Speak for Yourself! Key Initial Findings

Professor Carsten Maple (University of Warwick), *cm@warwick.ac.uk*
Dr Rebecca McDonald (University of Birmingham), *R.L.McDonald@bham.ac.uk*

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1. Background
   1.1 There is an ongoing debate in the public arena about the use of app-based contact tracing to help manage the COVID-19 pandemic. A number of countries have deployed contact tracing techniques to address the spread of the disease. A trial of a centralised UK app is ongoing on the Isle of Wight.
   1.2 Despite controversy around what approach is in the public's best interest, as yet, the opinions of the public have not been gathered, analysed or considered at a representative scale.
   1.3 We have undertaken a nationally-representative survey of the UK public. We utilised a specific method, a Discrete Choice Experiment (DCE), to help understand public opinion on aspects of contact tracing apps.
   1.4 The purpose of this work is to help inform those intending to design and deploy contact tracing apps in time of pandemic, **allowing governments to make appropriate design choices to ensure adequate uptake and participation**. In cases where concern exists, but a government has an overriding requirement, the **insights can inform awareness and informational campaigns, to increase understanding of the design choice.**
   1.5 We present here the key initial findings of the work.

2. Discrete choice experiment: paired choices between hypothetical apps, with option to opt out.
   2.1 Of all participants, 9.6% always chose to **opt out** of using a contact tracing app.
   2.2 There is no significant (negative) impact of any location data (GPS, wifi or mobile signal strength) being used alongside proximity data (Bluetooth).
   2.3 Linking proximity data to any other data sources reduces acceptability of contact tracing. (In order of unacceptability: shopping location from credit/debit cards; travelcard; phone or social network contacts; name and address).
   2.4 The recipient of any shared anonymised data determines acceptability of the app. Sharing data with **other app users is the least acceptable**. Sharing with **NHS is the most acceptable**, followed by with researchers, and then national and local government. The DP3T approach is decentralised, so only other users receive the information, whereas the NHSX app uses a centralised approach in which the (anonymised) information on those with COVID is held centrally and not distributed.
   2.5 **Older people** and those on **higher incomes** are significantly **more likely** to say they are willing to use the app. We find no effect of gender or education level.
   2.6 Technologically engaged people, (typified in this case by those who tend to leave Bluetooth switched on, and those who have engaged with an app or web-based COVID reporting tool) are **more likely** to opt in.
   2.7 Those still regularly leaving home during lockdown (e.g. for work) are **less likely to opt in**.

3. General willingness to opt in to a contact tracing app
   3.1 When asked "Overall, if a contact tracing app became available today, would you download and use it?", **66.4% of participants said they probably or definitely would download it**, compared with 17.6% saying they would probably or definitely not. In the DCE, participants were willing to use the app in 74.3% of choices

4. Practicalities
   4.1 We explored practical concerns that have been raised around what a contact tracing app might require to run effectively. We found some concern over the impact on phone **battery**, the amount of **data** it might require, and whether the app must be open in the **foreground** of the mobile phone. Whilst the use of Bluetooth was a cause for concern for some participants, it was the least problematic of the practicalities that we investigated.

5. Risk
   5.1 Reidentification: Participants were most concerned about the possibility that **other users** could reidentify them. 53.0% of participants reported moderate or extreme concern about this, compared to 15% expressing concern about reidentification by the NHS.
   5.2 Sharing additional data: We used an example case of **partial postcodes**, which feature in the NHSX app trial. In general, participants were not very concerned about sharing this information (74.3% of participants were "not at all" or "slightly" concerned).

6. Oversight and control
   6.1 Appropriateness of oversight: By far the most popular candidate for oversight of the app was the **NHS**, with 81.9% of participants stating this would be completely or somewhat appropriate. Participants did not clearly distinguish between the three other candidates (an independent group of advisory technology experts (GATE), or local or national government).
   6.2 Willingness to share information: We explained that an app user who was notified that they had COVID-19 would be asked to share an anonymised list of the people the app recognised they had had contact with. We elicited participants' willingness to share this list with each of four types of recipient: local government, national government, NHS and researchers. Again, **participants favoured the NHS**, with 84.2% probably or definitely being willing to share. Sharing with researchers was more acceptable than with local or national government.
   6.3 Participants are slightly **more concerned about what data is shared**, than about who it is shared with, but that they are slightly **more likely to opt out based on the recipient of the data**. Respectively, 64.0% of participants think it very or extremely important to have control over what data is shared, whilst 61.4% think it very or extremely important to control who it is shared with.

7. Trust in organisations
   7.1 We elicited the degree to which participants trust different agencies with their data. Specifically, we asked them to rate their agreement with statements intended to measure trust in each organisations' intentions and capabilities related to data use and data security. The **most trusted was the NHS**, followed by researchers. Local and national government were not clearly distinguished, and were less trusted overall than either NHS or researchers.
   7.2 In addition, we explored whether participants would trust the technology companies that provide the technology underpinning the app. Of our participants, **61.6% believed Apple and Google would be somewhat or extremely likely to access the data for other reasons**, compared to just 12.4% who say it is somewhat or extremely unlikely. This level of distrust is much more pronounced than the distrust in government.

8. Trade-off between privacy and effectiveness
   8.1 Deciding the acceptable level of intrusiveness in a contact tracing app, requires understanding how society balances concerns about privacy against controlling the spread of the pandemic.
   8.2 We asked participants if "We should prioritise privacy, even if this means not controlling the pandemic as effectively" or "We should prioritise controlling the pandemic, even if this means that privacy is compromised". **57.4% of participants slightly or strongly favoured prioritising controlling the pandemic over privacy.** Conversely, 20.1% slightly or strongly favoured protecting privacy over controlling the pandemic.