Data quality failures in the COVID testing system: a personal account

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Executive summary

CCC COVID Briefing Papers are an ongoing series of short-form, open access reports aimed at academics, policymakers, and practitioners, which aim to provide an accessible summary of our ongoing research into the effects which the coronavirus pandemic (and government responses) are having on cybercrime.

This report is a personal account of fulfilling a request to take a COVID test. The author encountered a number of difficulties which raise questions about data quality within the coronavirus testing system.

A COVID test is requested and a test kit is ordered

On Thursday 13 August 2020, I received a letter from the Chief Executive of my local council, asking everyone in my street to take a COVID test urgently, because of a high number of cases in the area.

The letter instructed me to book tests at `nhs.uk/coronavirus`, which leads to a **gov.uk** self-referral service. I requested a home kit for every member of my household, giving the following information: *name, email, reasons for getting tested, whether the applicant is symptomatic or asymptomatic, whether the applicant has access to a car, email verification code, how the applicant wants to get the test, date of birth, landline number, mobile number, gender, ethnicity, more ethnicity, employment status, industry, occupation, employer, country of residence;* and optionally, the applicant's *NHS and/or National Insurance numbers*.

Moments later, I received a **gov.uk** email confirming my order. The email warned that the test must be posted before the same day's last collection, in a "priority postbox", listing three locations. A dispatch confirmation came three hours later with the display name "NHS UK" but the sender address `fba-customer-ship-confirm@amazon.co.uk`. The next day, Friday 14 August, at 18:31, the kits arrived. Per instructions, I waited until the following Monday.

Efforts to complete my test

At 11:00 on Monday 17 August I unboxed and registered the test kits, and everyone in the household attempted them. I botched mine, and one other was questionable. I then tried to order two more tests to replace the botched ones, repeating the same application process for the other test and mine. At the end of the process my application was declined, because I had recently received an order. I dialled 119, and the call handler's best offer was a drive-through appointment, which could only be booked for the same day. Fortunately, as a knowledge worker, I have a flexible schedule; fortunately I have access to a car. A text message confirmed my appointment for 15:00 at Luton Bute Street Car Park, Church Street, Luton LU1 3JG.

First testing centre – wrong postcode: I navigated by postcode using Google Maps. When I arrived, I found several car parks but no testing centre. I parked and dialled 119 again. The call handler told me the testing centre must have moved on, and sent me to another location which she said would honour my ticket for this reason. Later, a Google search showed that the postcode and address do not match (Figure 1).

Priority postbox – wrong postcode: I also needed to post my household's tests. I navigated to LU4 8QT, one of three locations listed in the **gov.uk** confirmation email; but when I arrived there was no postbox.

The correct postcode was LU4 8BT, 1.2 miles away; the same error appears on Royal Mail's website, so the mistake is probably theirs.

Second testing centre – no testing facility present: The second testing centre was "Development Centre Car Park, 6 Six Hills Way, Stevenage, SG1 2FQ". This was 15.5 miles away, an estimated 30-minute drive. The address details were correct this time, but when I arrived no testing facility was in evidence. Note the proximity of the address (a county council training facility) to a Serco call centre (Figure 2).

Using a sockpuppet: After exploring the area, I parked and dialled 119 again. The operator said "they must have moved on", and said he would pass on my feedback. The solution he offered was to order a new home kit. To do this, I had to provide a new email address, which he used to create a 'sockpuppet' with all my other identifying details unchanged. The test arrived the next day and I completed and returned it on 19 August, the sixth day after receiving the council's letter. On Friday 21 August at 21:05 I received an SMS plus an email from `nhs.covid19.notification@notifications.service.gov.uk` to the original, not sockpuppet, address. As of noon on Tuesday 25 August, the other residents' tests are still pending.
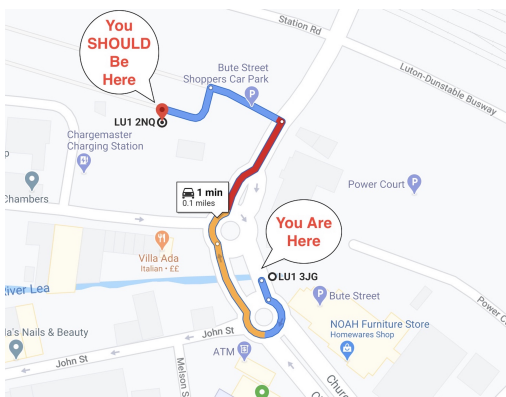

Figure 1: *Google Map showing route and distance from the postcode texted by the 119 operator, to the correct location at LU1 2NQ.*

Figure 2: *Google Map showing the second testing centre, close to a Serco call centre.*

Conclusions

By the time I got home, it was 18:15 and my four attempts to complete a COVID test had taken more than seven hours and I had driven more than 30 miles. Some or all of my patient data was shared not only with the NHS and the Government but with Amazon, as well as Serco who have been contracted to run Test and Trace despite their history of serious fraud (`https://www.sfo.gov.uk/cases/serco/`). The 119 telephone service directed me to two test centres where no testing was taking place, and my problem was only solved by an operator who ordered a new home kit using a sockpuppet with the same identifying details but a different email account. Although this solved a problem (which must be commonplace for patients doing a self-administered test with a high rate of user error) I wonder why the workaround was necessary? Alternatively, if the policy to forbid multiple ordering makes sense – then why was such a simple hack successful? Eight days later, this household has received only one result, delivered to the original email rather than the sockpuppet. The overall experience raises questions about data quality and governance in the testing system, to which patients must entrust their personal data in order to be tested for COVID.