Integrated Care System

Technology and interoperability supporting the Integrated Care System

Dr Graham Evans
Chief Digital Officer
The Health and Care System today.....

The general perception from the public is that the NHS is a single entity, with well connected systems and services that enable patients and service users to move seamlessly between point of care.

From “Isolation.........
........ to Integration”

The reality is, the NHS and broader Health and Care System, is a complex amalgamation of different organisations, operating in a dynamic and fast moving environment. Often working in “isolation”, but starting to move towards “integration”. 
Drivers for change

National/Political

Technological

Regional

People

(STP): ICS/ICP

Join our Journey
Drivers for change....

National/Political

The NHS Long Term Plan

Technological

Milestones for digitally-enabled care

- Introducing controls to ensure new systems procured by the NHS comply with new agreed standards
- By 2020, five geographies (to be confirmed) will deliver a longitudinal health and care record linking NHS and local authority organisations. Three more areas will follow in 2021
- By 2020/21, every patient will have access to their care plan on the NHS app, as well as communications from their carer professionals
- There will be 100% compliance with mandated cyber security standards by 2021.
- In 2021/22, every local NHS organisation will have a chief clinical information officer (CCIO) or chief information officer (CIO) on their board
- By 2024 there will be universal coverage of regional local health and care records.

Map and align digital enabling milestones/deliverables to the NENC Digital Roadmap
System convergence
Population circa 3.4m
180,000 staff
North East and North Cumbria
Digital Care Programme

NENC – Integrated Care System (ICS)
“An integrated system will only be as good as the weakest link”

Need to consider how we ensure autonomous and sovereign provider organisations commit and align to the system-wide agenda and priorities.

“We need to start thinking (and acting) ‘system’ and not just organisation”
NENC Digital Strategy Group - Governance

Great North Care Record (GNCR) Delivery Group
CCIO Network
CIO Network
HSLI project delivery

NENC ICS Health Strategy Group
NENC ICS Management Group
NENC Digital Strategy Group
NENC Digital Delivery Group
ICS Programmes

North ICP Newcastle & Gateshead Information Network
North Cumbria ICP North Cumbria Informatics Workstream
Central ICP Sunderland & South Tyneside Informatics Board
South ICP DDTHR W Digital Transformation Workstream
North East GP Informatics Group

Other groups feeding into the above include, Technical Design Authority, SIGN IG Group.
CIO Network providing expert technical advice to the ICS programs as required.
Delivery
The handbook........there really isn’t one...so!

But this is pretty close

“Strategy is delivery”
Getting the basics right - ‘Digital hospital(s)’

The Hospital of Things

Self Service

Collaboration

Infrastructure

Safety, security and Standardisation

“One part of the bigger picture”
‘Digital hospital(s)’ = emerging challenges

Cyber Threats

Safety, security and standardisation by design
The Digital Maturity Assessment (DMA) measures the extent to which healthcare services in England are supported by the effective use of digital technology.

The DMA, will help identify key strengths and gaps in healthcare providers' provision of digital services at the point of care and offer an initial view of the current ‘baseline’ position across the country. The DMA supports the National Information Board's commitment to achieving a fully interoperable health and care system.

The Digital Maturity programme worked with a number of partners including Academic Health Science Networks (AHSNs) and healthcare providers and CCGs to examine effective use of technology, with particular focus on capabilities such as digital care records, transfers of care and medicines management.

The Healthcare Information and Management Systems Society (HIMSS) standard is likely to become the vehicle for assessment, this is especially important when comparing digital maturity on an international stage.
Increased digital maturity enables connected services

Mobile & agile workforce
“Clinician passport”

For Illustration only
Digital Strategy – interoperating

Where is technology innovation most needed in healthcare?

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIE/Interoperability</td>
<td>63%</td>
</tr>
<tr>
<td>Patient experience</td>
<td>52%</td>
</tr>
<tr>
<td>Telehealth</td>
<td>52%</td>
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<tr>
<td>Electronic health records</td>
<td>49%</td>
</tr>
<tr>
<td>Data analytics</td>
<td>49%</td>
</tr>
<tr>
<td>Chronic disease management</td>
<td>48%</td>
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<tr>
<td>Patient safety</td>
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</tr>
<tr>
<td>Population health</td>
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<tr>
<td>Privacy, cybersecurity</td>
<td>41%</td>
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<tr>
<td>Clinical workflow management</td>
<td>38%</td>
</tr>
<tr>
<td>Precision medicine</td>
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<tr>
<td>Value-based care</td>
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<tr>
<td>Imaging solutions</td>
<td>24%</td>
</tr>
<tr>
<td>Revenue-cycle management</td>
<td>22%</td>
</tr>
<tr>
<td>Supply chain/inventory</td>
<td>19%</td>
</tr>
<tr>
<td>Workforce management</td>
<td>15%</td>
</tr>
</tbody>
</table>

Interoperability
“Not being separated by a common language”!

Source: Technology Innovation in Healthcare Survey. HIMSS Media, August 2018
What are the key messages we have heard?

Source: NHSX
Transformational change requires:

People
Process &
Technology
People, Process and Technology – “Aligning for change”

- Engagement – System-wide campaign
- Awareness
- Commitment (CEO, BoD’s)
- Clinical Leadership (i.e. CCIO, CNIO)
- Adoption
- Utilisation
- Security *(Data and Cyber)*

People & Process

**Align & Transform**

Technology

- Infrastructure
- Hardware
- Software
- Devices
- Systems
- Security *(Data and Cyber – built in)*

Hygiene factors

ICS/ICP – priority areas

- Current state “as is”
- Future state “to be”
- Operate
- Optimise
- Transformation
- Security *(Data and Cyber)*

If you always do what you’ve always done, you’ll always get what you’ve always got.

Henry Ford
A thought…

GDE Foundational Infrastructure

“… the simple truth that if we don’t make it compelling for clinicians to use IT systems for their day to day work and enable them to capture accurate, timely clinical information within those systems, then most of the other opportunities within the IT strategy will be unfulfilled.”

NHS England
Digital Collaboration
Current areas of digital collaboration
Long term system collaboration opportunities

Collaboration:
- Efficiency
- Effectiveness
- Economy
- Expertise

System convergence is key
- Increased ‘value-add’
- Shared skills and resources
- Knowledge transfer and retention
- Minimises talent drift
- Reassign ££ to frontline care
- Consider some reinvestment in Digital
The future
The future is here…

- Population Health
- Genomics
- Artificial Intelligence (AI) Machine Learning
- Robotic Process Automation (RPA)
- Precision Medicine
- Person centred care

But the basic building blocks need to be in place
What's next

Key themes
- Provider digitisation (Maturity)
- Interoperability/Integration
  - LCHR/GNCR/Consent
- Self-care/Self Sufficiency
- Health Call
- Big data - Research
- Artificial Intelligence
- Shared services

TECHNOLOGY AND INNOVATION

Wachter: NHS needs a 10 year digital roadmap

By Dan Wachtler | 25 August 2015

> Professor Dr Bob Wachter says NHS needs a longer term technology plan
> Praises progress made since his review with “constrained” funding
> Says that artificial intelligence in healthcare will become both essential and create new safety risks

The NHS needs a new long term plan for digital technology to ensure it reaps benefits from growing investment in IT, Professor Bob Wachter has told HSJ.

Speaking exclusively to HSJ/nearly two years after the publication of his review of NHS IT, the US physician said the system had made good progress on improving digital technology in challenging circumstances.

“Given the constrained resources, the emphasis on technology and building the workforce has been pretty impressive,” he said.

“My sense is they [the NHS] are about where we thought they would be and maybe it has been a little bit harder because the money is a little tighter.”

However, the NHS now needs to look further ahead at how it would take advantage of digital investment over the next 10 years, he said.

“Now is probably the right time to take a step back and say, over the next two to four years we are going to have a pretty digitalised and pretty interoperable system, what is the strategy for 10 years out?”

The NHS needs a new long term plan for digital technology to ensure it reaps benefits from growing investment in IT, Professor Bob Wachter has told HSJ.
Our rich picture…joining it all up!

Population Planning

Data Analytics & PHM Tools (e.g. RAIDR, analytics platform...)

Primary Care Systems & GP Connect

Health Care Provider Primary Care

Health Care Provider

Acute, Mental Health & Community

Health Call

System efficiencies:
• Do more with less $$$
• Shared services
• Back-office
• Clinical resources and systems sharing (e.g. Pathology and Radiology systems)

Mobile Technologies

Online and Video consultations

Telehealth Solutions

Digitally enabled Population, System & Organisations

Infrastructure & Common Standards
Digital Maturity: EPRs, HSCN, Cyber Security, Wi-Fi, CareScan+, CDRC, Mobile working, Transfers of Care...
We need to THINK and ACT…..

Patient
(and service user)

System

Organisation

Self-Service
“Digital First” Channel
Digital Front Door

Health Information Exchange
Patient Engagement Portal
Technology Enabled Care
HealthCall

Digital Maturity
Infrastructure
EPR
Interoperability
Cyber/Data Security
“To enable the delivery of high quality, efficient health and care services, to the people of the North East and North Cumbria through digital solutions”
…and therefore!

From

To

With
Thank you