



Test and Trace Business Plan

Helping to break chains of COVID-19 transmission, protect the public's health, and enable people to return towards a more normal way of life: The next phase of NHS Test and Trace

Published 10 December 2020

Contents

Foreword from Dido Harding, Executive Chair, NHS Test and Trace	2
Executive Summary	4
Introduction	8
Our achievements to date	9
The next phase of NHS Test and Trace.....	11
A. Working in partnership as 'teams of teams'	12
B. Increasing the speed and reach of our services	17
C. Improving the use of our data	25
D. Offering an excellent service to the public	28
Towards the National Institute for Health Protection (NIHP)	31

Foreword from Dido Harding, Executive Chair, NHS Test and Trace

In July, we set out the plan for NHS Test and Trace to take us through summer and into winter.

When the Test and Trace service began, we were still learning about the virus. We did not fully know how prevalent COVID-19 was, or the number of people who had the virus but did not have symptoms.

To help stop the virus, we stood up an integrated system at extraordinary speed so we could test at scale and trace the contacts of people who tested positive to advise them to self-isolate. We also created the Joint Biosecurity Centre which, with Public Health England, the Office for National Statistics and analysts from across government and academia, has deepened our understanding of the progress of the virus, allowing us to intervene early and with evidence. We launched the NHS COVID-19 app in September, which has now been downloaded over 20 million times and, on the Apple App Store, is the second most downloaded app in the UK in 2020.

This has only been possible by working in partnership with others. We strive to be 'teams of teams' made up of local authorities and Directors of Public Health, the NHS, Public Health England, public, private and not-for-profit sector partners, and the devolved administrations. It is thanks to them that as a country, we have made such unprecedented strides in developing our testing and contact tracing capacity and systems. These collective efforts mean that: over 20% of the population has been tested at least once; over 41 million tests have been carried out; and over 2 million people have been contacted and told to self-isolate.

As we now exit the second lockdown, it's fair to say that in many ways we face some of the most difficult circumstances yet. Colder weather will bring more general ill health and place additional strain on the NHS. Staying home will feel harder – economically, mentally, emotionally and socially – after many months of us foregoing our usual freedoms to protect our loved ones and the health of the nation. But for all the challenges this winter presents, there are reasons to be hopeful. Whilst they will take time to be rolled out, vaccines are now on the horizon. The COVID-19 response has also showcased our capacity for innovation, with a potential for an enduring legacy through an expanded UK diagnostics industry and the National Institute for Health Protection.

We also have a much deeper understanding of the virus and a clear line of sight as to what part NHS Test and Trace can play in tackling it – as our second line of defence after 'Hands. Face. Space'. The extensive work we have done to accelerate the development and introduction of innovative technologies is giving us new possibilities. With new lateral

flow and LAMP tests we can turbo-charge our testing capacity. We are already carrying out rapid, regular testing in hospitals, care homes, workplaces, universities and other areas that we value and that we need as a society to stay open and stay safe. That was not true back in March.

Even with the vaccine coming, we will not stop innovating and improving our service. We will keep looking for new ways to find and contain the virus – such as training sniffer dogs and our new ability to analyse wastewater. Our efforts to build and innovate will leave a legacy beyond this pandemic. The work we have done to rapidly expand our testing capacity is an investment that will enable us to quickly scale future diagnostic technologies and help us tackle new and existing diseases more easily.

We are also making great strides in contact tracing, expanding the role of local contact tracing and the size of local health protection teams, as well as using digital technology to reach people quickly and in a way that many of us are accustomed to. Our increasingly integrated and personalised local and national tracing model will help us to be able to respond more effectively in the future, whatever it may bring. We continue to develop the NHS COVID-19 app as a powerful contact tracing tool to help keep us safe. And we are relentlessly focused on ensuring that our services are as accessible as possible to everyone in this country, especially for those who need our help the most.

Our work in this next phase will include strengthening our partnership with local government and others to tailor our response more to the needs of local communities and making our service faster, more reliable and even more accessible. We will continue to improve how we use data to find and contain outbreaks, enabling people and organisations to better manage their risk. We will share what we learn about the virus, what we are doing to stop it, and what each of us can do to contribute.

There are over 50,000 people across the country working around the clock to expand and improve NHS Test and Trace, either directly employed or working with us through our partners. Since July, we have moved even closer to Public Health England and our combined, joint response has delivered an enormous amount. We are all clear we are working in service of our country, with and for everyone. We will beat this virus together, through observing 'Hands. Face. Space.', supporting each other, and making NHS Test and Trace the very best it can be.

I am hugely grateful to everyone who has helped to bring NHS Test and Trace to this point and who stands ready to take it into the next phase. We must all continue to play our part.



Dido

Executive Summary

On 23 November 2020, the UK Government published the COVID-19 Winter Plan. It's our programme for suppressing the virus, protecting the NHS and the vulnerable, keeping education and the economy going, and providing a route back to normal. The Government's strategy is guided by three objectives:

- Bring R (the rate of reproduction of the virus) below one and keep it there on a sustained basis to prevent avoidable deaths, both directly and indirectly from COVID-19
- Find new and more effective ways of managing the virus and enabling life to return closer to normal, including through vaccines, medical treatments and rapid testing
- Minimise damage to the economy and society, jobs and livelihoods, and safeguard education in schools, colleges and universities

NHS Test and Trace, working closely with Public Health England, is an integral part of the Winter Plan. We test to protect the vulnerable in care homes and the NHS. Our service breaks chains of transmission to help reduce R through finding and isolating people with the virus and their close contacts. And through testing and contact tracing, we help people return towards a more normal way of life, for instance by enabling people to attend schools and universities and visit care homes.

Our externally reviewed model-based estimates suggest that in October, testing, tracing and self-isolation (on symptom onset or following contact by Test and Trace) reduced the R number by around 0.3–0.6, compared to a scenario with only social distancing, restrictions and no self-isolation.¹ When we have implemented the commitments in this document, which we expect to by March, we estimate the R reduction could increase to around 0.5–0.7.² In high-prevalence areas that roll out rapid community testing, it could further reduce the local R number by around 0.6–0.8.³

This impact of testing, contact tracing and self-isolation goes hand-in-hand with targeted local restrictions and preventative behaviour like 'Hands. Face. Space'. NHS Test and Trace reduces R but needs to be combined with other interventions to keep R below one. The strictest restrictions have the biggest impact on R – such as a 75% reduction in R (2.7

¹ All R reduction figures are compared to a counterfactual of 1.6-1.9. R reduction is attributable to isolation of people with the virus – from symptom onset – and tracing and isolation of infectious contacts. In our model, the largest part of the transmission reduction (90%) is due to isolation of positive cases from symptom onset, assumed to increase after a positive test. We assume that some of this isolation occurs because testing contributes to better self-isolation adherence both before and after the test. The structure of the model means that, if we were to assume people would isolate on the basis of symptoms without a test, then a large proportion of the modelled transmission reduction could be achieved from the public guidance to isolate after symptom onset alone.

² Estimated through an externally reviewed Markov-Chain model. Technical annex to be published shortly

³ An indicative estimate based on a further 2 million rapid tests per day deployed locally among a population of 10 million. Probabilistic model still subject to review. Technical annex to be published shortly

to 0.6) from the spring lockdown – but also have the biggest impacts on the economy, compared to a smaller R reduction by 0.2–0.4 from increased home working, for example.⁴ Through their effect on R, testing, tracing and self-isolation helps the economy and protects society, mitigating the need for some of the most stringent measures that also bring the greatest costs.

This plan outlines our ambitions to further increase our impact in the next phase of NHS Test and Trace – focusing on four priorities:

A. Working in partnership as 'teams of teams':

We are working together as a nation to tackle this virus. Success requires bringing together the very best skills and knowledge locally, regionally and nationally—coordinating our work across the response, including with local authorities, public health experts and the NHS. We will give local teams more control through community testing and expanding local tracing partnerships.

Local areas will be supported with increased data, analysis and insight. This will be backed by funding, such as the additional money in the continued Contain Outbreak Management Fund, potentially worth over £200 million per month. Finally, we will bring more local leaders into the very heart of the way we work, co-designing our response.

Key objectives

- **Strengthen local/national partnerships across the programme.** This includes:
 - Scaling up local contact tracing
 - Working with local Directors of Public Health to deploy new testing technology, including through community testing
 - Funding local action, through potentially over £200 million per month in new, additional funding through the Contain Outbreak Management Fund
 - Systemically involve local leaders in co-designing policy and operational response

⁴ SAGE 58 paper, Non-pharmaceutical interventions (NPIs) table, 21 September 2020, <https://www.gov.uk/government/publications/npis-table-17-september-2020>

B. Increasing the speed and reach of our services:

We will find and contain this virus faster than ever before. Our testing capacity is expanding to unprecedented levels, and we will continue to increase our test capacity and drive even faster turnaround times. Millions more will be reached through new lateral flow devices – rapid testing on a scale not previously seen that will protect our most vulnerable and find more positive cases. Our contact tracing capability will reach more people more quickly and more efficiently – nationally, locally, digitally.

We are also exploring the best ways to expand support to those who need it the most while self-isolating. And our new technologies are allowing us to pilot innovative daily testing regimens that we expect to reduce the need for self-isolation of contacts. Once implemented, this will help people return more quickly and safely to a more normal way of life, avoiding the difficulties we know that self-isolation brings.

Key objectives

- **Continue to expand our testing capacity, including through rapid lateral flow devices**, to increase the proportion of positive cases we find
- **Expand and improve our contact tracing system** so that by the end of January we reach 90% of cases and 85% of the contacts they name
- **Reach contacts faster, with by March ~80% notified within 72 hours of the person who has tested positive booking a test** (for in-person tests) through improving our digital journey. Increased use of rapid tests may allow for even faster turnaround time in future, and those traced through the app are reached even faster

This reach metric refers to tests taken in person (through Regional, Mobile, or Local Test Sites). The R impact assessment quoted elsewhere in this document includes all channels (in-person, satellite, and home)

- **Increase support for those self-isolating**, including ensuring app users can access the Test and Trace Support Payment scheme

C. Improving the use of our data:

The analytical and epidemiological work done since our inception – through Public Health England and the Joint Biosecurity Centre – means we now have new, smarter ways to tackle the virus.

The JBC continues to evaluate the effectiveness of a range of measures to ensure our responses have the greatest impact. It has made great strides in understanding potential

early-warning indicators so decision-makers can respond sooner to emerging outbreaks. And it will continue to enable local and national decision-makers to access information they need to respond most effectively, including infection rates, the national COVID-19 alert level and the factors driving transmission.

We will continue to bring together expertise and data sources, including from the NHS COVID-19 app, enhanced contact tracing, wastewater analysis and local 'soft' intelligence, to identify and halt local clusters before they become outbreaks – and respond more effectively to cross-border outbreaks when they occur.

Key objectives

- **Identify and react to clusters and outbreaks as close to real time as possible**, by bringing together contact tracing data, NHS COVID-19 app data, local 'soft' intelligence and wastewater analysis, taking strong action to prevent clusters of cases from growing into outbreaks
- **Increase adoption and use of the app** to multiply effects of all interventions – testing, contact tracing, self-isolation and outbreak management

D. Offering an excellent service to the public:

To have its full impact, our service must be easy and convenient. We're committed to making our service as seamless to use and as trusted by its users as possible and to make it accessible for everyone, such as those with disabilities or who need language support.

By increasing participation in testing, tracing and self-isolation, we will further reduce onwards transmission of the virus. Our progress so far would not have been possible without the public doing what has been asked of them – and only together can we find the right solutions.

Key objectives

- **Make the public part of continuous improvement of our services** by increasing the types of performance data we publish, bringing even more user feedback into design, and closer collaboration with those most affected by the virus

Introduction

NHS Test and Trace and Public Health England work together to help break chains of COVID-19 transmission, protect the public's health and enable people to return towards a more normal way of life. At the heart of our service are the large-scale testing and contact tracing systems to rapidly identify people who have COVID-19 and their close contacts and help ensure they self-isolate to stop the onward spread of the virus.

COVID-19, like any infectious disease, is a series of transmission chains. To fight the pandemic, we need to find people with the virus early and help ensure they self-isolate to prevent onward infections. By identifying other people who are most likely to have been exposed to the virus and (depending on the circumstances) either ensuring they too self-isolate or are tested, we stop even more transmission.

Our model is one firmly grounded in partnership, working with Public Health England, local and national government, the devolved administrations, the NHS, universities, not-for-profit organisations and the private sector. The scale of operations and close partnerships that we have built over the last six months, combined with the development of new rapid turnaround testing technologies, means that we can now substantially expand what we deliver to have an even bigger impact on the spread of the virus. We know that we can go even further in strengthening these partnerships.

Our delivery model for both testing and contact tracing will continue to be multi-channel, making use of face-to-face physical sites, home delivery and workplace testing; and digital, phone-based and face-to-face contact tracing. This makes our services as accessible as possible to everyone in this country. All this is underpinned by data architecture that enables us to use data individually, locally and nationally to manage risk and control outbreaks better and faster.

This model provides a fast, efficient service throughout the country, which can be adapted to meet local needs. Our service will work for everyone, in their local area, underpinned by a strong national capacity that gives us the scale to respond to changes in the pandemic.

Our achievements to date

Since our launch in May 2020, NHS Test and Trace has made significant progress. Our first set of targets and how we planned to achieve them were set out in the first business plan published in July. In the months since then, we have delivered on our commitments to expand our testing capacity, improve our ability to reach contacts and improve support for those who need to self-isolate. We have:

- **Created capacity for 500,000 daily COVID tests, delivered through an integrated network of NHS, private and not-for-profit laboratories**
- **Established over 680 local testing sites**
- **Tested 20% of the population at least once**
- **Carried out over 41 million tests**
- **Contacted 2 million people to notify them to self-isolate**
- **Created the app, which has now been downloaded over 20 million times**

Our testing capacity, scaled up to 500,000 tests per day, is among the largest per head in the world. The combined capability of local public health teams and national tracing teams has allowed us to carry out contact tracing both at scale and in ways that reflect the relative complexity of different cases – such as with specialist public health teams for care homes. This autumn, our contact tracing capability successfully dealt with a 17x increase in the number of contacts entering the system compared to July, whilst still maintaining the proportion of contacts reached.

Alongside the introduction of new legal duties for people who have to self-isolate and for their employers, we have continued to work with local authorities to promote the vital importance of self-isolating in stopping the spread of the virus and to support people who need to self-isolate. This includes the introduction in September of the Test and Trace Support Payment scheme for people on low incomes.

The graphs below show how the UK is leading the way internationally on testing – we have rapidly grown our capacity and are testing at a higher rate per head than comparable countries.

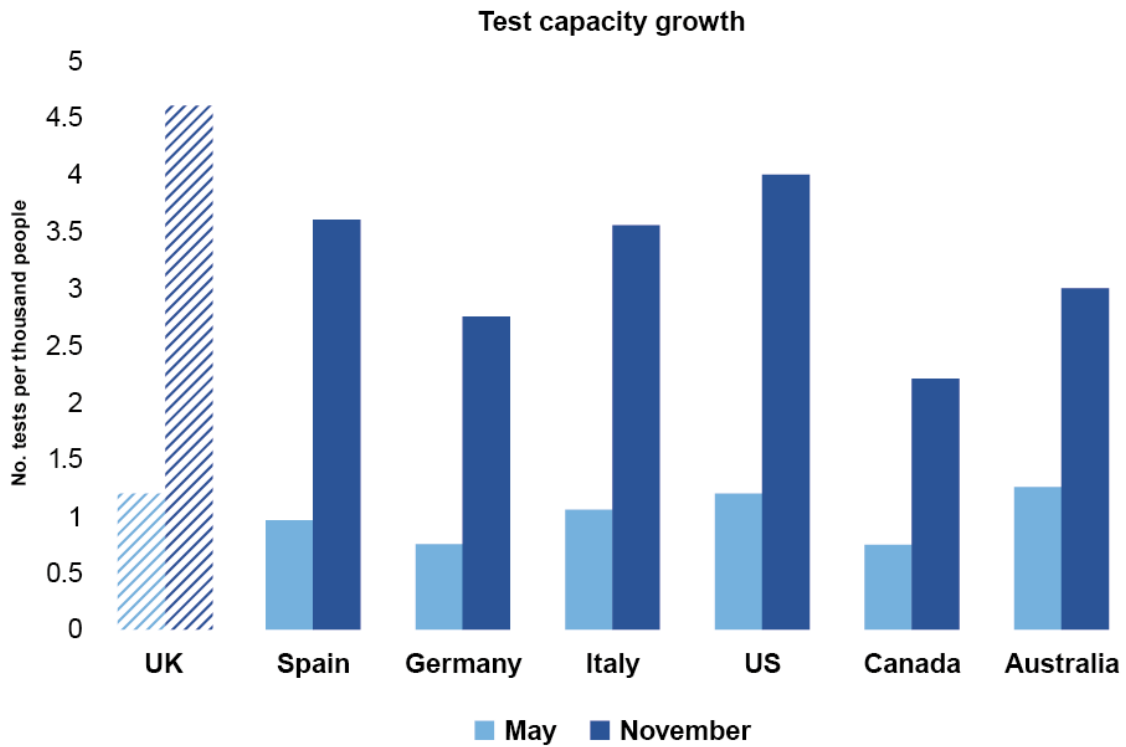


Figure 1, Chart. International comparison of testing capacity growth in the last 6 months.

	UK	Canada	Germany	US	Italy	Spain	France
Daily tests per 1,000	4.63	1.58	2.67	3.32	3.54	3.58	3.7
App downloads (% of population) (total downloads)	33.5 (20m)	14 (5.3m)	27.4 (22.8m)	n/a	19.8 (9.8m)	10 (5m)	10 (7m)

Figure 2, Table. International comparison of app downloads alongside the latest data on daily testing rates per 1000 of the population.

Figures listed are valid as of 11 November 2020. Caution should be used when making direct comparisons, because some nations do not have a single central COVID-19 app and it is unknown how many users delete the app after installation.

The next phase of NHS Test and Trace

Our four priorities

We will improve our model over the next four months by making it more partnership-based, faster and larger, able to more effectively use data, and more trusted by society.

A. Working in partnership as 'teams of teams'

We will strengthen our partnership between local and national public health experts, local government, the NHS, and employers to coordinate our response to the virus and share resources and intelligence to increase our impact across the country.

B. Increasing the speed and reach of our services

to tracing and self-isolation. This will allow us to find and contain the virus faster, and reach more people, including vulnerable and excluded communities.

C. Improving the use of our data

We will improve our analytics to rapidly identify clusters and respond before they can spread. We will drive up use of the app and QR codes for businesses. Combined with widely available and innovative testing, this will help enable economic and social activity to continue.

D. Offering an excellent service to the public

We will make it easy and convenient to access services ensuring the public understand why their engagement matters, what they need to do and how they can stop the spread of the virus.

A. Working in partnership as 'teams of teams'

We are working together as a nation to tackle this virus. NHS Test and Trace delivers a strong, integrated, local and national service in England, working in partnership with Public Health England and local authorities.

As 'teams of teams', we provide testing and contact tracing and prevent, contain and manage outbreaks – including through the [Contain Framework](#). While health is a devolved matter, we also work in collaboration with the devolved administrations to ensure a consistent and joined-up approach across the UK.

In the coming months, we will further increase the ownership of local teams and Directors of Public Health in testing and tracing through community testing and going further on local tracing partnerships. Local leaders will be built into the heart of our work, co-designing our policy and response.

Objectives

Our priorities are to:

1. **Scale up DPH-led testing**
2. **Deliver local tracing partnerships**
3. **Ensure support for self-isolation**
4. **Prevent and manage local outbreaks**
5. **Extend local authority funding**

Our achievements to date

This builds on work since our inception. In the past months, we have:

- Set up the National COVID-19 Response Centre to bring together the Joint Biosecurity Centre and Public Health England regional teams to connect the local and national response
- Increased local control of testing, giving Directors of Public Health the ability to select their own approaches to delivering tests and, as we go forward, introduce our new community testing programme locally

- Launched the Contain Outbreak Management Fund, which has committed over £780 million of funding to date, and through which we will deliver further funding to support local authorities to continue the development and delivery of their coronavirus response, including rolling out local contact tracing and managing outbreaks
- Strengthened local and regional contact tracing by setting up 200 local tracing partnerships, using local intelligence and expertise to reach people who have tested positive, and complemented by Public Health England's support, advice and training
- Improved data flows to local authorities, providing comprehensive contact tracing data to enable contact tracing teams to harness their local expertise and reach more contacts
- Supported local authority outbreak responses, including through the Contain Framework
- Built systems for closer collaboration between councils to share good practice, including the Good Practice Network
- Supported ministerial decision-making on local non-pharmaceutical interventions (NPIs) with local data and expertise

The next phase

We will work together with shared purpose to:

- Take a cross-system view of issues and develop a joint understanding of the local context: ensuring even greater coordination and coherence of our response, a commitment to working across teams to understand impacts at a local level and planning ahead from a shared set of assumptions
- Pool resources, evidence and data: ensuring we are using and sharing our combined resources efficiently, effectively and more systematically, so our response continues to adapt to the latest evidence and good practice to deliver our shared goals
- Engage and inform our communities: building a positive narrative about the response that reassures people and enables them to feel optimistic about the future – with more support for locally tailored communications that recognise the diversity of local communities

We will codify this partnership in a new Policy and Operations Co-design Group chaired by Dr Carolyn Wilkins. The Group will co-create a framework for our response, ensuring consistent quality standards and clear accountabilities as we scale up local delivery.

As a start, we expect this more local model will bring about the following changes:

1. Drive up locally-led testing at scale

- Local Directors of Public Health (DPHs) already determine test site locations and have their own discretionary rapid test allowance. We will build on this to ensure DPHs are able to choose their own approach to delivering tests and prioritising testing targets, drawing on their detailed knowledge of local needs, and helping ensure we reach communities most at risk
- As part of its COVID-19 Winter Plan, the Government is offering a new community testing programme for Tier 3 areas. Local authorities can come forward to participate in the programme, building on the positive lessons learned from the Liverpool Mass Asymptomatic Testing pilot (MAST)
- We will create a comprehensive system of local/national partnerships for contact tracing with a blended, fully integrated tracing model. This will allow us to reach a greater number of people with the virus and their contacts

2. Deliver tracing partnerships to support local tracking activities

- Every upper tier local authority will be supported to build its own capacity, allowing use of community-based tracers who can draw on local intelligence. Community-based teams will focus particularly on vulnerable or harder-to-engage groups, as many have been doing successfully since the summer. These local teams will work alongside the national team, which will support capacity building and meeting surges in demand

3. Ensure support for self-isolation

- For local authorities facing Tier 2 (High Alert) and Tier 3 (Very High Alert) restrictions, the Contain Outbreak Management Fund will provide additional funding. The criteria in place for this funding allows local authorities to use this to support non-financial activities aimed at assisting those who are self-isolating
- NHS Test and Trace will provide analysis and insights to help tailor optimal packages

4. Prevent and manage local outbreaks

- Building on the substantial collaboration so far, we will work to a shared framework to use data, insight and analysis to identify clusters of new infections and potential local outbreaks, and prevent onwards spread, including through rapid deployment of testing

5. Extend funding to local authorities

- We will provide new funding through the Contain Outbreak Management Fund of potentially £200 million per month to support local authorities facing continued or higher restrictions and to help fund local contact tracing and other requirements. This builds on the £780 million we have already committed to date.

Case Studies

Our partnership with Public Health England is central in all of this. This includes the work of local Health Protection Teams in responding to outbreaks of COVID-19, in addition to usual respiratory illnesses this winter, in care homes and secure settings; delivering training, exercises and capacity building; and providing expertise, analysis and data, including high-quality daily surveillance reports.

Bradford Council community engagement

Bradford is one of over 250 local contact tracing partnerships designed to improve services for all, particularly diverse, vulnerable and harder-to-engage groups. The council funds and supports a number of local partners, including:

Neighbourhood support teams – providing food parcels, access to priority shopping slots, and door-to-door testing in high prevalence areas

Voluntary outreach organisations – identifying positive cases within harder-to-engage communities, such as gypsy and traveller communities, and providing alternative sites for self-isolating individuals

Faith group outreach programmes – listening to learn how the council can adapt its services to better reach harder-to-engage groups. One example is a mosque outreach programme that gathered information on how multigenerational Muslim families perceived the requirement to self-isolate, which led to service adaptations to ensure that vulnerable older family members were protected from others in the household who tested positive, without separating families

Brent walk-through test site

The London Borough of Brent launched a local booking pilot in June at its walk-through test centre in Harlesden. In October, this scheme was extended to the walk-through test centre in Wembley. The council operates a booking line from 9am-5pm, 7 days a week, for anyone with symptoms who lives or works in Brent. The dedicated team books appointments at both local testing sites, directing residents to their nearest centre.

The booking process ensured that test slots were provided to local residents at higher risk, with 86% of test bookings being made by people from BAME backgrounds, some by those who are clinically extremely vulnerable and were referred by their GP.

Lessons learned included: distributing translated informational leaflets in council wards with high numbers of vulnerable and at-risk people, letters to local businesses, providing information in mosques and temples ahead of religious festivals such as Diwali and Navaratri, and using community hub referrals all increased engagement with the service.

B. Increasing the speed and reach of our services

By increasing the speed and reach of our services – and ensuring those asked to self-isolate do so – we go further in our impact on reducing transmission. As we achieve our ambitions, this reduces the stringency of restrictions needed to keep R below 1.

Objectives

In this next phase, we will improve performance across the user journey:

1. **Testing: find more cases, more quickly**
2. **Tracing: Trace a greater proportion of cases and contacts, more quickly**
3. **Supporting Isolation: ensure more people are supported, more effectively**

1. Testing: find more cases, more quickly

Testing is a central part of our overall strategy in three main ways:

- Testing **to find positive cases** is the first step to finding and isolating those who are infectious and their contacts
- Testing helps **protect vulnerable groups**, including care home residents, and helps keep healthcare pathways open
- Testing is a core part of our efforts to **enable** individuals, businesses and public services to understand and manage their risk, and get back to a more normal way of life

Our achievements to date

Since our service was set up, we have:

- Met our testing capacity target of 500,000 tests a day by the end of October, having processed 41 million tests overall, enabling us to identify over 1.1 million people who have the virus and helping ensure they and their contacts self-isolate to break chains of transmission

Test and Trace Business Plan

- Increased testing accessibility, by making the digital test booking journey faster and easier as well as piloting GP and pharmacy testing routes
- Introduced new testing technologies, including LAMP and rapid lateral flow device tests – supplementing PCR tests with new, rapid turnaround options
- Protected our health and social care settings by testing hospital patients on admission, care home staff on a weekly basis, and care home residents every 28 days. We have reduced the turnaround time of results for those tested in social care from over 100 hours in September to an average of 44 hours today – saving lives by breaking chains of transmission where vulnerability to the virus is highest
- Established over 700 local testing sites (see graphic) to provide more choices and make testing easier, decreasing the average distance travelled to access a test to 2.4 miles

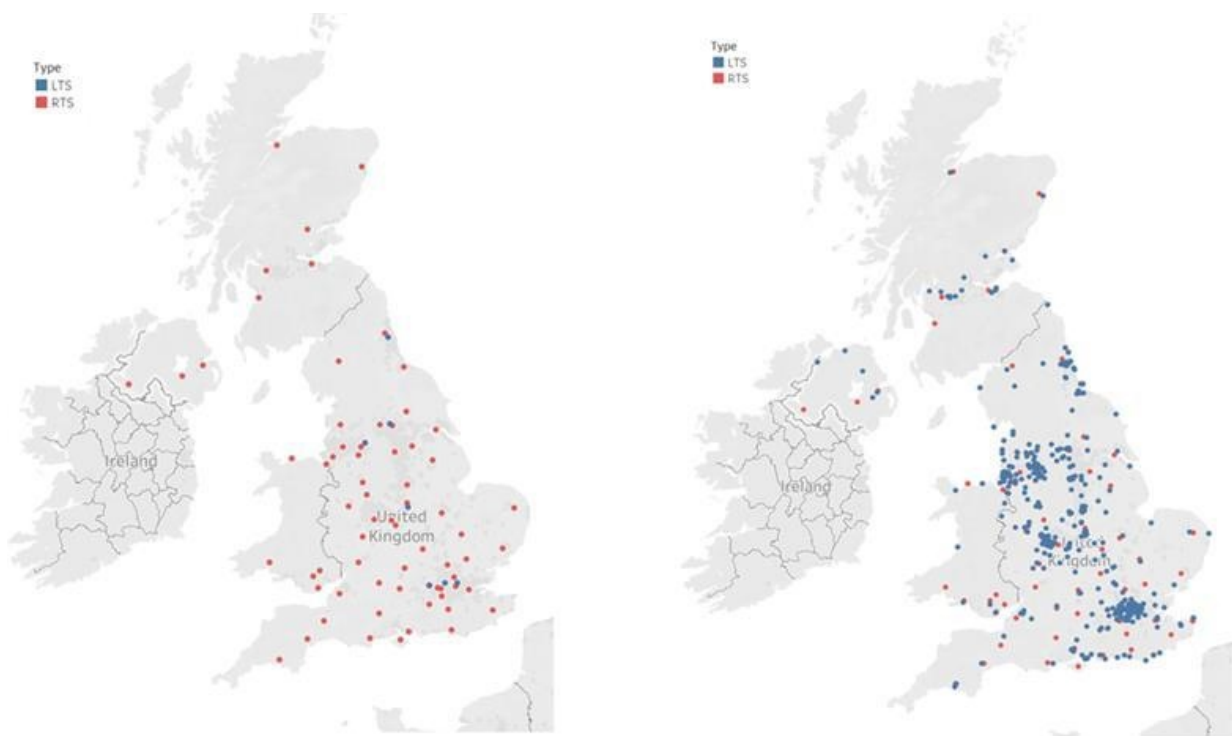


Figure 3, Map. Expansion of NHS testing sites (local test sites and regional test sites) across the UK from June 2020 (left) to November 2020 (right)

The next phase

For the next phase we have the following objectives:

Further expand the scale of our testing programme

- **Continue to expand our testing capacity**, including through rapid lateral flow devices, to increase the proportion of positive cases we find
- **Enable our largest employers, critical industries and the cultural and hospitality sectors** to run regular testing programmes
- **Support the rollout of community testing** in Tier 3 local authorities

Ensure that people can access a test and get their results faster

- **Make it easier to book a test**, through improvements to the online and telephone booking systems, taking account of differing access needs
- **Improve processes to reduce delivery times across all channels** through better sample flow, allowing seven-day collection of home tests and increasing test processing speeds through innovations such as unpacking and scanning during transit

Increase the number of test sites

- **Reduce the distance the majority of citizens need to travel to get a test** to within 1.5 miles or 30 mins for walk-up facilities

Pilot new approaches for contacts of positive cases

- **Pilot the offer of frequent rapid turnaround testing for contacts of positive cases** as an alternative to self-isolation

Case Study

Liverpool Mass Asymptomatic Serial Testing (MAST) pilot

Liverpool was selected as the first pilot site for whole city testing within England. Residents were asked to take two lateral flow COVID-19 tests, a week apart. The pilot allowed us to identify people who do not have COVID-19 symptoms but who are infectious and could spread the infection to others unknowingly. This has enabled us to support those infectious people to self-isolate reducing the spread of the virus.

Results from the pilot will be published shortly.

Alongside the operational learnings from running a testing programme of this size, we have identified several insights:

- It is crucial that people understand the rationale for testing those who don't have symptoms: to find the hidden virus, stop it spreading and get the R number down
- It is important to explain at an early stage that tests will be delivered via courier and taken at home, as this was not always clearly understood
- Trusted local voices and leaders play a critical role in engaging with diverse communities
- Some people are more comfortable getting tests in familiar environments such as community centres and places of worship
- We need to engage with individuals at key moments in their everyday lives, such as at supermarkets, places of worship and doctors' surgeries

2. Contact tracing – Trace a greater proportion of cases and contacts, more quickly

In July, we committed to increasing the proportion of contacts we identify and the speed at which we reach them so that, where necessary, people self-isolate promptly to stop the onward spread of the virus.

Our achievements to date

Since our inception, we have:

- Rolled out the NHS COVID-19 app, which has been downloaded over 20 million times in England and Wales in the last three months. Since its launch, we have further improved its accuracy in identifying high-risk contacts and have ensured interoperability with Scotland, Northern Ireland, Jersey and Gibraltar
- Strengthened local contact tracing through 250 local tracing partnerships that use local intelligence and expertise to contact people who have tested positive – working with local authorities to ring-fence tracing capacity for the highest-prevalence areas, helping us to reach more people
- Reached a higher proportion of cases, currently reaching 85% of cases, up from 79% in July⁵

⁵ 19-25th November, Weekly statistics for NHS Test and Trace (England) and coronavirus testing (UK)

- Improved the speed of contact tracing, reaching 75% of cases within 24 hours, up from 58% in the middle of October⁶
- Scaled to meet substantially higher demand, with 35 times the number of cases, and 17 times the number of contacts, entering the system now than in July⁷

The next phase

In the coming months we will continue to improve our services in the following ways:

Improve speed of contact tracing

- **Expand and improve our contact tracing system** so that by the end of January we reach 90% of people who test positive and 85% of the contacts they name
- **Reach contacts faster, with by March ~80% notified within 72 hours of the person who tested positive booking a test** (for in-person tests) through improving our digital journey.⁸ Increased use of rapid tests may allow us to drive turnaround times even faster in future
- **Increase the speed of our contact tracing**, with the potential for rapid tests to start the process at an earlier point in the infection cycle – ensuring that those who need to self-isolate do so as early as possible

Expand the role of local contract tracing

- **Help set up local tracing partnerships** in up to 90% of upper tier and unitary local authorities by the end of December 2020
- **Further integrate local and national tracing** by providing data to local teams faster and providing extra surge capacity where demand is high

Ensure a more seamless user journey

- **Make the journey easier, simpler and faster** through allowing people who test positive to register contacts online more easily, reducing unnecessary repeat calls, and speeding up call centre processes to reach people faster through new tools

⁶ 19-25th November, Weekly statistics for NHS Test and Trace (England) and coronavirus testing (UK)

⁷ 29 Oct - 25th November compared with 2-23rd July, Weekly statistics for NHS Test and Trace (England) and coronavirus testing (UK)

⁸ This metric refers to tests taken in person (through Regional, Mobile, or Local Test Sites). The R impact assessment quoted elsewhere in this document includes all channels (in-person, satellite, and home)

- **Improve our customer service function** to respond to complaints more efficiently

3. Supporting Isolation: ensure more people are supported, more effectively

Effective self-isolation is a critical part of breaking chains of transmission. Those self-isolating do not pass on the virus when they otherwise may have done. We support people when they self-isolate, whether they have tested positive or are a contact of a confirmed case.

Our achievements to date

In July, we committed to doing more to help ensure that people self-isolate promptly and reliably when they need to do so. Since then, we have:

- Provided financial support for those self-isolating through the [Test and Trace Support Payment scheme](#). This allows eligible individuals asked to self-isolate by NHS Test and Trace, including those on a low income and those unable to work from home to access a payment of £500 from their local authority
- Increased non-financial support for those isolating, introducing support calls and texts to link people to local authority or volunteer support, plus local support
- Increased understanding of the importance of self-isolation, the new legal duty on individuals and employers, and the support available for people self-isolating

Initial data from a survey undertaken by NHS Test and Trace⁹ indicates that just over half of contacts responding said they did not leave the house at all during their self-isolation period. Of those who did leave the house, around two thirds said they did so on only one occasion, and around three quarters said they did not have close contact with other people.

Self-isolation is not easy. It affects people's lives and livelihoods, and we have taken steps to provide financial support and other forms of assistance. There is much more we need to do. From polling and other research, we know that people break self-isolation for a number of reasons, most frequently the three set out below:

- **Lack of understanding** of the permitted behaviours under self-isolation – with over a third continuing to believe that outdoor activities, including exercise and recreation, are allowed
- **Lack of motivation**, particularly for contacts who do not have COVID-19 symptoms

⁹ To be published shortly

- **Lack of opportunity** to self-isolate because other basic needs (such as affording food or rent, or caring responsibilities) cannot be met

The next phase

In the next phase, we have set ourselves the following objectives:

Improve support for those self-isolating

- **Make Test and Trace Support Payments available to those notified by the NHS COVID-19 app**, ensuring more people are able to access the support to successfully self-isolate
- **Help local authorities identify those needing support during self-isolation**, using follow-up calls to ask whether those self-isolating might need more support

Improve our understanding of self-isolation

- **Launch a new survey with the Office for National Statistics** to improve our understanding of how well people self-isolate and what drives compliance

Ensure everyone understands why self-isolation matters

- **Improve understanding of the need to self-isolate, and the support available to do so**, through marketing campaigns and collaboration with local authorities

Take action against serious breaches

- **Work with local authorities to take action** where employers are knowingly allowing people to work when they should be self-isolating

Case Study

A day in the life of a clinical caseworker, Dr Penelope Cream, Clinical Psychologist and NHS Test and Trace Team Leader, National COVID-19 Response

Clinical caseworkers call people who have tested positive for COVID-19 to offer support, information, urgent assistance if required, and to ask about recent contacts so that they in turn can be told to self-isolate. It is a cascade of each community and each family helping every other person, set in motion by someone going for a swab test and then working with us to identify people at risk of infection. It's my job to support them in their work.

Recently we have been supporting first-year students just starting at university where they lack support networks. We also make referrals for urgent care when we identify that

someone is vulnerable: for example, an elderly person isolating alone at home with no access to food or medication; a person with a learning disability whose carers have to self-isolate; and refugees and people who are homeless. We speak to a very wide variety of people and offer help and advice to anyone who needs it.

We are dealing with emergencies, sometimes a bereavement. Sometimes we just give space and time to talk – which can make a huge difference to worried people at home on their own. Not all the calls are difficult, some are an absolute pleasure – and all are memorable. I think I can remember every single call I have made; the conversations stick with me as if I am with the person in their home for that brief but important time.

C. Improving the use of our data

Objectives

1. **Provide insight and analysis as the pandemic changes**
2. **Identify clusters more rapidly**
3. **Increase use of app and QR codes**

Data, insights and analysis sit at the heart of our approach. We use data to help identify outbreaks and prevent onward transmission. Our epidemiological and analytical expertise support decision-making. And we are committed to a transparent approach to the assessments and analysis we undertake.

The Joint Biosecurity Centre provides evidence-based, objective analysis, assessment and advice to inform the local and national response, including action on testing, contact tracing and local outbreak management in England. It also develops assessments of the risks to UK public health from inbound international travel and advice on the COVID-19 alert levels.

With Public Health England, we conduct surveillance testing, monitoring and reporting on the pandemic, including COVID-19 prevalence at local and regional levels. We gain insight from our expanding testing programme, contact tracing, the app and other sources, and use it to target interventions accordingly.

Achievements to date

Since our inception, we have, in partnership with Public Health England:

- **Improved our modelling and evaluation capability**, using data and analysis to understand the impact of the different interventions used. Key achievements include our nowcasting and forecasting capabilities to estimate the prevalence of COVID-19 and understand its patterns of transmission across the country. We are working with the UK's leading experts across organisations, including through our establishment of a Data Science Advisory Board and our partnership with the Turing Institute
- **Used data to identify clusters of infection**, bringing together data from testing, enhanced contact tracing and epidemiological surveillance to identify multiple new cases linked to a common setting. This enables us to respond faster and prevent clusters from becoming outbreaks

- **Worked with the Office for National Statistics (ONS) and other partners to provide disease surveillance and analysis**, including monitoring case rates, hospitalisations and syndromic surveillance indicators. We have also integrated other respiratory viruses into surveillance of hospital admissions; monitored excess mortality; created “HOSTED”, a surveillance dataset providing new insights into household transmission; and improved our understanding of COVID-19, including its prevalence in children and young people
- **Published weekly statistics on our performance**, setting high standards of transparency in our publication of a wide range of performance metrics, including numbers tested, test turnaround times and contact tracing successes. We also publish a range of further daily and weekly data on testing and the prevalence of the virus in conjunction with Public Health England on gov.uk so that it is available for the general public, and provide local authorities with additional daily data to help them understand the picture in their local area
- **Developed and published a methodology to assess the risk of inbound international travel** from over 250 countries, territories and islands, which has been endorsed by the UK's four Chief Medical Officers. Informed borders policy by bringing together indicators relating to prevalence, incidence, health system strain and local measure in place, among others

The next phase

We have ambitious plans to do even more with data in this next phase, set out below:

Use high quality insight, modelling and analysis to inform local and national action to stop the spread of the virus

- Use wastewater analysis and data from the NHS COVID-19 app and other sources to provide more rapid and accurate information on potential local outbreaks
- Share data faster, and more widely and easily, with local authorities and the devolved administrations to help target testing and outbreak management
- Make more of our work publicly available, including the codes we use to analyse various data sets
- Move to a single cloud platform to host NHS Test and Trace applications reliably, securely and at scale

Identify clusters of new infections more rapidly and notify those who may have been exposed

- Provide further data and support to local Health Protection Teams and local authorities to identify clusters and high-risk events as close to real time as possible
- Increase our use of staff, customer and visitor logbooks and app check-in data to warn and inform people who have been to locations linked to multiple cases, enabling them to adjust their behaviour to reduce transmission

Continue to promote widespread adoption and use of the NHS COVID-19 app and QR code system

- Continue to promote uptake and usage of the NHS COVID-19 app
- Share with the public how the app is being used and how aggregated app data helps break transmission – such as helping local authorities to target testing

D. Offering an excellent service to the public

Our goal is to **increase public awareness of NHS Test and Trace and how it helps to suppress the virus**. All successful services put the user at the centre and make it easy and convenient to access services. Understanding and engagement matter – it's crucial that we work with the public to incentivise the right behaviours.

Objectives

Our three objectives are:

1. **Explain clearly and concisely what we stand for and why we matter**
2. **Empower the public to help shape continuous improvement in our services**
3. **Engage the public and widen participation**

Our achievements to date

Since our inception, we have done significant work on these objectives – in particular, we have:

- **Made information about COVID-19 and our service widely available**, including through publishing weekly performance statistics and by creating a free online library of marketing and social media materials for local government and community groups to use to share guidance about COVID-19. We have also been working closely with local and national partners such as sports clubs and retailers to encourage people to protect their loved ones by getting a test if they feel unwell and self-isolating when necessary
- **Carried out targeted community engagement, working to make our service more inclusive**. This has included: working with community groups, voluntary sector organisations and multi-faith forums to help promote the service; adapting guidance and public health marketing to offer advice for people to celebrate and enjoy cultural and religious events safely; and making testing available in more settings, including hostels for rough sleepers
- **Developed new routes for more people to access our services**, including through making swab kits available to Directors of Public Health in areas of high prevalence, providing additional testing to groups at high risk or with a lower take-up of testing,

carrying out door-to-door testing, and piloting testing at GPs, pharmacies and places of worship

- **Improved access for people with disabilities**, including through step-free access at test sites, video instructions on test booking portals, digital journeys that are compatible with screen readers, simplified home testing, guidance and information in BSL and braille, and making the app compatible with Web Content Accessibility Guidelines 2.1 AA standard
- **Developed guidance and information in 10 languages**, introduced translation on the 119 test booking service and in the contact tracing service, and made the NHS COVID-19 app available in 12 languages

The next phase

We will continue to work with the public and build trust in what we do and how we do it:

Show people how they can use Test and Trace to reduce risk in their community

- **Create simple and compelling information to help people understand their risk** and how our services can help them, their families and friends reduce the impact of the virus
- **Continue to work with trusted voices locally and nationally to increase the reach of our services**, especially among those in disadvantaged and seldom heard groups. This includes drawing on more community partnerships and working with well-known doctors, social media influencers and local radio stations to deliver key messaging
- **Translate more guidance nationally**, reducing the need for local authorities to translate locally
- **Develop accessible advice and support**, specifically for people living in multigenerational and overcrowded households

Empower the public to help us make our service better

- **Set up a Citizens Advisory Board to work with us on some of the most challenging policy questions**. Create meaningful public policy dialogue, especially with underrepresented groups
- **Make our policy and design decisions more transparent**, including our equality impact assessments

Make it easier to use our services

- **Make our user experience simpler, easier and more convenient**, including through extensive user research and testing and piloting new ideas, with partners such as seldom heard groups and advocacy organisations
- **Work with citizens to better understand how to support them to make choices that help keep them and others safe** – including through using testing registration processes to provide guidance on contact tracing and self-isolation so that users get the information they need, when and where they need it most

Case Study

Royal National Institute of Blind People co-pilot on home testing kits

As part of NHS Test and Trace's ambition to make testing accessible to all, we partnered with the Royal National Institute of Blind People to co-design an accessibility trial. The aim was to understand and improve the end-to-end experience of the current service, from ordering a kit to receiving a result.

We conducted 42 interviews with blind and partially sighted people, including an observation of the participants performing the test.

What we learned from the trial led to substantial improvements, which are now being tested for implementation:

- **Live video assistance** to connect a user with a volunteer who can assist with taking the test
- **Easy-to-assemble boxes** to return home testing kits in a safe manner
- **Text-only, large-print and audio instructions** available via a new Equality Diversity & Inclusion (EDI) platform which will be accessible on GOV.UK
- **A simpler, easier digital journey** reducing the time taken from developing symptoms to self-isolating

Towards the National Institute for Health Protection (NIHP)

NHS Test and Trace strategy is backed by an additional £7 billion for its contribution to the Government's winter objectives – controlling the rate of reproduction, reducing the spread of the infection, and saving lives. This includes support for increased testing, including community testing, new technologies and ongoing improvements to tracing, and takes the overall funding provided for NHS Test and Trace this financial year to £22 billion.

This is a substantial funding allocation for a necessary part of the response to the pandemic. The vast majority of this is for testing and reflects the scale of testing that is happening in the UK. We understand the responsibility that comes with it, at a time where pressure on the economy is substantial. As a programme, we are committed to achieving value for money, publishing our expenditure in line with current requirements, and delivering the greatest impact on virus transmission that we can, through all the actions we take.

Our work builds on 'teams of teams' of local authorities and Directors of Public Health, the NHS, Public Health England, and public, private and not-for-profit sector partners. We will continue to learn and evolve, embracing innovation, such as the new technologies and diagnostics that will help all of us back towards a more normal way of life. As the Government prepares to roll out a vaccine we will work closely with the vaccine deployment team to ensure that our work is aligned with, and supportive of, rapid, mass vaccination.

Beyond COVID-19, we have an ambition to significantly improve early detection of disease more broadly. The significant expansion of our diagnostics capacity and capabilities since the start of the pandemic provides a unique opportunity to transform how we address disease in this country long-term. We see an expanded role for innovative and accessible diagnostic tools to identify and respond to disease earlier – and will always be looking out for new methods to reduce and eliminate unnecessary illness.

The people of the UK have adapted with creativity and compassion to the demands COVID-19 has placed on us all. The threat is a collective one; the responsibility to keep everyone safe is one everyone shares. If, as restrictions are lifted, everyone chooses to act cautiously and in line with the revised guidance, R will remain low, the rate of transmission will decline further, and more restrictions can be lifted. We are focused on delivering the improvements to NHS Test and Trace, laid out above, in order to save lives and avoid costly restrictions.

This means that everyone must do their part:

- Adhere to the 'Hands. Face. Space.' rules
- Get a test if they display symptoms of COVID-19
- Self-isolate for the required period if instructed to by NHS Test and Trace

- Participate in community-wide testing if offered within their area

NHS Test and Trace will leave an enduring public health legacy that will set us up to respond to future pandemics more effectively. Our experience in stemming the current crisis together will live on in the establishment of the National Institute for Health Protection (NIHP), which brings together Public Health England and NHS Test and Trace, as well as the analytical capability of the Joint Biosecurity Centre, under a single leadership team. This single organisation, tackling COVID-19 and focused on protecting the nation's health, will commence operations in spring 2021.