the testing process risk undermining trust in government, the health system, and test results. Throughout the testing process, the disconnect between the seemingly straightforward presentation of government guidance—whether regarding criteria for testing, booking systems, self-test instructions, or self-isolation rules—and the real challenges that arise when those guidelines meet individual circumstances creates space for uncertainty and ambiguity, which have the potential to undermine trust in the wider pandemic response. Through greater acknowledgement of the burden people undertake to get tested and greater support to aid them in this process, testing has the potential not only to contribute to public health, but also to foster social solidarity, build trust in the government to look after the interests of the public, and strengthen people's resolve to follow government guidelines to the best of their abilities.

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ADDITIONAL INFORMATION

This RARC-19 funded project received £30,000 and was completed on October 31st 2020.