Department of Health & Social Care

NHS COVID-19 app: Isle of Wight pilot evaluation report

NHS Test and Trace programme

8 April 2021

Contents

Acknowledgments

The evaluation was made possible by the support of many people. In particular, thanks are due to the Isle of Wight stakeholder team including: IWC / NHS Trust / CCG Staff; Local Media; Local leaders and ambassadors; Clinicians and Health Workers; Integrated Care Partnership; Emergency Services (Police / Fire); Town and Parish Councils; Local Community Groups; Third / Voluntary sector partners; Representatives of the more vulnerable and less accessible groups; Island business network (Key businesses, IWCC, FSB, VIOW); Digital community; Solent Ferry operators; Education Providers. In addition, particular thanks are due to the local leadership team.

Finally, huge thanks are due to the residents of the Isle of Wight for their enthusiastic support of the service and participation in the evaluation.

1. Executive summary

The evaluation of the Isle of Wight pilot of NHS Test and Trace focused on the user journey and attitudes to and experiences of the service, including the first version of the NHS COVID-19 app. Due to the timeframe and pace of the evaluation, the small number of positive cases expected during the pilot period, and the focus on the acceptability and technical functioning of the app, the evaluation did not assess the epidemiological efficacy of the service and does not provide evidence on impact. The main findings of the evaluation are summarised below.

Uptake of the first version of the app on the Isle of Wight was encouraging with over 56,000 downloads registered to users on the Isle of Wight, which equated to around 40% of the population. Over 40,000 of these downloads occurred within the first 2 days after the app was launched.

Older people were less likely to download the app than younger people. Survey data revealed that among those who owned a smartphone, privacy and phone compatibility were among the reasons for not downloading the app.

Most users found the app easy to use: 82% of people found the app very easy to download and 84% found it very easy to enter their details. Additionally, 84% of people rated their support for rolling out the app across the UK as being 4 or 5 out of 5.

Although there were some concerns over data sharing and privacy, 57% of people rated their confidence in the data being handled securely as 4 or 5 out of 5. However, there were significant misconceptions about what data is collected by the app identified via both interview and survey data, with over 70% of people wrongly believing that location data was collected.

While it is difficult to measure future behaviour, 81% of people with a smartphone said they would definitely report their symptoms in the app, with a further 12% saying they would probably do so. Only 97 people experienced a new continuous cough and/or high temperature during the evaluation period, but of these, 71% reported their symptoms in the app. It is important to note that as not all island residents installed the app and not all those who downloaded the app responded to the survey, the number of people recorded in the survey as reporting symptoms in the app will not be the same as figures collected directly from the app or through the Contact Tracing and Advice Service (CTAS).

Excluding complex cases referred to local health protection teams, 76% of people who tested positive successfully had details of their known contacts collected through CTAS. Each person had an average of 2 contacts. Of those contacts, 61% were successfully contacted by health protection.

Although 1,592 people reported symptoms via the app, only 309 home test kits were ordered. This discrepancy may be because people were using the drive-in test centres instead or they were entering symptoms to test the app to see what happens.

Most people only left their homes for permitted reasons, with just 8% saying they met family or friends (which may be permitted under some circumstances). Most people (94%) washed their hands with soap after most or every time they went outside, while 64% kept more than 2m apart from others all the time and a further 34% did so most of the time.

2. NHS Test and Trace

NHS Test and Trace ensures that anyone who develops symptoms of coronavirus (COVID-19) can be tested to find out if they have the virus and includes targeted testing of asymptomatic NHS and social care staff and care home residents. The service helps to trace close recent contacts of anyone who tests positive for coronavirus and, if necessary, notifies them that they must self-isolate at home to help stop the spread of the virus.

NHS Test and Trace is central to the government's coronavirus recovery strategy. It will enable life to return to as close to normal as possible, for as many people as possible, in a way that is safe and protects our NHS and social care.

Objectives

The following 3 objectives were developed for the NHS COVID-19 app but remain applicable to the service as a whole.

1. Contribute to flattening the epidemic by reducing the average number of people that each new case of COVID-19 infects (R).

2. Help return people to their normal life more rapidly, thereby preserving the local economy.

3. Estimate and flow of patients who will require hospital treatment in the coming days.

Isle of Wight pilot

The Isle of Wight was chosen to conduct the first phase of the pilot because it has a single NHS Trust that covers all NHS services on the Island and its circumscribed geography as an island with a sizeable population makes it an ideal place to introduce the NHS COVID-19 app and wider testing service in its initial pilot period.

The app was initially made available to Council and NHS workers on the island before being rolled out to the whole population shortly afterwards. Letters inviting everyone to download the app were delivered to all households on the island.

Timeline of events

The timeline of events for the Isle of Wight pilot was:

- 27 April – launch of drive through testing centres (not related to app)

- 4 May – app goes live
- 5 May – rollout of app to NHS and Council workers, launch of home test kit service via call centre and Public Health Contact Tracing launched.
- 7 May – all residents have access to app and first letters arrive
- 8 May – targeted marketing campaign
- 11 May – last invitation letters arrive

Process model

The Isle of Wight trial used version one of the NHS COVID-19 app. The process model for the pilot phase here was:

1) User experiences symptoms

2) User reports symptoms, either manually or via the app

- if user reports symptoms via the app, their contacts, if they are also app users, are notified and reminded of the importance of hand hygiene, social distancing and reporting symptoms

3) User is instructed to isolate and get tested

4) If the test comes back positive, then:

- contacts traced through Public Health Contact Tracing and Advisory Service
- contacts notified by public health and reminded of importance of hand hygiene, social distancing and reporting symptoms

5) If the test comes back negative, then user can end isolation

3. Key evaluation questions

The evaluation took place across the NHS COVID-19 app, testing and contact tracing and focussed on the following key learning objectives:

- to test the overall journey for the user from the NHS COVID-19 app, through testing, and on to public health contact tracing

- to improve interfacing between the pillars, processes, and monitoring

Due to the timeframe and pace of the evaluation, the small number of positive cases expected during the Early Adopter phase, and the focus on the acceptability and technical functioning of the NHS COVID-19 app, it was not possible to evaluate the wider impact of the service. Things that were not in scope for this evaluation include the epidemiological efficacy of the service and changes in attitude over time.

The key evaluation questions were:

1) What are the volumes and patterns of app downloads?

2) What feedback has the app received from users?

3) Are each of the processes operating effectively? What volumetric data can be used to inform national rollout at scale?

4) What do we know about people's health-related behaviours?

4. Data collection methodology

The evaluation included both primary and secondary methods of data collection. The primary method of data collection included data from the app, contact tracing and testing, as well as a household survey. The secondary methods included user research, small scale surveys and internal interviews.

Data collected from the app, contact tracing and testing

Data collected from the app, contact tracing and testing included, but was not limited to:

- percentage of the population who downloaded the app
- percentage of app users reporting symptoms who phone contact centre
- number of home test-kits ordered
- number of people providing contact details to the Contact Tracing Advisory Service
- number of confirmed contacts

Household survey

The household survey was open to all households on the Isle of Wight and focused on app experience, health behaviours and attitudes. It included both app and non-app users and was the only source of demographic data. It was commissioned by DHSC, designed by the Behavioural Insights team and carried out by NatCen Social Research between the 14 and 26 May 2020.

The aims of the survey were to explore attitudes to and experiences of using the app and identify barriers to completion. The survey invitation was sent out via a letter posted out to all households on the Isle of Wight. In total, 70,806 addresses were selected and sent invitations to take part. There were 2 codes per letter to enable 2 responses per household and these responses could be completed online or via telephone.

The questions were themed around app use or reasons for not downloading the app and trust, understanding and attitudes towards app. The survey also included questions about demographic information and health behaviours.

In total, 18,380 valid responses were received from 14,075 different addresses, which represents an unadjusted household-level response rate of 20%. Assuming that 10% of addresses are no longer occupied, the adjusted household-level response rate is 22%.

The results were weighted to the known profile of residents in the Isle of Wight, based on mid-year population estimates from the Office for National Statistics, and to account for non-response within and between households.

Secondary methods

User research and small-scale surveys were conducted by individual app teams to iterate app development and design. They were also used by testing teams, for example to determine the wording on test instructions. Additionally, data was collected from internal interviews which gave feedback on inter-team working, Control Room operations and communication.

Data limitations

There are a number of limitations to the data that this evaluation draws on, which are described below.

Due to the fact that not every household completed the survey, it was important to weight the data to minimise any bias in the findings. However, as with all survey weighting, this adjustment can help to reduce bias but it cannot eliminate it altogether. In addition, there were some constraints on the weighting: the weights mainly adjust for area characteristics of responding households rather than the characteristics of the individuals within those households or of the households themselves. In addition, household characteristics such as internet access and presence of children were not available (any CAWI response was used as a proxy for the former with percentage of households with children in the area filling in for the latter). Furthermore, the only calibration adjustment it was possible to make at an individual level was to the age/sex profile of adults in the Isle of Wight.

When interpreting the results it is important to note:

- Comparisons with external estimates demonstrate that the weighted sample is not fully representative of adults in the Isle of Wight on some characteristics. In particular, it appears to be more educated on average, with greater access to smartphones. The former may affect some estimates but initial analysis suggests that age is a much stronger predictor of key outcomes than education. The latter, moreover, should not be seen as a major limitation given that most analysis is done within the group of smartphone users.

- The relatively low response rates among younger people, particularly young men, approximately 2% of whom responded (compared to 15% overall) brings into question the relative representativeness of the survey results by age. Apparent

differences by age – even if highly significant statistically speaking – should be treated with caution for this reason.

It is also important to note that not all island residents installed the app and not all those who downloaded the app responded to the survey. Therefore, the number of people recorded in the survey as reporting symptoms in the app will not be the same as figures collected directly from the app or through the Contact Tracing and Advice Service (CTAS).

Code of Practice for Statistics

The following statement outlines how this research has complied with the Code of Practice for Statistics on a voluntary basis, for the analysis of the data published within the report.

The Code of Practice for Statistics (the Code) is built around 3 main concepts or pillars: trustworthiness, quality and value.

- Trustworthiness – the figures are based on data collected by the app and compiled by analysts at NHSx and data collected via a household survey. The survey was designed by an independent research organisation (the Behavioural Insights Team) and was undertaken by second independent research organisations (NatCen Social Research), which also undertook the primary statistical analysis of the survey data. The survey methodology is set out clearly in this report. The limitations of the evaluation are also set out.

- Quality – the data from the app is drawn directly from its reporting function; the survey followed best practice in its design, implementation and weighting. This report and the findings and analysis contained within it has been produced by professional analysts applying their professional judgement and has been quality assured by analysts within DHSC.

- Value – this evaluation provides important new evidence for ministers, policy makers and external stakeholders about the test and trace service and the first version of the NHS COVID-19 app, including the number of people who downloaded the app and perceptions and attitudes towards it. It is complementary to other sources that can provide information on the technical aspects of the service and the response to it.

5. Evaluation results

The evaluation results are split into the 4 research questions detailed earlier.

1) What are the volumes and patterns of app downloads?

2) What feedback has the app received from users?

3) Are each of the processes operating effectively? What volumetric data can be used to inform national rollout at scale?

4) What do we know about people's health-related behaviours?

The analysis of survey data is based on all 18,380 full interviews. The results are based on weighted data.

What are the volumes and patterns of NHS COVID-19 app downloads?

Number of downloads

The table below shows the number of app downloads to postal districts (i.e. the first half of the postcode) registered in the Isle of Wight. While this gives an indication of the adoption rate, this can only provide an estimate as this does not account for a person downloading the app onto multiple devices. Additionally, postal districts have not been validated so an Isle of Wight postal district will not guarantee that the user is a resident.

Table 1: Adoption rate in the Isle of Wight (IoW)

Downloaded and registered with an IoW postal district	Population of IoW	Estimated uptake as a % of total population*	Estimated uptake as a % of adult compatible smartphone users
56,231	141, 771	40%	59 to 63%

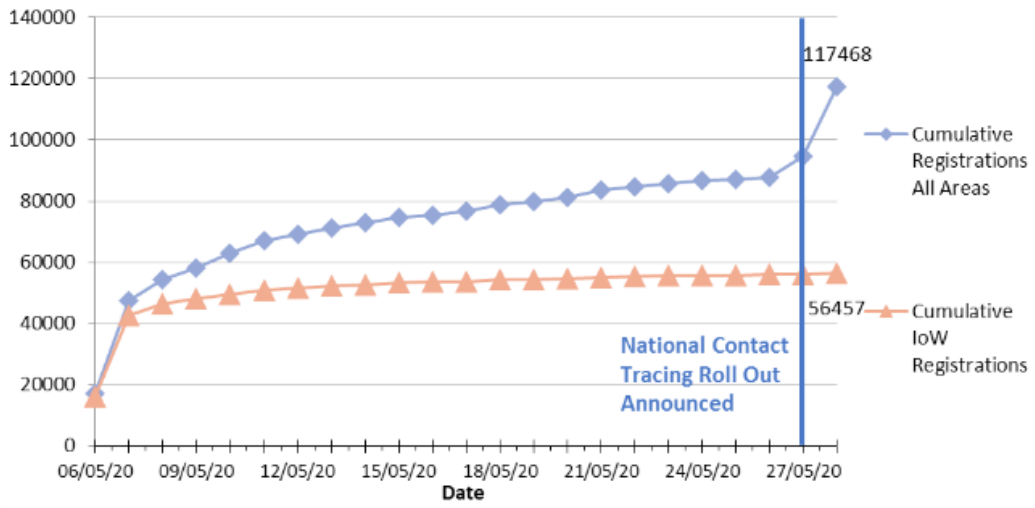
* Postal districts not validated, and some people may have downloaded the app on multiple devices

COVID-19 app survey data (DHSC, 2020) showed that among those with a smartphone, 87% say they have downloaded the app. People may have downloaded alternative apps or may have mis-reported. Using OFCOM survey data (OFCOM Technology Tracker Survey, 2019) on smartphone ownership, corrected for the age

distribution on the Isle of Wight and removing those with incompatible phones, app uptake equates to about 59% of the compatible smartphone-owning adult population on the Isle of Wight. An equivalent calculation using the COVID-19 app survey data estimated a 63% uptake.

Downloads over time

The chart below shows the cumulative registrations over time of Isle of Wight residents and of all regions. The data is shown from the 6 May to the 28 May 2020. After the initial spike on the 7 May, when Isle of Wight residents first had the opportunity to download the app, the cumulative number of downloads has remained largely static throughout May. This would imply that the initial communication of the app is important in ensuring its uptake. The cumulative registrations from all areas has been slowly increasing, with a spike between the 26 and 28 of May, probably due to the announcement of the National Contact Tracing service rollout on 27 May.



International comparisons

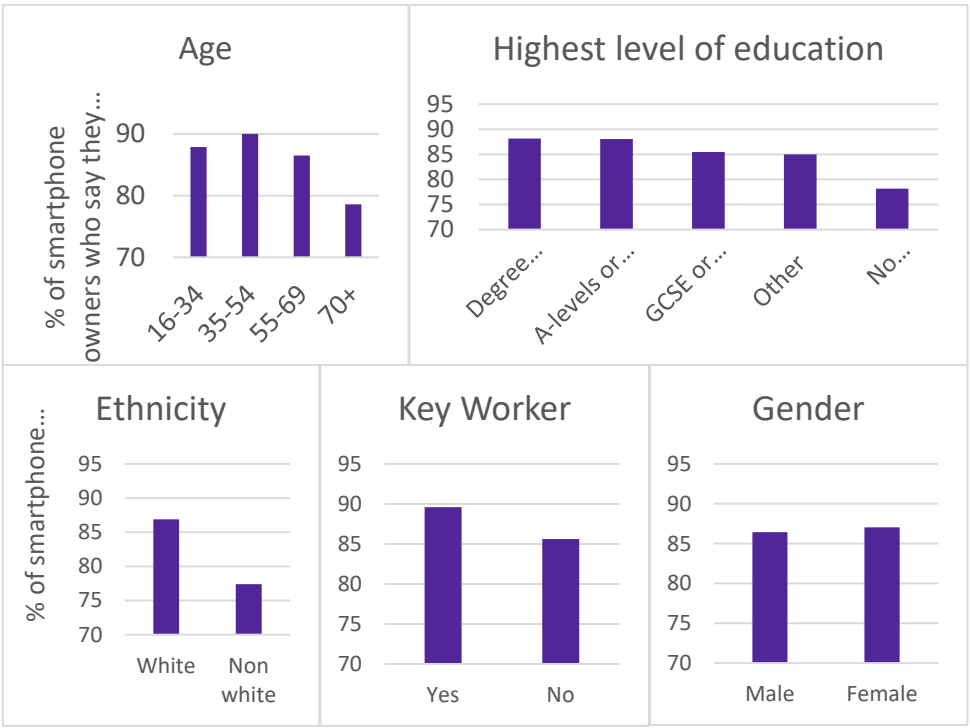
In order to put the download numbers into context, the table below shows the uptake of similar apps in other countries. When put into an international context, the Isle of Wight adoption rate of 40% is higher than the update rates experienced elsewhere. The Isle of Wight trial represents a much smaller sample size, but this figure is encouraging, nonetheless.

Table 2: Uptake of similar apps in other countries

Country	Uptake (number of downloads)	Update (% of total population)	Date app launched	Accurate as of (date)	Source
Australia	5.87 million	23%	26 April 2020	19 May 2020	The Guardian
Austria	600,000	7%	25 March 2020	25 May 2020	Tagesspiegel
India	110 million	8%	2 April 2020	26 May 2020	Times of India
Norway	1.5 million	28%	16 April 2020	19 May 2020	Institute of Public Health
Singapore	1.4 million	25%	20 May 2020	21 May 2020	Science

What are the characteristics of those who download the app?

The charts below show the percentage of smartphone users who reported that they had downloaded the app for 5 key characteristics.



All data that was collected in this respect was self-reported via the survey and no personal characteristics are collected by the app.

Age had an impact on the percentage of smartphone owners who said they downloaded the app, falling from 87% for those aged 55 to 69 to 79% for those aged 70+. Similarly, fewer smartphone owners with no qualifications downloaded the app (78%) than smartphone owners with GCSEs or equivalent (85%). Ethnicity also had an impact, with 87% of white smartphone owners saying that they downloaded the app compared with only 77% of smartphone owners of non-white ethnicity. Uptake was similar for keyworkers (90%) and non-key workers (86%) and between genders (86% for male, compared to 87% for female).

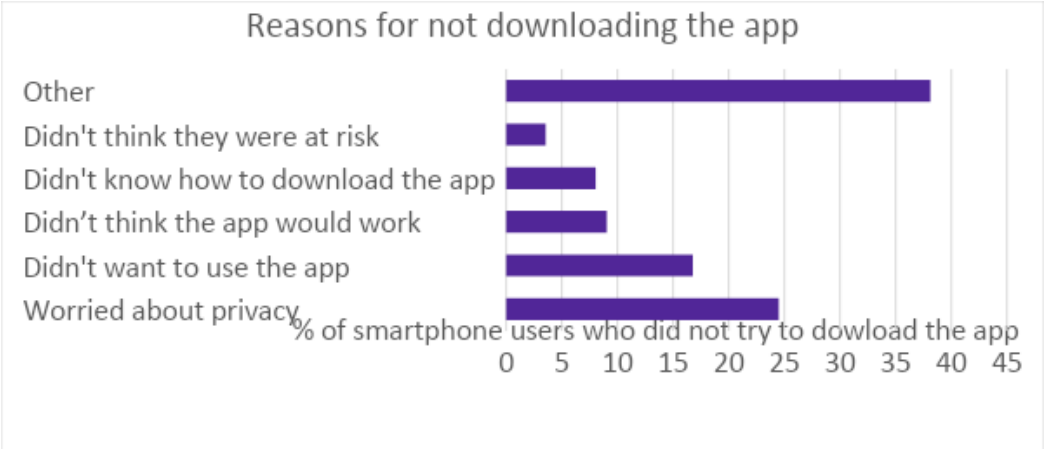
Overall, older people, those with no qualifications and people of non-white ethnicity were less likely to have downloaded the app. However, those with no qualifications are over-represented in the 70+ category in the Isle of Wight population.

What are the reasons given for not downloading the app?

In the survey, those who said that they had not downloaded the app were asked to give their reasons for not downloading it. The chart below gives the percentage of smartphone users who had not downloaded the app and the reasons why. The primary reason for not downloading the app was concerns around privacy (24%).

For those who selected ‘other’, the most commonly cited reason was not having the appropriate equipment. Many did not have the correct operating system or were using phones that they did not think would be compatible with the app. Additionally, those who did not have mobile data or were on pay-as-you-go contracts were not keen to download the app or did not think it would be useful. Another commonly cited problem was not having enough space on the phone to be able to download the app. Some respondents were casual phone users, who either do not take their phones out with them or who use their phones only for emergencies so they did not feel that they would benefit from the app, given their current habits.

Additionally, some respondents stated that they were not leaving their homes or seeing people. Some were shielding and said that they had no intention of leaving their homes so would not benefit from the app, while others said that they always maintained the 2 metres distance when outside.



Summary

The Isle of Wight pilot set out to test operational feasibility of the app rather than an attempt to reach a specific uptake rate or assess it against specific criteria. The uptake achieved for the app, however, is encouraging when compared with international equivalents.

When a new version of the app had been developed, it suggests that national uptake is likely to support a reduction in the number of new infections. When this happens, the data also indicates that additional support will need to be targeted at those populations who were less likely to download the app, including older people, those with no qualifications and people of non-white ethnicity. Additionally, the service will need to ensure that those who do not have the equipment, such as compatible phones or mobile data, have equal access to NHS Test and Trace and can thereby play their part in reducing the spread of the virus. Finally, concerns around data privacy will need to be communicated to build trust among app users and encourage uptake.

What feedback has the app received from users?

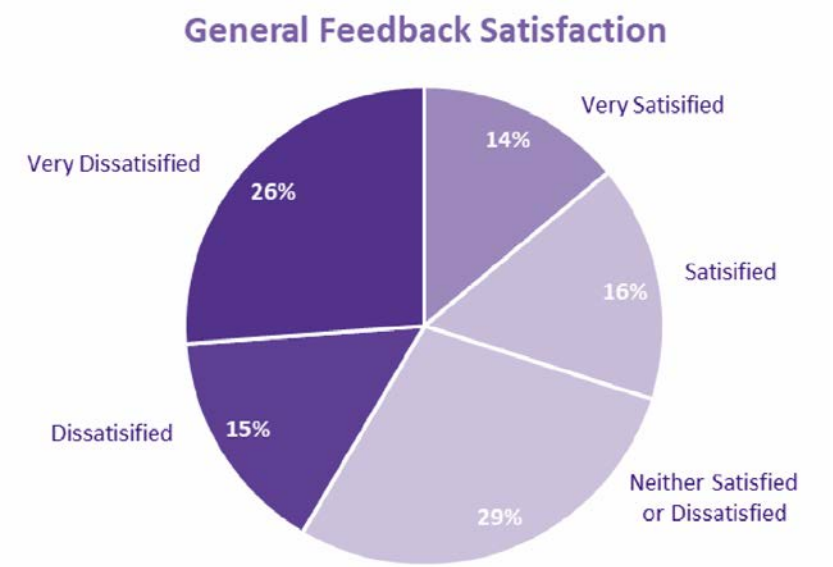
How easy is it to download and use the app?

Most people found it very easy to use the app and enter their details.

Survey data shows that 82% of people found the app very easy to download. Just 1% of people found it not at all easy to download. Of those aged 70+, 71% found it very easy to download, 25% found it fairly easy and 4% found it not at all easy. In total, 84% of

people said they found it very easy to enter their details into the app, with only 1% of people finding this not at all easy.

Further feedback on the app was collected via the website. There were 1,553 records submitted via the website, 718 of which were general feedback and 835 were technical queries. The general feedback satisfaction can be seen in the chart below.

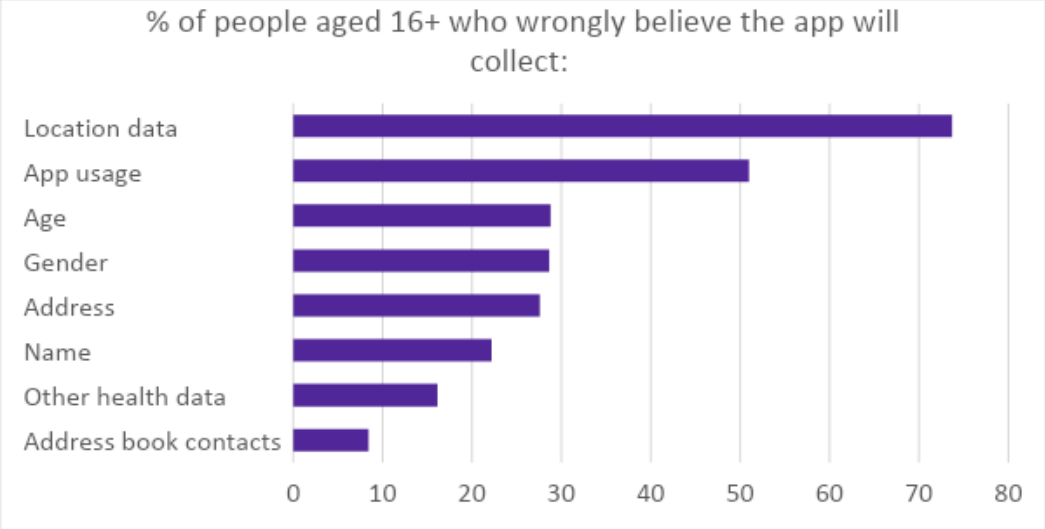


The comments given on the website were also themed to give the proportion of comments on various issues. The most common theme was device or OS compatibility with 39% of the comments focussing on this issue. The "annoying relaunch notification" made up 9% of the comments. Battery drain, Bluetooth interference with other devices and the lack of Bluetooth Low Energy capability made up 5% of the comments each.

Action has already been taken to address these issues, with FAQs being built up on the app website. Additionally, some users (1%) experienced issues with links directing them to GOV.UK webpages. An adjusted approach has now been implemented so that links now access dedicated pages on the app website rather than direct to GOV.UK.

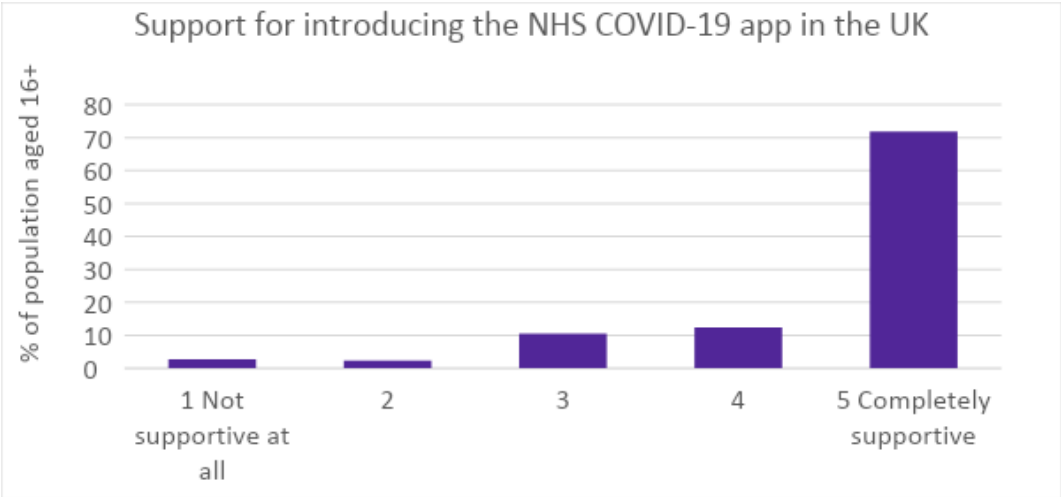
Understanding how the app works and what it does

Survey results suggest significant misconceptions about the app functionality, confirming previous findings from user research. Almost 3 in 4 (74%) wrongly thought that the app collected location data and half (51%) wrongly thought that app usage was collected. Over a quarter (29%) wrongly thought that personal details such as age and gender were collected. In fact, the app collects none of the data listed.



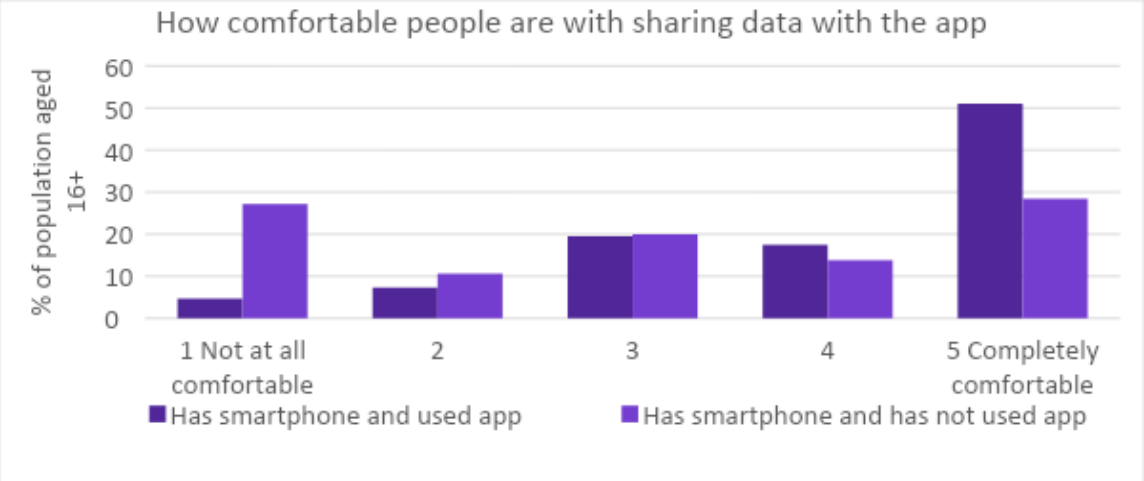
What is the overall reaction to the app?

The majority of users were supportive of the app being rolled out across the UK. People with higher qualifications tend to be less supportive with 67% of those with a degree and above rating their support as 5 out of 5 compared to 76% of those whose highest level of qualification is GCSE or equivalent, and 81% of those with no qualifications.



Data sharing

Overall, most people said they were confident that data shared with the app would be handled securely, with 57% of people rating their confidence as 4 or 5 out of 5. This increased to 65% for those with no qualifications, compared to 53% for those with a degree. This is likely linked to the age of respondents as 66% of those aged 70+ rated their confidence as 4 or 5 out of 5, compared with 49% of 16 to 34-year olds and those aged 70+ were also more likely to have no qualifications.



Summary

The Isle of Wight pilot aimed to gain insight into opinions and perceptions of the app. Overall, most users found it easy to use and to enter their details into the app and there was a large amount of support for the app being rolled out nationally. However, there were many misconceptions about how the app worked and concern about the way that data will be handled.

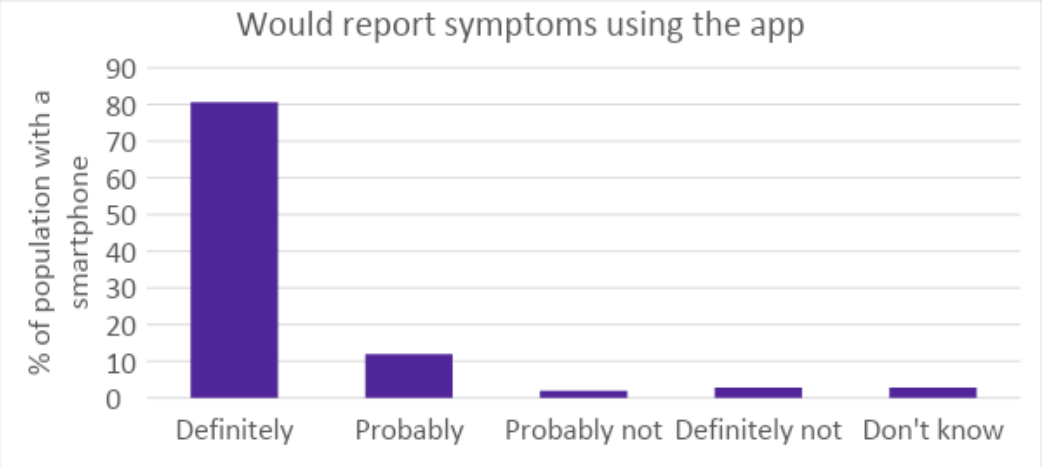
Are each of the processes operating effectively?

Reporting symptoms

Among those who have downloaded the app, 1% had since had a high temperature and less than 1% had developed a continuous cough (97 people). As such, the base sizes for data on people with symptoms are small, so any findings should be treated as indicative only. In addition, as not all island residents downloaded the app and not all those who downloaded the app responded to the survey, the number of people recorded in the survey as reporting symptoms in the app will not be the same as figures collected directly from the app or through the Contact Tracing and Advice Service.

Among the 97 who had symptoms, 71% recorded their symptoms in the app, with almost everyone finding it easy to record their symptoms. Among those who recorded symptoms, 49% did so within 3 hours and a further 22% did so within 12 hours.

In order to determine proposed behaviour, the survey also asked how likely people who had not experienced symptoms were to report their symptoms in the app, should they have them. Most people (81%) said they would definitely report symptoms using the app. Patterns were consistent across most population groups with little impact of vulnerability, key worker status or ethnicity. However, 75% of those aged 16 to 34 would definitely report symptoms, compared to 84% of 55 to 69-year olds.



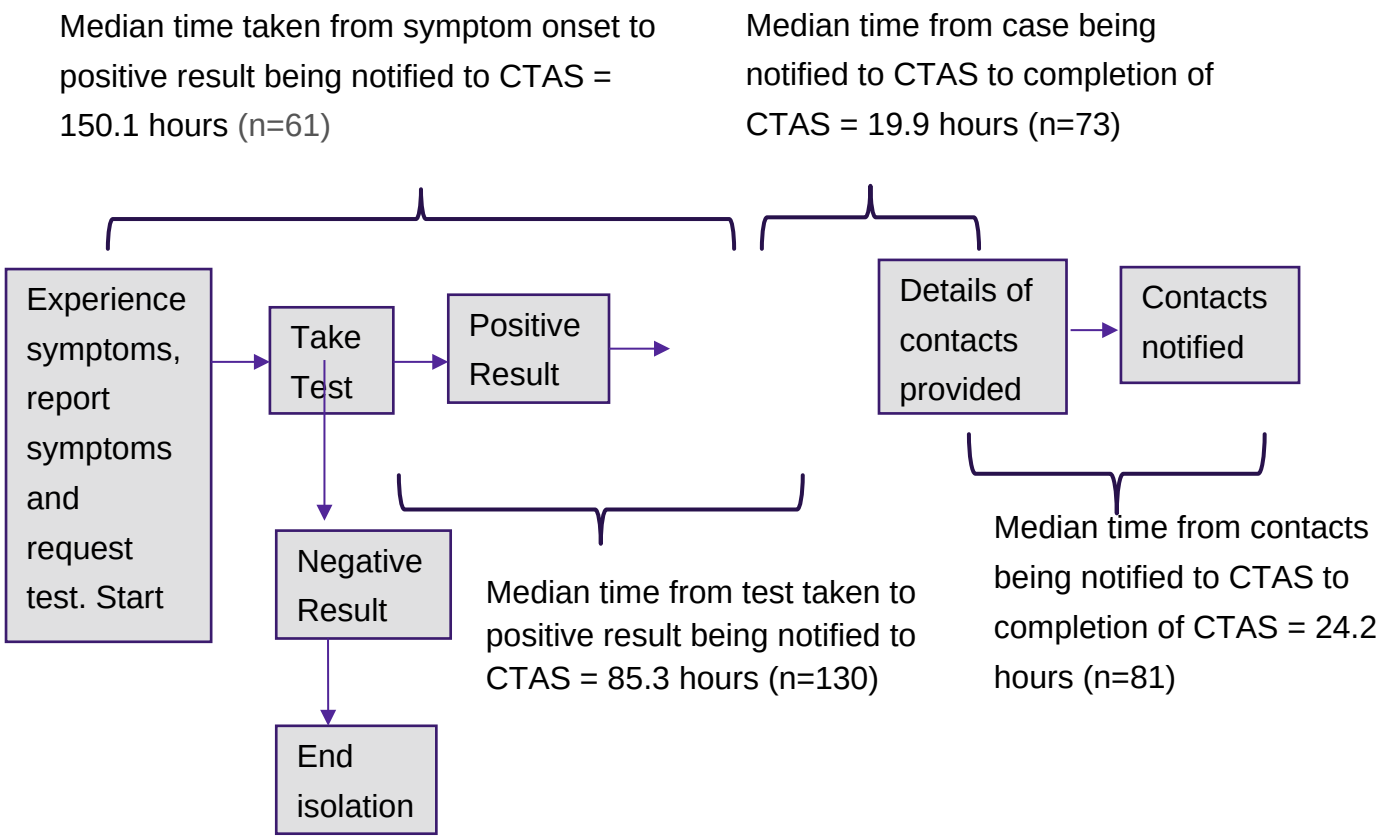
Contact tracing

There were 130 confirmed cases of people who tested positive for coronavirus notified to the Contact Tracing and Advice Service (CTAS) during the evaluation period (up until 17 May). Of these 34 (26%) were complex cases (such as those in prisons, health care settings or care homes) escalated to local health protection teams. Of the remaining 96 cases, 23 (18%) were uncontactable or failed to follow up. Of the remaining 73 (76%) who completed follow up, 38 of those (52%) used the Web Based Tool and 35 (48%) used the Phone Based Service. Of the 130 confirmed cases of people who tested positive for coronavirus notified to Contact Tracing, 17 reported that they had downloaded the App. This equates to 13.1% of all cases, and 23.3% of those who completed the CTAS process.

For the 73 cases of people who tested positive for coronavirus who completed follow up, a total of 134 contacts were reported, representing an average of 2 contacts per case. Of 134 contacts, 23 reported that they had downloaded the App. This equates to 17.2% of all contacts, and 28.4% of those who completed the CTAS process. Of the 134 contacts notified to CTAS during the evaluation period 1 (1%) were complex cases escalated to local health protection teams. Of the remaining 133 contacts, 52 (39%)

were uncontactable or failed follow up. Of the 81 (61%) who completed follow up, 33 (41%) used the Web Based Tool and 48 (59%) used the Phone Based Service.

Feedback from contact tracers suggests that people were commonly confused by the difference between app notifications and the public health contact tracing and may have refused to take part in the contact tracing because they had the app and so didn't think further tracing necessary.



Testing

As of the 27 of May, 1,592 people reported symptoms via the app, 635 people called the contact centre and 309 home test kits were ordered. Additionally, 3,136 tests were conducted at the Isle of Wight drive-through centre.

A cut-off date of 27 of May is used here, as a spike in people reporting symptoms on the 28 of May is likely to be related to the national roll out of contact tracing on this date. Drive-through testing was available to eligible residents without using the app and were booked via separate call centre. Home test kits were only available via the app's bespoke call centre. Users had to provide an app-generated ID to be eligible for a home test kit.

As the functionality to connect the app to the national test booking portal had not yet been built, a bespoke testing arrangement was designed for the Isle of Wight pilot. A dedicated call centre was set up to enable people to book tests. A supply of test kits was delivered to the Isle of Wight Council, which were then delivered to people's homes by a team of council workers.

Some drop-off is to be expected between each stage of the process. While all symptomatic app users phoning the call centre are offered a home test kit, some of those may have chosen to use a drive-through test centre instead, particularly if they were key workers. The ease of drive-through testing service may also have discouraged app use. In addition, those who reported symptoms via the app may have taken a test via the drive-through centre and it is not possible to cross-reference this data.

Summary

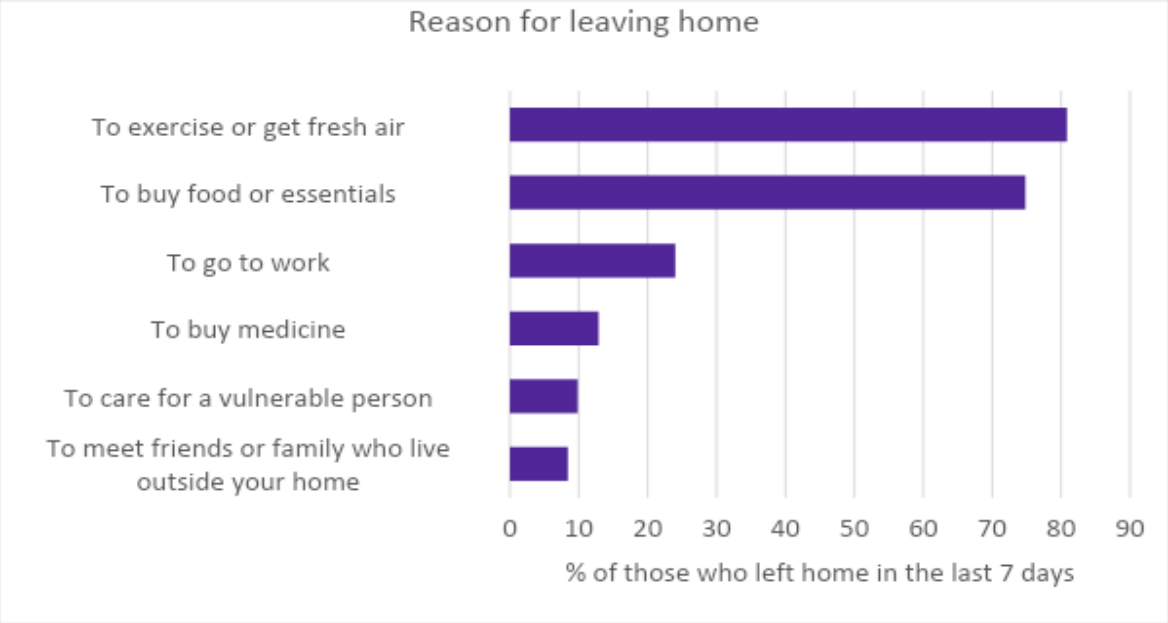
As only a small number of app users experienced symptoms, it is difficult to gauge compliance in reporting symptoms. However, most people (81%) said that they would definitely record their symptoms in the app, which is encouraging. Of those notified to Contact Tracing and Advice Service (CTAS) who weren't complex cases, three quarters (76%) completed follow up, either via the web or phone based system, reporting an average of 2 contacts per case. Of those contacts, 2 in 5 (39%) were uncontactable. Testing shows that there is some drop-off between each stage of the process.

What do we know about people's health-related behaviours?

Leaving the home

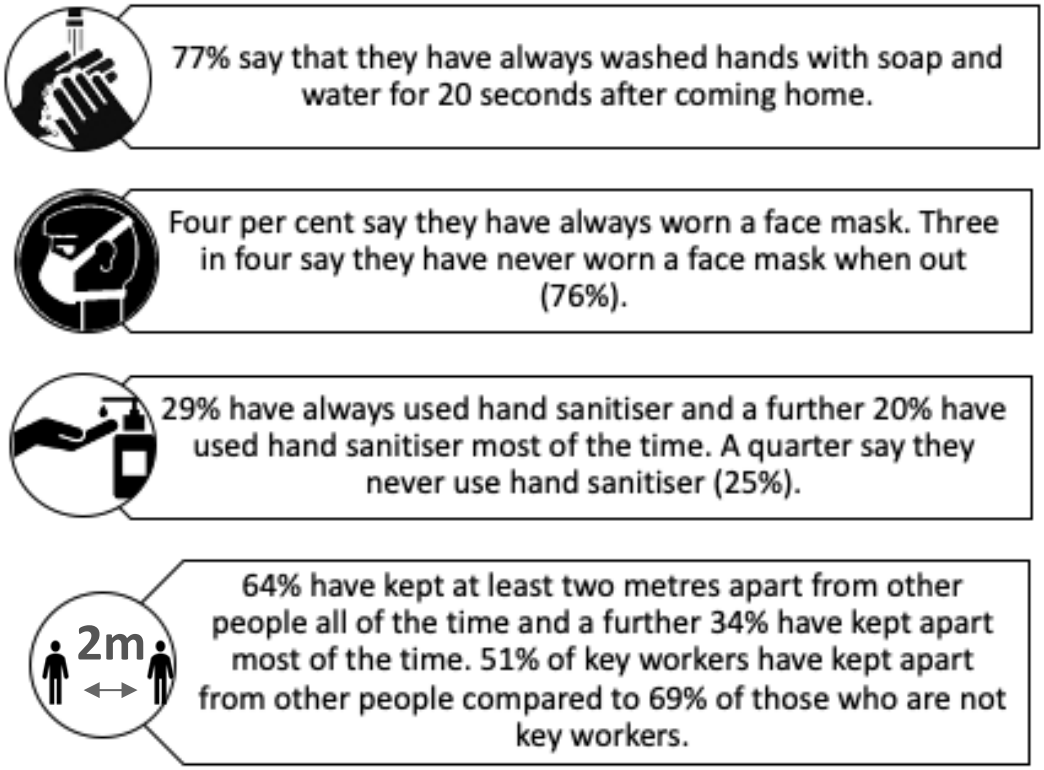
Overall, 15% of people left their house 10 or more times in the previous week. This increased to 27% for those self-reporting as key workers and reduced to 11% for non-key workers.

The main reasons for leaving home were to exercise or to buy food or essentials. Patterns were broadly similar across all population groups. People aged 16 to 34, however, were more likely to have met friends or family who live outside their home (14%) compared with the general population (8%).



What steps do people take when they are out to minimise the chance of infection?

The survey also asked about people's behaviours when they had been outside. The survey asked how often they had: washed their hands with soap and water for 20 seconds after coming home, worn a face mask, used hand sanitiser, and kept at least 2 metres away from other people. The options provided were: all of the time, most of the time, sometimes and not at all. As these questions were asked independently, it is not possible to combine these metrics (for example, how often people either washed their hands or used hand sanitiser).



Summary

The most common reasons for leaving the house were for exercise or to get fresh air and to buy food or essentials. Hand washing and keeping 2 metres apart from other people were prevalent behaviours, but mask wearing was not, with 3 in 4 saying that they had never worn a face mask.

Overview

There are some key successes that can be taken from the Isle of Wight pilot:

- the app was rolled out without major problems and had a good quantity of downloads (56,000, nearly 40% of the population)
- successful launch of contact tracing service
- testing capacity was enough to meet demand
- most people found the app easy to download and use
- most people were supportive of the app being rolled out across the UK

However, there are also some areas that could be improved. Survey results and user research suggested there were widespread misconceptions about how the app worked and the data it collected.

6. Limitations of Isle of Wight pilot and next steps

While there are limitations of the Isle of Wight evaluation, it has highlighted some areas that could be improved, or that require further investigation.

Limitations

The trial was carried out over a very short time frame and so did not have the opportunity to look at changes in attitude over time. Additionally, the pilot was implemented at pace and iterated throughout, so user experience may not refer to the current version of the service and will not always align with the plans for the national rollout. This is particularly true for the testing pillar as a bespoke testing service was set up for the pilot and so this did not replicate the plans for the national rollout.

Furthermore, the Isle of Wight has a homogeneous population with very little diversity and so does not reflect the population of England as a whole.

Further work from the Isle of Wight survey

The survey of the Isle of Wight suggests that there is further work to be done in the following areas:

- survey results and user research that misconceptions about how the app works and the data it collects would need to be addressed in future plans
- the implications of a high number of contacts being uncontactable or failing follow-up during the public health contact tracing process need to be understood and addressed
- reasons for drop off at each stage between reporting symptoms, phoning the contact centre and ordering a test kit need to be understood and addressed

National evaluation

There are also lessons that can be taken into the national evaluation in order to build up a more complete picture of NHS Test and Trace. These include:

- understanding the long-term impact on behaviour
- determining the timeline between symptom reporting and contacts receiving notifications for confirmed cases, and distribution of time frames therein

- evaluating of epidemiological impact of NHS Test and Trace
- understanding the impact of the service across the full range of population groups
- evaluation of end-to-end processes, including future components of the service such as providing certification to individuals of low risk of being infectious
- determining the wider NHS and social care requirements for the app

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