

DIGITAL HORIZONS

Spring 2019

The future of healthcare

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Welcome...

to the third edition of **Digital Horizons** - our technology newsletter covering the latest digital developments and innovations in healthcare.

With the technology and digital agenda already at the heart of discussions in 2019, following publication of the NHS Long Term Plan, this issue focuses in on a number of areas that will be integral to delivering identified priority areas.

We take a look at the work already underway to propagate Local Health and Care Records, as well as initial findings from the Global Digital Exemplar (GDE) programme evaluation.

With a continual focus on how the prevention agenda can be supported through the use of apps, we also hear from a project to bring the tried and tested Easychange offer from Scandinavia to the UK. This portfolio of digital self-care applications includes a range of programmes from smoking cessation to stress reduction.

And finally, we will also be hearing from the NHS Digital cyber security team on how the

Data Security Centre can support health and care organisations to ensure the confidentiality, integrity, and availability of patient data while protecting clinical and business systems from vulnerabilities and threats.

We're always keen to share our thinking and understand your ambitions, so whatever your digital healthcare challenges, we'd love to engage in an exploratory discussion with you.



Adrian Smith
Head of Digital Transformation
at Arden & GEM CSU

The Long Term Plan: a blueprint for a digital world?

With the long awaited NHS Long Term Plan published on 7 January, digital technology was placed firmly on the agenda as key to enabling and underpinning priority areas.

Building upon the Five Year Forward View, the Wachter review and Matt Hancock's 'tech vision', the Plan describes a huge shift towards adopting digital solutions. But achieving this will require a significant change in working practices as well as greater engagement with the public than ever before. We take a look at some of the key areas below.

Allowing patients to better manage their own health

Through access to a range of digital services, patients will be able to recognise their individual health risks and symptoms and manage their personal response to those risks. At Arden & GEM, we are already working in partnership with a number of organisations to accelerate access to evidence-based digital tools, such as Easychange, a portfolio of digital self-care tools built on 30 years of psychological research, and Mapmyhealth's digital therapeutic solutions for people with long-term conditions, including the NICE endorsed Mapmydiabetes. By supporting individuals to take a more proactive approach to their own health and wellbeing,

the demand for health and care services is predicted to fall.

Supporting an overstretched workforce

One criticism of the plan has been its failure to address the impact of workforce, in particular staff shortages. While we wait for a more explicit response to this, in the form of a workforce implementation plan (due to be published later this year), it's important to acknowledge some of the potential impact that digital solutions can offer in this area such as improving the availability and deployment of a clinical workforce through e-rostering and e-job plans. Increasing use of online and video consultations could also help address workforce shortages by allowing specialists to provide remote care and aggregating underutilised capacity.

The growing number of projects and pilots exploring the role of Artificial Intelligence can also help to relieve workforce shortages in key areas such as endoscopy. Arden & GEM is part of a partnership that has recently been awarded almost £2m to test and demonstrate how automated image analysis can help reduce unmanageable loads for human operators.



Building a clearer picture

While accelerating the rollout of Local Health and Care Records will increase safety and efficiency, greater availability and better analysis of clinical data will also enable more sophisticated decision support for clinicians and better predictive assessments for patients and integrated care systems. Rich and accurate data will support us to keep refining and optimising clinical pathways and treatments based on evidence of best practice and outcomes.

Don't forget the 'Long' in the Long Term Plan

We need to remember that this is a Long Term Plan and that any expected benefits from technology will take time to realise in such a large and complicated system. This was a key point made in the Wachter review and has been repeatedly demonstrated by our own work in supporting and evaluating the Global Digital Exemplar (GDE) programme.

We shouldn't underestimate the time and challenge in embedding the 'digital first' tools and work practices proposed. Making these available is one thing, getting them systematically used in the right way as part of our normal working practices is quite another. We must aim for a digital future with a new operational delivery model replacing the old, rather than being bolted on to what we do now. How we approach the transformation required and provide the necessary support for both staff and patients, will be the key to success.

95

times the word
digital features
in the plan

By 2024

we will fully digitise Trusts
with full LHCR coverage

100%

compliance with mandated
cyber security standards by 2021

50%

of priority areas rely, at
least partially, on digital

Digital first primary care
for every patient by

2024

Making joined-up patient records a reality

In 2018, NHS England made a significant step on the journey towards genuinely joined-up patient records by investing in five initial Local Health and Care Record Exemplars (LHCRE).

Based on similar principles to the Global Digital Exemplar (GDE) programme, the aim is to accelerate progress in local areas already adopting best practice in the collection, protection and ethical use of patient information and encourage other regions to follow suit.

The programme has now been extended to a further three LHCRE sites and ultimately intends to achieve national coverage.

Each LHCRE consists of either one or multiple Sustainability and Transformation Partnerships (STPs). Arden & GEM supported the successful wave 1 bid from Greater Manchester,

building on our extensive data management expertise and our role providing DSCRO (Data Services for Commissioners Regional Offices) in the North West.

Towards the end of 2018, the CSU was successful in winning an exciting Local Health and Care Record project. When the original LHCRE programme began, the Midlands and East of the country - covering 17 of the 44 STPs - wasn't in receipt of funding support. We are now working closely with the teams across all 17 STPs to help identify strategy, leadership and architecture themes that will help the region accelerate its integrated record ambitions.

LHCR initiatives are important in their own right but are also crucial to NHS and Government plans to establish Digital Innovation Hubs to provide a safe, controlled and secure environment for research that can harness scientific developments for the benefit of patients.

"Sharing information for people's individual care can be lifesaving by quickly providing staff with the details they need, from patient histories to previous test results and care plans.

The public already assume their GP Practice and hospital can see their records; now in the NHS's 70th year through Local Health and Care Records we will start to make this possible."

Dr Simon Eccles, Chief Clinical Information Officer for Health and Care

GDE Programme Evaluation - Going through the keyhole

Since May 2018, Arden & GEM's digital transformation team has been working alongside experts from the University of Edinburgh to evaluate NHS England's flagship Global Digital Exemplar (GDE) programme.

The evaluation team, which also includes University College London and Harvard Medical School, was tasked with assessing the impact of the GDE initiative in helping digitally advanced providers to pioneer the integration of digital technologies into patient care.

The evaluation has been split into five work packages, over a three year period; with Arden & GEM leading on the 'Scoping study of digital maturity,

infrastructures and optimisation plans' phase. This will build upon the CSU's previous baseline review by undertaking a 'key lines of enquiry' investigation across all acute and mental health sites - and will also take in acute fast followers making 40 sites in total. Visits include qualitative interviews with key decision makers, observations of meetings and systems in use, and looking at key themes across strategy, implementation, benefits realisation, relationships and lessons learned.

This first phase of the evaluation was completed at the end of October 2018 and provided key insights into the best approaches for delivering digitally enabled transformation, how systems can be best implemented and optimised and how best to share knowledge across sites, fast followers and the wider NHS. It also helped inform the other four work packages.

The project aim is to help shape government policy to support the NHS in taking full advantage of the benefits associated with health information technology. Further work will take place with sites during 2019, to continue to inform the evaluation, as they progress with their digital journeys.

The DSC cyber security support model

Identify | Fix | Embed | Review

The NHS is harnessing the advantages of the digital revolution and is delivering leading-edge health and care solutions. Central to this, NHS Digital's Data Security Centre (DSC) works to ensure the confidentiality, integrity, and availability of patient data, and protects clinical and business systems from vulnerabilities and threats.

The DSC offers comprehensive support, free of charge, to health and care organisations allowing them to remain focused on delivering day-to-day, local operational and clinical priorities, to effectively manage data security and to provide safe, effective patient care.

Designed to equip organisations with the knowledge, infrastructure, policy and culture to build and maintain the necessary local interventions, the DSC provides a cyclical Cyber Security Support Model to identify, fix, embed and review an organisation's cyber security. At the same time it will support NHS organisations with the mandatory Network and Information System (NIS) compliance, Data Security Protection Toolkit completion and CQC inspection.

Starting with the Data Security Onsite Assessment, which combines an IT HealthCheck with Cyber Essentials Plus, experts will help organisations identify issues and provide initial guidance on how to overcome areas of high risk and expose vulnerabilities. After the assessment organisations will have a clear, detailed plan of action and can then choose from the suite of support services and products from the DSC. This support is designed to significantly improve their cyber security posture and maturity along with helping them achieve compliance within defined security standards while delivering local operational and clinical priorities.

For technical weaknesses and issues, specialist suppliers will provide a proactive response to identified issues, focussing on existing technology and systems and providing recommended fixes while actively supporting the organisation to deliver the required changes. At the same time, if required, the DSC will help organisations develop a cyber-specific risk review comprising a clear and uniformed framework from which they can, importantly, integrate security into existing organisational risk reporting.

To maintain and develop an effective cyber secure organisation it is vital to embed cyber security into policies, processes and culture. To achieve this, a team of experts can be deployed on-site to provide a tailored suite of services to support operational readiness into the day-to-day ways of working at every level.

The model encourages a re-assessment to validate the improvements that have been made as a result of this support model. Where additional improvements and support are required, the DSC is always available to continually support all health and care organisations and will provide additional support as necessary to ensure organisations continuously improve. While the services are free, the DSC understands that before committing to assessment and review it is vital to have senior-level buy in and approval.

To aid this, the DSC provides GCHQ Certified Board-level Cyber Security training. This comprehensive and engaging training explores the leadership challenge of cyber and data security in health and care, aligning it to your organisational objectives.

Each organisation will have different requirements, likely to include the need for a mix of technical solutions and operational/policy improvement and the Cyber Security Support Model is only part of the services provided by the DSC.

Find out more at
www.digital.nhs.uk/services/data-security-centre

To register for an onsite assessment or to find out more about the other, free support services, please contact the DSC directly
cybersecurity@nhs.net

Helping people make an 'Easychange'

The Five Year Forward View established a vision for the NHS to become better at helping people to manage their own health. Couple this with the new Secretary of State for Health and Social Care's drive for digitisation of the NHS, and the need for effective self-care technologies becomes even more prevalent.

But in this increasingly crowded marketplace, finding the most effective solutions for patients and citizens can be challenging. A common theme has been a lack of evidence to demonstrate the true impact of health apps, making it difficult for commissioners to make informed decisions on investing in this technology.

One organisation, based in Norway, is already demonstrating the value of a range of apps that are delivering a new and more effective way to change habits and lifestyles. Changetech launched their first 'Easychange' smoking cessation app in 2003, and since then has worked collaboratively with healthcare professionals, government agencies, charities, insurers and pharma companies to grow their portfolio to 23 support programmes.

Easychange programmes are now running in Norway, Sweden, Denmark, Finland and Iceland with tens of thousands of users benefiting from the technology to help them to quit smoking, drink less, reduce stress, eat healthier, become more active, increase their mood and wellbeing, or live better with a chronic disease.

The innovation that underpins all Easychange applications is a totally new approach to habit change called personal change programming, or PCP. Each app is built around how the human brain functions, and the psychology required to break bad habits and

improve health and lifestyles. Studies suggest that the brain sees all significant change as a potential danger and launches a series of psychological processes to restore the status quo. The Easychange PCP approach integrates modern psychology techniques that can effectively overcome the brain's natural resistance to change making it much easier for users to succeed.

Keen to demonstrate the value of their programmes, Changetech is passionate about ensuring Easychange is evidence based. Every component that goes into each programme has proven to be effective in clinical trials. The value of the programmes has already been documented in six randomised clinical trials and accepted in the Cochrane Library, with details on the impact of specific programme elements also documented in over 20 user studies. From keeping 21% of users smoke free after 12 months to reducing stress levels by 30-40%, the results are clear, independently verified and impressive.

With an estimated 70% of all health budgets spent on diseases caused by unhealthy habits, digital self-care solutions are set to play a pivotal role in tackling the world's largest health challenges. Investing in research to understand the true benefits of these applications, will undoubtedly help healthcare professionals to adopt new technology, deliver efficiencies and improve lives.

"Easychange is based on extensive research about why people find it so difficult to change their personal habits and behaviour. Our digital self-care programmes are rooted in 30 years of research in behavioural psychology, social psychology, health psychology and related disciplines to allow the user to build the knowledge and techniques required to achieve their goals."

Harald Schjelderup-Lund,
CEO at Changetech

Arden & GEM is working in partnership with Changetech to bring Easychange programmes to the UK. If you would like to find out more please contact Gabrielle Marsden at gabrielle.marsden@nhs.net

The future of the NHS Number - Have your say

The NHS Number is key in ensuring a patient's data is kept with them throughout their health and social care journey, giving a seamless care experience, whether at home, in hospital, or a residential nursing home. Dr Simon Eccles, the Chief Clinical Information Officer for Health and Care in England has made the widespread use of the NHS Number, one of his seven priority areas.

NEL Consulting and NHS England have launched a survey to establish current use of the NHS Number, across health and social care in England. We are providing STPs the opportunity to help shape and influence how the NHS Number is to be used in the next decade and beyond, and to ensure that your professional voice is heard.

This will take the form of surveys to your provider organisations on current use and opportunities for improvement.

The surveys take approximately 15 minutes to complete and a downloadable pdf version is available to help collate any necessary information before commencing the survey to ease completion. The survey is open until March 1st 2019.

If you would like to take part in this survey or have particular views on how NHS Number use can be improved please email nelcsu.nhsnumbers@nhs.net

Help us support you to deliver safe and high quality patient care by completing this survey.

The NHS Numbers Project

Let's get connected

Is connectivity the key to enabling digital healthcare transformation?

In the NHS Five Year Forward View, and subsequent Long Term Plan, harnessing technology and innovation is seen as integral to healthcare transformation.

Connectivity has a crucial role to play in enabling access to remote self-management solutions, providing remote monitoring and early diagnostics, and facilitating shared clinical-decision making. All of these can significantly ease the pressures on strained NHS resources. There are a range of innovative projects already underway where connectivity is enabling technological solutions that improve patient outcomes and deliver efficiency:

Transforming diagnostics

Currently, most diagnostic work is undertaken in clinics and where it does occur at home (for example multi-day heart rate monitoring) doesn't supply real-time information - data is downloaded and returned to a clinic for subsequent analysis. The delay in collecting, submitting and reviewing data can have obvious negative consequences such as heart attacks or a worsening of conditions.

Real-time information from always-connected tools, such as wearable monitoring devices, can help put people in control of their own health as well as providing a wealth of immediate diagnostic information. However, this could also create capacity problems for an already stretched workforce - this is where Artificial Intelligence (AI) can be linked with connectivity to truly transform diagnostics. Exploratory projects using AI for a 'first pass' are in progress for two key pathways - cardiology and bowel cancer.

Ageing well from an early stage

Projects in this area focus on connectivity at home and the automation of observations and social care support. This includes the latest developments in video consultation, wearables and remote sensing devices, and monitoring and control centre functions. These developments can enable early discharge from hospital and then help mitigate the prospects of readmission.

Ambulance and emergency care

5G satellite enabled connectivity has the potential to drive a 30% reduction in emergency patients being taken to hospital while simultaneously improving patient safety by allowing ambulance crews to undertake live video consultations.

As a global leader in 5G capability and satellite technology, the UK is well positioned to take advantage of the opportunities connectivity presents - with further focus and investment to come from the Industrial Strategy and funding deal.

For more information on any of the projects described above, email us at; contact.ardengem@nhs.net

How data is helping to eradicate hepatitis C in England

Public Health England has launched a new report, 'Hepatitis C treatment monitoring in England' which shares preliminary findings from the Hepatitis C patient registry and treatment outcome system, developed by Arden & GEM.

The creation of the Hepatitis C patient registry and treatment outcome system, on behalf of NHS England, has been hailed as a significant milestone in the monitoring of hepatitis C (HCV) elimination in England. By the end of April 2018, the registry contained more than 32,600 entries for over 32,400 people. This data has helped Public Health England (PHE) to better understand the sociodemographic, infection and clinical characteristics of people in England who have been diagnosed with chronic HCV and have accessed treatment services.

The new report found that although there was some duplication of information, data completeness exceeded 90% for many key variables, including age, sex, HCV genotype, source of referral, previous treatment, disease stage, as well as expected duration, date and setting of treatment. Where levels of data completeness were sub-optimal, they still represented a significant improvement on those previously available in England and further improvements will be supported by CQUIN incentives put in place by NHS England.

As data availability and data completeness improves, the information will be invaluable for targeting allocation of resources for finding and treating patients,

improving equity of access to treatment, modelling the future burden of HCV-related disease, and monitoring the progress of elimination, in England. The health system's progress eliminating hepatitis C as a major public health threat will be better tracked and interventions more easily identified.

The report also established that 95% of people who received and completed hepatitis C treatment have been cured of the serious and potentially life-threatening infection in the last 3 years. This is primarily due to effective new direct acting antiviral medication which became available on the NHS in 2015.

Dr Graham Foster, NHS England's Hepatitis C clinical chair, said:

"This dramatic NHS progress in treating hepatitis C over the past few years is one of the biggest but least acknowledged NHS success stories. By investing several hundred million pounds, NHS England has helped transform the lives of thousands of people, and with fair pricing from the drug companies, the NHS has a real prospect of eliminating hepatitis C altogether."

The findings are also being used by PHE and NHS England to launch a national drive to identify patients who may have previously been diagnosed with hepatitis C but weren't able to access newer, potentially curative treatments.

To find out more about how Arden & GEM's business intelligence experts designed and developed the Hepatitis C patient registry and treatment outcome system, read the full case study available at www.ardengemcsu.nhs.uk



**Arden and
Greater East Midlands**
Commissioning Support Unit

For details about our full range of services, please contact us:

website: www.ardengemcsu.nhs.uk

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