



Briefing Paper: Increasing adoption of the NHS COVID-19 App

Summary

Adoption of the NHS COVID-19 App across the UK population is forecast to be 51.1% but **adoption could increase by 22.4% to 73.5% nationally**, while protecting privacy, if key recommendations are incorporated into its design and launch. Epidemiologists predict any contact tracing app will only be effective in controlling the virus with at least a 60% adoption rate.¹

Researchers at City, University of London, have **modelled the likely adoption rates of the App** based on new research assessing public behaviour. The App is an essential component of the 'Test and Trace' programme to accelerate contact tracing and reduce the spread of the coronavirus. **Specific measures to increase adoption are set out** in this briefing based on the research findings. The research team behind the paper, [Predicted Adoption Rates of Contact Tracing App Configurations](#), are available to discuss the findings.²

Current Policy

The NHS COVID-19 App currently under development by NHSX (the "Expected NHSX" app) as currently designed will achieve the **lowest adoption rate** of all models assessed **with 51.1% of the public adopting it**.

This is primarily due to two factors:

- 1) **Responsibility for the App and oversight.** Current news reports create the perception that the UK's contact tracing app development is spearheaded by the Government. The Secretary of State for Health and Social Care is the primary spokesperson for the app in the media and the government's healthtech blog publishes updates about the App. However, research **respondents show a clear preference for the NHS to be fully in charge.**
- 2) **Linking the App to testing**, so that those in self-isolation get priority access to testing for COVID-19. Currently, no plans to link the app to priority testing have been announced.

Additionally, **people do not fully understand Bluetooth-enabled contact tracing.** Instead, they believe that location data is necessary for the app to function effectively. Under the current design, data will not be stored longer than 28 days and will be deleted after the app's use is finished and the pandemic is over. People's preference is for **data to be stored for half this time (14 days)** and this affects whether or not many will download the App.³

Steps to Improve Adoption

Certain attributes are significantly more important in determining whether individuals will download the App. **Respondents are most likely to adopt a contact tracing app if:**

- 1) **The NHS is responsible and has oversight** – The governance of the App should be clearly defined under the responsibility of the NHS, with an independent oversight body. The Government should not be, nor be perceived to be, in control of the app.
- 2) **The App facilitates priority access to testing during self-isolation** – The app should be linked to testing, so that those in self-isolation (because they are symptomatic or have been alerted by the app of a possible infection) can get tested quickly. Communication during the launch must convince the public that this testing capacity is achieved and functional. Providing priority booking for food delivery slots when in self-isolation would also support app adoption.
- 3) **The App is used to monitor self-isolation by sending alerts** (e.g. push notifications) – The app should not be used for monitoring or enforcement purposes.
- 4) **Download is voluntary and not conditional** – App use should be voluntary and not linked to freedom of movement.
- 5) **There is a defined 'expiry date' to the COVID-19 App and data storage** – People are more willing to share their data in a way they perceive useful in fighting the pandemic but want to have a clear end point, as they did not support their data being stored "for as long as necessary"

¹ 'Escaping the virus: Don't rely on contact tracing apps', *The Economist* (16th May 2020).

² [Caroline Wiertz, Aneesh Banerjee, Oguz A. Acar & Adi Ghosh, Predicted Adoption Rates of Contact Tracing App Configurations - Insights from a Choice-Based Conjoint Study with a Representative Sample of the UK population \(City, University London - Sir John Cass Business School, 28th April, 2020\).](#)

³ [Hasan Chowdhury, Matthew Field & Margi Murphy, 'NHS contact tracing app: how does it work and when can you download it?', The Telegraph, \(19th May 2020\).](#)

Demographic factors affect individuals' likelihood of adopting the App. The communication campaign to launch the app should target demographics least likely to adopt. These factors include:

- **Inequalities** – preference for app adoption increases with higher levels of income. The researchers noted that people with lower incomes and older people are less likely to own a smartphone, and that older people might feel technologically challenged using apps.
- **Perception of testing capacity** – Respondents who do not believe that widespread testing can be achieved by the time the lockdown is lifted are less likely to adopt a contact tracing app.
- **Geography** – Respondents in London have a stronger preference for the app, perhaps an indication that the app appeals more to residents of densely populated areas.
- **COVID experience** – People are more likely to adopt an app if they are afraid of Covid-19, if they or their family have been ill or experienced symptoms, and/or if they have suffered financial or mental health consequences due to the lockdown.
- **Age** – Preference for adopting an app goes down for respondents aged 50-64, and respondents aged 65+ are least likely to adopt any app at all. Those aged 25-34 have the highest preference for app adoption.

A Model App

The research into public preferences suggests that a 'Model App' to maximise adoptions whilst safeguarding privacy and civil liberties should have the following features:

1. Oversight of the app by the NHS
2. Priority access to testing for people using the app and in self-isolation
3. Not used to monitor or enforce self-isolation
4. Voluntary use of the app
5. Data only stored for 14 days
6. Voluntary reporting of test results
7. Anonymous contact tracing
8. Does not upload location data
9. Alerts for confirmed and suspected infections
10. Works internationally

About the study

The researchers asked a representative sample of 2,061 UK adults to choose between different contact tracing app configurations to estimate their preference for various features. The respondents were representative of the UK population in terms of gender, age, ethnicity and age. This information was used to simulate the adoption rates for different potential contact tracing apps through a choice-based conjoint which uses realistic choice scenarios (rather than less reliable attitude surveys) to measure preferences for product features, and to simulate the likely acceptance of a product. This allows estimation the adoption rate for various app configurations. The study has been published as [Predicted Adoption Rates of Contact Tracing App Configurations](#).

The study produced four models for the App:

- An **'Expected NHSX' app** that NHSX/the UK government have announced (based on an interpretation of press coverage and NHSX blogs) has the lowest adoption rate with **51.1%**.
- A **'Big Brother' app**, run by the UK government with compulsory use and reporting of test results, identifiable contract tracing and which uploads location data, achieves a slightly higher adoption rate with 54.6%. This is due to the assumption that testing for suspected COVID-19 cases would be provided, which respondents seem to value more than protecting their privacy and civil liberties.
- A **'Maximum Adoption' app**, which is voluntary and monitors self-isolation but disregards implications for privacy and civil liberties, has the maximum adoption rate of **77.6%**.
- A **'Recommended' app** (as detail above – 'Model App') that would reach the highest adoption while safeguarding privacy and civil liberties has an adoption rate of **73.5%**.

About the authors

The research was conducted by [Professor Caroline Wiertz](#), [Dr Aneesh Banerjee](#), [Dr Oguz A. Acar](#) and [Adi Ghosh](#), of the Cass [Business School](#), [City, University of London](#). [Cass Business School](#) is a leading global business school driven by world-class knowledge, innovative education and a vibrant community. Cass has been at the leading edge of business education for over 50 years, developing leaders who help businesses thrive through change and uncertainty. Prof Wiertz and colleagues are available to provide policy advice.

For further information and to arrange a meeting with the researchers, please contact edward@gkstrategy.com or on 0774 9677 543.