NATIONAL INFORMATION BOARD

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Personalised Health and Care 2020

WORK STREAM 2.1 ROADMAP

Give care professionals and carers access to all the data they need

Setting the commissioning and regulatory roadmap for implementing of digital data standards 2018/2020

June 2015

CONTENTS

1 CONTEXT AND VISION

In a “paper-free” NHS and social care system professionals will obtain information from across the health and care system to help make effective efficient high quality decisions. Professionals will be able to find and use digital health and care information in a secure, timely and reliable manner. Decision support will be integrated into workflow, and professionals will understand individual preferences and gain insights from service users.

This is a high priority as a continued reliance on paper records and error-prone manual processes make care less efficient, jeopardising safety and effectiveness. In addition significant safety benefits and savings, available from comprehensive adoption of barcoding and e-rostering for example, are not currently being achieved.

The success of the Summary Care Record programme and the keen progress being made by the Integrated Care Pioneers and local health and care economies such as Leeds, Hampshire, Cheshire, Bristol confirm the appetite for comprehensive interoperability and information sharing at the frontline.

This work stream was tasked with detailing how CCGs, local authorities and care providers will mainstream digital standards for delivery transformation, care service automation, and help achieve interoperability and information sharing between health and social care providers. This will support a health and care paper-free system, at the point of care by 2020. Supporting health and care professionals to effectively integrate services around the individual requires the information about them to flow with them.

2 ENGAGEMENT AND CONSULTATION

The work stream has been chaired by Stephen Dunn, Chief Executive of West Suffolk NHS Foundation Trust and Rob Tinlin, Chief Executive of Southend Borough Council. It has benefitted from input and expertise of a highly experienced and diverse programme board comprising representatives of CQC and TDA, Marie Curie, Carers UK and a small local charity, the Clinical Strategic Reference Group and NIB lay member, CCGs, CCIO, NHS Provider organisations – acute, ambulance service and community.

It has engaged widely with frontline commissioners and providers and representative bodies such as the NHS Confederation, NHS Providers, LGA, ADASS, Socitm and the Richmond Group.

3 OUR PROPOSALS

3.1 Sustained investment in digital technology

Sustained investment in digital technology and software can help deliver extensive capabilities to a wide range of health and care professionals when accompanied by the expertise to optimise delivery and maximise benefits. The experience of the US "meaningful use" programme and the impact of the Technology Funds demonstrates that continued incentives for delivery is crucial.

An unfettered market with high individual transaction costs and low transparency on end-user performance and utility does not ensure that the NHS and Social Care, the consumers of information systems, achieve value for money.

- We recommend the development of a detailed financial model to make the case for further capital investment in enabling information technology. This resource will be delivered by September 2015.
- We further propose that a detailed set of principles be developed in partnership with local areas to ensure that resources are targeted at health and care economies to best effect. This would require struggling economies to make demonstrable progress whilst ensuring leading systems are incentivised to continuously improve and buddy up with those facing greater challenges. These principles will be developed and agreed by September 2015.
- Engaging with the supplier community and the Carter Review we propose looking for the opportunities for further procurement efficiencies in the specification, delivery and operational running of integrated digital care records and procurement of related digital technologies. We propose identifying (with the Carter review team) a "top 20" of potential savings opportunities from investment and optimisation of digital capabilities in health and care. This engagement will continue throughout autumn 2015.

3.2 Creation of local digital roadmaps

As part of an ongoing process local health and care economies will create joined up plans

demonstrating how they will make viable progress towards the paper free targets for 2018 and 2020. These digital roadmaps will be published by April 2016.

To support local areas develop plans for delivering an interoperable health and care system we have published a first package of standards – see Appendix A. We will publish detailed guidance to CCGs, local authorities and providers regarding the core content of their local digital roadmaps. Draft guidance will be published at the end of June 2015.

The roadmaps will describe the current digital capabilities of local areas and outline plans for progress towards paper-free over the next five years. They will be supported by self-assessment and peer review; plans refreshed annually in line with the NHS Planning Framework. We will assure the content of local digital roadmaps to check that individual and health and care economy proposals are harmonised and realistic. CCGs will coordinate roadmap development in conjunction with providers, local authorities, and the voluntary and community sectors. Given the significance of the Better Care Fund, Health and Wellbeing Boards will have a central role in local sign-off.

Local health and care economies will be assisted to deliver high quality plans. Co-created tools and resources on developing digital roadmaps as part of a package of learning and support will be made available from September 2015.

3.3 Creation of a Digital Maturity Index

To ensure transparency on progress towards being paper-free we are co-producing, with the health and care sector, a Digital Maturity Index. This will enable individual providers and health and care economies to baseline and benchmark their current position and mark progress. It will assist local organisations and economies identify solutions to address the gap between their current reality and what making best use of digital technology delivers.

The maturity index will measure both care setting (provider organisation) and health and care system (information sharing and interoperability) maturity. The first data collection for the digital maturity index focusing on Acute and Mental Health and aspects of information sharing will begin this summer. The first digital maturity index will be published in autumn 2015. Going forward the outcomes of the audit will be built into the CCG assurance process and the CQC will integrate it into their core metrics for provider registration.

See Appendix B for details of the core content for the Digital Maturity Index

The scope and depth of the maturity index will be increased over the coming years to include Primary Care, Social Care and Community Services and Clinical Networks. We will consult with the voluntary and independent sectors about incorporating their role into the scope of the Digital Maturity Index in subsequent years.

3.4 Aligning levers and incentives

Ensuring that health and care professionals have access to the data they require to deliver integrated care requires fundamental alignment of the levers and incentives in the system.

The full spectrum of regulatory, inspection, commissioning and development levers and incentives will be used to support delivery of the digitally enabled integration agenda.

We propose incorporating additional clauses regarding adoption and use of priority digital standards (see Appendix A) in 2016/17 and going forward within the National Standard contract and that regulators routinely incorporate compliance with these into their licensing and performance regime.

We propose further alignment of the GP IT Operating model in 2015/6 and use of levers within specialised commissioning to ensure the full range of digital capabilities are exploited in all care settings.

We propose building on the arrangements and commitments in the Better Care Fund to help drive the adoption of information sharing and interoperability.

We propose the development of a Commercial Strategy in 2015/16 that underpins engagement with suppliers to support the delivery of this agenda.

3.5 Developing digital capability

Securing a paper-less health and care system is significantly dependent on leadership and capability building. Helping to foster a learning environment can support local areas to share their progress, identify common challenges and pinpoint examples of emerging best practice so that others can learn and/or adopt.

We propose the creation of local digital care collaboratives in 2016, as a focal point to practice, learn and improve together.

We propose establishing a national digital care collaborative in 2016 to develop common guidance, tools and share good practice across the local collaboratives.

We propose part-funding a support package for providers, commissioned from the HSCIC Provider Development Unit by the TDA and Monitor on optimisation, continuous service improvement, contracting and supplier relations, benefits realisation. Building on existing foundations this work should develop further in 2016/17.

We propose working with the 12 demonstrator sites for GS1 adoption, established by DH procurement policy and research team to support and drive efficiency in supply side operations. This work should begin in 2016/17.

We propose working with Commissioning Support Units, AHSNs and NHS regions to develop and co-ordinate offers to CCGs to build their capability. Building on existing foundations this work should develop further from autumn 2015.

We propose supporting Health and Wellbeing Boards in partnership with the Local Government Association. Building on existing foundations this work should develop further from autumn 2015 going forward.

3.6 Interoperability

An over-arching interoperability strategy is required to help deliver a paper-free health and care system. Open information systems using key digital standards to share information enable professionals to access and contribute directly through their local systems.

Our wide ranging proposals are included at Appendix C.

We recommend on the basis of the evidence work should begin immediately on:

- The creation of regional interoperability communities that define and deliver integrated digital care records and information sharing based on local needs
- The creation of a National Patient Record Locator service to enable elements of an individual patient's record to be readily accessed in a timely manner
- Extending access to the Summary Care Record to a number of key care environments, e.g. nursing home sector, and an expansion of the flags and alerts included e.g. where an individual has a diagnosis of dementia or has a learning difficulty/disability

3.7 Digital efficiency in system transactions

The work stream also recommends that the NIB identify the opportunities for efficiency from increasing digitisation of system transactions and "back office" business processes. This work should begin immediately.

3.7.1 Phasing this Work

Recognising that digital maturity and information sharing between care settings (place based) can only be fully achieved when there is digital optimisation within individual care settings, our programme is based around three phases:

- Phase 1: Individual Care Settings
- Phase 2: Health and Social Care (partial)
- Phase 3: Health and Social Care (full) including 3rd sector and independent sector as an integral part.

The degree of effort required in each phase will vary according to local circumstance and progress to date.

APPENDIX A: INFORMATION STANDARDS

4.1 The best current standards

The current suite of information standards in place (or under development in the near term) is illustrated below:

- NHS NUMBER
- SNOMED CT
- dm+d (Dictionary of medicine and devices)

- Transfers of Care (i) eDischarge (Application to electronic discharges from Acute to Primary Care)
- GS1 (Global Standards)

4.2 Highest priority future standards

On a 1 to 3 year timescale the next set of standards that need to be developed and used routinely are outlined below:

- NLMC (National Laboratory of Medicine Catalogue)
- Transfers of Care (ii) eDischarge (Application to transfers of care – Urgent Care)
- Transfers of Care (iii) eDischarge (Application to transfers of care – Social Care)
- End of Life Information standard

APPENDIX B: DIGITAL MATURITY INDEX

Capabilities for Joined Up Care	Description	Illustrative Examples	Outcomes/Benefits
Records, Assessments & Support Plans	Giving health & care professionals the capability to: • Capture information for subsequent use by others • Use information captured by others • Supporting better clinical decisions at the point-of-care	• Accessing details of diagnoses • Accessing demographics/contact details • Developing a single multi-agency care plan • Accessing detailed patient history	• Patient safety • Quality of care • Continuity of care • Care co-ordination
Decision Support	Giving health & care professionals the capability to: • React more appropriately and promptly to events happening across the system through automated rules-based analysis, prompts and alerts	• Being alerted to deteriorated patients • Being alerted to an end-of-life plan • Being alerted to hospital admissions • Being alerted to a discharge-ready patient	• Patient safety • Quality of care • Continuity of care • Care co-ordination
Transfer of Care, Orders & Communications	Giving health & care professionals the capability to: • Make referrals • Process transfers • Record discharges • Summarise care episode and place orders to/with other professionals	• Making a referral to another service • Ordering radiology services • Discharging a patient from a service • Summarising an A&E episode	• Patient safety • Quality of care • Continuity of care • Care co-ordination
Remote & Assistive Care	Giving health & care professionals the capability to: • monitor, diagnose, counsel or advise patient remotely • access expert advice at the point of care	• Telemonitoring • Teleconsultation • Telecoaching	• Patient safety • Quality of care • Continuity of care • Care co-ordination
Asset & Resource Optimisation	Providing health & care professionals with: • assurance that highest quality physical assets are available at the point of care at lowest cost	• Patient tracking • Product tracking • Geolocation	• Patient safety • Efficiency
Citizen Activation	Giving citizens the capability to: • manage their own health through access to knowledge on their health, care and condition • access to support mechanisms and transactional services	• Accessing diagnostic results • Ordering a prescription • Recording 'end of life' preferences • Contributing patient-generated information to the care record	• Citizen activation • Citizen experience • Patient safety • Continuity of care • Care co-ordination

APPENDIX C: DELIVERING AN INTEROPERABLE ENVIRONMENT

To deliver this, the interoperability strategy is based on the following plans. This will be taken forward through the existing Interoperability Board and Interoperability Programme acting as the bridge to local initiatives (such as the Integration Pioneers):

- Ensuring Primary Identifier Adoption building on requirements of the NHS Standard Contract, Better Care Fund and 2014 Care Act. This will strengthen system-wide levers and focus on areas with low usage.
- Establish Regional Interoperability Communities to deliver their integrated care record solutions. These locally defined solutions will be the main approach for local organisations to deliver their information sharing needs.
- Prioritise uptake of fundamental digital standards (as ratified by the NHS England Board) such a NHS Number, Transfers of Care, EPACCS for end of life care; which form the basis for any effective information sharing between different care settings and common across locally delivered solutions.
- For Key Transfers of Care specify, introduce and adopt tight and consistent digital standards across key care settings covering admissions, discharges and referral notifications. These will enable the move from sharing unstructured information to sharing structured and coded information.
- Create a National Patient Record Locator Service to act as a national index to be able to find out what records exist for a patient across local and national care record solutions (such as SCR).
- Enable Open APIs within and between Integrated Digital Care Records. The ability to access care information from local systems through open interfaces. In addition, given that care pathways cut across geographical boundaries, the ability to access information (found using the national index) from IDCR solutions using standardised interfaces will be key.
- Increase use of the Summary Care Record as Integrated Digital Care Records are developing locally this will include extending access to additional care settings (where it is appropriate) and adding additional (limited) critical information.

To aid local organisations in their local delivery, we will co-create products/tools to support local decision-making on the most suitable interoperable approach to take and how to best procure this. This builds upon the six “offers” on interoperability of the Integration Pioneers programme and products such as the Interoperability Handbook and Starter OBS to ensure that benefits are articulated for local areas.

In addition, we will focus upon a specific number of information sharing initiatives:

- Support access to Medical Records in Defence Medical Services through work with the Ministry of Defence.
- Support access to GP Records in Care Homes enabling continuity of care and supporting the commitment for Care Homes to provide updates to GP records as part of plans for ‘named GPs’.

APPENDIX D: THE EVIDENCE BASE

Our vision for an interoperable health and care system prioritises areas where evidence suggests there will be greatest benefit in meeting the triple aims of efficiency, quality and safety. The evidence and research has been drawn from national and international experience, research and delivery programmes.

Work was undertaken by McKinsey in 2014 to identify the benefits of digitally enabled processes in the NHS, drawing on 34 systematic reviews and a review of 13 integrated care models worldwide. This work found that four elements of integrated care had the most impact – self empowerment and education; multi-disciplinary teams (MDT); care coordination and individualised care plans (personalised approaches using tailored information influencing health behaviour). All of these elements are effectively enabled by digital technologies. In particular MDT's, care coordination and individualised care plans are underpinned by Integrated Digital Care Records.

This research also identified how digitally enabled approaches impacted on key care priorities, including prevention of non-elective hospitalisations, reducing hospitalisations at end-of-life, reducing elective activity due to better disease management, improved mental health outcomes and reduced A&E admissions through more effective self-care.

7.1 Further evidence gathering: next steps

We recognise that further work is needed to build upon this evidence base through both academic research and feedback from local organisations. This will include:

- Understanding the current challenges faced in urgent and emergency care to secure a paper-free environment particularly with the ambulance service.
- Assessing the impact and benefits of delivering key capabilities in care settings beyond the NHS with a specific focus on the voluntary, independent and care home sector.
- Fully engaging with the Vanguards, Integrated Care Pioneers and wider New Care Model sites who are utilising digital technology to support the delivery of care and test benefits.
- Building a fuller set of benefits cases that demonstrate the return on investment and broader personal and societal benefits available from investing in a range of digital interventions.

APPENDIX E: BENEFITS

Business Capability	Theme	Individual Provider Benefits *(Phase 1)*	Locality Benefits *(Phases 2-3)*
Records, Assessments & Support Plans	Efficiency	Reduced unnecessary or duplicative tests / imaging procedures; reduced admin around tests; reduced review appointments; reduced time spent on prescription admin; increased use of lower cost drugs; reduced time searching for records; reduced medicines wastage; reduced paper document management costs; reduced effort collecting info for audits and investigations; reduced trips to base; reduced duplicate data entry; reduced 'no access' visits	Reduced need for 2-person initial home visits; reduced 'no access' visits; reduced unnecessary or duplicative tests / imaging procedures; reduced duplicate data entry (through accepting data recorded in other settings); reduced time spent preparing for MDT meetings
	Quality	Reduced ICU LoS; reduced downstream demand arising from better care; reduced inpatient LoS arising from better care; income protection (CQUINs); more effective ward rounds by multiple clinicians accessing the record at the same time; reduced time to make information available to other clinicians; increased adherence to medicines policies; reduced delayed discharges linked to medication delays	Reduced admissions from better management of patients with LTCs; reduced admissions at end-of-life; reduced delayed discharges linked to arranging care package; reduced admissions from A&E; avoidance of patients presenting at A&E / GP through more effective intervention by 111 / community pharmacy; voluntary sector enabled to provide effective care; reduced time to make information available to clinicians in other care settings; more effective 'out of hours' interventions
	Safety	Reduced adverse drug effects; reduced instances of wrong drug / wrong dose / wrong patient	Improved diagnosis / clinical decisions through access to the full record;
Decision Support	Efficiency	Reduced effort in calculating risk scores; reduced effort in raising alerts	Reduced effort in raising alerts in other settings
	Quality	Better care through clinical decision support; better decisions through information being presented in accessible ways	Increased appropriate public health interventions; increased ability to take patient preferences into account across settings
	Safety	Reduced hospital acquired infections and pressure ulcers; reduced falls; ability to react more comprehensively and promptly to patient deterioration	More effective safeguarding decisions; improved diagnosis / clinical decisions

Business Capability	Theme	Individual Provider Benefits *(Phase 1)*	Locality Benefits *(Phases 2-3)*
Transfers of Care, Orders and Communications	Efficiency	Reduced effort in following up missing or illegible information; reduced costs in moving paper around; reduced effort in creating a discharge summary	Reduced effort in following up missing or illegible information
	Quality	Better clinical decisions from more timely, accessible and comprehensive information	Better clinical decisions from more timely, accessible and comprehensive information; quicker access to diagnostics and treatment
	Safety		Reduced instances of medication conflicts
Remote & Assistive Care	Efficiency	Reduced effort from switch to lower cost channels for consultations; reduced travel through virtual MDTs	Reduced admissions through increased monitoring; reduced referrals through ability for 'generalist' clinician to engage with a 'specialist'
	Quality	Reduced LoS as patients can be monitored outside hospital	Improved patient experience from not needing to attend follow-ups at remote specialist centres; ability for 'generalist' clinician to engage with a 'specialist' at the PoC resulting in better care
	Safety	Appropriate levels of prescribing and medicines administration Avoidance of duplicate testing	Increased ability to detect patient deterioration
Population Health / Care Management	Efficiency		
	Quality	More effective deployment of limited resources to specific cohorts (e.g. those at high risk of gestational diabetes)	More effective deployment of limited resources to specific cohorts (e.g. those at high risk of readmission, falls, etc.)
	Safety	Reduced hospital acquired infections / sepsis	
Asset & Resource Optimisation	Efficiency	More efficient use and reduced loss of equipment; reduced time spent capturing info on bed status; improved bed capacity; reduced nursing costs from better staff utilisation; reduced locum spend	Reduced LoS from better admission and discharge planning
	Quality	Assured supply chain and asset management	Avoidance of counterfeit drugs
	Safety	Assurance of right person right time right place	Avoidance of error and potential litigation