

BOARD PAPER - NHS ENGLAND

Title: Digital Health Services by 2020: Delivering Interoperability at Point of Care to Support Safe, Effective, Efficient and High Quality Care

From: Tim Kelsey, National Director for Patients and Information

Purpose of paper:

- To update the Board on progress towards achievement of commitments towards the implementation of digital standards and to ask the Board to approve our plans to achieve system-wide interoperability. Upon approval by the NHS England Board, we intend to begin a consultation with the wider health and care sector on the proposals.
- To secure Board approval and endorsement for a comprehensive programme of implementation support (see section 3) to commissioners. This will help to deliver interoperability and enable integration and innovation in new models of care and support better patient outcomes and benefits.

The Board is invited to:

- **ratify** the current approach to the implementation of digital standards as mainstream health and care commissioning requirements
- **approve** the current priority list of digital standards for 2015/16 and to support the future priorities in the digital standards pipeline for 2016—2018
- **confirm** our intention to use all available commissioning levers in 2015/16 to help secure comprehensive adoption of digital standards by the publicly funded NHS and care sector. We will work to ensure that the NHS makes a step change towards delivery of the goals outlined in the Five Year Forward View and the National Information Board Framework – “Personalised Health and Care 2020”.

Executive Summary

The Five Year Forward View recognised the need for the NHS and social care to exploit the information revolution to meet the fundamental challenges facing us – the health and wellbeing gap, the care and quality gap, and the funding and efficiency gap. Recognising the need for sector-wide leadership to deliver this agenda the National Information Board (NIB) has brought together organisations from across the NHS, public health, clinical science, social care, local government and representatives of the public. In November 2014, the NIB produced '*Personalised Health and Care 2020, Using Data and Technology to Transform Outcomes for Patients and Citizens - A framework for action*'. This document committed that local health and care economies would, by April 2016:

- produce detailed roadmaps highlighting how, amongst a range of digital service capabilities, they will ensure clinicians in all care settings will be operating without the need to find or complete paper records by 2018; and
- that by 2020 all patient and care records will be digital, real-time and interoperable.

NHS England's approach to fulfilling the commitment, based on our statutory role to publish information standards, is to:

- develop a list of priority data standards through 2015/16, the digital transfer of which will form the basis of a future 'licence to operate' for information-sharing for all NHS-funded providers;
- develop a package of support to commissioners and regulators to help them in their role to enforce the standards and achieve the ambition;
- further develop and implement our 'digital maturity index' which is a tool to benchmark and measure progress across the provider landscape towards achievement of the digital capabilities and standards;
- work with the NHS Trust Development Authority (TDA) to commission the Health and Social Care Information Centre (HSCIC) to develop a package of support for providers to develop their capabilities towards achievement of the ambition;
- work with the integration pioneers¹, vanguards², test beds³ and new towns⁴ to promote digital deployment and showcase best practice.

¹ These are local areas to express an interest in becoming 'pioneers', demonstrating the use of ambitious and innovative approaches to delivering integrated care.

² Through the New Models of Care Programme, individual organisations and partnerships, including those with the voluntary sector, are invited to apply to be 'vanguard' sites. These organisations will have the opportunity to work with national partners to co-design and establish new care models, tackling national challenges in the process.

³ Defined as sites for worldwide innovators.

⁴ New town developments and the refurbishment of some urban areas offers the opportunity to design modern services from scratch, with fewer legacy constraints - integrating not only health and social care, but also other public services such as welfare, education and affordable housing.

The purpose of this paper is to update the Board on progress towards achievement of these commitments and to ask the Board to approve our plans to achieve system-wide interoperability. Upon approval by the NHS England Board, we will begin a consultation with the wider health and care sector on the proposals.

Section 1: Setting a modern digital standard for safe, effective health and care services

1. Across the NHS secondary care sector in England, the use of modern technology to manage workflows, communicate across specialties and store patient information within a Trust is hugely varied. The transfer of information to and from primary care or social care, in a digital and consistent format, is rare. Some providers operate paper and whiteboard systems and processes, others have modern computerised processes yet continue to communicate with primary care and social care via fax machines.
2. Previous initiatives have helped to stimulate innovation towards a modern digital standard. The Integrated Digital Care Fund, 'Safer Hospitals, Safer Wards' and Nursing Technology Funds have helped to improve the penetration of clinical information systems and digital patient records in the more complex hospital and community services sector. The latest indices that were produced by EHealth Intelligence, a market leader in their field, illustrates that this investment has been particularly beneficial in patient safety contexts such as electronic prescribing, clinical decision support and vital signs observations.
3. There are a number of excellent examples that illustrate this process. The Prescribing Information and Communications System (PICS) in University Hospitals Birmingham is providing comprehensive access to real time clinical information about the status of patients and compliance with treatment plans in each ward environment, allowing early detection and prevention of sepsis and ensuring that more patients are receiving the right drugs at the appropriate intervals to maximise effectiveness. Oxford University Hospitals have achieved 'bench to bedside' information integration for key diagnostic laboratory tests, and through the use of mobile technologies by nursing staff is capturing vital information at the point of care. In turn, this has significantly reduced the potential for transcription error and helped free frontline staff from paper-based processes. Locala CIC, a social enterprise responsible for provision of community services in Kirklees, has a fully mobile nursing workforce, equipped with the means to access and record information remotely in patient's records. It is augmented by clinical decision support to reduce professional isolation and improve the quality of consultation.
4. Over the past five years, progress towards digitisation within general practice has improved consistently. That 100% digitisation of records within general practice has been achieved – and 95% of practices are enabled to offer patient-facing digital services to allow patients to book appointments, order prescriptions and gain access to a summary of their medical record -- is a significant achievement. This progress is supplemented by a wide range of innovative applications from General Practice to the Prime Minister's Challenge Fund. Relevant examples include:

- equipping patients with telehealth devices to undertake diagnostic tests then upload to the GP for consideration; and
 - GPs securing information sharing agreements with neighbouring practices to allow visits or appointment for patients from other general practices,. This also extends to the ability to view their records, write to the patient record and issue electronic prescriptions.
5. Recognising the scale and nature of the benefits of digital interoperability – further examples of excellent practice are showcased on NHS England’s website – and recognising the variation in progress across England, a system-wide consensus has emerged. This has led to a prioritisation of the use of commissioning and regulatory levers to make rapid progress towards achieving an interoperable information sharing future.
 6. The National Information Board’s “Personalised Health and Care 2020 – A Framework for Action” makes a number of concrete commitments to help deliver this interoperability agenda. All patient and care records will be digital, real-time and interoperable by 2020. By 2018 clinicians in primary, urgent and emergency care and other key transitions of care contexts will be operating without needing to use paper records. This will be achieved by alignment of national technical and professional data standards with regulatory and commissioning requirements. By April 2015, building on the existing interoperability programme, the NIB, in partnership with users and industry bodies, including the Foundation Trust Network and the NHS Confederation, will coordinate agreement on these standards and how they should be ‘hard-wired’ into commissioning and regulatory oversight.

The NHS England Board is asked to confirm its approval of the NIB proposal that all commissioning and regulatory levers and incentives should now be used to drive forward delivery of digital interoperability across the health and care sector by 2018/2020.

Section 2: the core technical requirement

The role and scope of information standards

7. To ensure safety and continuity of care, it is essential that the identity of a person can be confirmed quickly and accurately via the NHS Number. This will then link them unquestionably to their own clinical history via the electronic patient record.
8. To enable integrated care, digital information must be transferred seamlessly between one care setting and the next, between one health or care professional and another, and increasingly between professionals, citizens and carers in two- and three-way exchanges.

9. Citizens become active partners in their own health and care through accessing and reviewing information, adding their view of their own needs and aspirations and recording their care preferences. By empowering citizens in this way, it helps ensure they have a positive experience of care.
10. Comprehensively employing information standards also enables data to be more consistently and confidently captured, combined and interrogated. In so doing, it can be used to generate commissioning intelligence, enable audit and inform epidemiology.
11. The 'NHS Standard contract' has defined minimum national requirements for 2015/16. These are detailed at Figure 1, below. Working with the Health and Social Care Information Centre and clinical leaders – through the Academy of Royal Colleges – a next set of standards has also been prioritised for implementation. These are specified at Figure 2, below.
12. Through the explicit leadership and commitment of all NIB members, there is a need to increase the pace of development and adoption of these digital information standards using all means available. Once approved, and generally regarded as important by the NHS and social care commissioners and providers, these standards will then be routinely integrated by software suppliers into the applications that organisations depend upon to deliver electronic health record capability.
13. To date, the performance of providers of publically-funded care in this context has fallen short of expectations in many instances. Whilst a recent national survey has indicated that the NHS Number is now being used as a consistent unique identifier in the vast majority of settings, it is still not being adopted universally, despite featuring in national planning guidance and contracting documentation for over a decade. To help respond to this challenge, the 2015/16 Planning Guidance referenced that the NHS number will be used as the primary identifier in all settings when sharing information. Commissioners will need explicitly to include this change within their plans. To enforce this change, commissioners will be able, under additional powers proposed through the NHS Standard Contract for 2015/16, to withhold funding from providers unless these conditions are met.

The best current standards

14. The current suite of information standards in place (or under development in the near term), including the rationale for their development, and the levers and incentives in place to drive up adoption is illustrated in figure 1 below:

Figure 1

Standard	Detail	Rationale	Levers and Incentives
NHS Number	Single unique identifier	Safety Continuity of care Care co-ordination	CCG Planning Guidance NHS Standard Contract
SNOMED CT	Consistent clinical terms	Continuity of care	NHS Standard Contract
dm+d (Dictionary of medicines and devices)	Consistent descriptions for medicines/ medical devices	Safety Efficiency	NHS Standard Contract
Transfers of Care (i) eDischarge	Application to electronic discharges from Acute to Primary care	Safety Care co-ordination	CCG Planning Guidance NHS Standard Contract
GS1 (Global Standards)	Unique barcode identifiers for place, product and person	Safety Efficiency	NHS Standard Contract DH NHS eProcurement Strategy

Highest priority future standards

15. On a 1 to 3 year timescale the next set of standards that need to be developed and be used routinely are outlined in figure 2 below:

Figure 2

Standard	Detail	Rationale
NLMC (National Laboratory of Medicine Catalogue)	Consistent clinical terms for test (pathology)	Safety
Transfers of Care (ii) eDischarge	Application to transfers of care (Urgent Care)	Safety Continuity of Care
Transfers of Care (iii) eDischarge	Application to transfers of Care (Social Care)	Safety Continuity of Care
End of Life information standard	Application to Care co-ordination at the end of life	Continuity of Care Care co-ordination

The Board is asked to confirm the proposals outlined above for minimum digital standards to be adopted by NHS Commissioners and to agree the proposed future standards, including the process for their development.

Section 3: the development of local health economy roadmaps to interoperability

Governance and co-production

16. Given the level of variability of progress across the country, and also the key role of Clinical Commissioning Groups (CCGs) and specialised commissioners in how they prioritise local health economy investment decisions, we intend to consult with key stakeholders on how best to develop local plans and roadmaps that will lay out in greater detail “who will do what” towards digital interoperability.
17. The consultation will examine the role of the regulators Care Quality Commission, Monitor and TDA in the achievement of the ambition and will look at how CCGs and specialised commissioners will support and monitor progress through the digital maturity index. Detailed guidance on the precise content of local roadmaps will follow in June 2015 alongside more specific information on the packages of support that commissioners and local providers can expect towards development of their plans.
18. Governance of progress towards the development of the local roadmaps, under the oversight of the National Information Board, is being co-chaired by a Foundation Trust Chief Executive (Stephen Dunn) and a local authority chief executive Rob Tinlin (on behalf of the Local Government Association). The governance includes a comprehensive cross-section of interested parties representing the clinical communities; Department of Health; other arms-length bodies (including HSCIC, CQC, TDA, and Health Education England (HEE)); the voluntary and independent sectors; and subject matter experts from the Chief Clinical Information Officer and Chief Information Officer networks.
19. In line with the NIB proposals to give care professionals and carers access to all the data they need and to set the commissioning and regulatory roadmap for implementing of digital data standards by 2018/2020, a series of discussions have already taken place with the NHS Confederation, NHS Providers and Carers UK who are important stakeholders to help drive progress.
20. While outside the scope of this paper, the development of the wider local health economy roadmaps and interoperability agenda comes at a crucial time as NHS England and other Arm’s Length Bodies develop strategies around enhancing their cyber security architecture and servers. NHS England’s Audit and Risk Committee will consider this issue in more detail in May 2015. The discussion will include a view about NHS England’s cyber security resilience and continuity plans and ability to respond in the event of a cyber-attack.

Simple metrics and a benchmarking tool to show progress towards digital maturity

21. A key parallel activity is development of the mechanism by which commissioners and care providers can benchmark and assure themselves that they are making best use of information technology, digital data and services, with the consequent reduction in bureaucracy. The Digital Maturity Index is a census of digital progress developed by NHS England alongside the HSCIC's work on burden reduction. It highlights for commissioners and providers the variations in progress by NHS Trusts.
22. In line with the Transparency agenda currently being spearheaded by the Secretary of State for Health, we are planning to publish indicators showing progress of digital maturity in October 2015 on 'MyNHS' at both commissioner and provider level.
23. From March 2016, delivery of local roadmaps towards digital interoperability will be taken into consideration by the CQC as part of their inspection regime and by HEE with regard to training accreditation. It is also proposed that an onsite peer-led annual review of around a quarter of providers will take place each year following completion and publication of self-reported progress. The procedure for this assessment is being developed in partnership with the NHS, social care and the voluntary and independent sectors.
24. In 2015/16, a roll-out of a digital maturity audit toolkit will take place for Acute Trusts and Mental Health care settings. This audit will confirm a baseline to help support the commissioners in identifying future development requirements and priorities. In the future, we aim to develop the audit to be both an organisation and a place-based assessment covering all NHS-funded providers, and including progress on information sharing and interoperability with adult social care services and the independent sector.

Driving forward adoption of digital standards

25. Consistent, measureable progress on this agenda also requires capacity and capability building across the CCG and provider community in order to reach consumers and users of health and care and their carers.
26. CCGs have a key role to assure development of local health economy plans that detail information sharing and digital interoperability. NHS England has a key role to assure CCG progress towards it. Through 2015/16 we will work with CCGs towards achievement of the priority standards (detailed above) that were also documented in the planning guidance issued in December 2014. Publication of the digital maturity metrics on MyNHS in October 2015 will provide us with a strong sense of where increased CCG support is likely to be needed and where

our CCG assurance processes need to be further strengthened in the 2016/17 planning framework.

27. The emergence of networks such as the Chief Clinical Information Officers and Chief Information Officers networks have helped to increase drive, visibility and collaboration around these initiatives. The investment of capital funds (Safer Hospitals Safer Wards, Nursing Technology Funds and Integrated Digital Care Fund) has proved a powerful instrument to promote digital deployment and has acted as a strong signal to the sector of our intention to drive up digital adoption locally (rather than through central solutions).
28. Evidence from the US in relation to the 'meaningful use' initiative – which President Obama used to dramatically increase the scale of digitisation and the use of the electronic patient record in secondary care – is that financial incentives play an important part in speeding up digital adoption when combined with training and capability building.
29. The NIB has asked TDA and Monitor to lead on the offer of direct support to providers through the HSCIC Provider Development Unit, who will directly assist providers in with development of business cases, roadmaps and implementation of digital interoperability.
30. It is also critical also that these local roadmaps for interoperability involve citizens and local communities. Indeed, the digital opportunities identified also need to be sensitive to local priorities. Some communities are already particularly focussed on digital adoption, for example, to support learning disabilities and digital inclusion. We recognise that many areas will need to develop plans for the basics of 'paperless' working before they move on to implementing the more complex digital interactions with citizens currently undertaken in primary care.

The Board is asked to agree that NHS England, working with NIB partners, should support local commissioners and providers in their journeys towards digital interoperability.

**Tim Kelsey
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March 2015**