

17. Taking advantage of the opportunities of digital technology

We have been working together to consider what the requirements set out in the NHS Long Term Plan mean for our residents, staff and health and care partner organisations across North Central London (NCL). We have a collective commitment to deliver changes that will improve the health and wellbeing of residents and have listened to what residents and communities have told us is important to them.

This draft plan builds on existing plans and work already underway across NCL and sets out how we will deliver the commitments in the Long Term Plan. It has been developed by, and with the insights from, representatives working in NCL, including staff working in health and social care, and clinical leaders and managers, patients and residents, and our partner organisations from across the NHS, social care, voluntary sector and beyond. Local leaders across our partner organisations, including NHS trusts, general practice, commissioners and local authorities have been closely involved in shaping and overseeing the development of these plans. We are continuing to work closely with all of these groups as we refine the plans and move into delivery and implementation of the commitments.

If you would like to feedback or contribute to this work as we further develop our plans and implementation, please see the 'Listening to residents and communities' section for more details on how to get involved.

Introduction

Digital technology is a significant part of our everyday lives improving the way we socialise, shop and work. It also has great potential to improve how the NHS delivers its services in a new and modern way; providing faster, safer and more convenient care.

The NHS Long Term Plan aims to increase the range of digital health tools and services. People will be able to seek health information and support online, and choose whether they speak to a doctor on the phone or in person. A wide range of NHS-approved apps will help people get ongoing support to help them manage their health and wellbeing needs, backed up by face-to-face care when this is needed.

It also sets out plans for investing in improving NHS IT systems and in developing new technology. The LTP includes making sure staff have the technology they need to do their jobs, and our systems can talk to each other and share vital information to support the delivery of care.

Our NCL digital plan sets out how we will be responding to the ambitions set out in the Long Term Plan, providing the foundations to enable us to take advantage of the opportunities of digital technology. Please also see Section 5 (Integrated out of hospital and community care) and Section 9 (Transformed outpatient care) for more detail on digital primary care and digital outpatient plans.

Fully digitising North Central London is a key priority for our region in the next five years. We have undertaken a number of approaches, including provider digitisation programmes and an STP-wide health and care record-sharing programme that covers primary, community, mental health, secondary and social care.

NCL STP has procured and is in the process of implementing two STP-wide platforms to enable system-wide integration across health and social care in NCL - a Health Information Exchange (HIE) for real-time viewing of patient data from multiple disparate sources, and Cerner's HealthIntent for population health management. Implementing these two systems makes up the core of the STP's efforts in the digital space since 2018/2019. We have focussed on integrating records from health and care providers across NCL to facilitate better care, reduce duplication and inefficiencies, improve patient experience, improving population health outcomes, and reducing health inequalities.

Since the last digital maturity assessment of the STP, we have made significant strides. In 2017, we were below the national average in terms of digital maturity, but since the last assessment was undertaken in late 2017, our four acute trusts have received Global Digital Exemplar (GDE) or Fast Follower (FF) funding - Royal Free London (RFL) has fully implemented electronic patient records (using Cerner Millennium) at Barnet and Chase Farm, University College London Hospitals (UCLH) has implemented electronic patient records (using Epic) across all sites, North Middlesex University Hospital (NMUH) and Whittington have implemented new functionality in their System C electronic health record. Great Ormond Street Hospital has also implemented Epic. We anticipate that as the electronic health records are developed, especially in the acute sector, this will be reflected in the overall digital maturity of NCL when a new assessment is undertaken.

In terms of provider digital maturity, our four main acute providers - RFL, UCLH, Whittington and NMUH - are all part of the GDEs/FFs programme, which should deliver a minimum of HIMSS EMRAM stage 5 by 2022, with many sites targeting a HIMSS EMRAM stage 7 within the next 10 years. For example, Chase Farm Hospital is HIMSS EMRAM level 6 and we plan to achieve level 7 in 2020. We plan to achieve HIMSS EMRAM level 6 at Barnet Hospital in 2020 and Royal Free in 2021, and achieve level 7 in 2021 and 2022 respectively. The HIMSS EMR Adoption Model (EMRAM) is a benchmarking tool that is used by acute care organisations to assess their level of digital maturity against an internationally recognised set of standard criteria, including electronic health record functionality and levels of adoption.

In June 2019, the NCL Chief Information Officer (CIO) Working Group took part in a London-wide initiative for assessing digital maturity on a system level, ran by Deloitte. The CIOs assessed the digital maturity of their organizations against the Strategic Development and Investment Framework and discussed digital priorities for the STP. The output from the workshop will be used to direct future system investments in line with ambitions across London to align the various digital funding streams into a more coherent whole.

We also have a number of provider-specific digitisation programmes underway for electronic prescribing and medicines administration (EPMAs) and electronic health record (HER) enhancements, and we have earmarked the rest of our health System Led Investment programme (HSLI) funding not used for HIE/HealthIntent for this.

NCL is well versed in the GDE programme. Our GDE participants are committed to providing GDE Blueprints to help deliver IT capabilities more quickly and cost effectively, and other trusts are also keen to have access to the Blueprint library to learn from other trusts. For example, our Royal Free GDE is committed to providing 5 Blueprints for:

1. Reducing unwarranted clinical variation using digitised standard care pathways
2. Implementation of Cerner Millennium Model Content EPR to achieve HIMSS EMRAM 6

3. Go-live of the new Chase Farm Digital Hospital
4. Implementation of Cerner HealthIntent Population Health Management
5. Improving patient care, outcomes and experience for deteriorating patients with Acute Kidney Injury (AKI) using DeepMind Streams App

In addition, providers in NCL have been employing machine learning and Artificial Intelligent technology to enable more efficient delivery of, for example, diagnostic services or outreach services.

In procuring technology platforms, we already require suppliers to comply with national standards and frameworks. For example, RFL uses the NCL Procurement Shared Service so they already use compliant frameworks for digital procurements including NHS terms and conditions to ensure compliance with regulatory, legal and NHS standards on data capture, storage and sharing. These requirements form part of the contract entered with the suppliers which ensures that these standards are implemented.

Security of Data in North Central London

We aim to keep abreast of the latest cyber security developments and requirements.

Our providers are well on their way to rollout Windows 10 and Microsoft Advanced Threat Protection, and all of our GP sites already meet these requirements. Our Trusts are well engaged and keen to be on the front foot in this regard, but progress is threatened by national capital spending reviews.

Furthermore, we use the Cyber Security Support Model to raise our level of cyber protection. We are briefing our trust boards on cyber security awareness, we implement cyber security tools, and we have significant progress towards achieving the Cyber Essentials Plus certification with providers and primary care practitioners.

Our organisations are already making use of the Cyber Risk and Operations support package to improve our cyber resilience.

Digital Leadership in North Central London

Chief Clinical Information Officer (CCIO) roles in partner organisations within NCL have evolved a lot over the past couple of years, and we plan to continue this trend.

- The STP now has a dedicated CIO and two CCIO posts (provider and CCG)
- The STP population health digital programme is led by a Local Authority Public Health consultant
- All 5 CCGs have a nominated clinical digital lead
- All 12 providers have at least one CCIO.
- At least three Chief Nursing Information Officers (CNIOs) have been appointed recently
- The provider CCIOs come from a variety of clinical backgrounds including doctors, nurses, allied health professionals, psychologists
- Two of the acute providers are enabling medical trainees to gain experience as CCIOs, supported by senior staff
- We have established a patient panel and have strong engagement with Healthwatch organisations across the STP
- Our CIOs and CCIOs sit on their trust boards to a various degree, but all are committed to give better representation to Information Officers at the board level

- Lead social care workers are involved in NCL's Health and Care Reference Group, and we are keen to explore how we develop social care digital leaders (equivalent to CCIOs) as part of NCL's Digital Programme.

Funding NCL's Digital Transformation

We have established a healthy pipeline of digital projects to provide better care for our residents by raising the digital maturity of our STP. Our main focus is the delivery of our local shared health and care records programme with the help of STP resource, leaving capacity for trusts to also carry on with individual provider digitisation schemes. Both are funded locally and through national programmes like the Health System Led Investment and the Local Health and Care Record Exemplars capital programmes. We have a dedicated resource handling all digital funding for the STP, making sure we are aligned to national guidelines and make the best use of them to drive the NCL's digital agenda.

There will be additional financial implications to connect more organisations to the HIE shared record and HealthIntent population health management which are not included in current funding bids e.g. community pharmacists, out of hours services, dentists etc. Quality improvement support will be needed to maximise the benefits of HIE and HealthIntent implementation across the system. We have already bid for all available funding that exists and are waiting for confirmation that we will receive funding for the projects that were originally approved.

Our future challenges include the fact that the software licensing model is moving to a subscription service globally. This moves the cost from capital to revenue and may create challenges given the financial context in NCL.

Adding this to the year-on-year CIPs trusts have to make on their revenue budgets only adds to the scale of the problem looming. NCL trusts will also need to make significant investments to maintain their current level of maturity, current operations, and to procure new licenses for out of support products and clinical systems as they reach their end of contract in the next years.

Benefits Realisation

Our health and care records sharing programme isn't just delivering technology for technology's sake. We are committed to developing use cases that will enable clinical workstreams such as mental health and children and young people to deliver more benefit for our residents.

Digitising to Core NHS Standards

In digitising our providers, we are committed to meeting standards set by NHS England and NHSX.

We are working towards providing mobile access to our staff where it is needed. At the Royal Free, we already provide remote access to our EPR for staff based in the community, and to patients using our patient portal.

Community services are largely domiciliary and delivered by a mobile workforce, and therefore we have projects in the pipeline that deliver mobile devices and access to our workforce. There are a number of mobile applications which support more effective delivery of care in the home including the native mobile apps from the main suppliers. For example, Central London Community Healthcare (CLCH) would run a programme to implement and

embed this across domiciliary community services for more efficient and effective care. This includes more rapid access to the clinical record for safe care and improved data entry to improve data quality and increase clinical facing time. Central and North West London (CNWL) is targeting implementation of lightweight devices to allow access to the trust's SystemOne electronic patient records and to NCL's Health Information Exchange remotely whilst away from base location in addition to access to social care records as they become available.

All Mental Health trusts in NCL are committed to submitting comprehensive data to the Mental Health Services Data Set and IAPT dataset (where IAPT is delivered) and are in line to deliver SNOMED CT compliance and submit patient-level costing information. All Mental Health trusts continue to develop their digital maturity to provide digitally enabled mental health care (see mental health chapter for details).

Our trusts utilise Child Protection – Information Sharing (CP-IS) via the national spine service and are looking to integrate further and embed into our EPRs.

Our trusts either no longer use fax machines or are planning to remove all that are left in the near future. Fax machines are not provisioned within GPIT support.

In addition, with support from the Healthy London Partnership, local authorities and CCGs in NCL are working with care homes across the footprint to support them to access NHS mail. A key pre-condition to doing so is for providers to complete a data security protection toolkit, which Healthy London Partnership are running a series of webinars with care home providers, supported by local authorities and CCGs, to support. The system benefits of NHS mail are clear, particularly in respect of improving communication flows between care homes and the NHS to support discharge and admission avoidance.

Stakeholder Engagement Impacts on HIE Delivery

Throughout the HIE roll out, the following instances of stakeholder engagement had a significant impact on the delivery plans:

- **Outpatient Letters:** Our GP cohort were quick to feedback that the HIE system was having a significant positive impact on their work practices but that the ability to see outpatient letters from the acute hospitals would have an even bigger impact. We changed the roll out plan of datasets from Royal Free to accommodate this request and bring letters into HIE more quickly.
- **Role Based Access Control (RBAC):** Our providers and clinical reference group raised considerable concern over access to the HIE record by non-clinical staff or staff without a legitimate relationship with the patient. The HIE delivery plan was updated to include a new release of software to include RBAC capability.
- **Sensitive Data:** We have engaged with mental service users to understand their concerns with sharing their mental health records across providers. This information has helped to inform our planning on what data is to be included in a mental health data set.

Engagement with Residents, Clinicians, Social Care and Other Stakeholders

For the past 11 months, the NCL Digital team has been proactively engaging with relevant stakeholders across the patch to inform them about the benefits derived from the HIE and HealthIntent systems. Most of these meetings have translated into formal kick-off meetings with providers and local authorities regarding deploying HIE and subsequently HealthIntent. In order to address the complexity in terms clinical data that flows into both systems, the NCL Digital Team has initiated the process of forming clinical sub-groups by care setting, which should collaboratively decide what data flows into HIE and what data would be of most useful when providing treatment at the point of care.

A substantial amount of communication materials has been produced and distributed across the NCL space in order to inform citizens about the associated benefits that would come with a live joined-up health and care record. Patient representatives have been elected and invited to join the various governance meetings in the Digital workstream to assess the benefits derived from deploying the system, and to provide valuable feedback on how best the system can be adapted to suit patients' needs.

In addition to that, the team engaged with clinicians already using the system in order to receive their opinion, here is some of the feedback that we have received:

"It's the best decision we have made as a practice in a decade, a game-changer and win-win for all in terms of functionality.

Out of 6700 patients only 10 of our patients Opted Out due to a successful promotion of the overwhelming benefits to patient care. Deployment was seamless and we have maintained excellent channels of communication with our NCL Partners and their support has been amazing throughout the journey.

Surprisingly, there has been no disruption to the running of the practice throughout the transition.

Still very excited about the endless possibilities of HIE 3 months on and cannot do without it in my day to day work as it gives me instant access to relevant hospital information (visits, pending appointments, results) to aid decision making and saves a lot of time and inappropriate appointments chasing that crucial piece of information that is waiting to be shared by secondary care."

In terms of future engagement plans, as the programme has entered a rapid deployment stage, the NCL Digital team is planning on engaging several important stakeholder groups. As of now the team has ensured the forming and on-going management of the Chief Analytical Officer's (CAO) Working Group and the Analytics Board, which are aimed at developing a clearer view on how HealthIntent will be mobilized and deployed.

NHS Login and the NHS App

We don't have STP-wide plans for the NHS.uk website, NHS Login or the NHS App, but we're open to exploring how the NHS Login can be used to authenticate patients and how our patient portals can be integrated with the NHS App, and some Trusts already plan for this within their Digital Strategies. Our clinical platforms are built on open standards and have APIs to facilitate uninhibited workflow with national systems and our clinical partners. These system enhancements will, over time, enable patients to choose not only where to be treated but also when.

Personal Healthcare Records

In terms of patient access, the RFL has a patient portal that provides access to a wide range of patient data, which we want to offer to all our patients. In the future we are looking to provide access to transactional services like booking or amending outpatient appointments or capturing data from home based or wearable sensors. Currently there are different patient portals for primary and some secondary care providers, each offering access to appointment booking, local electronic health records and offer patients a way to share information with their providers e.g. completion of pre-assessment forms. Most of these are proprietary portals at present so there is a need for a national programme to ensure APIs can be developed to share data between these and the NHS App. NCL will be evaluating options in conjunction with other London STPs to provide a common approach to a person held record across the capital. Furthermore, with patient consent, care plans can be shared between organisations, avoiding duplication and improving patient engagement, activation and experience. In this way, providing residents with a London-wide person-held record will both support the development of personalised care, as well as improve workload planning.

Some trusts have digitised maternity records within their EPR and plan to provide access via their patient portals. The same applies to children's immunisation records, as trusts are keen to provide access to e-Redbook integrated into their EPRs.