

NHS Digital COVID-19 Gold Report

29 March, 2021



Overview of active initiatives in NHS Digital's COVID-19 response – 29 March, 2021

COVID-19 strategic focus areas

	Technology & Data workstream for Vaccinations (p.4-5)
	Deliver digital services for NHS Test and Trace (p.6)
	Provide digital channels for citizen guidance and triage (p.7)
	Identify and protect vulnerable citizens (p.8-9)
	Enable remote and collaborative care with systems and data (p.10)
	Support planning with data, analysis, and dashboards (p. 11)
	Get data and insights to research communities & support clinical trials (p.12)
	Provide secure infrastructure and support additional capacity (p.13)
	Plan for recovery, restarting services and new needs

Initiatives NHS Digital is delivering

Significant milestone reported in this update

Work ongoing

Booking systems: deliver national & local booking capabilities	Data flows and dashboards: data architecture, quality checks & visualisation	Communication Infrastructure: connectivity, NHSmail, devices	Point-of-Care systems: assure performance and data integrity	Service Operations: operational support for the end-to-end vaccination service	Cyber Security Operations Centre: cybersecurity services for Vaccination	
Digital platform for Pillar 2 & 3 Testing: all out-of-hospital testing for the public	Contain: public and private access to COVID-19 dashboards	Cyber Defence Operations Centre: security services for Test, Trace & Contain	Service Operations: ensuring performant operation of Pillar 2 testing infrastructure			
Covid Therapeutics: enable delivery of Covid-19 therapies by primary care	Covid Status: provide citizens with testing and/or vaccination status	111 First (ED Streaming): enabling efficient management of patients in EDs	NHS Pathways: new products and content to enable wider COVID-19 response	111 Online: enhancements to enable wider COVID-19 response	NHS App: over 1m users now accessing personalised health services via NHS App	NHS.UK: up-to-date health information and various digital services for citizens
Shielded Patient List (SPL): developed & maintaining list of vulnerable patients	SPL Data for Public Health: private dashboards to facilitate planning	Risk Stratification: platform to support more granular COVID-19 risk profiles				
COVID Oximetry @home: enabling monitoring of high risk patients in their homes	Long Covid: data and digital capabilities to enable treatment and info provision	GP Connect for Social Care: access to GP records to support direct care	"Bring Your own Device" for Primary Care: enabling GPs to work remotely			
Secondary Care Medicines Data: developing new data collection	Social Care Data Collection from Care Management Systems	Situation Reports: collecting data for NHSE on COVID-19 patients/staff impacts	Cancer: linking data and performing analysis to support planning & research			
Trusted Research Environment for England (nominated by SAGE)	NHS COVID-19 Vaccine Registry: facilitating recruitment into clinical trials	Novavax Trial: supporting Phase 3 trial for COVID-19 vaccine candidate	RECOVERY Trial: Hospital and testing data for evaluating treatments	Enabling Research: initiatives to accelerate production and improve access	Central Disseminator of GP Data for research and planning	PRINCIPLE Trial: primary outcome data for trial focused on older people
Other infrastructure and cyber support: e.g. Laptops, cyber plans	Connectivity: network upgrades and extensions within NHS and social care	Authentication: development of additional virtual smartcard solutions	NHS Mail for health and social care: expansion and upgrade of capability			
"Healthcare debt" analysing activity, referrals & outcomes						



Overview of completed initiatives in NHS Digital's COVID-19 response – 29 March, 2021

COVID-19 strategic focus areas

Initiatives NHS Digital has delivered

Work complete



Technology & Data workstream for Vaccinations (p.4-5)



Deliver digital services for NHS Test and Trace (p.6)



Provide digital channels for citizen guidance and triage (p.7)



Identify and protect vulnerable citizens (p.8-9)



Enable remote and collaborative care with systems and data (p.10)



Support planning with data, analysis, and dashboards



Get data and insights to research communities & support clinical trials (p.11)



Provide secure infrastructure and support additional capacity (p.12)



Plan for recovery, restarting services and new needs

Service Design: targeted reviews to ensure coherence across Test & Trace

Trace: digital infrastructure for contact tracing

NHS Login: secure identity verification for access to App and other NHS services

Self-Isolation Notes: digital service to self-certify for COVID-19 if evidence required

111 First (EDDI): booking appointments from 111 telephony / online into EDs

Find my NHS number: service to rapidly provide NHS number to patients

SPL Open Data: providing open data / visualisation of aggregated data

Vulnerable children: support safeguarding by sharing data with nurses, health visitors

Mental Health Survey: impact of COVID-19 on children and young people

Shielding Notes: digital service to self-certify for COVID-19 if evidence required

Video-consultations for Primary Care: assurance and rollout to >90% of practices

Video Consultations for Outpatients: rollout/implementation support to NHSE

GP Connect: information sharing across primary and urgent care

Microsoft Teams Deployment: deployment to 1.2m NHS Mail users

Electronic Prescription Service (EPS): electronic by default (Phase 4)

iPads for Social Care: secure access to patient data for direct care

Ethnicity Outcomes Analysis: analysis to investigate high BAME fatalities

Diabetic risk factors: linking data from national audit to support analysis

REACT1: data for community prevalence testing (antigen testing)

HOSTED: monitoring of anonymised household transmission by PHE

111 Open Data: published open data / visualisation for COVID-19 triages

e-Referral Dashboard: open data showing referral trends during COVID

Plasma Trial: identification of eligible (recovered COVID-19) patients

UK Biobank: large-scale medical and genetic database for health research

Returning Staff: advice and technical support for onboarding

Your NHS Needs You: survey for recruitment of returning clinicians

Nightingale Hospitals: connectivity, technical / cyber



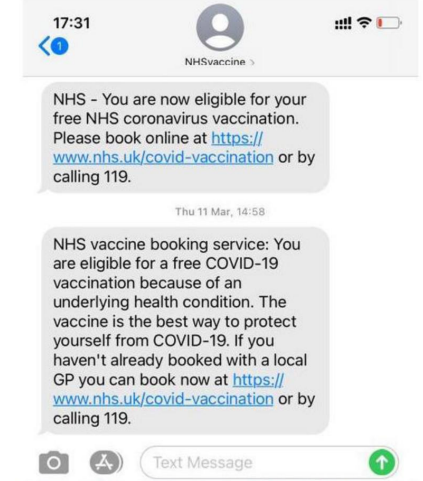


NHS Digital's COVID-19 response – Support delivery of vaccinations (1 of 2)

NHS Digital is leading the Technology and Data workstream of the Vaccinations programme, providing data, analysis, and infrastructure to support delivery of vaccination programmes and facilitate post-vaccination monitoring

Initiatives	Focus area	Deliveries and impact
Appointment Booking	Identifying Eligible People for Cohort 6*	<ul style="list-style-type: none"> Delivered multiple data and technology solutions to enable accurate identification of around 6m people eligible for vaccination as part of Cohort 6*. This included carers and those aged 16-64 years whose underlying health conditions increase their risk serious disease and mortality from COVID-19 Conducted a population-level risk assessment to identify the higher risk cohort using digital infrastructure developed by NHS Digital and a predictive model developed by Oxford University (described in detail on page 9). The population risk assessment was completed on 14 Feb and loaded into the National Immunisation Management Service (NIMS) on 24 Feb Collected data from 156 sources to identify ~2m carers and established new data flows to pass this data to the National Immunisation Management system (NIMS), enabling these carers to be offered vaccinations as part of Cohort 6 (all flows in place by 5 March)
	National Booking Service (NBS)	<ul style="list-style-type: none"> Continued to enhance the national 'Book a coronavirus vaccination' service (Book a coronavirus vaccination - NHS (www.nhs.uk)). As of 21 March, over 6m people have used the service to book appointments at NHS vaccination centres and community pharmacies (bookings into PCNs and Hospital Hubs are currently managed directly by those providers). The service is also used to check patients into these vaccination sites and to manage appointments Continued programme of ongoing performance testing and scaling to ensure the platform remains performant whilst expanding the number of sites, types of vaccine available and number of concurrent users. The service has been assured to support 5m vaccinations per week
	Call and Recall Service	<ul style="list-style-type: none"> Continued to manage service that sends vaccination letters to eligible citizens and issues reminders to people that did not attend or book appointments. As of 26 March, 15m letters and 4m text messages have been issued. Focus now is on completing invitations for cohort 9 (people aged 50-54) and on sending reminders to those who have not yet booked a vaccination appointment A text messaging service has been successfully piloted and is now being used in parallel with letters as a more rapid mechanism for notifying people of their eligibility for vaccination

Successfully piloted text messaging as a more rapid and cost-effective mechanism for inviting people for Vaccinations



Messages from NHSVaccine are tailored according to the reason an individual is eligible for vaccination

* The Joint Committee on Vaccination and Immunisation (JCVI) has prioritised vaccination for specific cohorts based on increased risk from COVID-19 ([Priority groups for coronavirus \(COVID-19\) vaccination: advice from the JCVI, 30 December 2020 - GOV.UK \(www.gov.uk\)](https://www.gov.uk))





NHS Digital's COVID-19 response – Support delivery of vaccinations (2 of 2)

NHS Digital is leading the Technology and Data workstream of the Vaccinations programme, providing data, analysis, and infrastructure to support delivery of vaccination programmes and facilitate post-vaccination monitoring

Initiatives	Focus area	Deliveries and impact
Data Access	Summary Care Record Application (SCRa)	<ul style="list-style-type: none"> Delivered new 'COVID-19 Vaccination' tab in the SCRa on 05 Feb and in SCRa 1-click on 25 March enabling authorised users to view a patient's coronavirus vaccination history. The new tab is only displayed if a patient has had at least one vaccination and is usually available within 48h after vaccination event information is entered into point of care systems. As of 25 March, the new tab in SCRa had been viewed over 33k times across 1.3k care settings, with the majority of views in provider trusts and community pharmacy sites
	Adverse Reactions	<ul style="list-style-type: none"> Delivered new data flow to GP IT systems on 18 March to enable data on adverse reactions to be viewed in GP records
	Reporting on Local Performance	<ul style="list-style-type: none"> Delivered tactical solution on 23 March to provide GPs and other stakeholders with information on vaccination events for their practices. Work on the strategic reporting solution is underway in conjunction with stakeholders
Data Quality	Data and Dashboards	<ul style="list-style-type: none"> Delivered minimum viable product (MVP) for the private data quality dashboard on 18 March. This dashboard displays results of reconciled vaccination event data across all vaccination systems and enables proactive resolution of any differences
Communication Infrastructure	Connectivity	<ul style="list-style-type: none"> Continued to work closely with NHS England and telecommunications suppliers to ensure that fixed connectivity, WiFi and back-up 4G connections are available for vaccination centres, primary care sites and community pharmacies. As of 26 March, NHS Digital had facilitated procurement and overseen installation of communication infrastructure to 124 sites with work underway with a further 22 sites. Deployment is being managed to align with vaccine supply

Vaccination information has been added to the Summary Care Record Application (SCRa) to facilitate direct care across a wide range of care settings, providing scheduled & unplanned care

First dose of Covid-19 vaccine

Date and Time: 13-Dec-2020 23:48

Vaccine Product: COVID-19 mRNA Vaccine BNT162B2 30micrograms/0.5ml dose concentrate for suspension for injection multidose vials (Pfizer-BioNTech) (Pfizer-BioNTech)

Manufacturer: Pfizer-BioNTech

Organisation: RJ1

Adverse reaction(s) recorded? Yes. 1 adverse reaction(s) were recorded within 15 minutes of administering the vaccine.

Reaction (1): Injection site pain (disorder)

Reaction Description (1): NRvBxD iRuZHX MmROXva QDOMJ yFI kxOBupc gl'RtcnZ DSUJoRiRx sox u3IHUDDGfo

Severity (1): mild

Causative Agent (1): Administration of first dose of SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) vaccine

Type (1): allergy

Verification Status (1): unconfirmed

Evidence (1): NRvBxD iRuZHX MmROXva QDOMJ yFI kxOBupc gl'RtcnZ DSUJoRiRx sox u3IHUDDGfo

Onset (1): 20220107

Less Information

Site of Vaccination: Right arm

Route of Vaccination: Intradermal route

Dose: 0.5 ml

Batch Number: BVJQXCKUZWKTEPERYEPU

Care Setting: Community health services (qualifier value)

The new tab will be displayed only when at least one vaccination has been administered. Information will usually be available within 48h of a vaccination event being recorded





NHS Digital's COVID-19 Response – Deliver digital services for NHS Test and Trace

NHS Digital is the primary digital delivery partner for Testing within NHS Test & Trace, supports Contain via a series of dashboards plotting the infection spread within the UK, and provides IT service management and cyber security management for Testing and Contain

Initiatives	Focus area	Deliveries and impact
Surveillance	Variants of Concern	<ul style="list-style-type: none"> Supported enhanced surveillance of variants of concern by expanding data capture at test registration on 29 Jan (e.g. new questions to record previous positive test results) and establishing a direct feed to the Wellcome Sanger Institute, the largest genome sequencing hub in the UK, on 9 Feb. These changes enable prioritised gene sequencing of samples of interest and enable future work to enable particular samples to be identified at point of registration
Border Control	Mandatory Testing of International Arrivals	<ul style="list-style-type: none"> Delivered new digital capabilities on 15 Feb to support mandatory testing of international arrivals including integration with a 3rd party hotel booking system, a new ordering service for self-testing kits, and capture of additional data at registration. These changes enable testing of individuals isolating at government quarantine hotels ('Red' channel) and those self-isolating at an accommodation of their choice ('Amber' channel)
Asymptomatic Testing	Testing for Schools	<ul style="list-style-type: none"> Launched new service on 04 March for ordering lateral flow device (LFD) tests for home use (https://www.gov.uk/order-coronavirus-rapid-lateral-flow-tests). This service is a key enabler of the safe return to schools and is for use by anyone in a household, childcare bubble or support bubble if at least one member is a school pupil or works in a school (or related occupation) Delivered additional changes to the Asymptomatic Testing Site (ATS) platform to support the return to school including changes that enable schools to more easily report LFD test results on 29 Jan, bulk register LFD tests on 15 Feb, and bulk order LFD tests on 18 Feb
	Self-Test Results Reporting	<ul style="list-style-type: none"> Continued to enhance the online service for self-reporting test results (https://www.gov.uk/report-covid19-result): integrated the service with NHS Login on 4 Feb reducing the time required to report a result by over 50%; provided users with a Contact Tracing token from 11 March, thereby ensuring isolation periods start at point of a positive LFD test; expanded service to include Wales NHS staff on 11 March; implemented capture of ONS occupation codes on 18 March to enable surveillance by sector
Increasing Testing Capacity	Scaling the Service	<ul style="list-style-type: none"> Completed scaling work required for the digital service to process up to 10m results per day and over 1m results per hour. At peak, the service successfully processed over 2m results within 24h

NHS Digital has worked with partners to enable the digital infrastructure for Testing to process 10m results per day



This increased capacity is a key enabler for expanding asymptomatic testing for schools and workplaces





NHS Digital's COVID-19 response – Provide digital channels for citizen guidance and triage

Providing digital channels for citizens to access information and guidance, self-manage and be routed to the most appropriate care, minimising contact and reducing the burden on clinical staff

Initiatives	Focus area	Deliveries and impact
COVID Therapeutics	Primary Care	<ul style="list-style-type: none"> Supported NHS England in designing a proposal for delivering therapeutics to people who have tested positive for COVID-19 through primary care. The proposal was approved on 12 March and work is now underway to establish the enabling digital infrastructure: functionality to communicate potential eligibility following a positive test, changes to enable GP's to provide proactive follow-up, and enhancements to NHS 111 Online to support patient identification and facilitate prescriptions There are currently no therapies approved for treating COVID-19 outside of hospital. This preparatory work is being initiated now to enable more rapid mobilisation of delivery channels as soon as novel therapies are approved for treatment of COVID-19 patients in primary care. Additional work will be required once specific treatments are approved for use
COVID 'Status'	Data and Infrastructure	<ul style="list-style-type: none"> Stood up a team to respond to requests from system partners for support of services for providing citizens with their vaccination and/or testing status to support emergent domestic and international policy
Improving Access to Services	User Research	<ul style="list-style-type: none"> NHS Digital actively employs User Research to determine how we can ensure digital services are accessible to those most impacted by COVID-19 and those most likely to encounter barriers to using those services (see graphic). A wide range of research methodologies are used including surveys, observation, and usability testing to provide an evidence base that informs initial service design and ongoing service delivery. Over 1.5m people have participated in user research over the past year
	Self-Isolation Notes	<ul style="list-style-type: none"> The 'Get an Isolation Note' service has won the Civil Service Awards 2020's Resilience & Rapid Response Award. The service was launched on 20 March 2020 within 10 days of the original commission in close partnership with DWP, DHSC and NHSX. As of 22 March, 2.8m notes have been generated to enable people to self-certify their absence from work due to COVID-19, thereby, reducing burden on GPs, protecting access to benefits, and supporting employment (Get an isolation note - NHS (111.nhs.uk))

NHS Digital's user research teams are actively working with different groups to understand barriers to access and use of digital solutions

<p>People who are digitally excluded 22% of the population (11.9 million) do not have the digital skills needed for everyday life in the UK (Good Things Foundation, 2019).</p>	<p>People with no or low English language skills 1.3% (726,000) of the population cannot speak English well and 0.3 per cent (138,000) cannot speak English at all (Office of National Statistics, 2011).</p>
<p>People with cognitive or physical disabilities 21% (14.1 million) of the population have a disability (Department of Work & Pensions 2020).</p>	<p>Trans and non-binary people 21% of trans people felt their needs were ignored when they accessed, or tried accessing, healthcare services (National LGBT Survey, 2017).</p>
<p>People from Black, Asian and minority ethnic communities* 14% of the population (7.9 million) identify themselves as being in a BAME groups (Office of National Statistics, 2011).</p>	<p>People who care for a family member or friend who needs help 11% of the population (5.4 million) provide unpaid care for a friend or family member (Office of National Statistics, 2011).</p>

User research with over 1.5m people is providing a real-world evidence base for effective design and delivery decisions





NHS Digital's COVID-19 response – Identify and protect vulnerable citizens (1 of 2)

Identifying and protecting vulnerable citizens, to ensure that they can be shielded or receive additional support

Initiatives	Focus area	Deliveries and impact
Shielded Patient List (SPL)	Identifying vulnerable citizens	<ul style="list-style-type: none"> The Shielded Patient List (SPL) identifies patients at the highest risk from COVID-19, based on criteria set by the Chief Medical Officer for England (CMO). Since 23 March 2020, NHS Digital has delivered weekly iterations of the SPL to partner organisations so support can be targeted to clinically extremely vulnerable people (CEV) The list was significantly expanded on 15 and 22 February to include ~1.7m people identified as being at increased risk from COVID-19 through a population-level risk assessment using the QCovid risk prediction model (described on page 9). There are now ~3.8m people on the SPL NHS Digital will continue to produce the list after the pause to national shielding advice on 31 March to enable ongoing support by partner organisations in health and local government and to facilitate future support for CEV, should this be required
	Communicating with vulnerable citizens	<ul style="list-style-type: none"> Continued to issue advice and guidance to CEV with 2.3m letters and 850k emails issued on 21 Feb to communicate the extension of national lockdown to 31 March. 3.8m letters and 1.4m emails were issued from 15 March to advise CEV about support that will be available once the national shielding advice pauses on 31 March
	Dashboards	<ul style="list-style-type: none"> Expanded the private SPL dashboards used by Directors of Public Health to support CEV on 18 Feb to include vaccination data. These dashboards provide views of first and second vaccination doses for CEV in a local area, broken out by age and ethnic category, enabling targeted interventions to support take-up of COVID-19 vaccination by these patients
	Vitamin D	<ul style="list-style-type: none"> Completed matching of requests for free Vitamin D supplements to people on the SPL. As of 22 Feb, when the scheme closed, ~460k validated requests had been referred to DHSC for fulfilment
	Get a Shielding Note	<ul style="list-style-type: none"> Implemented changes to the 'Get a Shielding Note' service to align with the end of shielding advice. From 31 March new 'Shielding Notes' can only be generated retrospectively and the service will be paused from 30 April. As of 26 March, the service has enabled over 15k CEV to generate a note for their employer or the Department of Work and Pensions confirming they had been advised to shield

Since it was first published on 23 March, 2020 NHS Digital has delivered 50 iterations of the Shielded Patient List (SPL) which is disseminated to numerous public bodies involved in providing shielding services



The SPL remains an important enabler for provision of targeted support to ~3.8m clinically extremely vulnerable people





NHS Digital's COVID-19 response – Identify and protect vulnerable citizens (2 of 2)

Identifying and protecting vulnerable citizens, to ensure that they can be shielded or receive additional support

Initiatives	Focus area	Deliveries and impact
Risk Stratification	COVID-19 Population Risk Assessment	<ul style="list-style-type: none"> At the request of DHSC, NHS Digital has developed digital infrastructure to support a more sophisticated approach to identifying individuals with increased vulnerability to COVID-19, now that clinical determinants are better understood. This infrastructure uses the University of Oxford's QCovid risk prediction model, which assesses an individual's risk based on a combination of characteristics (including age, sex, ethnicity, BMI, and specific medical conditions). DHSC commissioned Oxford University to develop the QCovid model and it has been validated by the Office for National Statistics (ONS) Successfully used the new infrastructure for population-level risk assessments for adults in England, identifying an additional 1.7m people at increased risk of adverse outcomes from COVID-19 that were <u>not</u> previously included on the Shielded Patients List (SPL). This has enabled these individuals to be prioritised for vaccination as part of Cohort 6* and to be eligible for additional support through addition to the SPL from 14 Feb (vulnerable individuals below the age of 70) and 22 Feb (vulnerable individuals above the age of 70). These additions were then subject to review by GPs and Trusts through standard SPL clinical review processes Delivered the COVID-19 Clinical Risk Assessment Tool for authorised users on 16 Feb, which is also based on the QCovid model. The tool generates absolute and relative risk scores for individuals to enable clinicians to hold tailored conversations with patients about their specific risks from COVID-19 and to facilitate clinical review of additions to the SPL (COVID-19 Clinical Risk Assessment Tool - NHS Digital) Patients were added to the SPL when their risk assessment results placed them in the top 2% of people at highest risk of catching and dying of COVID-19. The threshold was agreed by England's Chief Medical Officer, in consultation with senior clinicians, based on research conducted by the University of Oxford. To facilitate clinical review of patients whose predicted risk did <u>not</u> meet this threshold, NHS Digital delivered the COVID-19 Population Risk Assessment Viewer on 16 March, which enables GPs to view patients registered at their practice whose risk assessment results were below the agreed threshold

NHS Digital successfully delivered a population-level risk assessment for adults in England, enabling ~1.7m people at increased risk from COVID-19 to be prioritised for vaccination and access support via the Shielding Programme (<https://digital.nhs.uk/coronavirus/risk-assessment/population>)

COVID-19 Population Risk Assessment

We've used the University of Oxford's QCovid® risk prediction model to identify additional people to be added to the **Shielded Patient List (SPL)**.

Page contents

- Level of stage
- How we've identified people as being potentially at high risk, clinically extremely vulnerable
- Health conditions and treatments
- Geographical districts
- Who has been risk assessed
- Agreed threshold for adding people to the Shielded Patient List
- Missing or unknown data
- Validating additions to the SPL generated by the population risk assessment
- Patients not added to the SPL
- Transparency notice

Read about shielding status and what to do if you think you should not have been identified as high risk. If you have a question about the COVID-19 Population Risk Assessment that is not answered here, please email risk.stat.spl@nhs.uk.

We have used QCovid® to develop the COVID-19 Population Risk Assessment. This combines a number of factors such as age, sex registered at birth, ethnicity, body mass index (BMI) and specific health conditions and treatment to estimate the risk of a person catching coronavirus and becoming seriously unwell.

We have used patient data held centrally to identify people who might be at high risk and generated risk assessment results for these people. People whose results are above the **agreed threshold** for high risk (clinically extremely vulnerable) or severe illness from coronavirus have been added to the **Shielded Patient List (SPL)** in England.

Coronavirus information can be found on [GOV.UK](#), including [guidance for high risk \(clinically extremely vulnerable\) people](#).

Our use of QCovid® in the COVID-19 Population Risk Assessment using patient data held centrally has been registered by NHS Digital as a **Class 1 medical device** with the [Medicines and Healthcare products Regulatory](#)

NHS Digital has also delivered new tools to support clinical review of patients' risk and published detailed information on how the risk assessment was completed, including which data sets were used and clinical code mappings ([COVID-19 Population Risk Assessment - NHS Digital](#))

* The Joint Committee on Vaccination and Immunisation (JCVI) has defined Cohort 6 as people between the ages of 16 and 64 with underlying health conditions which put them at higher risk of serious disease and mortality from COVID-19 ([Priority groups for coronavirus \(COVID-19\) vaccination: advice from the JCVI, 30 December 2020 - GOV.UK \(www.gov.uk\)](#))





NHS Digital's COVID-19 response – Enable remote and collaborative care

Making data and systems available to enable remote and collaborative working by health and care staff, minimising transmission and managing strained capacity

Initiatives	Focus area	Deliveries and impact
Remote Digital Care	COVID Oximetry@home	<ul style="list-style-type: none"> Continued to support NHS England's (NHSE) programme to monitor higher risk patients' oxygen levels in their homes, following a positive COVID-19 test Delivered enhancements to daily data feeds to COVID Oximetry@Home providers on March 5. These changes enable earlier recruitment by improving the speed with which providers are notified of new patients with a positive COVID-19 test who are over 65 and/or clinically vulnerable Increased coverage of weekly data collection to over 80 CCGs, covering over 13k patients. This data is utilised to produce weekly management information reports for NHS England's COVID Oximetry@Home programme and regional leads and will be shared for evaluation
Long Covid	Data and Measurement	<ul style="list-style-type: none"> Continued to support NHSE's 'Long Covid' programme, which is coordinating design and delivery of services for patients who are experiencing long-term effects from COVID-19 Surveyed providers of 'Long Covid' assessment services to identify opportunities to improve completion rates and quality of responses for the weekly clinic activity report. This report captures data on patient volumes, activities undertaken when assessing Long COVID-19 patients, and patient demographics. Findings delivered to the programme on 10 March and recommended changes, including a new reporting rhythm and enhanced questions, will be implemented in April Delivering fortnightly report on activity in primary and secondary care to the 'Long Covid' programme to complement the clinic activity report. This report reflects use of the new 'post Covid syndrome' clinical codes* (see graphic). As of 10 March, over 3,750 GP practices and over 125 secondary care providers have recorded activity using these codes

Clinical codes are now available for recording 'Long Covid' diagnoses and referrals in both primary and secondary care	
SNOMED code	Description
1325021000000106	Signposting to Your COVID Recovery (procedure)
1325031000000108	Referral to post-COVID assessment clinic (procedure)
	Referral to Your COVID Recovery rehabilitation platform (procedure)
1325041000000104	Post-COVID-19 syndrome
1325161000000102	Acute COVID-19 infection
1325171000000109	Ongoing symptomatic COVID-19
1325181000000106	Post-COVID-19 Functional Status Scale patient self-report final scale grade (observable entity)
1325121000000105	Post-COVID-19 Functional Status Scale structured interview final scale grade (observable entity)
1325131000000107	Assessment using Newcastle post-COVID syndrome Follow-up Screening Questionnaire (procedure)
1325061000000103	Assessment using COVID-19 Yorkshire Rehabilitation Screening tool (procedure)
1325081000000107	Assessment using Post-COVID-19 Functional Status Scale patient self-report (procedure)
1325101000000101	Assessment using Post-COVID-19 Functional Status Scale structured interview (procedure)
1325141000000103	Newcastle post-COVID syndrome Follow-up Screening Questionnaire (assessment scale)
1325051000000101	COVID-19 Yorkshire Rehabilitation Screening tool (assessment scale)
1325071000000105	Post-COVID-19 Functional Status Scale patient self-report (assessment scale)
1325091000000109	Post-COVID-19 Functional Status Scale structured interview (assessment scale)
1325151000000100	

SNOMED (primary care) and ICD (secondary care) codes refer to 'post Covid-19 syndrome' in line with NICE guidance*

*For more information please refer to [Rationales](#) | [COVID-19 rapid guideline: managing the long-term effects of COVID-19](#) | [Guidance](#) | [NICE](#)





NHS Digital's COVID-19 response – Intelligence to support planning

- Providing data, analysis & dashboards to help the system understand the prevalence and spread of infection & manage capacity

Initiatives	Focus area	Deliveries and impact
Data Analysis	Impact of Shielding on Clinically Vulnerable	<ul style="list-style-type: none"> Supported National Audit Office (NAO) review of the effectiveness of the Shielding Programme in protecting the clinically extremely vulnerable (CEV). Developed methodology to identify care home residents on the Shielded Patients List and linked that information with hospital admission and mortality data sets to assess impact of COVID-19 on care home residents. Provided analysis to the NAO on 08 December and the NAO published their report on 10 Feb (Protecting and supporting the clinically extremely vulnerable during lockdown - National Audit Office (NAO) Report)
Data Provision	Electronic Prescribing and Administration (EPMA) Data in Secondary Care	<ul style="list-style-type: none"> Made secondary care medicines data available through NHS Digital's Data Access Request Service (DARS) on 24 Feb for use in planning and research. The data is collected daily and covers around 9% of total prescribing activity in secondary care from Jan 2019 to present, providing a full year of pre-COVID-19 prescribing data as well data for the first year of the pandemic. Data for a further 6% of prescribing activity will be available from summer 2021. This data collection was accelerated to support the COVID-19 response by enabling a better understanding of the role of medicines used in treatment of COVID-19 patients in secondary care (e.g. dexamethasone) and provides an additional dataset for research
	Vaccine Data	<ul style="list-style-type: none"> Made COVID-19 vaccination events and adverse reactions data products available through DARS on 19 Feb, further increasing the range of COVID-19 datasets available for planning and research
Data Collection	Social Care	<ul style="list-style-type: none"> Completed daily data collection from Social Care Management systems. ~7% of Social Care providers participated in the collection of 70k data items, including key demographic data and COVID-19 status for both social care receivers and social care providers. While the collection will cease on 31 March, it has provided useful trend analysis for the sector and successfully demonstrated that data can be collected directly from these systems. NHS Digital is working with DHSC and partners to ensure lessons learned from this collection are integrated into the strategy for social care data collection

NHS Digital made a new secondary care medicines data set available via DARS on 24 Feb, covering ~9% of prescribing activity in NHS Trusts in England ([Electronic Prescribing and Administration \(EPMA\) Data in Secondary Care under the COVID-19 Direction - NHS Digital](#))

Electronic Prescribing and Administration (EPMA) Data in Secondary Care under the COVID-19 Direction

Since December 2020 NHS Digital has established a daily collection of data from electronic prescription and administration systems. This data relating to medicines prescribed and administered to patients is sourced from secondary care NHS trusts in England.

The purpose of this data collection

- help identify patients who might be at higher risk of harm if they contract COVID-19
- help researchers understand any patterns of prescribing before, during and after COVID-19
- be linked to other datasets to provide new insights and support research
- be used to model the impact that treatment of various respiratory tract infections, such as with antibiotics, antivirals and antifungals, has on COVID-19 patient outcomes and antimicrobial resistance

EPMA data can be linked to patient-level NHS Digital datasets such as the NHDSEA medicines dispensed in Primary Care, COVID-19 Hospitalisation in England Surveillance System (CHES), SIS-Hospital Episode Statistics and the Second Generation Surveillance System (SGSS).

Linkage of EPMA data with other datasets can support research into the association of medicines and severity of disease experienced by COVID-19 positive patients. It can help identify medicines providing greater protection or linked to poorer outcomes - for example, specific groups such as ACE inhibitors, Angiotensin II receptor blockers, anti-arrhythmic, antimicrobials, beta blockers, diuretics, as well as individual medicines, such as heparin, prednisolone, verapamil.

There are now 10 COVID-19 datasets available via DARS including testing data, vaccination data, and GP data ([Data Access Request Service \(DARS\) products and services - NHS Digital](#))



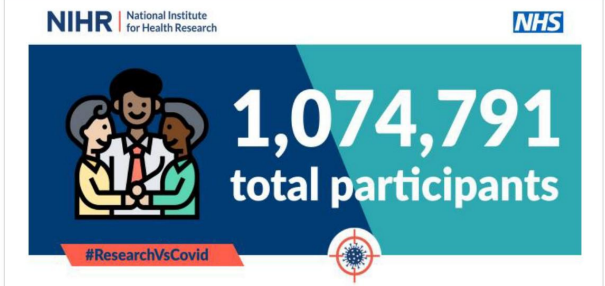


NHS Digital's COVID-19 response – Enable research and clinical trials

- *Facilitating the sharing and availability of data and analyses to support research, enabling evaluation of different response interventions and increasing understanding of COVID-19 transmission, immunity and clinical outcomes*
- *Accelerating COVID-19 Drug and Vaccine clinical trials*

Initiatives	Focus area	Deliveries and impact
Enabling Research	Trusted Research Environments	<ul style="list-style-type: none"> • Continued to provide access to data in Trusted Research Environments (TREs) for nationally prioritised COVID-19 research questions. TREs allow researchers to safely analyse de-identified data in approved systems, supported by collaboration tools • Published the first report using NHS Digital's TRE for whole population research on COVID-19 and cardiovascular disease on 23 Feb with researchers from Health Data Research UK (HDRUK) and the British Heart Foundation Data Science Centre*
	Accelerating Researchers' Access to Data	<ul style="list-style-type: none"> • Conducted a further researcher education sessions on 15 and 17 March for 175 attendees with the National Institute of Health Research (NIHR), HDRUK, MRC Regulatory Support Centre and the Health Quality Improvement Partnership. These sessions focus on improving awareness of the available data assets, access routes, and approval requirements so that researchers can make better use of health and social care datasets
Enabling Clinical Trials	RECOVERY	<ul style="list-style-type: none"> • Continued to support recruitment and provide data to the RECOVERY trial through NHS DigiTrials. The trial reported on 11 Feb that use of Tocilizumab reduces COVID mortality for hospitalised patients with severe COVID-19, shortens their time to discharge and reduces the need for mechanical ventilation**
	NHS COVID-19 Vaccine Research Registry	<ul style="list-style-type: none"> • Continued to operate the NHS COVID-19 Vaccine Research Registry, in partnership with the NIHR, to facilitate recruitment into vaccine trials and accelerate the identification of safe and effective vaccines • As of 26 March, around 460k people have registered an interest in being contacted for recruitment into vaccine trials with 144k eligible volunteers invited into one of six trials • On 11 March, the UK Phase 3 trial of the Novavax candidate vaccine reported further positive results*** Around half of the participants were recruited through the Vaccine Registry

As of 13 March, more than 1m people have taken part in COVID-19 research across the UK. NHS Digital is proud to be part of this important work, which has helped deliver vaccines, treatments and improved care



* A pre-print report is available from: <https://medrxiv.org/cgi/content/short/2021.02.22.21252185v1>

** [Tocilizumab reduces deaths in patients hospitalised with COVID-19 — RECOVERY Trial](#)

*** [Novavax Confirms High Levels of Efficacy Against Original and Variant COVID-19 Strains in United Kingdom and South Africa Trials | Novavax Inc. - IR Site](#)





NHS Digital's COVID-19 response – Provide infrastructure and support additional capacity

Providing secure infrastructure and supporting additional care capacity through support and logistics for cross-system data access, fast authentication of new users, Nightingale hospital facilities and connectivity to private providers

Initiatives	Focus area	Deliveries and impact
Cyber	Cyber Security Operations Centre (CSOC)	<ul style="list-style-type: none"> Responded to significantly increased level of cybersecurity risk through heightened threat intelligence and additional proactive monitoring for potential threats across the NHS estate. This is in addition to security measures normally deployed to protect NHS organisations, including NHS Secure Boundary and Protective DNS Issued 3 high severity alerts in Feb and March. While NHS organisations were not specifically targeted, the CSOC led on ensuring potential vulnerabilities were rapidly resolved by identifying exposed devices and working closely with organisations to address vulnerabilities and assure their assets. This additional support included deployment of NHS Digital's specialist resources to several NHS sites to facilitate remediation activities
	COVID-19 Cyber Technical Remediation Programme	<ul style="list-style-type: none"> Provided cyber vulnerability identification and remediation support to 180 Trusts in response to risks that have emerged or have been exacerbated by COVID-19. Support has been offered to the remaining Trusts but has not yet been requested Completed Secure Backup Reviews for 112 Trusts, to review alignment to NCSC Guidelines on Backup, identify backup-related risks and provide remediation support Provided guidance and advice to all Trusts regarding steps to take to improve access controls in relation to backups. £800k funding provided to 83 Trusts for Privileged Access Management solutions which reduce the risk of unauthorised users accessing backups
Connectivity	Upgrades to offset Winter Pressures	<ul style="list-style-type: none"> Confirmed that upgrades completed for all 353 sites identified as being at risk of having insufficient network bandwidth to cope with increased demand over the winter. NHS Digital worked with NHSX to identify the organisations with the greatest need and provide financial support to increase their network capacity. The NHS organisations involved have indicated they will maintain the upgraded connectivity

NHS Digital's Cyber Security Operations Centre offers a range of products and services that are reducing systemic cyber risk across health and social care

Threat hunting	Identifying Compromised credentials	Protective monitoring	Threat intelligence	Incident support	Vulnerability assessments
NHS Secure Boundary: Perimeter security solution	Windows 10: Advanced threat protection	Bitsight: Measure levels of local cyber security risk	VMS: Monitor and investigate local security vulnerabilities		
Training: NCSC certified board training	Training: Specialist training for SIROs	eLearning: Information asset owner (IAO) and clinician eLearning	Training: Specialist cyber security training		
Support: Technical remediation	Assessments: DSC on-site assessments	DSPT: Proportionate security and governance reporting	Simulated phishing: Local deployment of simulated phishing emails		
Cyber awareness: Awareness toolkit for organisations to deploy quickly and easily	Cyber alerts: Receive information and respond effectively to cyber security threats	Cyber associates: A network of cyber security expertise across the system	Specialist security services: Bespoke information risk assurance		





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