

NATIONAL
INFORMATION
BOARD

Annual Report



September 2016

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National Institute for Health and Care
Excellence

Association of Directors of Adult
Social Services

National Maternity Review

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Public Health England

Human Fertilisation and
Embryology Authority

Richmond Group of Charities

Human Tissue Authority

Strategic Clinical Reference Group

Independent Cancer Taskforce

UK Statistics Authority

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Local CIO Council

Medicines and Healthcare Products
Regulatory Agency

Local Government Association

The National Data Guardian's Panel

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National Information Board Annual Report

Executive Summary

The National Information Board (NIB) is the senior advisory group which guides and agrees strategy, requirements and priorities for information and technology across the health and care system; and commits to ensuring that system leaders also align their businesses to deliver the necessary business change for the system wide strategy. The Board is made up of 29 organisations across the health and care system. It is supported by a Strategic Clinical Reference Group who are crucial in providing the clinical perspective.

Since its inception in 2014, the NIB has taken a collaborative approach to developing an ambitious vision for a digitally-enabled health and care system.

This strategy, *Personalised Health and Care 2020*, was published in November 2014.

This is the National Information Board's first Annual Report. As well as reporting progress made, it details the work streams that identified what would need to happen to make the vision

a reality.

In September 2015, these work streams published their proposals in a series of roadmaps which are now funded through the £4.2 billion secured specifically for technology from the government's spending review.

Informed by three independent reviews, the proposals laid out in the work stream roadmaps have been translated into 33 programmes.

Patients and citizens, health and care professionals and service commissioners and providers will all benefit from digital access to services and better information to support decision making.

The National Information Board will now oversee the realisation of these benefits. And it will look to the future, anticipating emerging and novel technologies that will create new opportunities to improve health and care.



Foreword

It is a great pleasure, as Interim Chair of the National Information Board (NIB), to introduce its first Annual Report and to highlight progress towards transforming our health and care system using data and technology.

As recently as 2014, [the NHS was declared the highest ranking healthcare system in the world](#) on quality, access and efficiency. Nevertheless, the size and scope of its services, especially when considered together with social care services, seems to have hindered its ability to select and adopt some of the best digital technology. Certain well-judged changes could enable our health and care professionals to provide more

effective and timely care, improve health and clinical outcomes, and contribute to overall savings. A new, more holistic view of health and a recognition that services need to put the patient centre stage, also generate new requirements and opportunities for digital approaches.

By harnessing the digital opportunity for health and care, the NHS can not only reaffirm its world class status but has the potential to go beyond what has been achieved elsewhere and in other sectors in the UK. Underpinning this ambition is *Personalised Health and Care 2020*; a comprehensive, overarching strategy which is now carefully mapped to a set of new and existing programmes designed to transform health and care services and deliver the changes needed.



to the NIB strategy and led to the allocation of significant funding for its implementation. The lessons of the past suggest we should focus at a national level on specifying standards and interoperability, while also identifying and driving the desired outcomes and benefits. With some obvious exceptions, local partnerships should be allowed to develop and implement the solutions. In addition, meaningful, widespread clinical and patient involvement must be central to the design and implementation of a digitally transformed, integrated health and care service.

The launch of the new programmes mentioned in this report is, of course, just the beginning of a lengthy process. The NIB will monitor and oversee the work at a strategic level to ensure it delivers the intended outcomes described in *Personalised Health and Care 2020*. It will also continue to make connections between the many and diverse parts of the health and social care system. Finally, it will scan the horizon for major changes and emerging topics not already addressed in *Personalised Health and Care 2020*.

Meanwhile, there have been three other important reviews in this area. We are already starting to implement Baroness Martha Lane Fox's report on digital inclusivity and Dame Fiona Caldicott's review of data security, consent and opt-out, and are looking forward to receiving a report from Professor Robert Wachter on making electronic patient records work for clinicians and patients.

The NIB remains, as my predecessor Tim Kelsey intended, an exciting and productive vehicle for leading the digital transformation of health and social care in England. Although this is our first annual report, I believe the results illustrated in this report prove the success of the NIB model so far.

With Professor Keith McNeil, newly appointed Chief Clinical Information Officer, taking over as NIB chair, I am confident that progress towards realising the vision set out in the NHS *Five Year Forward View* is now gaining pace.

I thank you for your interest in the NIB, hope you find this report informative and welcome any comments, questions or suggestions you may have.

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John Newton
NIB Interim Chair

Vision and strategy

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In this section

Patients and citizens

Health and social care professionals

Innovators

Commissioners and provider organisations

Our care is in our hands

Transforming health and care

“Collectively and cumulatively [these initiatives and commitments] and others like them will help shift power to patients and citizens, strengthen communities, improve health and wellbeing and, as a by-product, help moderate rising demands on the NHS.”

Five Year Forward View

The National Information Board (NIB) envisages a transformed health and care system that harnesses the skills of individuals and digital technology to deliver benefits and improved care to patients and citizens, health and social

care professionals, commissioners and local providers, and innovators.

Established in March 2014, the NIB supports the central role that technology must play in improving care and making savings. It provides strategic direction on all informatics programmes ensuring that the objectives outlined in its seminal document

[*Personalised Health and Care 2020 \(PHC2020\)*](#) will be met.

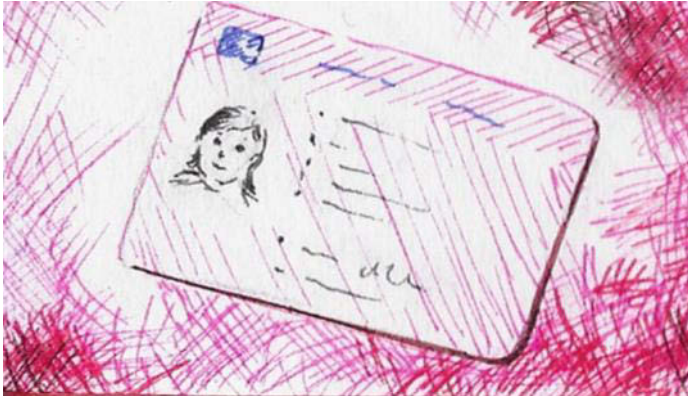
The NIB acts as a focal point for communication across the health and care sector, gathering together members from across the sector to steer the direction of information and technology developments.

Published in November 2014, PHC2020 examined how the health and care system is advancing, and identified good practice in other industries and the wider economy. PHC2020 outlined proposals that were collaboratively produced to address the three key challenges as identified in the [*NHS Five Year Forward View*](#); the health and wellbeing gap, the care and quality gap, and the funding and efficiency gap.

It is a framework for action to deliver real benefits for:

- Patients and Citizens;
- Health and Social Care Professionals;
- Commissioners and Provider Organisations;
- Innovators across the health and care sector.

Vision and strategy



Patients and citizens

When patients and citizens access health and care services, those caring for them should be able to easily access comprehensive, accurate and timely information. Patients and citizens should be empowered with improved access and personalisation of care, working in partnership with professionals to more effectively manage long-term conditions and prevent avoidable lifestyle-related diseases.

Development of personalised digital care records means patients will be able to access and contribute to their own medical records.

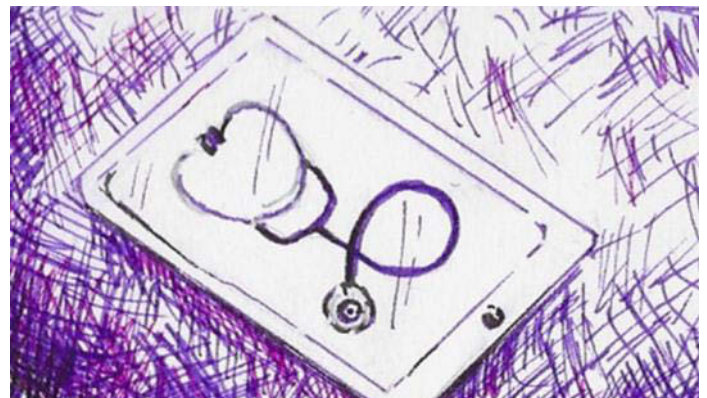
Our vision is to deliver the online services that all patients need to help them manage their own care and wellbeing, at home and on the move. By doing so, we will also relieve the pressure on front-line services. We believe that health and care digital information and services should be available to all who want them. We will work hard to widen digital participation so that the benefits of online services are made available to everyone, including “hard to reach” communities, using the technologies they know well.

NHS.UK will provide clear, simple health information connected to quality, trusted

digital services. We will offer a personalised experience, supporting people to manage their own health. NHS.UK will be central to a network of services provided by national, local and third party organisations. We will help to deliver the next generation of digital healthcare, improve efficiency and increase quality for all.

Patients will be able to use laptops, smart phones or other mobile devices to access digital services to:

- register with a GP;
- book or change appointments (with the GP surgery or hospital);
- order and pay for prescriptions;



Health and social care professionals

- access and spend personal budgets with links to appropriate care services.

For health and social care professionals, having access to all the appropriate information from across health and social care services is essential to delivering a high quality, timely service, ensuring the best possible outcomes.

Vision and strategy

The integrated digital care record will enable staff to access and share up to date, accurate data with both the individual and other professionals. This will lead to integrated care planning, better decision making and seamless transfers between care settings.

Health and care professionals will have the ability to set automatic notifications to inform decisions, and make use of tools and applications to monitor and communicate remotely. Additionally, consultation time can be used to better effect if patients and citizens take a more active role in their care, and can work collaboratively to achieve the best outcomes.



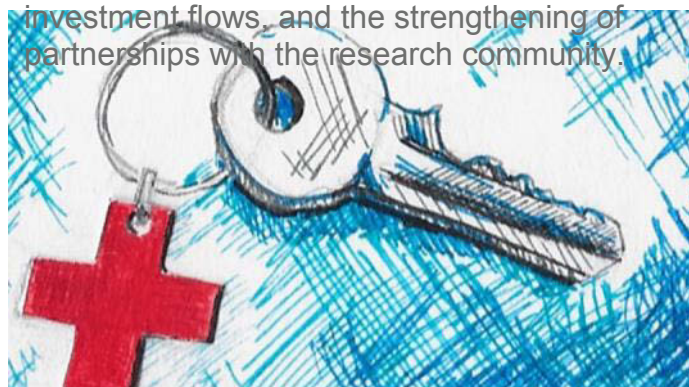
Innovators

The health and care system, with its large and diverse portfolio, is one of the best places in the world to test new innovations. Through combining different technologies and changing ways of working across traditional delivery boundaries, innovation has the potential to transform care delivery.

The health and care sector will embrace new technologies and establish new partnerships. New collaborations with technology companies and patients will unlock the

potential of the digital agenda and create products that can offer smarter, faster, improved healthcare and grow the digital health and care sector.

The creation of an open and transparent infrastructure will encourage research and innovation whilst aiding rapid implementation. Enhanced support for innovation will require a review of available investment funds, new investment flows, and the strengthening of partnerships with the research community.



Commissioners and provider organisations

Health and care data needs to flow across traditional delivery boundaries in order for commissioners and providers to deliver an integrated package of care.

It is important for both commissioners and providers to understand the extent to which the NHS and social care are using digital technology and in particular health and care information to its greatest potential. This will support high quality, efficient and effective care.

To maximise the collective chances of achieving the 2020 ambition, it is critical that timely, accurate and comprehensive

Vision and strategy

across the health and care sector need to work together to achieve the best outcomes and drive efficiency.

Health and care organisations have recently completed a self-assessment which indicates their current level of ‘digital maturity’. This will be used to benchmark progress towards becoming paper free at the point of care and to identify which organisations can quickly become exemplars and which are in need of additional support and resources in order to achieve this aim.

Local health and social care commissioners and providers have been asked to work together to produce local digital roadmaps that set out how they will achieve a paper-free service at the point of care. Transformation support centres will be established, alongside a robust knowledge management function, to build a suite of products and tools that provide guidance and practical assistance to these local collaborations, or ‘footprints’, throughout the journey to become paper free at the point of care.

Collaboration

Sharing agreements and information standards make it possible to join up information across the health economy. This will enable true collaboration between all those involved in the care of the patient, including the individual themselves. Different organisations and sectors will collaborate on data, information and technology initiatives leading to better and more efficient health and care services.

Empowerment

Provision of training and support, combined with access to information and digital tools, will empower individuals to take greater control of their health, working alongside those who are charged with delivering health and care services.

Communication

Remote monitoring and communication systems enable care to take place at a time and place more convenient to the individual and can reduce unnecessary hospital stays. Communicating more effectively with patients and citizens about how and where their data is used is fundamental to earning greater trust in the appropriate sharing of data, improving quality, optimising the use of resources, and enabling the review of services.



Translating plans into action

Our work so far



“New technology can help people engage with services and give them greater control of their own care, both being vital to the success of a transformed NHS. The NIB programmes are also already making a real difference to prevention and self-care.”

Duncan Selbie,
Public Health England

The proposals set out in PHC2020 were translated into a series of work streams, each focused on achieving specific aims and tasked with developing a roadmap for delivery.

The following pages report the progress made by these work streams and how they will be taken forward in future.

These programmes of work have the potential to make significant differences to how patients, citizens and professionals receive, interact with, and deliver health and care services. They aim to improve health outcomes through addressing the health and wellbeing gap; transform care by closing the care and quality gap; and control costs and enable change by closing the finance and efficiency gap over the next five years.

The work undertaken within the work streams was

In this section

Work streams 1-7

Independent reviews

informed by three independent reports which are also summarised in this section.

These looked at:

- Digital Inclusion
- Data security and consent/opt-outs
- How Health IT can improve care

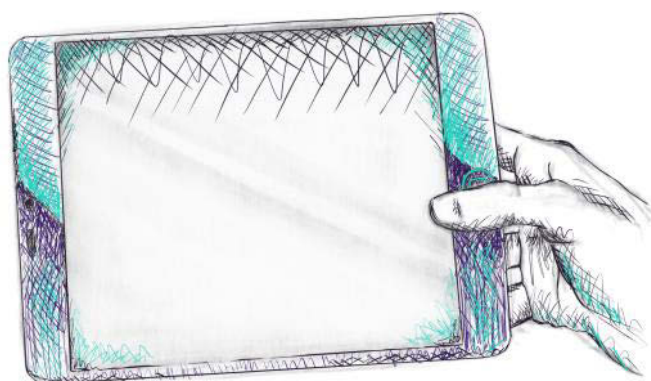
The work stream roadmaps were published in October 2015 and can be downloaded [here](#).

The NIB Prospectus, which was a review of progress, was published in September 2015 and can be downloaded [here](#). It set out the steps taken towards using digital technology to give patients more power over their care and make the health and care system more efficient.

Progress to Date

Work Stream 1.1

Enable patients to make the right health and care choices: providing patients and the public with digital access to health and care information and transactions



Improved digital access to health and care information and transactions is essential to support people in making health and care choices. Quality digital services can support prevention and self-care, improve quality and contribute to future service sustainability.

A new service, NHS.UK, is being developed to facilitate better digital access. This is a cross-organisation project, delivered by HSCIC (publicly known as NHS Digital from 1 August 2016) in collaboration with NHS England, and the Department of Health, as well as specialist experts from the wider digital and health industries.

Extensive consultation with patients and healthcare professionals has enabled the mapping of interactions with the health and care system. This has helped identify opportunities where digital technology can provide additional support in joining up information and services. A series of prototypes were developed and user-tested and results have been very positive.

More information is available on the blog:
<http://transformation.blog.nhs.uk/>

Case Study:

Benefits of Online Access to Records

The Challenge: Street Lane Practice, a GP practice in north Leeds with over 13,000 patients, was struggling with the large number of requests from patients to access their own records. Before the introduction of online access to records, this could only be done during a consultation in the practice which was time-consuming for both patients and GPs.

The Solution: The practice did not hesitate to launch online access to records when it became available. After testing the system with a key group of patients, it now encourages all patients to access their online records. By November 2015 a total of 2,020 patients had registered for GP online services, with 560 having full record access.

The Benefits: Patients can now access records, book appointments, order repeat prescriptions and view blood test results online without having to call or visit the practice, saving patients and the practice time and money.

Mike, a patient at the practice, likes the flexibility that online access can offer: "It's not a replacement, but an additional service. People with online access have three extra options to get in touch with their practice."

Progress to Date

Work Stream 1.2

Enable patients to make the right health and care choices: providing citizens with access to an accredited set of NHS and social care ‘apps’

Apps will be available to the public which have been validated by the health and care system and can support them to remain healthy. These apps can be downloaded from app stores or people may be directed to them from digital health services such as NHS.UK or healthcare professionals.

In addition to existing channels, patients will be able to use apps to help them manage their health. Health and care professionals and commissioners will be provided with guidance on which apps to recommend to citizens. Apps for use by professionals will also be reviewed and accredited.

App developers will have clear guidance to support the development of better quality health apps.

There will be a 4 stage accreditations process:

- **Stage 1** – self-assessment;
- **Stage 2** – community validation;
- **Stage 3** – business case development;
- **Stage 4** – independent evidence evaluation of clinical safety and effectiveness.

Case Study:

Improved Care Coordination and Patient Experience

The Challenge: Information silos across Bradford and Airedale district made it difficult for health and social care organisations in the district to provide joined-up services and care.

The Solution: The district opted to implement an Integrated Digital Care Record (IDCR); a digital solution that would allow systems to access data, including patient - and bed availability - information, from across these differing settings. The solution spans Acute Trusts, Mental Health Trusts, Local Authorities, CCGs, and 85 independent GP

practices. Once patient consent is established their medical records can also be accessed live across acute and community settings.

The Benefits: The IDCR has produced immediate and significant results, with reduced administration time and medication errors, and a more accurate and dynamic record. The solution removes the need for patients to repeat their story to different care professionals and they have reported more positive service experiences.

The Future: The district is reviewing its existing information sharing agreements to create a single record for each patient,

Progress to Date

Work Stream 2.1

Give care professionals and carers access to all the data they need: Setting the commissioning and regulatory framework for implementing digital standards

Care professionals and carers need access to real-time digital information on a person's health and care. The implementation of digital data standards and the move towards a paperless environment are key enablers for this. These standards will be based on the work being undertaken by local providers to support interoperability.

Local health economies have recently submitted their Local Digital Roadmaps, detailing how they will deliver the ambition of being paper-free at the point of care by 2020.

These seek to reflect three key principles:

1. Using existing assets to best advantage, increasing uptake of proven solutions;
2. Clear delivery milestones, benefits realisation and optimisation; and,
3. Strategic alignment, system level governance and proposals to build capacity and capability.

NHS acute, community and mental health providers in these Local Digital Roadmap Footprints have also completed the Digital Maturity Self-Assessment to baseline and benchmark progress towards being paper-free at the point of care.

Case Study:

e-Referral and Resource Matching System

The Challenge: Paper-based systems, with no directories of services available, mean that NHS Trusts meet significant challenges when referring patients to appropriate areas of social care, community and mental health services.

The Solution: In February 2013, Cumbria CCG implemented an e-Referral system to improve patient flow between a local hospital and adult social care unit. This solution integrates with the providers' Electronic Patient Record systems to ensure a consistent approach when sending and receiving e-referrals. 300 different sites are now set up on Cumbria's directory of services with a similar number of active users across different health and care settings.

The Benefits: This implementation has successfully integrated services for faster patient assessments and referrals. The system monitors applications at each stage of the process, saving clinicians time and providing them with more information prior to patient consultation. This reduces follow-up appointments and incomplete referrals. The solution has transformed services in the Cumbria CCG area, providing standardised, consistent care and clear audit trails.

“The solution improves patient care by capturing comprehensive patient information and communicating it instantly to the right clinician to take the right action to improve patient care.”

Alison Kitson, District Nurse

Progress to Date

Work Stream 2.2

Give care professionals and carers access to all the data they need: Developing a roadmap for comprehensive data on the quality, efficiency and equity of health and care services for secondary uses.

Currently, the health and social care system is unable to exploit the full potential of all the data and information available. There should be a single, high quality, digital patient record that captures and tracks every interaction as patients journey through the health and care system. This record should feed into the “secondary uses” data set to inform functions such as commissioning, regulation and transparency to improve service and planning.

Strategic priorities for the improvement of the secondary uses data landscape have been identified as well as a plan for the

improvement of the ‘core’ secondary uses datasets, which, for the first time, spans across the health and social care system.

The next phase includes outlining the proposed datasets and future phases of the programme. Projects such as Patient Level Information Costing and Genomics (and Multi-omics) programmes have been prioritised due to their potential impact.

Work Stream 3

Make the quality of care transparent: roadmap for publication of comparative information

In support of intelligent transparency, the Secretary of State, Jeremy Hunt, has commissioned the NIB to write an annual public letter, copied to the Chair of the Health Select Committee. The letter outlines proposals, including changes to data and metrics on [My NHS](#) to support service improvements.

The NIB published the first of these [letters](#) on 31 March 2016, affirming a commitment to this agenda and providing a summary of members’ activities in support of transparency. The letter outlined developments underway for My NHS, and made recommendations for changes intended to embed transparency in the culture of the health and care system and realise its benefits.

Improved transparency across the health and care system will optimise use of the available data. Making the information accessible to everyone will help patients and the public understand the quality of their local services and make informed choices about their care, and will improve accountability and drive up the quality of care across the health and care system.

The Department of Health, working with partners, has created My NHS to provide comparable information about the quality and outcomes of a wide range of health and care services with more information being added every month. The site sits alongside and complements NHS Choices; where NHS Choices is aimed primarily at patients and the public, My NHS is designed to be of most use

Progress to Date

My NHS was given a major refresh in November 2015. Site functionality has become more sophisticated, with continuing user testing and feedback. The site now includes a 'highlights' feature which shows the headlines from official statistical releases as they are published, with links back to the data

owner's own publication. The new CCG Improvement and Assessment Framework metrics, added in July, provide insight into commissioning performance to complement the data on providers.

Case Study:

Integrated Community Care

The Challenge: Community nurses, working within the Maldon Integrated Care Team and caring for housebound patients across Mid-Essex, needed the ability to see up-to-date information about medications and allergies. This was important both for newly referred patients and those already under the care of their team.

The Solution: With access to the Summary Care Record (SCR), these community nurses can now see patients' prescribed medications, known allergies, and medication history. This removes the need for patients to recall medication

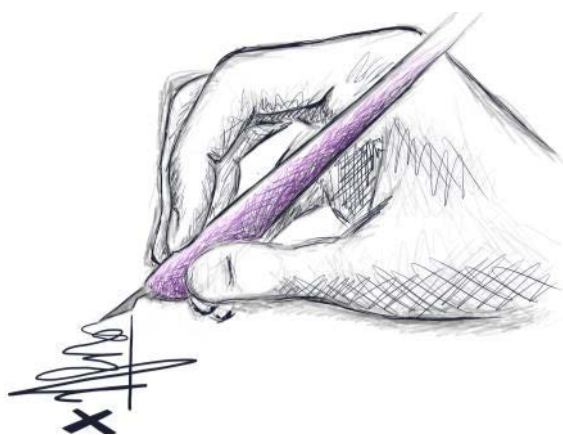
names, and for nurses to contact GP practices to retrieve this information.

The Benefits: Having patient information to hand improves the safety and appropriateness of prescribing. Providing community nurses with access to the SCR results in more effective working. As Louise Philips, Community Matron for Maldon notes, "Having this information when we first see a patient speeds up the initial assessment and improves their experience of care as they are relieved to not have to answer countless questions about the same thing. Patients

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Work Stream 4

Build and sustain public trust



The public need to trust us to handle their personal health and care data securely and in accordance with any data sharing opt outs they may have made. Citizens need to be clear on how and when their data will be used and why. A key part of building this trust is the National Data Guardian's report on Data Security and consent/opt-outs. Public trust in this area is fundamental to the success of all other domains of the NIB's work.

There has been extensive engagement with the public, clinicians and industry. Key messages include the need to engage professionals, earn the trust of the public and communicate nationally consistent messages.

Progress to Date

The new Information Security and Risk Board (ISRB), comprising of senior officials from across the system, has a key role in encouraging organisations to

implement standards and highlighting organisations who have applied them well. There is also a real need to focus upon behaviour and culture.

Case Study:

Safe Access to Online Records

Hulme Hall Medical Group in South Manchester, a large GP practice with two sites and 11,000 patients, recently started offering online services and full record access to patients. As of January 2016, about 200 patients have requested this access and almost 50% of patients at the practice now carry out transactions, including booking appointments and ordering repeat prescriptions online.

The Challenge: To aid the smooth implementation of this service, medical records have to be translated into plain English, with removal of jargon, abbreviations and technical terms which could be confusing to patients. Practice staff take great care when

screening the records to ensure all entries are correct. They scan for third party information and anything that could cause concern to patients.

The Solution: Hulme Hall started off slowly by offering the service to a small number of patients, allowing staff time to get used to the system and develop it as they went along. Patients providing their consent are made aware of the type of information that will be revealed to them and given advice on how to safeguard this information and what to do if they find errors.

The Benefits: Having patients question what is in their records has been beneficial to the practice, allowing patients to become more involved with their care.

Work Stream 5

Bring forward life-saving treatments and support innovation and growth

With the growth of a UK digital health industry and the development of new opportunities for existing life science companies, patients will be able to receive new, more effective treatments and the health and social care system will benefit from new technologies enabled by new care pathways.

The Accelerated Access Review has been engaging with innovators and the health and care system to bring forward recommendations for how innovative products can be adopted to impact patient care more quickly. An [interim report](#) was

published in October 2015 and the final report is due this year.

NHS England, the Office for Life Sciences and the Department for Culture, Media and Sport announced the first wave of 'Test Beds' in January 2016, which will test and evaluate new combinations of technology, data and workforce redesign aimed at addressing some of the most serious issues facing patients and the health service.

The Test Beds bring together local health bodies including CCGs, hospital trusts,

priority

Progress to Date

a wide range of innovators from home and abroad. They will showcase how the NHS can deliver more tailored and efficient services by taking advantage of innovations such as wearable monitors. Analysis of the resulting data will improve patient outcomes whilst supporting them to monitor their conditions themselves.

A portal for research data has been launched www.hdf.nihr.ac.uk, and a plan for supporting the growth of the digital health industry and building effective partnerships has been developed, underpinned by [research into the digital health industry](#) in the UK that was commissioned and published in 2015.

Work Stream 6

Supporting care professionals to make the best use of data and technology

Case Study:

e-Observation System of Patient Vital Signs

The Challenge: Northampton General Hospital recognised the need for improvement when it came to patient observations. Nurses were making notes of numerous procedures on charts placed at the end of patients' beds; a process that was not only time consuming for nurses, in terms of writing and filing, but also left room for human error.

The Solution: Between November 2013 and July 2014, an electronic observations system was implemented at the hospital to monitor and analyse patients' vital signs. The system records patient observations and can alert clinicians immediately via an electronic device if a patient's condition worsens or an intervention is needed. Replacing the manual system, this electronic solution has reduced errors by 300% and was being used by 1500 staff across 26 wards as of January 2015.

The Benefits: The solution keeps staff informed to ensure patients receive the support they need if and as soon as their condition happens to deteriorate.



The health and care sector workforce need help and support to make the best use of data and technology. By establishing practical, usable initiatives, the workforce and its leaders will be better equipped with the skills, knowledge and behaviours required in a paperless, digital environment. In order to establish what is needed the Royal College of Physicians Health Informatics Unit (with NHS funding) undertook a review of current personal electronic health and care record activity in the UK. This will inform investment

Progress to Date

are met. Work is also underway to understand how carers and carer groups would like to access digital channels for care.

The establishment of a clear set of digital competencies is key to developing capability. These can then be applied to different areas of the workforce and used to inform gaps in learning and development. Several events have already been organised to educate the workforce and leadership and share best practice.

A pipeline of projects is being identified and scoped which align with four broad areas of ambition:

1. **Leadership**
Helping leaders support their workforce to make the best use of data and technology, to discharge responsibilities to the wider system and to act as enablers, rather than blockers, for change.
2. **Competency**
Addressing the question: ‘what does our workforce need to be able to do?’
3. **Professionalism**
Ensuring that the expert ‘informatics workforce’ is appropriately skilled and informed of the criteria they need to meet in order to satisfy agreed, established professional standards (including registration and regulation).
4. **Collaboration**
Addressing the need to share learning across and within professions.

“The most important thing that any organisational leader can do is think about how to change culture.”

Jeremy Hunt, Secretary of State for Health



Case Study:

Integrated Inpatient ePMA System

The Challenge: Harrogate and District NHS Foundation Trust wanted to introduce an e-Prescribing and Medicines Administration (ePMA) System to improve interoperability throughout the organisation.

The Solution: By interoperating with the other digital systems, the chosen ePMA system allows staff complete visibility of information about every patient within two clicks. Initially implemented across inpatient wards, the solution has since been rolled out across all departments in the hospital and other care settings.

The Benefits: More effective prescribing and administration of medicines, including antibiotic stewardship, has improved patient safety and outcomes, as infection cure rates have risen. Errors associated with prescribing and the administration of medicines have fallen, and incidents associated with patients being given a medicine to which they are allergic have dropped to zero.

The Future: The trust has plans to further improve the system, linking it to a clinical portal, and rolling it out to the Outpatient Department and A&E, bringing the total number of users to over 100 consultants, 300 medical staff, thousands of nurses and around

Progress to Date

Work Stream 7

Assure best value for taxpayers and open up existing infrastructure

While this is listed as an independent work stream, this body of work underpins all the work carried out by the NIB. This work is essential and ensures that the NIB remains focused on delivering real benefits to the health and care system in the most cost efficient way.

Through the Prospectus and roadmaps, the NIB set out a clear vision for the future and the benefits that digitisation can deliver. On that basis, the NIB was successful in securing £4.2 billion in the 2015 spending review. Faced with the challenge of making sufficient savings to counter the NHS funding gap of £22 billion, careful consideration has been given to what

each project can deliver. The digital agenda presents the greatest opportunities for rising to this challenge.

The overall portfolio is made up of 33 individual programmes and existing live services. Together they will deliver the strategy set out in *Personalised Health and Care 2020* and enable delivery of the vision described in the *Five Year Forward View* and the Department of Health's Shared Delivery Plan.

Links to Case Studies

P.12 www.england.nhs.uk/wp-content/uploads/2015/11/benefits-online-accss-recrds-gp.pdf

P.13 www.england.nhs.uk/digitaltechnology/wp-content/uploads/sites/31/2015/09/idcr-success-story-bradfrd.pdf

P.14 <https://www.england.nhs.uk/digitaltechnology/wp-content/uploads/sites/31/2015/04/success-story-cumbria-0115.pdf>

P.16 <http://systems.hscic.gov.uk/scr/library/communitycare.pdf>

P.17 www.england.nhs.uk/wp-content/uploads/2016/01/po-hulme-hall-case-study.pdf

P.18 www.england.nhs.uk/digitaltechnology/wp-content/uploads/sites/31/2015/04/success-story-northampton-0115.pdf

P.19 <https://www.england.nhs.uk/digitaltechnology/wp-content/uploads/2015/06/success-story-harrgt-05-2015.pdf>

Progress to Date

Independent reviews

To inform the next stage of implementation, the Secretary of State for Health commissioned three independent reviews. Their findings are reported in the following pages.



Dame Fiona Caldicott

Dame Fiona Caldicott

Baroness Martha Lane Fox

Professor Robert Wachter

Review of data security, consent and opt-out

In September 2015, the Secretary of State commissioned the Care Quality Commission to undertake a review of data security in the NHS and, in parallel, commissioned Dame Fiona Caldicott, the [National Data Guardian](#) for Health and Care, to undertake an independent review of data security and consent, with the purpose of:

- Developing new data security standards;
- Devising a method of testing compliance with the new standards; and
- Proposing a new consent/opt-out model for data sharing in health and social care.

Dame Fiona Caldicott published her [review](#) on 6 July 2016. It found that, broadly, the public does trust the NHS with confidential data. However, as the health and social care system becomes increasingly paperless and digital, it also becomes ever more important

that there are adequate and robust safeguards in place to protect that personal information.

It is vital that health and care staff have access to the safeguards, knowledge and capability to handle such information securely. Dame Fiona Caldicott has proposed 10 security standards to be applied in every health and care organisation that handles personal confidential information.

Dame Fiona Caldicott has also emphasised the vital importance of data sharing and is proposing a new consent/opt-out model, which will give people a less complex choice about how their personal confidential information is used.

Progress to Date



Baroness Martha Lane Fox

Recommendations for digital inclusion

Internet enabled technologies have the power to radically transform health care services to improve experiences. With the network age come great opportunities to empower people in relation to their health care choices.

To do this, infrastructure barriers to digital take up need to be tackled; digital skills within the NHS workforce need to be cultivated; opportunities for people to engage with their health online need to be maximised; and a focus on building and scaling digital health and new technologies that put people's needs at the centre and reach the most excluded first are all critical.

The 4 recommendations made by Baroness Martha Lane Fox to the NIB are:

1. Making sure those with the most health and social care needs, who are often the least likely to be online, are included first in any new digital tools being used across the NHS.
2. Free Wi-Fi in every NHS building.
3. Building the basic digital skills of the NHS workforce to ensure that everyone has the digital skills needed to support people's health needs.

4. Building the basic digital skills of the NHS workforce to ensure that everyone has the digital skills needed to support the provision of digitally-enabled care.

Free Wi-Fi will allow patients staying in hospital to self-monitor their conditions using apps, maintain contact with social networks that can support recovery and, crucially, help them to stay in contact with family and friends.

It would also reduce the administrative burden on doctors, nurses and care staff, freeing up more time to be spent with patients, and enable safer working practices such as e-prescribing, known to reduce medication errors by 50%.

Digital health tools and information can help people to better manage their health and avoid unnecessary GP visits and hospital admissions. Older people often lack computer confidence but have high health and social care needs and 33% of those with registered disabilities have never used the internet.

Progress to Date



Professor Robert Wachter

Making IT work: harnessing the power of health IT to improve care in England

The Secretary of State for Health asked Professor Robert Wachter to lead a review of the implementation of information technology in the NHS in October 2015, with a particular focus on the introduction of clinical systems, including electronic health records, in the acute sector.

Professor Wachter is Professor and Interim Chair of the Department of Medicine at the University of California, San Francisco and an expert on the challenges of digitisation in healthcare.

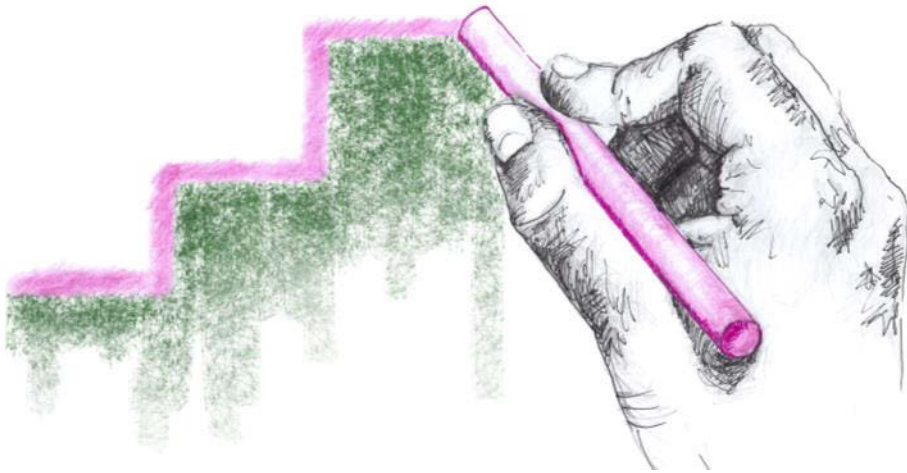
The review is supported by an advisory board drawn from the US and UK, and a representative from Denmark. Work started in February and publication of 'Making IT work: Harnessing the Power of Health Information Technology to Improve Care in England' is

expected imminently.

Professor Wachter has already indicated some of the review's key findings including the importance of clinical buy-in and engagement and the need to build capacity and capability in the Chief Clinical Information Officer workforce.

Professor Wachter said:

"The NHS is one of the world's largest health and healthcare systems, and one of its largest employers. It's essential that information technology across the NHS works well and can perform the tasks needed to deliver high quality, safe and efficient care. I am looking forward to finding out about some of the great work taking place across the NHS and highlighting areas for improvement."



Delivery and developments

The role of the NIB



“It is clear to me that what we have from NIB is a coherent set of technology programmes designed around the transformation requirement. The NHS cannot achieve the improvements needed without these programmes.”

Jim Mackey,
NHS Improvement

The National Information Board (NIB) is a collaborative partnership bringing together members from across the health and care sector. Given its broad membership, the NIB is uniquely placed to keep a watchful eye on the big picture

and ensure that the various

programmes are joined up and engaging with the right people and organisations.

Since its inception, the NIB has sought to incorporate views from those involved in, and affected by, its role. The Board itself has representatives from 29 organisations. Its independent members and third sector organisations also play a crucial role in bringing an impartial, measured approach to the next phase of this work.

Going forward, the NIB will play an important assurance role in the delivery of *Personalised Health and Care*

In this section

The role of the NIB

Delivery domains

2020 (PHC2020). It will ensure that focus on the strategic agenda is retained, make connections, highlight best

practice, and support engagement. Key areas that the NIB has recently begun work on include:

A patient vision; to engage patients and citizens in articulating what will make digital services work for them.

Local implementation and learning from local; to ensure the programmes are informed by the experience of those working at a local level.

Analytical capacity and capability in the health and social care system; new programmes will generate new sources of data which may require new analytical approaches.

Horizon scanning; to use expertise to scan the horizon for future priorities and identify the next set of digital

Next steps

Delivery domains

The structure of the proposed portfolio was initiated through a series of workshops in early 2016 and a special working group of the National Information Board. Outputs include the repositioning of the work streams into a set of ten delivery ‘domains’ which encapsulate the programme briefs and existing live services.

Formal governance of each of the programmes is being established by a dedicated management board. This will ensure programme ownership by an elected Senior Responsible Officer and establish key performance indicators to measure the outputs or outcomes, pivotal to

Self-care and prevention

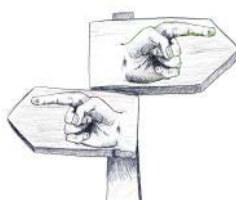
Our vision is to deliver the online services that patients and service users need to take control of their own care and wellbeing, at home and on the move. By doing so, we will also relieve the pressure on front-line services. We believe that health and care digital information and services should be available to all, so we will work hard to widen digital participation, so that the benefits of online services are made available to everyone, including “hard to reach” communities.

Programmes

- Citizen Identity
- NHS.UK
- Health Apps Assessment & Uptake (including wearables)
- Widening Digital

Related Live Services

NHS Choices provides health and lifestyle advice, and information about local services. It attracts 48



million visits a year.

Urgent and emergency care

The national urgent and emergency care strategy aims to improve outcomes for people accessing 111, Accident and Emergency and 999 services. Our vision is for technology to support these aims by providing improved algorithms, clinician access to patient records and online 111 services that help the public to self-diagnose and

avoid a telephone or face-to-face interaction. We want to connect people with the right service that is most appropriate for their urgent care needs and the needs of the system.

Programmes

- Clinical Triage Platform
- Patient Relationship Management
- Access to Service Information
- Out of Hospital Care

Related Live Services

NHS Pathways has reduced unnecessary ambulance dispatches. Up to 15% of 999 calls are now closed without



Next steps



Transforming General Practice

Our vision is to make more time for General Practitioners to treat patients by using technology to reduce the burdens of administration and providing patients with the online services that can reduce unnecessary visits to their GP.

Our ambition is to support the adoption and design of technology which:

- enables self-care and self-management for patients;
- helps to reduce workload in practices;
- helps practices who want to work together to operate at scale; and
- supports greater efficiency across the whole system.

Programmes

- General Practice Operational Systems and Services
- Adopting Existing Technologies in General Practice
- Technology for General Practice Transformation
- GP Data for Secondary Uses

Related Live Services

NHS Digital's GP IT Programmes are instrumental to delivering a paperless NHS by 2020. 73% of General Practices (nearly 6,000) procure their main clinical system via the NHS Digital framework (GPSoC). The framework gives GPs access to a list of robustly accredited systems at nationally negotiated prices.

£12 million has been saved by transferring patient records electronically using the GP2GP service rather than on paper.

Up to 95 % of GPs are now offering Patient Online services

Integrated care

Our vision is to better inform clinical decision-making across all health and care settings by allowing information generated in one care setting to be seen and



acted upon in another, irrespective of geographical or organisational boundaries.

Related Live Services

Programmes

- Integrated Care – Business Change
- Integrated Care – Interoperability and Architecture
- Social Care Integration
- Personal Health Record

Access to Summary Care Record is now available in

approximately 20% of pharmacies and 95% now have access with approximately 50% already having completed pre-requisite activities.

The Child Protection Information Sharing solution is available and being deployed between social care and urgent care settings.



Digital Medicines

Our vision is for citizens to receive world class care everywhere and at any time. Supported by digital technologies, the provision of information will optimise use of medicines. This will enable health and social care practitioners to deliver safe,

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Next steps

manage their own medications increasing their ability to self-care and allowing them more convenient ways to receive them.



Programmes

- Digitising Community Pharmacy
- Pharmacy Supply Chain and Secondary Uses
- Integrating Pharmacy across care settings

Related Live Services

43.3% of prescriptions are now delivered through the Electronic Prescription Service, with over 80% of GP's "connected" and actively using it. By Mid 2017 we expect to achieve 90% of prescriptions.

Elective Care

Our vision is to deliver a single referral and booking service for all elective care throughout the NHS and partner organisations and thereby provide improved treatment choice for patients.

Programmes

- Digital Referrals

Related Live Services

53% of referrals are made through NHS e-Referrals (as at April 2016).

Paper Free at Point of Care

Our vision is to create an NHS which is "paper free at the point of care" by supporting and incentivising NHS organisations to move from operating with paper and whiteboards to regular use of technology to manage day-to-day diagnosis and patient flow. We will support NHS organisations to build the capability they need to undertake the transformation and exploit and derive benefit from previous technology investments.

Our role is to ensure that local health and care organisations operate in an environment where patient and care records are digital,

Programmes

- Driving Digital Maturity
- Digital Child Health
- Digital Diagnostics
- Workforce and Professional Capabilities

real-time and interoperable



by 2020.

Data Outcomes for Research and Oversight

Our vision is to use the latest technology available to address the challenge of today's fragmented data landscape. Although national health and social care data is held centrally, there are multiple collections by national and local bodies. This places a burden on providers to support these collections and makes data location a point of confusion to people wishing to access it.

By analysing and making available the data we hold in new and different ways, we will offer new services that break down the barriers to accessing information, to ensure appropriate individuals have access to the information they need. New analytical methodologies will use new types of data to impact on delivery of patient care.

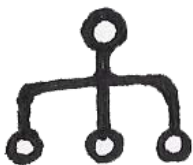
Next steps

main central health and care organisations to ensure best use of the rare skills in this area and to minimise any risk of duplication of effort or focus.

By providing high quality data, and enabling its timely capture, we will arm the health system with current, relevant powerful information to inform what is required to deliver best value care today and in the future.

Programmes

- National Data Services Development
- Data Content (including GP data, PLICS and PCOMS)
- Innovative uses of data



Infrastructure

Our vision is that information will flow safely and securely across all health and care settings by providing robust and future-proofed national systems and networks. We want to provide patients, clinicians and healthcare staff with smarter access to digital tools and technologies to deliver better care.

Programmes

- Digital Interoperability Platform and Spine
- NHSmail2
- HSCN
- Wi-Fi

Public Trust and Security

Our vision is to build public trust and confidence in how health and care services look after people's confidential information and use it appropriately, by assuring



data security across the health and care system, supporting data sharing by implementing a preference model that is transparent and patient-centred, and improving information governance across the health and care system.

The independent reviews led by Dame Fiona Caldicott, the National Data Guardian, and the Care Quality Commission have made recommendations on information sharing and data security. The consultation on the proposed security

standards and consent/opt-out model will shape implementation of Dame Fiona Caldicott's recommendations.

The Public Trust and Security Domain is responsible for delivering against both the standards and the opt-out consent model. Underpinned by the ongoing independent role of the National Data Guardian for Health and Care, who works to improve information governance across the health and care system and raise concerns publicly about improper use

Programmes

- Cyber Security
- National Opt-Out Model

of personal health and care

“These programmes will transform the health and care sector, using information to design better services and deliver better care. Improved information flows will facilitate a joined up health and care system, and new digital technologies will empower patients and clinicians“

Andy Williams,
NHS Digital

