



NHS Digital coronavirus programme update

2 February, 2021



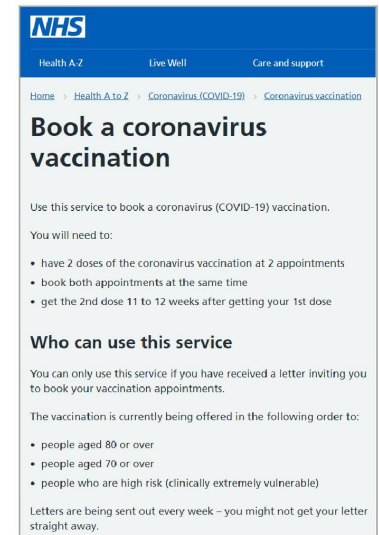


NHS Digital's COVID-19 response – Support delivery of vaccinations (1 of 2)

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	National Booking Service	<ul style="list-style-type: none"> Launched the national 'Book a coronavirus vaccination' service on NHS.UK on 09 January. The service allows people to book appointments at NHS vaccination centres and community pharmacies (bookings into PCNs and Hospital Hubs are managed directly by those providers), change their appointments, and receive a booking confirmation via email or text message. The service also includes a patient check-in application and an appointment management system for staff working at the vaccination sites To ensure vaccinations are only offered to eligible people, the service does a 'look-up' to the National Immunisation Management system (NIMS) which manages cohorts and eligibility, thus ensuring that only individuals who have received a letter from the national vaccination programme can book. Individuals who have not booked their first appointment when they first use NIMS are required to book both first and second vaccinations The service has processed 200k+ bookings per day so far, with volumes expected to reach ~350k bookings per day. It has been fully available (no digital queuing or delays) since go-live
	Appointment Booking using GP Connect	<ul style="list-style-type: none"> Supported rapid adoption of GP Connect Appointment Management functionality to enable primary care staff to use their own clinical systems to book patients into appointments at designated local vaccination sites. To date, ~4.5k practices have used the functionality with ~60k vaccination appointments booked using GP Connect during the week ending 22 January
	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 28 January, 4.5m letters had been issued
Point-of-Care Systems	Increasing Capacity	<ul style="list-style-type: none"> Managed the delivery of a number of NHS and third party systems being used to record vaccination events. Worked with EMIS to significantly increase the capacity of the Pinnacle system during January to meet increased demand Assuring the integrity and efficiency of data flows between the systems utilised for capturing and recording vaccination events ('point-of-care' systems) and downstream systems (e.g. GP systems)

Launched the 'Book a Coronavirus Vaccination' service on 09 January to support expansion of NHS England's COVID-19 vaccination campaign



The service enables eligible citizens to book and manage appointments and allows staff at vaccination sites to check patients in and manage appointments

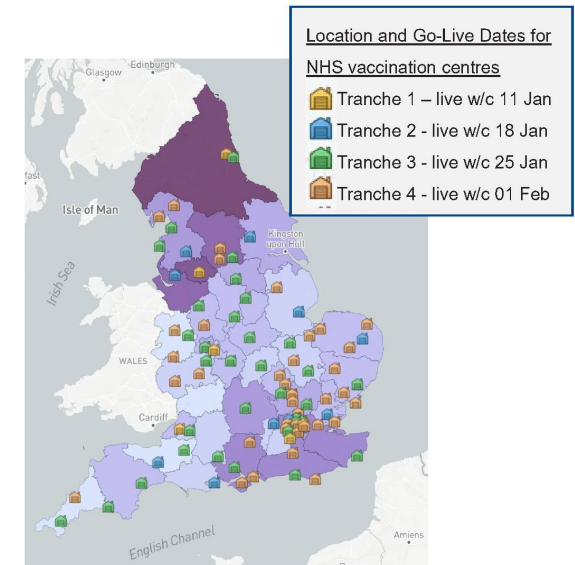


NHS Digital's COVID-19 response – Support delivery of vaccinations (2 of 2)

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
Communication Infrastructure	Connectivity	<ul style="list-style-type: none"> Worked closely with NHS England (NHSE) and telecoms suppliers to ensure that fixed connectivity, WiFi and back-up 4G networks are available for the 50 NHS vaccination centres that are now live (Tranches 1-3 in the graphic). Similar support is being provided for the additional NHS vaccination centres that are being established. We have issued advice on connectivity considerations when selecting vaccination sites to minimise the risk of delay to sites being fully operational We are also providing connectivity advice and procurement support to smaller local vaccination sites and pharmacy sites upon request. As of 29 January we have supported 119 sites where existing connectivity was insufficient
Data Quality	Data and Dashboards	<ul style="list-style-type: none"> Delivered proof of concept for a Data Quality dashboard on 29 January. This dashboard displays results of reconciled vaccination event data across all vaccination systems and enables proactive resolution of any differences. Minimum viable product (MVP) due to be delivered on 04 February Commenced work to include vaccination data in the private dashboards used by Directors of Public Health to support patients identified as clinically extremely vulnerable (CEV) through the Shielded Patient List (SPL)
	Helpdesk	<ul style="list-style-type: none"> Expanded data quality helpdesk support for primary care staff on 29 January. The service assists clinical and administrative staff involved in vaccinations by rapidly responding to questions and providing a point of escalation for data issues
Operations	IT Operations Centre	<ul style="list-style-type: none"> Established initial IT operations monitoring and support capability on 14 January. Work underway to progressively expand coverage and support model
	Cyber Security	<ul style="list-style-type: none"> Continued to provide cybersecurity assurance for critical components of the vaccination infrastructure and expand coverage of protective monitoring

NHS Digital is working closely with NHS England and suppliers to ensure secure and robust connectivity for vaccination sites, including NHS vaccination centres



Reliable connectivity to clinical systems enables staff at vaccination sites to verify medical history and record vaccination events





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

Initiatives	Focus area	Deliveries and impact
Asymptomatic Testing	Asymptomatic Test Site (ATS) Platform	<ul style="list-style-type: none"> NHS Digital, with partners, has delivered an asymptomatic test site (ATS) platform that can be tailored for use in different community settings. The digital capability links the subject to a lateral flow device (LFD), captures test results from a site operator, and enables onward communication to the person who was tested and downstream services (eg: contact tracing) Supported use of the ATS capability by UK universities to test students prior to their return home for Christmas. Private dashboards were delivered on 11 January to allow universities and the Department for Education to monitor testing progress and results (see graphic) On 02 December, delivered significant upgrades to convert the platform to a web-based model that can be rapidly scaled, including digital tools to facilitate set-up of new test sites by central call centres. The enhanced ATS platform is being used in the mass roll-out of devolved community testing operated by Local Authorities across England From 4 January, supported use of the ATS capability for secondary schools in England. During the national lockdown, the solution is being used to test on-site staff and children who are attending school
	Self-Test Results Reporting	<ul style="list-style-type: none"> Launched a service for online reporting of self-testing results from LFDs on 04 December (https://www.gov.uk/report-covid-19-result) then delivered enhancements to enable its use by different groups. The service is now being actively used by people working in Adults Social Care (from 04 December), the NHS (from 10 December), and schools (from 14 January) with daily volumes reaching up to 270k
Increasing Testing Capacity	Scaling the Service	<ul style="list-style-type: none"> Continued to work with partners across the digital service to increase capacity. The digital infrastructure can now process 6.3m results per day Integrated new providers to support expansion of the overall testing service. As of 25 January, technical integration had been completed for 28 new laboratories, 30 mobile testing laboratory units (to support point of care testing in response to outbreaks), and Royal Mail (new fulfilment partner for provision of home testing kits)

Delivered new, private dashboard on 11 January for ~100 organisers of university-based testing programmes

The dashboard provides an aggregated view for a particular university of the numbers of tests administered and the results of those tests. It includes a summary table with the following data:

Category	Count	Percentage of Total
Total Pillar 2 Tests	478,227	-
Positive Pillar 2 Tests	2,435	0.5% of total
Negative Pillar 2 Tests	474,122	99.5% of total
Void Pillar 2 Tests	1,670	0.3% of total



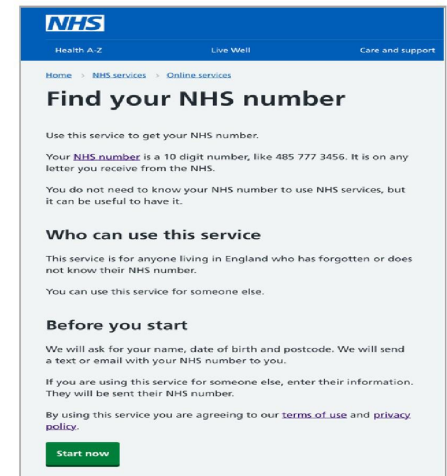


NHS Digital's COVID-19 response – Provide digital channels for citizen guidance and triage

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
111 First	Emergency Department Digital Integrator (EDDI)	<ul style="list-style-type: none"> Delivered further enhancements to “EDDI”, a tactical Emergency Department Digital Integrator web service. EDDI enables 111 Online and 111 Telephony services to book patients into emergency departments (EDs) and provides EDs with a view of expected patient flow Enhancements delivered on 18 January include a flag to indicate whether a patient has been advised to shield, provision of patient contact details on the daily summary screen and changes to summary screens to allow EDs to better manage any 'did not attends' As of 31 January, 135 EDs had deployed EDDI with 37k patients attending booked slots. 26 EDs are due to deploy EDDI by 31 March. 17 EDs use another solution (assured by NHSE) 99% of 111 suppliers are currently able to support EDDI with final supplier (TTP) due to have completed development required to support EDDI by 31 March In parallel, continued to progress the strategic “system to system” solution that allows ED software suppliers to integrate directly to the 111 service via CareConnect APIs
111 First	ED Streaming	<ul style="list-style-type: none"> Commenced Beta testing at Portsmouth Hospital NHS Trust on 20 January for a ‘front door’ streaming solution for emergency departments (EDs) The solution enables walk-in patients to use a console and undertake a self-service triage similar to the 111 service. Patients are automatically directed to the most appropriate care setting based on the results of their self-service triage
NHS Pathways	Pathways Clinical Consultation Support (PaCCS)	<ul style="list-style-type: none"> Commenced beta testing for the PaCCS product with Yorkshire Ambulance Service (999) on 10 January and London Central & West NHS 111 service on 16 January PaCCS provides NHS Pathways decision support content in a consultation format for use by clinicians performing remote consultations in Integrated Urgent Care settings Beta testing is expected to complete in February with roll-out to 111 and 999 providers following completion of pre-deployment work with system suppliers
NHS Numbers	Find your NHS Number	<ul style="list-style-type: none"> Launched the ‘Find your NHS Number’ service on NHS.UK on 25 January to help patients provide their unique reference when accessing services

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As of Feb 01, over 50k people have successfully requested their NHS number and had it provided by either SMS, email, or letter
[Find your NHS number - NHS \(www.nhs.uk\)](http://www.nhs.uk)





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). NHS Digital is responsible for weekly iterations of the SPL so support can be targeted to clinically extremely vulnerable people (CEV) The list of conditions was expanded on 11 December to include patients with Down's Syndrome and Chronic Kidney Disease stage 5 (CKD-5) resulting in ~29k additions to the SPL. There are now ~2.3m patients on the list Continued to support clinical reviews that aim to reduce the number of children and young people unnecessarily included on the list (now less than 57k)
	Vaccinations	<ul style="list-style-type: none"> Provided a feed of the SPL to the National Immunisation Management Service (NIMS) to ensure that clinically extremely vulnerable (CEV) adults are informed of their eligibility to receive a COVID-19 vaccination as part of Cohort 4*
	Vitamin D Supplements	<ul style="list-style-type: none"> Matched requests for free vitamin D supplements to citizens on the SPL. Provided the first validated list to DHSC on 15 January so supplements could be sent to ~300k CV As of 27 January, over 160k additional patients have registered their interest in receiving the tablets. NHS Digital will continue to match requests to the SPL and issue to DHSC for fulfilment until the end of the scheme (Get vitamin D supplements if you're at high risk from coronavirus (COVID-19) - NHS (www.nhs.uk))
	Communicating with vulnerable citizens	<ul style="list-style-type: none"> Following announcement of the latest national lockdown, ~2.3m letters and ~800k emails (via the Government's Notify service) were sent to vulnerable people on the SPL to provide advice and guidance, including how to access support NHS Digital's SPL Query mailbox has become a principal point of contact for questions from CEVs about the national shielding service and for technical queries from clinical staff and local authorities. ~3.5k requests were received in January

The Shielding Programme has been shortlisted for the 2020 Civil Service Awards 'Collaboration Award' which recognises exceptional collaboration across sectors, administrations and layers of government



NHS Digital has worked closely with partners across government and the Health and Care sector to enable targeted support for ~2m clinically vulnerable people

* The Joint Committee on Vaccination and Immunisation (JCVI) has prioritised vaccination for specific cohorts based on residence in a care home, advanced age, front line work in health and social care, and 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/government/news/priority-groups-for-coronavirus-covid-19-vaccination-advice-from-the-jcvi-30-december-2020))





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 Risk Assessment Service (Clinical Tool)	<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. Whereas the SPL system identifies individuals with any one of the conditions on the CMO's Spring 2020 condition list, the enhanced risk stratification system assesses an individual's risk based on a combination of characteristics (including age, sex, ethnicity, BMI, and specific medical conditions, and incorporating assessments of combined morbidities). DHSC commissioned Oxford University to develop the underlying risk calculator, and NHS Digital is delivering the operational system We completed a private beta for the clinical-facing risk stratification tool, the COVID-19 Risk Assessment Service, with a small cohort of GPs, CCGs and primary and secondary care representatives. The service generates absolute and relative risk scores to enable clinicians to hold tailored conversations with patients about their specific risks. It does not store or share any personal information. Discussions underway with senior stakeholders from DHSC and NHS England to agree plans for the public launch of the service
	Vaccinations	<ul style="list-style-type: none"> We have completed test runs for population-level use of the Oxford university algorithm to identify people with increased risk from COVID-19 who are <u>not</u> currently included on the Shielded Patients List. These patients will be included in JCVI Cohort 6 for vaccination (i.e. all individuals aged 16 years to 64 years with underlying health conditions which put them at higher risk of serious disease and mortality*) During w/c 08 February, these individuals will be added to the Shielded Patient List and subject to review by GPs and Trusts through the standard SPL clinical review processes

* The Joint Committee on Vaccination and Immunisation (JCVI) has prioritised vaccination for specific cohorts based on residence in a care home, advanced age, front line work in health and social care, and increased risk from Covid-19 ([Priority groups for coronavirus \(COVID-19\) vaccination: advice from the JCVI, 30 December 2020 - GOV.UK \(www.gov.uk\)](#))

The COVID-19 Risk Assessment Service has been successfully used by clinicians in private beta to assess a patient's specific risk of (i) catching and dying from COVID-19 and (ii) catching and requiring hospitalisation due to COVID-19

Risk of catching COVID-19 and dying

- Absolute risk: 0.6055% (1 in 165)
- Relative risk: 6.76

Risk of catching COVID-19 and associated hospitalisation

- Absolute risk: 1.1441% (1 in 87)
- Relative risk: 5.38

Release R1 Version 1.0.6

When recording the result in the patient's notes, you should enter the date and release version number used, alongside the absolute and relative risk score.

[▶ What does absolute and relative risk mean?](#)

What risk factors contributed to your patient's result

- Age (19-100): 34
- Height (cm): 160
- Weight (kg): 90
- Sex assigned at birth: Male
- Ethnicity: Chinese
- Housing category: Not homeless or resident of a care home
- Diabetes type: Has type 1
- Has Parkinson's disease
- Body mass index (BMI): 35.2

Results generated using test data

This new clinical service generates absolute and relative risk scores based on a patient's specific characteristics. The data is intended to support discussions with patients on how to reduce their risk of adverse outcomes from COVID-19



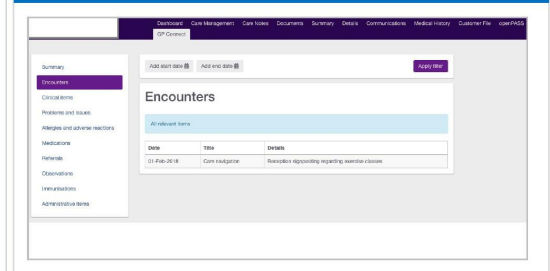


NHS Digital's COVID-19 response – Enable remote and collaborative care

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 programme to monitor higher risk patients' oxygen levels in their homes, following a positive COVID-19 test Issued 3 additional SNOMED clinical codes to GP systems suppliers on 8 January to record whether a patient has access to a pulse oximeter and oxygen saturation measurements. These codes, along with the 9 codes issued in November, enable COVID Oximetry@Home activity to be recorded. The codes have been deployed by EMIS, TPP and Eva (covering ~94% of GP practices) and will be available to users of Vision by 12 March Provided daily lists of patients with a positive COVID-19 test who are over 65 and/or clinically extremely vulnerable to 68 CCGs to help enrol patients into the programme Initiated weekly data collection from CCGs on 22 December to support progress monitoring and ongoing programme evaluation. 52 CCGs are now providing data and the focus is now on increasing coverage of data collection to facilitate impact evaluation
Long Covid	Data and Measurement	<ul style="list-style-type: none"> Mobilised team to support NHS England in designing and delivering services for patients who are experiencing long-term effects from COVID-19 ('Long Covid') Delivered initial digital capabilities to enable Long Covid patients to be tracked including: <ul style="list-style-type: none"> Issuing 16 new SNOMED codes (available in all GP systems by 31 January) Initiating new weekly data collection to capture activity in Long Covid clinics Activity data is being provided to NHS England to support planning for Long Covid services. Design work is underway to enrich the activity reports with information from other sources to present a more complete picture of activity and other key issues (e.g. wider determinants of health and comorbidities) Progressing discovery activities to determine how NHS Digital can best support the online elements of the Long Covid service, namely the 'Your Covid Recovery' rehabilitation programme and the provision of general information for patients, families and carers
Social Care	GP Connect	<ul style="list-style-type: none"> Enabled real-time sharing of medical information between GP systems and clinicians in Social Care through implementation of GP Connect Access Record standards by everyLife's PASS digital care management system. Further deployments with everyLife are being planned and development is underway with 2 additional care management system suppliers

Enabled real-time sharing of medical information between GP systems and clinicians in 30 Social Care sites through GP Connect



Eligible users of everyLife's PASS digital care management system can now view allergies and adverse reactions, acute and repeat medication, and other clinical data following implementation of GP Connect's Access Record standards



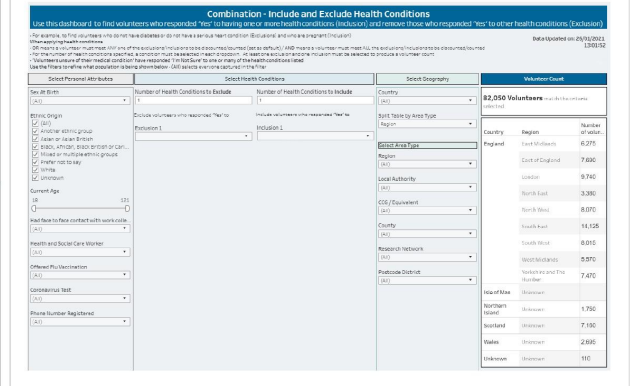


NHS Digital's COVID-19 response – Enable research and clinical trials

- 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
- Enabling acceleration of 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 Trusted Research Environments (TREs) for nationally prioritised COVID-19 research questions. TREs consist of dedicated environments with specified, de-identified, linked data products; analysis tools; collaboration tools; and mechanisms for safe publishing • Supported researchers from the Office of National Statistics (ONS) investigating the association between hospitalisation with coronavirus and long-term multi-organ dysfunction. The findings for the first phase of the research have been published*. NHS Digital is now supporting the next phase of the research by expanding the data in the ONS TRE to include Pillar 1 & 2 testing data and infectious disease surveillance data (SGSS)
Enabling Clinical Trials	NHS COVID-19 Vaccine Research Registry	<ul style="list-style-type: none"> • Continued to support operation of the NHS COVID-19 vaccine research registry, in partnership with the National Institute for Health Research (NIHR), to facilitate recruitment into vaccine trials and accelerate the identification of safe and effective vaccines • As of 22 January, 388k people had registered an interest in being contacted for recruitment into vaccine trials. 135k eligible volunteers have been invited into one of five trials, including Novavax (see below) • Delivered private dashboards on 22 January to enable researchers to rapidly determine how many volunteers meet potential inclusion criteria by selecting personal attributes (e.g. age, occupation, ethnicity), health conditions (as inclusion or exclusion criteria) and location (e.g. region). The dashboards allow researchers to rapidly refine recruitment criteria
	Novavax	<ul style="list-style-type: none"> • Supported recruitment onto the Novavax trial through the NHS COVID-19 Vaccine Registry (described above) and, from 04 January, provided COVID-19 test results data to enable evaluation of the candidate vaccine (Phase 3 results have demonstrated strong efficacy**)

Delivered private dashboards on 22 January for the NHS COVID-19 Vaccine Research Registry. The dashboards enable researchers to rapidly determine how many volunteers meet inclusion criteria for clinical trials



* The findings from the ONS study are available via <https://www.medrxiv.org/content/10.1101/2021.01.15.21249885v1>

** Novavax publishes positive efficacy data for its COVID-19 vaccine - GOV.UK (www.gov.uk)



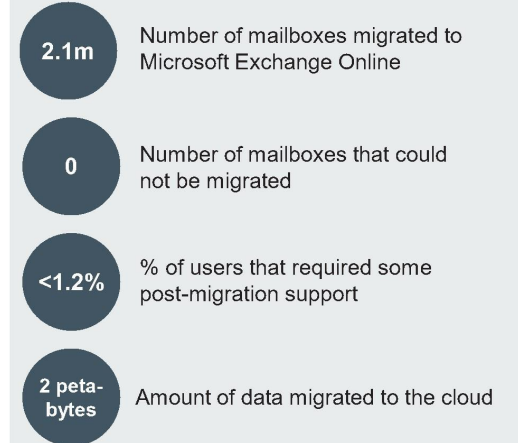


NHS Digital's COVID-19 response – Provide infrastructure and support additional capacity

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
NHS Mail	Migration to Microsoft Exchange Online Platform	<ul style="list-style-type: none"> Completed migration of 2.1m NHSmail accounts to Microsoft's cloud-based Exchange Online platform on 01 February. NHS Digital, working in close collaboration with Accenture and Microsoft, successfully delivered the world's largest ever enterprise mail migration with very minimal impact on front line health and care staff The migration was not initiated in response to the pandemic, but has facilitated access to communication tools that are enabling effective, remote collaboration. MS Teams is now used by ~5,500 organisations and, on average, hosts ~1m chat messages, ~250k meetings and >125k calls each day
Fast and Secure Authentication	Virtual Smartcards	<ul style="list-style-type: none"> Approved revised solution for isosec virtual smartcards on 21 January, enabling trusts to resume deployment of the solution. Deployments had been paused to enable isosec to provide a design that fully meets NHS Digital's requirements for secure authentication to national systems and an Advanced Electronic Signature for use with the Electronic Prescribing Service (EPS). Further information on the solution can be accessed via https://digital.nhs.uk/coronavirus/access-logistics-hub/ Continued to support deployment of Entrust virtual smartcards for authentication to national systems. Final regression testing underway to confirm resolution of issue that has prevented use of Entrust solution for digital signing. If testing is successful the solution will be piloted with EMIS's GP System. For further information contact accesslogistics.hub@nhs.net
Connectivity	Upgrades to offset Winter Pressures	<ul style="list-style-type: none"> As of 28 January, upgrades have been completed for 320 of the 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 majority of the NHS organisations involved have indicated they will maintain the upgraded connectivity beyond the winter period. Feedback suggests the increased bandwidth has been particularly beneficial for hospital sites

NHS Digital, in collaboration with Accenture and Microsoft, successfully completed the world's largest enterprise email migration on 01 Feb



Migration of 2.1m NHSmail accounts to Microsoft's Exchange Online platform ensures health and care staff will always have access to the latest collaboration tools and capabilities





Thank You

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 www.digital.nhs.uk