PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

Tim Kelsey, NIB Chair
NIB Leadership Meeting, King’s Fund, London

17 June 2015
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

Rebecca Chaloner, Deputy Director Innovation, Growth & Technology, Department of Health

NIB Leadership Meeting, King’s Fund, London

17 June 2015
**WORK STREAM ROADMAPS JUNE 2015**

1.1 Enable Me to Make the Right Health and Care Choices
Providing patients and the public with digital access to health and care information and transactions

1.2 Enable Me to Make the Right Health and Care Choices
Providing citizens with access to an accredited set of NHS and social care “apps”

2.1 Give Care Professionals and Carers Access to All the Data they Need
Setting the commissioning and regulatory roadmap for implementing digital data standards by 2018/2020

2.2 Give Care Professionals and Carers Access to All the Data they Need
Roadmap for comprehensive data on outcomes and value of service now – ensuring the business intelligence requirements of health and care are met

3 Make the Quality of Care Transparent
Roadmap for publication of comparative information

4 Build and Sustain Public Trust
Deliver roadmap to consent based information sharing and assurance of safeguards

5 Bring Forward Life Saving Treatments and Support Innovation and Growth
Chapter 9 of Personalised Health and Care 2020

6 Support Care Professionals to Make the Best Use of Data and Technology
Chapter 10 of Personalised Health and Care 2020

7 Assure Best Value for Tax-Payers and Open Up Existing Infrastructure
Chapter 11 of Personalised Health and Care 2020

8 Enabling Information Standards
Provides a ‘standard-setting’ service to underpin all other work streams

*Personalised Health and Care 2020: A Framework for Action*
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 1.1: Enable me to make the right health and care choices
Providing patients and the public with digital access to health and care information and transactions

Personalised Health and Care 2020: A Framework for Action
ENGAGEMENT

NATIONAL INFORMATION BOARD

Personalised Health and Care 2020: A Framework for Action
THE CURRENT STATE & CASE FOR CHANGE

The Current State
Customer Experience, Access & Expectation Feedback
Modern Technology Digital Inclusion Security Across the Boundaries between Health & Care

Case for Change
New Models of Care and the Natural Move to Digital Demographic Pressures Self-care & Empowerment Productivity & Efficiency Care Act

Personalised Health and Care 2020: A Framework for Action
**PUBLIC PREFERENCES**

**Multi-channel offer by intent**
We were told that being able to contact NHS through channel of choice is by far the most important attribute.

**Consistent and timely response tailored to contact scenario**

**Personalisation through an NHS account**

**Making it easy to self serve**

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**Cash-Releasing Benefits**
- e-Consultations
- Electronic Referrals
- Online Medicines Management
- Online Primary Care Registration
PRIORITISED DIGITAL OFFERS

- NHS.UK Platform, Including System-Wide Service Directories
- Digital Primary Care Services
- Citizen Identity, Security & Consent
- Interoperability Between Local Services to Allow Data Sharing
- Digital Elective Care Services
- Digital Urgent & Emergency Care Services
- Online Medicines Management
- Digital Elective Care Services
- Patient Access to Digital Health Records
- Supporting Business Change & Citizen Uptake
- Widening Access & Improving Digital Skills
- Creating a Database of Demographic, Contact & Customer Preference Information

Personalised Health and Care 2020: A Framework for Action
All services start and end with NHS.UK
The single point to access all health and care services

Analytics throughout the journey
Channels demand to low cost, low intervention

Services
Transactions/applications
- NHS.UK
  - Find a...
    - GP, dentist, counsellor, health app etc
  - Book...
    - GP appointment, blood donation, hospital outpatient
  - Apply...
    - Exemption from charges, EHIC vouchers
  - Pay...
    - Prescription in advance
  - Order...
    - Repeat prescription, anti-virals
  - Register...
    - Organ donor, receive info and updates
  - Report...
    - Medicine side effects, safety, abuse
  - Access...
    - Your personal health record and other digital health services and apps

All developed to the same standards. Easier to use than non-digital alternatives. Consistent look and feel regardless of supplier.

Platforms
- Identity
  - Assuring secure personal access
- Payments
  - Cross government
- Appointments
  - Cross government, e.g., prison visiting
- Messaging
  - Reminders, notifications
- Publishing
  - GOV.UK
- Personal health records
  - Links with APIs, wearables, secure hubs
- Symptoms/conditions

Discrete capabilities that can be consumed by multiple services and applications. Re-usable components and common standards. Don't solve the same problem twice!

Registers
Data
- Organisational details
- Medicines
- Licences
- Performance/outcomes
- Apps
- Other

A single source of knowing something - secure, accurate, well managed, supporting many services equitably

Standards
- Service standards: All services must meet standards at alpha, beta, live. Will build on GDS work and supplement with health specifics
  - User needs, design, consistent, assisted digital, in house capabilities, security, flexibility, technology
- Data standards - easy to understand and widely agreed. Based on existing (open) standards. Protect privacy. Avoids lock-in (open APIs)
  - Accountability, transparency, control, consent, interoperability, security, integrity, visibility, open data
WORK STREAM 1.1 TIMELINE *(NIB Commitment)*

**2015**
- July-Dec: Conduct user research for NIB 1.1
- Commission 1.1 Programme/Projects
- Proposal to link NHS Choices with 111*

**2016**
- Wave 1 of e-consultation: Deliver alpha.nhs.uk
- Plan to consolidate NHS Referrals, appointment booking & Repeat Prescription via nhs.uk
- Approval of overarching NIB 1.1 Programme Business Case
- Develop/Approve detailed investment cases
- Customer Relationship Management (CRM) live service
- Widening Digital Participation delivery next phase
- nhs.uk service standard implementation
- First Digital Social Care Accounts

**2017**
- Service Directory – 2nd generation access to information service
- nhs.uk evaluation framework developed
- Discovery for the use of genomic data (digital U&EC)
- Service Directory Procurement
- Widening Digital Participation procurement
- PHR delivery model developed
- Wave 2 of e-consultation
- Citizen Identity Implementation complete

**2018**
- DMS GP2GP Integration
- Care home PHR alpha
- NHS referrals – full integration with nhs.uk
- Primary Care online alpha
- Customer Relationship Management live service

**2019**
- PHR implementation and transformation
- PHR Access/Write Access Implementation
- Functionality to support OOH and e-consultations

**2020**
- All projects live
- 100% electronic prescriptions
- Discovery for the use of genomic data complete

**2021**
- Discovery for the use of genomic data complete

**NATIONAL INFORMATION BOARD**

Personalised Health and Care 2020: A Framework for Action
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 1.2:
Enable me to make the right health and care choices
Providing citizens with access to an accredited set of NHS and social care “apps”
WORK STREAM 1.2 TIMELINE

Proposals for an application assessment framework

Structured reviews posted on the NIB pages of gov.uk

Digital (early) prototype of the self-assessment stage

Announcement of a digital mental health development programme

November 2015

Completed user research to test audience needs

Engaged a cohort of GPs, and other clinicians to consider the feasibility and interest in the community based component of the model

Piloted the stage 1 prototype with a number of app developers

2016

Beta’ version of the Stage 1 digital service can be launched

Evaluative processes developed and tested with stakeholders for stage 3-4 of the model

2020

Stage 2 will have been piloted

Personalised Health and Care 2020: A Framework for Action
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 2.1: Give Care Professionals and Carers Access to All the Data they Need
Setting the commissioning and regulatory roadmap for implementing digital data standards by 2018/2020

Personalised Health and Care 2020: A Framework for Action
THE STORY SO FAR

Current State
Reliance on paper-records and error prone manual processes
Mixed adoption of key standards
Variation in digital capability
Inconsistent information sharing across care settings

Future State
Timely and reliable digital health and care information
Open systems and widespread adoption of key standards
Local areas sharing progress and pinpointing best practice
Care service automation and efficient delivery

Personalised Health and Care 2020: A Framework for Action
OUR PROPOSALS FOR DELIVERY

We have engaged with a diverse group of stakeholders from across health, social care, voluntary and community sectors to inform our priorities:

- **Sustained investment in technology**
  - Investment in enabling technology to deliver safety, quality and efficiency

- **Creation of local digital roadmaps**
  - Development of inclusive, viable local plans to prioritise investment and realise benefits

- **Creation of a digital maturity index**
  - Baseline and benchmarking tool to assure progress and highlight best practice

- **Aligning levers and incentives**
  - Utilising regulatory, inspection, commissioning and development levers

- **Developing digital capability**
  - Accelerate improvement across the health and care system

- **Interoperability**
  - Development of an open environment based on open interfaces and key standards

- **Efficient system transactions**
  - Digitising system transactions and “back office” processes

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Personalised Health and Care 2020: A Framework for Action
WORK STREAM 2.1 TIMELINE

**2015**
- **July-Dec**: Further evidence based research & consultation
- **2016**
  - **Local digital roadmap guidance refreshed**: Digital Maturity Index for Mental Health, Acute and Information Sharing launched
  - **2017**
    - **Local digital roadmap guidance refreshed**: Digital Maturity Index extended for Social Care, Primary Care & Community
    - **Digital Maturity Index including additional care setting published**: Learning disability and alpha dementia flags included on SCR
    - **Business case for National Record Locator Service completed**: Widened access to SCR for pharmacies
    - **Second wave local digital roadmaps assured and published**: Local digital roadmap guidance refreshed
    - **Consultation on strengthening and extending digital maturity indicators**: Digital roadmaps mainstreamed in planning and assurance processes
    - **Food and Emergency Care are operating paper free**: Published results of updated Digital Maturity Index
- **2018**
  - **Local digital roadmap guidance refreshed**: Overarching business cases for programmes
  - **Final local digital roadmap guidance**: Co-creating tools & resources to support IDCR adoption launched
  - **Published results of Mental Health, Acute and Information Sharing Maturity**: Identified top “20” potential digital saving opportunities for investment
  - **Overarching business cases for programmes**: Financial model for capital investment
  - **Business case for National Record Locator Service completed**: Business case for National Record Locator Service completed
  - **Needs of national and local digital care collaboratives established**: National and local digital care collaboratives established
  - **Defined requirements for Open APIs for sharing across regions**: Digital maturity and digital roadmap used by CQC and NHSE assurance
  - **Defined standards for transfers of care**: Defined standards for Open APIs for sharing across regions
  - **Target providers with low NHS Number adoption and use**: Target providers with low NHS Number adoption and use
  - **Regional interoperability communities formed**: Alpha for SCR on mobile
  - **Health and care system is operating without the need for paper records**: 100% GP patient records uploaded to SCR
  - **Regional interoperability communities formed**: Defined requirements for transfers of care
  - **Urgent & Emergency Care are operating paper free**: Child Protection flags included on SCR
  - **Regional interoperability communities formed**: Regional interoperability communities formed
- **2019**
  - **Local digital roadmaps published and assured**: Local digital roadmaps published and assured
  - **Alpha for SCR on mobile**: Local digital roadmaps published and assured
  - **Launch of National Record Locator Service**: Alignment and use of levers for GP IT
  - **Work with GS1 demonstrator sites to drive efficiency and share learning**: Alpha for SCR on mobile
  - **Work with GS1 demonstrator sites to drive efficiency and share learning**: Defined standards for transfers of care
  - **Deployment of digital record transfer for Defence Medical Services**: Defined standards for transfers of care
  - **Deployment of digital record transfer for Defence Medical Services**: Defined standards for transfers of care
  - **All local areas fully implemented IDCR**: All local areas fully implemented IDCR
  - **Health and care system is operating without the need for paper records**: All local areas fully implemented IDCR

**Personalised Health and Care 2020: A Framework for Action**
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 2.2:
Give Care Professionals and Carers Access to All the Data they Need

Roadmap for comprehensive data on outcomes and value of service now – ensuring the business intelligence requirements of health and care are met
OUR COMMITMENTS AND DELIVERABLES

Work Stream 2.2 will...

Provide an oversight of the delivery of the proposed commitments outlined in the NIB framework (p. 34-35)

Deliver the plan for the secondary uses dataset development, rather than the production of the dataset itself in relation to the NIB framework:

2. September 2015 – ‘High Priority Roadmap’
3. May 2016 – Detailed Roadmap

*Paper Ref: NIB 0403-4002

Board Paper – National Information Board Leadership Meeting, Olympia eHealth Public Meeting 04/03/2015
National Information Board Work Stream 2.2: Giving the right people access to the health and care data they need

Developing a roadmap for comprehensive data on the quality, efficiency, and equity of health and care services for secondary uses (i.e. all uses that are not direct care)
Our **vision roadmap** has drawn the following early draft conclusions. The table below represents the priority areas where datasets are recommended for review and development to improve the quality of secondary health data.

<table>
<thead>
<tr>
<th>Data</th>
<th>Health &amp; Wellbeing</th>
<th>Care &amp; Quality</th>
<th>Funding &amp; Efficiency</th>
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<tbody>
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<td>Mental Health</td>
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<tr>
<td>Primary Care</td>
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<td>Specialised Commissioning</td>
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<td>Unplanned Care</td>
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<td>Drugs</td>
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<td>National Clinical Audits</td>
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<td>Wider Determinants of Health</td>
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<td>Workforce</td>
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</tbody>
</table>

*** High Impact  
**  Medium Impact  
*  Low Impact

Rating includes assessment of data quality as it stands today.

Proposal subject to iteration through stakeholder engagement Summer 2015 and will be considered as part of the more detailed 2.2 roadmaps to following in September and Spring 2016.

Will also be influenced by the delivery/development of our other 10 FFA commitments.
EVIDENCE

Historical Evidence via government reports and reviews...
Commissioners lack essential information about the quality of the services they are securing for their population, including the safety, efficiency and compassion of those services and how well each service is joined up to provide seamless care for patients.

External users, including regulators and researchers, lack complete and accurate information about the outcomes, quality, efficiency and equity of the services being provided, often having to rely on re-using data that were recorded primarily for financial purposes.

External users, including regulators and researchers, lack complete and accurate information about the outcomes, quality, efficiency and equity of the services being provided, often having to rely on re-using data that were recorded primarily for financial purposes.

Stakeholder are telling us...
“We had no data relating to community activity or capacity. Without this we couldn’t accurately gauge system pressure beyond the acute sector or make full judgements about the cause of acute pressure”

“Not knowing the numbers of emergency admissions daily meant we couldn’t tell how under pressure the system was and which trusts were under pressure”

“Unable to plan on the basis of activity and information ”

“Current data is very hospital focussed”

“Better insight of patient safety across all care settings needed”

“We need better access to National Clinical Audit datasets”
WORK STREAM 2.2 TIMELINE

**Approach**
- Feb 2015: Phase 1 – Engaging with NIB ALBs
- March 2015: “5YFV Vision” – Workshops & engagement with our core NIB ALBs to validate vision

**Validate Vision**
- Oct 2015: End of Phase 1
- Sept 2015: High Priority Roadmap

**Assess & Engage Outcomes**
- Oct 2015: Phase 2 – Engaging all Stakeholders
- June 2015: Public Commitment: ‘Plan for a Plan’

**External Assessment & Engagement**
- Jan 2015

**External Discovery**
1. National Workshops
2. Website (tbc)
3. Research Evidence
4. Further 1-2-1s

**National Information Board**

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**Phase 1**
- Jan 2015: External Assessment & Engagement
- Feb 2015: Phase 1 – Engaging with NIB ALBs
- March 2015: “5YFV Vision” – Workshops & engagement with our core NIB ALBs to validate vision

**Phase 2**
- June 2015: Public Commitment: ‘Plan for a Plan’
- Oct 2015: Phase 2 – Engaging all Stakeholders
- June 2015: Final detailed roadmap

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Personalised Health and Care 2020: A Framework for Action
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 3:
Make the Quality of Care Transparent
Roadmap for publication of comparative information
OUR DELIVERABLES

MyNHS
- a beta site hosted on NHS Choices, which brings together existing information on a range of services in a series of scorecards.
- a roadmap published February 2015 setting out the improvements planned for the MyNHS scorecards and data.
- the site was refreshed (Phase 2) with new data, improved functionality and enhanced data presentation on 24 March, with a future refresh (Phase 3) planned for July 2015. The site will continue to be developed on a regular basis with new scorecards and latest data.

Work on the public health, social care and adult social care outcomes frameworks:
- alignment of presentation of the NHSOF, PHOF and ASCOF on a single portal (nominally MyNHS) in order that local organisations, as end users, can interrogate the data as if one framework and can access a read out across the three frameworks for their area.
MAIN DEVELOPMENTS

New scorecards for CCGs and GPs, with content designed and owned by internal and external stakeholders

A new scorecard for dentists

Updates to the existing scorecards, to reflect routine data refreshes and to add new areas, such as Improving Access to Psychological Therapies on the Mental Health scorecard, and consultant team or unit level outcomes for the Consultants’ scorecard

A new scorecard for providers of adult social care, covering residential and nursing homes

MyNHS as possible “shopwindow” for routine health and care data, bringing together access to routine information across the health and care systems and becoming the single “go-to” place for professionals and the public to find what data are available and where to pursue it, depending on what level of detail they need

Developing the use of real-time patient feedback as a means of highlighting quality and enhancing choice: work is in hand to address the issues to be resolved if Family and Friends Test text is to be published, including information governance and patient consent as well as considering any impact on the overall FFT approach
EVIDENCE

The available national and international evidence shows the efficacy of transparency to drive improvements and choice.

Dr Foster’s hospital guide, among others: publishing rankings had a stronger reputational effect for those at the bottom, who are spurred into improving.

The US (Wisconsin): publishing benchmarked hospital data had a greater effect on improving quality than simply feeding back to hospitals individually.

The Netherlands: rankings are taken seriously by management but do not carry the same credibility with clinicians. For transparency to resonate with both, it is essential to select valid indicators and methods of comparison, such as bandings. Year on year stability is also key to maintaining credibility.

NHS Choices: uses the power of transparency to enable patients to compare services such as hospitals. These findings (that what comes first matters, that too much information is overwhelming and that simple labels are more helpful than symbols such as stars) have been used in the design of the MyNHS website presentation.
WORK STREAM 3 TIMELINE

- **June 2015**: External commissions for development of CCG scorecard
- **July 2015**: New MyNHS scorecards for social care providers of residential and nursing homes
- **Sept 2015**: IAPT data for mental health scorecard
- **April 2016**: Revised scorecard for GPs
- **2020**: New scorecard for CCGs
- **2015**: Expansion of consultant’s scorecard
- **2015**: King’s Fund report & proposals for CCG scorecard
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 4:
Build and Sustain Public Trust
Deliver roadmap to consent based information sharing and assurance of safeguards
The public have “no/very few objections to medical data being used for the ‘general good’ (perceived as helping find cures and causes), provided commercial gain is not the priority”.

Ipsos MORI
GP surgeries, the NHS, and academic researchers and universities are the most trusted institutions for their use of data.
OUR PROPOSALS

We are strengthening the role of the National Data Guardian by:

- Conducting a public consultation in Summer 2015 to clarify that National Data Guardian’s role and functions
- Seeking to put the independent National Data Guardian role on a statutory basis

We are listening to the public by:

- Building our evidence base on the public’s attitude to and concerns over data use
- Beginning a wide-ranging public engagement exercise with the Nuffield Council on Bioethics’ Roundtable Event on 19th June

Personalised Health and Care 2020: A Framework for Action
We are respecting citizens’ preferences for data use by:
- reviewing the current consent and objection options available through national and local systems
- developing a new model to record preferences for data use

We are reinforcing information and cyber security by:
- establishing the Information Security and Risk Board
- developing a system wide assurance framework
- establishing CareCERT

We are improving information governance by:
- re-launching the Information Governance Toolkit in October 2015, focusing on smaller organisations
- considering how to simplify the information governance system in England
**WORK STREAM 4 TIMELINE**

- **June 2015**: 19th – Nuffield Council on Bioethics roundtable
  - Initial discussion with Ministers on the shape of public dialogue

- **July 2015**: Contract Award for HSCIC supplier partner for CareCERT
  - Ongoing public dialogue

- **October 2015**: Provisional start of public consultation on the role of the National Data Guardian

- **Autumn (timing TBC)**: CareCERT Phase 1 go-live

- **2016**: Development of suite of cyber security tools by HSCIC, to support health and care system, including SIRO support proposals
  - Timings TBC – National Data Guardian role to become statutory

- **April 2016**: Provisional date for publication of a roadmap for moving to a whole-system, consent-based approach to sensitive data

- **2020**: Preferences model to be developed and implemented
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 5:
Bring Forward Life Saving Treatments and Support Innovation and Growth

Chapter 9 of Personalised Health and Care 2020
THE VISION

Objectives:
Establishing England as one of the world’s leading centres for innovation in digital health

Maximising the benefits that the data revolution is bringing to health research and development

Delivered through:
A series of actions that tackle barriers to innovation throughout the development cycle
BUILDING THE PICTURE FOR DELIVERY

**KEY**

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No resource committed or scope of deliver organization will need to change in order to deliver

Resource committed or will be delivered as part of ‘business as usual’ or specified organisation (see notes)

( ) Brackets indicate original proposal from Chapter 9, Personalised Health & Care 2020

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**Digital Health Industry Strategy (2)**

**Agreed Approach for International Opportunities (9)**

**Evolution of Tariff System (10a)**

**NICE Guidance Development (10b)**

**Benefits Realisation of Tech Funds (4)**

**GPSOC (5)**

**Test beds (7)**

**New Towns (8)**

**Real World Evidence to Support the Development of New Medicines (2d)**

**Data Services will be Developed to Support Research (2c)**

**Maximise Benefits from 100k Genomes (1)**

**Future of Genomics in NHSE**

**Implement Industry Strategy Recommendations**

**Provide IT Architecture to Collect Patient Data**

**Prepare the Health & Care System**

**Any Future Tech Funds**

**Test Beds Implementation**

**New Towns Implementation**

**Health Data Innovation**

**Partner with Industry**
TOP-LINE EXPECTED BENEFITS

- UK is established as one of world’s leading centres for innovation in digital health
- New Towns, Test Beds and Tech Fund programmes provide opportunity to try new innovations, gather information about their effectiveness and scale-up to benefit the NHS and society at large
- UK maximises the benefits from the health data revolution

**Patients**
- Patient have access to the best new treatments and healthcare
- Patients have greater control over their own health
- Digital health solutions support new models of care e.g. integrated care which improve patient experience
- Digital health solutions improve health and care system administration, freeing clinician time to spend with patients

**Health & Care System**
- The health and care system can deliver better health outcomes for the same or lower overall cost
- Digital health solutions are available to meet the evolving needs of the health and care system
- New Towns, Tech Funds and Test Beds will increase the learning capability of the health and care system
- Data assets available for research into improving the system

**Society**
- A successful digital health industry will drive economic growth (via GVA) & job creation
- Digital technologies may increase public health and create a healthier and more productive workforce e.g. via prevention agenda
- Increased coordination across UK data & clinical research infrastructure & resources to achieve shared aims

**Industry**
- The UK is one of the best places in the world to be a digital health company
- NICE offers early advice to companies on evidence development, enabling more cost-effective trial design
- Businesses see more rapid uptake of innovative products, stimulating revenue growth and investment
- Strong health data landscape in UK supports investment
Digital Health

Strong on digital health industry composition and barriers to innovation:

UK digital health industry study for Office for Life Sciences Knowledge Transfer Network and the Digital Health Special Interest Group report of November 2014

Requires further development on efficiency and patient outcomes:

McKinsey research on digital information systems estimate that efficiencies of approx. £8-14bn savings could be generated for the NHS by 2020/21
Little evidence identified to date on most relevant disease areas for digital health

Health Data

On genomics - 2012/13 the Human Genomics Strategy Group report gives us a good basis to take forward a National Genome Informatics Network

Workshop held by the Department of Health and industry under the direction of the Ministerial Industrial Strategy Group (MISG) on health data for research allowed us to identify key data sets for research and barriers to maximising them

Only three clinical trials globally of real patients recruited and monitored using real world clinical records have all taken place in the UK
Continuous improvement of GPsOfC

Major projects review of tech funds by cabinet office

Test beds call closes to global innovators

Independent Review of Nursing Tech Fund

NICE to review current practice on digitally enabled services as they feature in disease-specific guidelines

Continuous improvement of GPSoC

Major projects review of tech funds by cabinet office

Test beds call closes to global innovators

Independent Review of Nursing Tech Fund

NICE to review current practice on digitally enabled services as they feature in disease-specific guidelines

Ongoing work – Real-world evidence can be used to support the development of new medicines and treatments, data services will be developed to support discovery science, the NHS is capable of supporting the future agenda on genomics and molecular pathology datasets

Decision of whether/how to implement strategy

Review of evidence, consideration of policy options

Designation of test beds

Publication of strategy

Evidence gathered from health and care system and industry stakeholders to support industry strategy

Demonstration of capitation payment models by advanced “Pioneer” sites, new care model vanguards and IPC sites

Monitor will launch support for payment innovation (package of support for sites implementing innovative payment models including capitation care models)

Implementation of test beds

Shadow testing of the three-part payment model for Urgent & Emergency Care

Monitor to roll out patient level costing across acute settings

Monitoring to progress roll out of patient level costing datasets across out-of-hospital settings

Evidence gathered from health and care system and industry stakeholders to support industry strategy

NICE to review reimbursement pathway for digital technologies

Shadow testing of the three-part payment model for Urgent & Emergency Care

Monitor to roll out patient level costing across acute settings

Evidence gathered from health and care system and industry stakeholders to support industry strategy

NICE to review reimbursement pathway for digital technologies

Publication of strategy

Evidence gathered from health and care system and industry stakeholders to support industry strategy

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Publication of strategy

Evidence gathered from health and care system and industry stakeholders to support industry strategy
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 6:
Support Care Professionals to Make the Best Use of Data and Technology

Chapter 10 of Personalised Health and Care 2020
We consulted with a widely representative stakeholder Advisory Group to develop a set of ambitions to underpin the roadmap:

**AMBITION**

**Professionalism**
We will increase the professionalism and regulation of the informatics community, based upon clear standards, so that better decisions can be made.

**Competency**
We have provided access to the skills and development that will improve the working life of our workforce.

By April 2016 we will have consulted on leveraging existing initiatives to find the best ways of supporting carers to access digital records and information.

**Leadership**
Organisational leaders will be more confident in making decisions about data, information and technology and will know the best ways to assure themselves that those decisions are safe and appropriate.

**Collaboration**
It will be routine practice for different organisations and sectors to collaborate on data, information and technology initiatives which lead to better and more efficient patient and citizen care.
LEADERSHIP SUMMITS

A series of [Digital] Leadership Summits will take place during 2015/16

These summits will be focused around:

- **Transformative technology/assistive technology** (showcasing studies from NHS/care organisations and other industries)
- **Understanding what services are available for use now, and those emerging down the line**
- **Improving operational efficiency (using technology and data) within and across boundaries**
- **Understanding the scale of information/technology threats and risks** (inc Cyber Security and protecting patient/citizens in a digital age)
- **Making good technical/information decisions and detailing support that is available to leaders to help them make sound technical/information decisions**
- **Removing barriers and 'navigating the system'** (e.g. environment/context has a huge impact in that we can develop staff but the right infrastructure is needed to support it)
WORK STREAM 6 TIMELINE

June 2015
- Agreed a revised definition of the health, care and social care informatics profession including risk/competency by role in care setting
- Consulted on ways of supporting carers to access digital records (to inform other NIB workstreams)
- Provided an environment for leader to proved ‘protected, trusted’ second support

2017
- Worked out the best vehicle (by workforce segment) to make their working life better
- Held a series of (digital) leadership summits to address the needs of leaders using innovative knowledge base
- Addressing gaps and overcoming the barriers seen as key by the workforce
- Established networks of support across organisations, sectors and health and social care to help share initiatives

2018
- Established a professional body (Federation, Faculty) with a professional framework to support
- Opened up industry technology centres to combine working with innovation and learning
- Significant uplift in ‘digital working life’ across the workforce

2020
- Fully implemented Faculty of Medical Informatics with recognition across sector
- Organisational leaders able to be confident in making safe decisions about data, information and technology
- Routine practice for different organisations and sectors to collaborate on digital initiatives

NATIONAL INFORMATION BOARD

Personalised Health and Care 2020: A Framework for Action
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 7:
Assure Best Value for Tax-Payers and Open Up Existing Infrastructure

Chapter 11 of Personalised Health and Care 2020
Purpose

- Develop proposals to ensure best value for the taxpayer and open up the existing infrastructure
- Review and assess outputs from all NIB work streams
- Develop criteria to assess existing informatics initiatives
- Review existing portfolio and new NIB proposals against this criteria
- Develop investment proposals for a prioritised list to enable costs savings and modernised service delivery

Progress

- Data gathering and review of the existing nationally funded informatics portfolio
- Draft criteria to assess and prioritise future informatics investments
- Initial assessment of work stream proposals underway
WORK STREAM 7 TIMELINE

**June 2015**
- Review Roadmaps from all NIB work streams
- Finalise criteria for assessing future investments

**July 2015**
- Continue data gathering on all informatics portfolio items
- Appoint consultancy support
- Apply agreed criteria to assess the outcomes and proposals of the other NIB work streams

**Aug 2015**
- Develop prioritised list of candidate activities

**Sept 2015**
- Confirm strategic direction and submit proposals to Informatics Portfolio Management Board
PERSONALISED HEALTH AND CARE 2020
Using data and technology to transform outcomes for patients and citizens

National Information Board Work Stream 8:
Enabling Information Standards
Provides a ‘standard-setting’ service to underpin all other work streams
Fundamental standards are adopted with full adherence across Health and Social Care sectors

- Plans are agreed for each of the fundamental standards that implementation
- The relevant programmes of work are defined and funded

The processes for the development, approval and governance of standards are complete, fit for purpose and accessible

- The right standards are available for use in a timely way
- They are up-to-date with clinical developments
- Details and full relevant guidance are published in an accessible form so that the Standards are well understood, including the benefits of adoption
- There are ongoing processes and adequate resources for the maintenance of the standards

Integrated technical platforms provide services to achieve the ambitions of the NIB Framework and are securely hosted, professionally managed and providing a high quality and responsive service for:

- Data collection, processing and onwards provision for commissioning, research and regulation
- Supporting information flows for direct care
- Citizen access and authentication
- Published Data and Transaction interfaces for app providers
- Preference (including objection and consent) setting and implementation
STANDARDS – PROPOSED WORK

- **Transfer of Care Documents (Initial set Discharge Summaries Oct 2015; others following)**
  - A programme of work to transform the headings in the PRSB standards into fully defined messages with coded content
  - Work with software vendors to get them implemented in software packages
  - Support to care providers to implement the working practices and processes which will enable effective use

- **Replacement of Read Codes with SNOMED CT (complete by end 2016)**
  - A significant programme of work to implement of SNOMED CT and dm+d in place of Read codes
  - Co-ordinate change to the many systems and processes which use Read codes - GP systems, pathology results and QOF reporting

- **SNOMED CT and dm+d in Secondary Care (2015 and ongoing for 5 years)**
  - Implementation of preferred terminologies (SNOMED CT and dm+d) is closely related and must be done together
  - Wider implementation enabled through new detailed guidance and support material and events
  - Encouraging the capture of SNOMED CT terminology and codes at each point of care, support software providers to enable this
  - Work with the relevant professional bodies to establish agreed sets of terms for their professional use

- **Pathology - as part of an overall Diagnostics Tests Programme (Phased 2015 – 2018)**
  - A programme of work to resolve the many issues around pathology requests and results, of which acceleration of NLMC development is a key factor
  - The programme will address standards and capacity for the communications infrastructure in a fully-working service

- **Standards Governance (end 2015)**
  - Some work to improve the way standards are developed and applied, including the full establishment of the Informatics Design Authority (IDA) and revisions to the SCCI processes and arrangements, and the completion of the Enterprise Architecture and tooling
  - The development of an overall Standards Strategy to document current and proposed practice
TECHNICAL PLATFORMS – PROPOSED WORK

• Data Services Platform – for Secondary Uses of Data (Phased 2015 – 2017)
  • Programmes, including care.data, NTS, and DSfC, have similar requirements for importing, cleansing and processing data
  • Need to re-platform the existing data services in the HSCIC to improve service to users, capability and capacity
  • The DSP will be capable of supporting central data collection, and will have a set of safeguards for protecting it beyond what we have today:
    • Data is de-identified while on the Data Services Platform; Data is not linked until required; Data can be accessed, analysed and linked with local data without leaving the Platform; Very sensitive data can be accessed through a highly secure data lab; Citizen preferences, consents and objections can be complied with in detail; The uses to which a citizen’s data has been put can be tracked

• Direct Care Programme – Services for Clinicians and Carers (progressive developments 2015 - 2018)
  • Best practice guidance and standards for Regional Integration initiatives
  • Master Index or ‘Record Locator’ service to locate the data is for any individual
  • Published standard for access to patient data in care systems including methods of access, authentication arrangements data sharing rules
  • Integration hub for Primary Care data providing consistent, common interfaces into principal GP systems with open market access
  • Published Interfaces to central systems to make enquiries and do updates, including personal demographics, Summary Care Record or making a booking

• Digital Services – the offering to the Citizen and his apps supplier (Phased 2015 – 2018)
  • A set of ‘back end’ technical and platform services for access to data and transactions, and administrative systems for authentication, indexing, logging and preference implementation
  • These same services will also be needed to support the growing market for apps and third party service offerings. These must be essentially the same services as those provided directly to the citizen to provide a consistent experience and set of information
  • Digital Services is not a single IT system - data, transaction and administrative services will be delivered through enhancements to existing systems and platforms together with some new facilities
  • Backend systems will be built to support:
    • Authentication and login at a national scale; Access to and presentation of data held ‘Nationally’; Access to others systems where data is held locally and regionally – initially just click-through to a URI; Flexible Preferences service to record and implement a citizen’s preferences, consents and objections; Tracking usage and dissemination a citizen’s data

Personalised Health and Care 2020: A Framework for Action
NEXT STEPS

Tim Kelsey, NIB Chair
NIB Leadership Meeting, King’s Fund, London

17 June 2015

Personalised Health and Care 2020: A Framework for Action
PERSONALISED HEALTH AND CARE 2020

Using Data and Technology to Transform Outcomes for Patients and Citizens
A Framework for Action

Delivering the Five Year Forward View
Personalised Health and Care 2020

INTRODUCTION

The Five Year Forward View sets out a clear direction for the NHS, showing why change is needed and what it should look like.

Since the Five Year Forward View’s publication, the National Information Board (NIB) has been considering how the NHS can harness the power of data and technology to transform clinical services for patients.

In November 2013, the NIB published its framework for action: Personalised Health and Care 2020. The framework sets out the strategic direction for the NIB’s work to support the national programme for change and focuses on four areas of work:

1. Implementing Personalised Health and Care 2020
2. Supporting the delivery of clinical services
3. NIB and NIBC role and responsibilities
4. NIB and NIBC governance

IMPLEMENTING PERSONALISED HEALTH AND CARE 2020

The NIB translated the proposals set out in Personalised Health and Care 2020 into a series of work streams, headed by the following areas:

- Enable the delivery of high-quality care
- Support the delivery of high-quality care
- Implement the programme
- Establish the NIB and NIBC governance structure
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The NIB’s work is ongoing and will continue to evolve as the programme progresses.
Enable me to make the right health and care choices: supporting digital channel shift for patients and citizens, including:
- Digital primary care services
- nhs.uk
- Digital 111
- Apps Library
- Digital Inclusion
- Self Care

Transforming general practice, including:
- GPSoC
- GPT
- GP2GP
- Prime Minister Challenge Fund

Paper-free healthcare & system transactions, including:
- Interoperability
- Automation of system transactions
- Back office transactions e.g. BSA, Pension
- Wider system access – dentistry defence etc

Out of hospital care & integration with social care, including:
- ePrescribing
- ePharmacy
- Urgent & emergency care
- Integration & Social Care Online
- Care Accounts
- Local Authorities

Acute & hospital services, including:
- Elective/non elective care
- eHospitals
- Summary Care Record
- Electronic Health Record
- Barcodes
- Supplier Side Efficiencies

Data for outcomes & research, including:
- Data platform/strategy
- System-wide consistency of data capture at point of care
- Transparency
- Genomics

Leadership capability
Standards
Data (interoperability) platform
Public trust & security
Innovation & growth (suppliers/industry, enterprise)
Accountability/Lever & Incentives/Digital Maturity
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Accountability/Lever & Incentives/Digital Maturity
ONGOING PLANS

- Asking for NIB leadership’s endorsement for the six delivery domains
- Taking our plans out for a wider discussion during the summer and refine them in light of feedback from all stakeholders
- Continue work on the digital contribution to productivity and efficiency
COORDINATED COMMUNICATIONS

- Communication & Media Plan
- Conference Engagement & Events Plan
- GOV.UK Website Updates
- NIB Comms Toolkit – branding guidelines, briefing documents, templates, slide packs
- Speaker Briefing Packs
- Domain Talking Head Video Clips
- Social Media
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>19th June</td>
<td>Nuffield Trust Event</td>
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<td>30th June</td>
<td>Health &amp; Care Partnership</td>
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<td>July 2015</td>
<td>NIB Regional Events (15th, 21st, 28th)</td>
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<td>July &amp; October</td>
<td>HIMSS UK Leadership Summits</td>
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<td>July 2015</td>
<td>EHI Summer School</td>
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<td>2nd-3rd Sept</td>
<td>NHS Innovation Expo</td>
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<td>Autumn 2015</td>
<td>Health Insights</td>
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<td>October 2015</td>
<td>HSJ Leadership Summit</td>
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All services start and end with NHS.UK
The single point to access all health and care services

Analytics throughout the journey
Channels demand to low cost, low intervention

Services (Transactions/apps)
- NHS.UK
  - Find a...
    - GP dentist, counsellor, health app etc
  - Book...
    - GP appointment, blood donation, hospital outpatient
  - Apply...
    - Exemption from charges, EHIC vouchers
  - Pay...
    - Prescription in advance
  - Order...
    - Repeat prescription, anti-virals
  - Register...
    - Organ donor, receive info and updates
  - Report...
    - Medication side effects, safety, abuse
  - Access...
    - Your personal health record and other digital health services and apps

All developed to the same standards. Easier to use than non-digital alternatives. Consistent look and feel regardless of supplier.

Platforms
- Identity
  - Assuring secure personal access
- Payments
  - Cross government
- Appointments
  - Cross government e.g. prison visiting
- Messaging
  - Reminders, notifications
- Publishing
  - GOV.UK
- Personal health records
  - Links with APIs, wearables, secure hubs
- Symptoms/conditions

Discrete capabilities that can be consumed by multiple services and applications. Re-usable components and common standards. Don’t solve the same problem twice!

Registers
- Data
  - Organisational details
  - Medicines
  - Licences
  - Performance/outcomes
  - Apps
  - Other

A single source of knowing something - secure, accurate, well managed, supporting many services equitably

Standards
- Service standards: All services must meet standards at alpha, beta, live. Will build on GDS work and supplement with health specifics
  - User needs, design, consistent, assisted digital, in-house capabilities, security, flexibility, technology
- Data standards - easy to understand and widely agreed. Based on existing (open) standards. Protect privacy. Avoids lock-in (open APIs)
  - Accountability, transparency, control, consent, interoperability, security, integrity, visibility, open data