

NHS Digital coronavirus programme update

19 June, 2020

Information and technology for better health and care

NHS Digital coronavirus programme update – 19 June, 2020 Wiss Digita Highlights of the last four weeks

- NHS Digital has been confirmed as the Technology Delivery Lead for Test and Trace services
 - NHS Digital will now define the technology and data architecture (excluding the Contact Tracing App) and manage delivery partners
 - Digital Testing system is being expanded to support antibody testing, asymptomatic testing and testing ahead of elective procedures
 - Development of roadmap for next-gen digital systems for manual tracing is underway
 - Dashboards have been deployed to enable Local Authorities to assess localised containment strategies
- NHS Digital's citizen-facing channels remain an important "digital front door" for accessing COVID-19 services
 - 2 million people have downloaded the NHS App and utilisation remains significantly higher than before the outbreak
 - Content for 111 Online and NHS.UK has been enhanced to reflect new government guidance, including changes to requirements for social distancing and use of face masks. New functionality allows repeat prescriptions to be ordered through NHS.UK
- Access to patient information continues to be expanded and improved at point of care
 - COVID-19 test results, for out-of-hospital antigen tests, are now being sent to GP systems via a new middleware solution (live on12 June) and healthcare professionals are now alerted when a patient's record includes codes indicating confirmed or suspected COVID-19 infection
 - Summary Care Records for 35m patients have been updated with additional information from GP systems (64% of in-scope records)
- NHS Digital continues to play an important role supporting research into COVID-19
 - Data curated by NHS Digital enabled the RECOVERY trial to confirm dexamethasone as an effective treatment for COVID-19
 - 94% of GP practices in England are participating in BMA and RCGP-endorsed data collection by NHS Digital to support planning and research. First dissemination of GP Data to the RECOVERY trial is planned for w/c 22 June with further research requests being prioritised
 - Work underway with NIHR to deliver tactical solution for collection of "permission to contact" data to facilitate recruitment onto vaccine trials
- NHS Digital is working closely with partners in Health and Social Care to improve infrastructure
 - Planning underway for a coordinated programme to support HSCN, Microsoft and Cyber upgrades that Trusts need to complete in October

NHS Digital coronavirus programme update - 19 June, 2020 Overview of initiatives in support of the COVID-19 strategic focus areas

"Healthcare debt"

analysing activity, referrals & outcomes

monitoring:

Plan for recovery, restarting

services and new needs (n/a)



Major milestone reported in Executive Summary

COVID-	19 Strategic focus areas	Initiatives NHS D	eigital is deliverin	g		ificant milestone reported in		ork ongoing ork complete
Provide digital channels for citizen guidance and triage (p.4)		111 Online: eTriage and routing of patients to most appropriate care	NHS App: mobile access to eTriage and GP bookings, tests & prescriptions	NHS.UK: up-to-date health information and various digital services for citizens	NHS Login: secure identity verification for access to App and other NHS services	NHS Pathways: triage algorithms underpinning 111 online & call centres	Self-Isolation Notes: digital service to self- certify for COVID-19 if evidence required	Remote COVID Wards: monitoring high risk patients in their home
(Ų)	Enable remote and collaborative care with systems and data (p.5)	Summary Care Record: augmentation for COVID-response	GP Connect: information sharing across primary and urgent care	Electronic Prescription Service (EPS): pharmacy flex and additional drugs	Video-consultations for Primary Care: assurance and rollout to >90% of practices	Video Consultations for Outpatients: rollout/implementation support to NHSE	Microsoft Teams Deployment: deployment to 1.2m NHS Mail users	NHS Mail for health and social care: rollout to social care and other new users
	Deliver digital services for Test, Trace and Contain (p.6-7)	Digital platform for booking tests at new COVID-19 labs	Testing data capture, analysis and dissemination	Cyber Security Operations Centre: security services for Test and Trace	Service Design: targeted reviews to ensure coherence across Test & Trace	Service Mgt: ensuring performant & secure operation of testing infrastructure		
††	Identify and protect vulnerable citizens (p.8)	Shielded Patient List (SPL): developed & maintaining list of vulnerable patients	SPL Open Data: published V1 open data / visualisation of aggregated data	Vulnerable children: support safeguarding by sharing data with nurses, health visitors	SPL Data for Public Health: private dashboards to facilitate planning	Mental Health Survey: impact of COVID-19 on children and young people		
	Support planning with data, analysis and dashboards (p.9)	ICU Capacity Planning Tool: new predictive models for beds & ventilators	Ethnicity Outcomes Analysis: analysis to investigate high BAME fatalities	Diabetic risk factors: linking data from national audit to support analysis	Social Care Data Collection: data from Care Management Systems (automated)	Secondary Care SitRep: data on COVID-19 patients and staff impacts	REACT1: data for community prevalence testing (antigen testing)	Open Data & Dashboards: public and private access to COVID-19 information
	Get data and insights to research communities (p.10)	Trusted Research Environment for SAGE: with NIHR/HDR UK	Central Disseminator of GP Data for research and planning	NICOR: analysis for cardiovascular status / outcomes and COVID-19	Data Access Environment for PHE: accelerating epidemiology		Cancer: linking data and performing analysis to support planning & research	HOSTED: monitoring of anonymised household transmission by PHE
	Support clinical trials (p.10)	Plasma Trial: identification of eligible (recovered COVID-19) patients	RECOVERY Trial: providing hospital and testing data for trial evaluating treatments	PRINCIPLE Trial: primary outcome data for trial focused on older people	Permission to Contact: collecting data for recruitment into clinical trials			
X	Provide secure infrastructure and support additional capacity (p.11)	Connectivity: network upgrades and extensions within NHS and social care	Nightingale Hospitals: connectivity, technical / cyber	Fast and secure authentication: smartcards/readers, virtual smartcards	Returning Staff: advice and technical support for onboarding	VDI environment for Primary Care: virtual desktop to enable GPs to work remotely	Other infrastructure and cyber support: e.g. Laptops, cyber plans	Your NHS Needs You: survey for recruitment of returning clinicians



Providing Digital Channels for Citizen Services and Triage *NHS Digital COVID-19 Response – 19 June, 2020*



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

Services	Focus area	Deliveries and impact
111 Online	Clinical Algorithm	 Removed separate COVID-19 "mini-service" on 11 June to align with latest NHS Pathways release (delivered on 22 May). This ensures triage is based on a wider set of symptoms and reduces risk of non-coronavirus illness being missed. Clear signposting for COVID-19 information and support services has been maintained Delivered enhancements to the clinical algorithm on 11 June to update the case definition for COVID-19, to include loss of smell and loss of taste, along with other improvements to the way symptoms for coronavirus and other illnesses are assessed
	User Journeys	Streamlined onward signposting at the end of the 111 online journey to direct users to the NHS.UK coronavirus hub (www.nhs.uk/conditions/coronavirus-covid-19). This ensures symptomatic patients receive unambiguous direction to testing services along with other relevant COVID-19 information
	Resilience	Implemented final set of infrastructure changes to ensure 111 Online remains resilient through any future surges in volumes on 11 June. Service has been scaled and stress tested to 2k requests per second (10x March peak and 100x recent average volumes)
NHS App	 - Utilisation - 	 Reached over 2m downloads of the NHS App on 08 May with utilisation of all functionality other than appointment booking, remaining significantly higher than the pre-COVID-19 period (see chart). New functionality for pre-consultation triage and changes to pharmacy nominations, fast-tracked for COVID-19, used over 10k times
NHS.UK	Patient Services	Deployed Beta release on 11 June to allow patients to order repeat prescriptions via NHS.UK to provide access for patients without smartphones (https://www.nhs.uk/using-the-nhs/nhs-services/pharmacies/order-repeat-prescriptions-online)
NITO.UK	Updated Guidance	Continued to iterate content to reflect the latest government guidance including information on changes to social distancing rules, face masks, and new signposting for support for domestic abuse
Remote Digital Care	COVID-19 Virtual Wards	 NHS Digital is supporting the pilot of "COVID virtual wards" in three locations in England. These "virtual wards" are designed to support and monitor high risk coronavirus patients in their home to detect and act on any early signs of deterioration

The NHS App has been an important point of access for health services during the outbreak with significant increases in utilisation for all functionality (other than appointment bookings)

NHS App Utilisation	01 Mar- 15 June	% of All Time Total ¹	% Change vs. Pre- COVID period ²
Downloads	1,431,346	60%	256%
Registrations (including provision of new NHS Login if required)	464,011	59%	191%
Logins (number of times NHS App was used)	3,567,130	56%	120%
Appointments Bookings (on current categorisation approach)	39,788	20%	-57%³
Record Views (number of times users viewed their records)	1,623,949	55%	116%
Prescription Orders (number of times prescriptions requested)	470,580	65%	222%
Organ Donation Registrations	25,799	65%	214%

^{1.} The NHS App was launched on 01 January, 2019. The % of all time total reflects utilisation from 01 March -15 June as a proportion of utilisation since launch

^{2.} The equivalent "pre-COVID-19" period is 15 Nov 2019 to 28 Feb 2020

Reduction in appointment bookings reflects adoption of different operating model in general practice in response to the outbreak

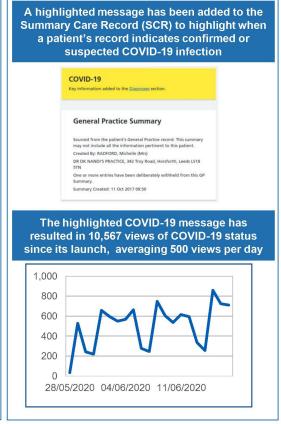


Enabling Remote and Collaborative Care NHS Digital COVID-19 Response – 19 June, 2020



Making data and systems available to enable remote and collaborative working by health and care staff, minimising transmission and managing strained capacity (e.g. with practices closed or staff unwell)

Services	Focus area	Deliveries and impact
Summary Care Record	Access to additional patient information	 Completed upload of additional information from GP systems for 35m Summary Care Records (64% of records as of 21 June). Uploads for TPP are 97% complete (37% of records). Uploads for EMIS are 48% complete (60% of records) and due to complete on 03 July. Dates being confirmed for Vision (~3% of records) SCR additional information has been viewed ~450k times by authorised healthcare professionals since uploads started on 24 April (i.e. additional information was viewed as part of 42% of the SCR views over that period)
(SCR)	Signposting COVID-19	 Introduced yellow message box on 28 May to ensure users of the SCR application, SCR 1-click systems and SCR private beta are aware when specific information related to a patient's COVID-19 status is included on the SCR (see graphic). The notification is based on 5 commonly used SNOMED CT codes for confirmed and suspected COVID-19 The call-out box had been viewed 10k times as of 18 June (see graph)
	Access to patient records	~6.6k GP practices (~97%) are enabled to share patient records with other NHS organisations and 85% have received at least one request to view a patient record from another organisation
GP Connect	Appointment Booking	• ~6.6k GP practices (~97 %) are now enabled to accept appointment bookings from other NHS organisations, including the COVID-19 Clinical Assessment Service (CCAS), and 78% of these practices have received bookings from other services
	Update to records with COVID-19 information	COVID-19 codes from NHS 111 triages now being included on patient's GP records as structured messages to alert practices to new coronavirus dispositions. As of 11 June, ~3k practices were able to receive these messages with remaining practices updating systems and processes so messages can be received with target to complete all practices in July





Delivering Digital Services for TTCE *NHS Digital COVID-19 Response – 19 June, 2020 (1 of 2)*



Delivering robust, scalable and secure services for COVID-19 Test, Trace, Contain and Enable through provision of digital infrastructure, live service operations, cyber services and service design expertise

Services	Focus area	Deliveries and impact				
number of o	Since March, NHS Digital has been the key delivery partner for the digital infrastructure for 'Pillar 2' testing, working alongside an increasing number of other 3 rd parties. During late May and June the TTCE organisation formed and started to formalise its operating structure. On 17 June it was formally announced that NHSD will be the digital delivery partner for TTCE going forward and we are now working to define the operating model and formalise supply chain arrangements under our command					
	Antigen Testing	 Implemented changes to strengthen the digital infrastructure and expand testing functionality: enhanced data provision to the tracing service, introduced continuous processing for files and SMS from 8am to 6pm (previously one batch each day), delivered changes to support testing of children under 5, and added fields to capture ethnicity Initiated pilot on 15 June to ensure patients tested ahead of elective procedures. Patients from 5 Acute Trusts will receive text messages directing them to request Home Testing kits 7 days ahead of elective surgery for specific, low-risk specialties. Pilot has started with low numbers of patients with target to increase to 500 tests per day across the 5 Trusts. Strategic solution to support restarting the system is being developed in parallel 				
Digital	Antibody Testing	Started build-out of existing digital platform for Antibody Testing. Target for release of MVP is mid-July and will leverage the home testing functionality developed for antigen testing. Decisions on eligibility for antibody testing are being progressed outside of NHS Digital				
Platform for Testing	Sending Test Results to GP Systems	 Delivered new middleware solution on 12 June so new test results can be automatically sent to GP systems ~45% of new results cannot be automatically sent due to data quality issues (e.g. misspelt names). An additional matching process has been established for these records (target go-live is 26 June). Additional, up-front verification is planned for July to maximise data quality going forward Results of historic tests had been stored by NHS Digital until they could be sent to GP systems. ~90k historic test results have been sent to GP systems. ~1.7m historic results with missing or incorrect demographic data will be matched through the remediation process described above and will be sent to GP systems starting 26 Jun 				
	Live Services	 Mobilised a Testing Live Service Operations team, operating from 8am to 8pm, 7 days per week to ensure reliability, performance and security of digital infrastructure of testing Out of hours cover established for all high severity service incidents. All high severity incidents impacting live service have been responded to and resolved under hyper-monitoring of the service All 12 test centre releases since 22 May have been under full control of the Live Service Operations team 				

Symptomatic patients can request antigen testing via NHS.UK
△ https://www.nhs.uk/ask-for-a-coronavirus-test
NHS Ask for a coronavirus test
< Go back
How do you want to get the coronavirus test?
For a drive-through test, you or someone you live with must have a car to get to a regional test site.
Select your country or ask for a home test kit.
Test sites in England AVAILABLE
Test sites in Scotland AVAILABLE
Test sites in Wales NOT AVAILABLE
Test sites in Northern Ireland AVAILABLE
or
Request a home test kit AVAILABLE
You can ask for a kit for yourself and anyone else you live with who has coronavirus symptoms. This service is on the GOV.UK website. There is an identity check for home test kits.
Continue

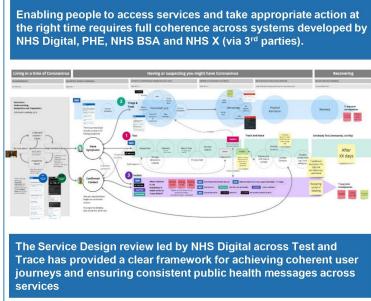


Delivering Digital Services for TTCE *NHS Digital COVID-19 Response – 19 June, 2020 (2 of 2)*



Delivering robust, scalable and secure services for COVID-19 Test, Trace, Contain and Enable through provision of digital infrastructure, live service operations, cyber services and service design expertise

Services	Focus area	Deliveries and impact
	Systems for Trace	 Manual Tracing services were stood-up using the (PHE-owned) CTAS and Synergy systems. Greater functional capability is now required, and NHS Digital has been asked to work with the TTCE CTO to determine whether major extensions to CTAS or deployment of an alternative 3rd party solution is preferable. NHS Digital will then lead delivery of the target solution NHS Digital has had no involvement in the design or build of the NHS COVID-19 Tracing App, development of which was stalled on 18 June. We are supporting work to define strategic options for the future of this App
Test, Trace, Contain and	Contain: Data dashboards for Local Government	 Delivered interactive, private dashboards on 12 June to show number of tests completed per 100K population and number of positive COVID-19 tests. ~500 authorised users from Local Authorities, CCGs, PHE and Central Government are currently using the dashboard. Work underway to provide lower-level geographic views to support local responses to potential outbreaks
Enable (TTCE)	End-to-End Service Design	Completed review of digital services supporting initial triage, testing and tracing for COVID-19 to ensure coherence between services rapidly established by PHE, BSA, NHS Digital and NHSX (via 3rd parties). This highly collaborative exercise leveraged NHS Digital's recognised system leadership role in content, design and user research. Further user research currently underway with "seldom heard" groups to ensure their needs are fully understood and the service is designed to work for all citizens
	Cyber Security Operations Centre (CSOC)	NHS Digital rapidly established cyber security services for NHS Test and Trace and has matured the capability for incident response, protective monitoring and operational management since go live on 22 May
	Live Services	Established additional service monitoring for all critical COVID-19 data services, dashboards and the Contact Tracing and Advisory Service (CTAS)



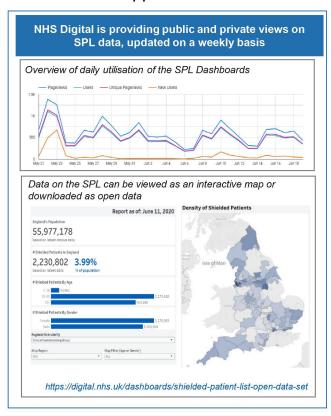


Identifying and Protecting Vulnerable Citizens NHS Digital COVID-19 Response – 19 June, 2020



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

Services	Focus area	Deliveries and impact		
	Identifying vulnerable citizens	 The Shielded Patient List (SPL) identifies patients judged to be at the highest risk from COVID-19, based on criteria set by the Chief Medical Officer for England. The list size has remained at ~2.2m patients over the last month, with additions and deductions from GPs and hospitals and minor changes from the national algorithm HM Government has committed to reviewing the guidance for shielded patients and writing to each patient informing them of any changes. NHS Digital supports this process by providing the list of patients to contact 		
Shielded Patient List (SPL)	Data Visualisation	 Continued to publish interactive, public dashboards and open data from the SPL on a weekly basis. The SPL dashboard has been viewed by ~500+ people per day since its launch (see graphic) Deployed private dashboard for authorised officials in Local Authorities, CCGs, and DHSC. Private dashboards provide break-outs of data for each of the 11 conditions that determine inclusion in the SPL and work is underway to further refine the granularity of morbidity data and to include demographic and mortality data 		
	"Advanced" SPL	We are supporting the development of a more complex model for identifying individuals highly vulnerable to COVID-19 by researchers at Oxford. The new model will incorporate the latest evidence as to which conditions are most highly associated with vulnerability to COVID-19 and will apply weightings to factors and consider correlations between conditions. Work is underway to determine what digital infrastructure will be required to support the new model once it has been agreed by the CMO		
Children & Young People	Survey for Mental Health	Commissioned by DHSC to support NatCen Social Research and the Office of National Statistics to monitor the impact of COVID-19 on the mental health of children and young people in England by expanding an existing longitudinal survey. Initial data collection will take place on 01 July and focus on mental health and wellbeing, impact on daily life, education, health, and access to services for a pre-defined cohort		



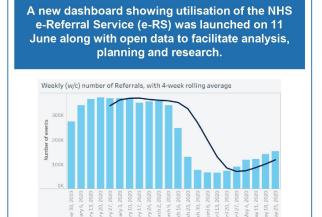


Intelligence to Support Planning NHS Digital COVID-19 Response – 19 June, 2020



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

Initiative	Focus area	Deliveries and impact
Data Visualisation and Access	 Public Dashboards	 Delivered dashboard on e-Referrals on 11 June (see graphic) to aid transparency of the scale of reductions in referrals, providing CCG-level data by specialty and by week. Visualisation of changes over time and access to anonymous open data will facilitate analysis, planning and modelling
Cancer and COVID-19	Data Linkage and Analysis	 Mobilised joint work programme with Public Health England (PHE) on 15 June to rapidly answer key COVID-19 questions related to the impact of COVID-19 on cancer services and patient outcomes. Findings will inform service planning and improve understanding of COVID-19's effects on cancer patients to enable future mitigation of these effects. The programme brings together complementary data sets and expertise to enable better data linkage, tracking and analysis across the patient pathway from primary through to secondary care and outcome
Social Care Data Collection	Care Management IT System Collection	 Agreed to start automated data collection from Care Management systems on 01 July for 17.5% of the sector. The initial collection of aggregated and anonymised data will include ~90k records of which 60k are for care receivers and 30k are for caregivers, showing COVID-19 infection rates in both groups Initiated discussions with other sites to increase coverage of the collection but this cannot fully cover the sector as most sites do not utilise Care Management systems. The collection will be an important input for planning and identifying trends
'HOSTED' Project	Understanding Transmission Rates	Developed HOSTED dataset in partnership with Public Health England (PHE) to examine rates of COVID-19 transmission within households. The process for generating the data ensures privacy and confidentiality of data subjects (PHE cannot identify individuals or addresses). Analysis of the dataset is underway, and outputs produced as part of the monitoring of pandemic activity are being used to support the scientific advice provided by PHE



Users can view referrals, bookings and Appointment Slot Issues (ASIs) by NHS Region, STP, CCG, Priority, Speciality and/or Clinic Type. Data can be viewed as a map or a line chart view.

Public dashboards for COVID-19 data can be accessed via https://digital.nhs.uk/dashboards

Additional information on e-RS can be accessed via https://digital.nhs.uk/services/e-referral-service

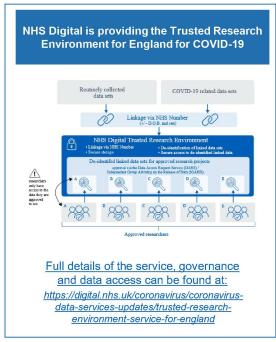


Enabling Research and Clinical Trials NHS Digital COVID-19 Response – 19 June, 2020



- 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.

Services	Focus area	Deliveries and impact
	 NHS DigiTrials 	 Data curated by NHS Digital, and serviced through our 'NHS DigiTrials' service, has supported the work of the RECOVERY trial*: this randomised control trial of potential COVID-19 therapies has found that a low dose steroid treatment, dexamethasone, can cut risk of death by third for patients on ventilators and by a fifth for those on oxygen
	Trusted Research Environment for SAGE	 Continued to expand Trusted Research Environments (TREs) for COVID-19 research for England. This service provides researchers with support for data access requests, access to data on a secure platform and support with analysis work. Dedicated TREs are being established for particular research interests: TREs have been delivered for PHE and for National Institute for Cardiovascular Research (NICOR). A TRE for the British Heart Foundation (BHF) is planned for July, and requirement for TREs for cancer research are being defined
Enabling Research	Central Disseminator of GP Data for research and planning	 Following endorsement by the BMA, RCGP and National Data Guardian, NHS Digital is collecting and disseminating GP data for COVID-19 planning and research. This reduces the burden on GPs to ensure legitimate, controlled and proportionate data release Received positive responses to participation requests from ~6.4k GP practices in England (~94%) with only 8 practices opting out. Follow-up is underway with the remaining ~300 practices Initiated first data extract on 29 May based on GP practices that had confirmed participation by 27 May (~83% of total). Data delivery to the RECOVERY* trial planned for w/c 22 June with additional researc requests already being prioritised. Data extracts will occur every 2 weeks until the end the outbreak
	Permission to Contact (with NIHR)	Commissioned by National Institute of Health Research (NIHR) on 15 June to deliver a tactical solution to enable potential participants to record their permission to be contacted with respect to possible participation in vaccine trials. Discussions underway around initiating programme to deliver strategic solution for electronically managing consent for care, research and clinical trials



* The Oxford-led RECOVERY trial is assessing treatments for patients hospitalised with confirmed or suspected COVID-19 (https://www.recoverytrial.net/)



Provide Infrastructure and Support Additional Capacity NHS Digital COVID-19 Response – 19 June, 2020



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 private providers

Services	Focus area	Deliveries and impact
Cyber Security Support Model	COVID-19 Cyber Technical Remediation Programme	 Cyber vulnerability identification and remediation work has been intensified and accelerated in Trusts identified as being most critical to the COVID-19 response (such as large ICU's, Nightingale parent organisation, etc) 85% of these high priority Trusts are now heavily engaged in acceleration activities This work includes acceleration of onboarding to existing national services such as the secure boundary service
Connectivity	Care Homes	• Sent letters to ~1.8k care homes on 12 June to inform them their access to digital services could be significantly improved through simple connectivity upgrades. NHS Digital now following up directly with these sites and planning underway for remaining 6.5k high / medium priority sites
Fast and secure Authentication	 Virtual Smartcards 	 ~20k of the 30k licenses from the Isosec contract have been issued across 70 sites. As of 18 June, ~1.9k licenses had been activated across 31 sites Completed testing and clinical safety assurance for Entrust solution, which uses Bluetooth. Planning underway for deployment beyond 5 pilot sites in July. Go-live is contingent on approval of Entrust's updated Privacy Policy
VDI for Primary Care	Virtual desktop for remote working	Completed testing for virtual desktop that will enable GPs and other healthcare staff to work remotely using their own devices. Following successful pilot, solution will be ready to deploy from 22 June but funding model is yet to be agreed Paper being drafted to outline use cases, funding model and proposed next steps – draft will be circulated for comment to Regional Digital Directors, CIOs and other key stakeholders to ensure final decision on deployment of a national solution best supports system needs
Infrastructure Support	Co-ordinated deployment across Trusts	HSCN migrations, upgrades to Microsoft software and implementation of planned cybersecurity enhancements need to be completed by Trusts over the next few months. NHS Digital is mobilising a co-ordination programme to minimise impact and ensure delivery of key infrastructure upgrades

The COVID-19 Cyber Technical Remediation Programme was launched in April 2020 to augment and accelerate cyber support for national threat monitoring, local resilience and mitigation of specific threats



NHS Organisations have been actively supported throughout the outbreak through the Cyber Security Support model (depicted above): focus has been on identifying opportunities to improve cyber security and now moving to support organisations in addressing any shortcomings



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