



Strategy for
**Information Management and
Technology (IM&T)**
2017-2021



Introduction

Our trust is embracing the opportunity to forge a sustainable identity within the Cheshire and Merseyside Five Year Forward View (FYFV) footprint as an acute provider, led by a new and positive executive leadership team.

Our Trust's journey through a number of changes over the last two years such as the loss of community services, leadership change, and increasing financial challenges together with the development of the Cheshire and Merseyside FYFV and the Alliance Local Delivery System (LDS) has increased the requirement for effective collaborative partnerships and working.

The trust is embracing this exciting opportunity to forge a new sustainable identity within the Cheshire & Merseyside FYFV as an acute provider, led by a new and positive executive leadership team.

Digital First is recognised by the Trusts leadership as a key enabler for the improvement of direct patient care and care pathways around patients. Digital technology is also essential to support new models of care across providers and the wider FYFV.

The current IM&T Strategy 2015 – 2019 is in place; however much has changed and the need for a revised strategy is evident.

This new strategy is enhanced by the trusts commitment to clinical IMT leadership with the recent appointment of the Trust's Chief Clinical Information Officer (CCIO).

Effective, clever IM&T that makes caring for patients easier and safer will need to be supported by the development of our technology, systems and infrastructure over the next four years.

Our patients needs and expectation around availability or information, accessibility and methods of communication with us have also changed considerably since the last strategy was agreed.

We work in a regional health economy, where patients are free to choose their providers. They expect a seamless service between providers. Whilst this is still some way off, our strategy needs to be aligned to the FYFV and LDS IM&T workstreams to ensure that opportunities to deliver digital innovations across the region are maximised.

Our strategy details is designed around:

- Transforming the internal hospital systems; operating a paper-light, data rich patient record system
- Making information available at the point of care to ensure care is prioritised and optimised for each and every patient.
- Improving communications between hospital clinical staff, primary and community care, social care and patients
- Promoting agile working across the Alliance LDS and Cheshire and Merseyside FYFV.
- Ensuring IT Infrastructure is designed for optimum clinical use; ensuring the most appropriate device, available at the point of care.
- Reducing the number of separate systems in use and improving the user experience through a reduction in the number of clicks and better systems integration.
- Effective business intelligence capability to ensure the Trust can design clinical services optimally for its patient population.

Background

In addition to the Trusts strategic objectives, there are a number of external drivers for change which influence the development and direction of the IM&T strategy.

Paper Free at the Point of Care

NHS England has set out its vision of paper free at the point of care. The guidance has been updated to support the FYFV and STP plans. It stipulates that Local Digital Roadmaps are developed to drive IMT maturity to a stage where patient care is digital first and captured once, removing the reliance on legacy paper processes.

Clinical Digital Maturity Models

This model has ranked all NHS hospital trusts on their use of IT and where they are on their digital journey. The output has been used to define Global Digital Exemplars (those with good maturity levels). Whilst this model has been provider capability based, future models will likely be 'place based' and care outcome measured.

Personalised Health & Care 2020

NHS England has set out a framework to transform care outcomes for citizens through effective use of data and technology. It aims to:

- give patients and citizens more control over their health and wellbeing
- reduce the administrative burden for care professionals.
- Support research into genomics

Five Year Forward View (FYFV)

The NHS faces unprecedented challenges to reduce the quality of care gap, financial sustainability. This can only be achieved through a joined up holistic approach for new models of care across primary care, community services and hospitals

Mid-Mersey Alliance LDS

The mid-Mersey health economy is known as the Alliance LDS. Consisting of primary care, specialist and community trusts as well as Hospitals covering Southport & Ormskirk, St Helens & Knowsley and Warrington & Halton areas. The LDS has an established IMT workstream and supporting IMT plan to enable the LDS cross cutting clinical themes to support the C&M FYFV

Putting Patients First

NHS England published its business plan *Putting patients first: the NHS England business plan for 2013/14 – 2015/16* in which it described the need for a fundamental cultural change within the NHS that puts patients at the centre and focus of all clinical care. Fundamentally IT solutions must be patient centric and support clinical care with this in mind

Key Priorities

We present six key areas, which over the next four years will support a digitally mature and transformative IM&T environment.

1. Delivering the Electronic Patient Record

Where are we now?

We are deploying the SystemC Medway EPR system. This system is modular and allows us to prioritise areas where we will see the most benefit to patients and our trust. So far we use the following modules, with the following functionality live: PAS, A&E, Maternity, Patient Observations and during in 2017-18 Order Requesting and Results Reporting for Radiology and Pathology services. Through these modules we will deliver a truly integrated structured electronic patient record. To supplement the digitisation of traditional case notes, we have deployed Evolve EDMS across most clinical disciplines with a small number of remaining areas to complete by 2018.

Where do we aim to be by 2020?

We expect to have delivered a comprehensive EPR system with functionality for electronic forms, ePrescribing, Theatres and Hospital Handover and escalation. We will have equipped our clinicians with mobile devices, and enabled “bring your own device” services where they can access the integrated patient record. We will have converted a significant set of paper based care pathways into a structured digital one. Information will be recorded once only and at the point of first patient contact. Systems integration will ensure core systems outside of EPR are accessible through Medway meaning clinical staff have an efficient and easy to use IT experience.

2. Supporting Clinical Workflow: The Deteriorating Patient

Where are we now?

The Trust uses the SystemC VitalPAC system for patient observations. This aids clinical care of the deteriorating patient. However we have the opportunity to improve upon this by exploiting the Trusts digital capability through designing a clinician led solution; harvesting data across a wider dataset enabled by the Medway EPR and integrated systems. A team of in-house clinical & technical specialists will develop a bespoke in house system to unleash the power of information, displaying it in a view that aids prioritisation and escalation of our sickest patients.

Where do we aim to be by 2021?

The Trust will have real-time access to clinical information at the point of care that allows clinical staff to make important decisions regarding prioritisation, escalation, and placement on the appropriate care pathway. Electronic ward boards will show appropriate information to aid planning and show performance. Clinicians will use mobile devices to collaborate and support effective handover and care co-ordination. Hospital management will access a ‘magnifying glass’ view to aid capacity planning and service management.





4. Business Intelligence

Where are we now?

We have a clear Business Intelligence Strategy which underpins the work done by the Information Team. The Trust's Business Intelligence function supports data processing and reporting for all clinical divisions as well as a number of corporate functions.

Where do we aim to be by 2021?

By further development and innovation the team will roll out suites of reports to operational and clinical leads, making best use of available technologies such as mobile applications intelligence will be delivered right to the front line in real time.

3. Robust and efficient IT

Where are we now?

We have a modern computer environment based on Windows 7 and flexible Virtual Desktop Computers. We have invested in state of the art disaster recovery solutions to protect the trusts key information assets from failure.

Where do we aim to be by 2021?

Windows 10 will be fully rolled out across the Trust with Office 365 deployed. The Trusts Cyber Security strategy will be fully implemented meaning technology and a security culture is optimally embedded to protect the organisation against threats. System logons will be efficient and clinical systems access simplified through the EPR.

5. Flexible Working

Where are we now?

The trust has implemented a robust 'cloud' desktop service which allows clinicians and corporate staff to securely access a trust virtual desktop from home or other NHS (N3 connected) organisations.

Where do we aim to be by 2021?

Citizen Wi-Fi will be free 24/7 across the Trust improving patient experience. Mobile devices will be enabled for clinical EPR applications allowing doctors to access information at the point of care. Simplified logon to trust systems will be available anywhere across the Alliance LDS. Tele-conferencing technologies will support remote consultations and collaboration between doctors.



6. The Shared Care Record

Where are we now?

The trust sends electronic inpatient eDischarge letters to GPs and is working on extending this to all trust areas. Additionally we are implementing integration into the Lancashire LPRES shared care record.

Where do we aim to be by 2021?

The trust EPR system will integrate into a local health economy shared care record. The shared care record will enable health and social care organisations to share important care information about the citizens direct care requirements. Shared care pathways will be supported and transfers of care enhanced by alerting and escalation capability. Anonymised data lakes will help drive service design based on population health.

What does this mean for our patients?

Our Patients will benefit from assistive care and telehealth technologies meaning they can more easily make informed healthcare decisions.

Preventative care models underpinned with technology will help reduce hospital visits. All our patients will receive the most appropriate care in the most suitable place for them and their needs. Opportunities to spend less time in and visiting hospital will allow for better and smoother transition between care providers.

Information sharing will ensure GPs have access to care provided with the wider healthcare setting. Healthcare workers having the right tools and technologies provide patients with the assurance that their local NHS service is a modern digitally enabled one.

Patients will have opportunities to engage with their care providers on digital platforms.

I feel assured my healthcare worker has visibility of my care record which ensures they can make the most informed decisions with me.

I feel more confident my doctor has up to information on my hospital care.

New technology at home allows me to monitor my own healthcare.

I am able to use my smartphone to access parts of my patient record.

My GP can see the care I have received at the hospital.

When I am discharged I receive a detailed care summary letter which helps the transition of my care.

I can use telehealth technologies such as Skype to engage with my care worker.

Smartphone apps aid me finding my way around the hospital.

New assistive care technologies help me manage my own care, avoiding hospital visits.

I feel assured my care worker is in the modern age and not using paper.

My GP is able to refer me to a Community Service instead of hospital because they have access to my information.

When I have an appointment at the hospital I am reminded via a text message to my phone.

When I attend the hospital or community clinics I feel confident they have my most recent results.



What does this mean for the Health care worker?

The healthcare worker will benefit from having the right technology supported by the best underlying infrastructure that is simple to use and allows them to work flexibly to access the Clinical IT systems they require.

A digitally mature patient care record is accessible by the right healthcare worker at the right time. Patient care will be delivered in a paper-light environment. Business Intelligence reporting will inform decision making and that care pathways are optimal ensuring patients are treated in the right care setting.

The majority of patient record information I require is in the Trusts EPR system – which means I can easily access my patient's information.

I can place pathology & radiology test requests electronically and I receive the results to my trust mobile device.

The Trust has digitised the older paper forms into electronic forms which make accessing information easier.

I can see the GP and social care information about my patients within the EPR system.

I use my mobile device to help me work flexibly wherever I am.

Accessing the computer systems is simple and I don't need to log into separate systems anymore.

We are paper-light! Our legacy paper case notes are scanned and available electronically.

The electronic clinical whiteboards are enabling me to prioritise the sickest patients quickly.

We are able to plan better for increased A&E attendances thanks to the information reports.

Pathways exist for patients who see us about the same condition. They're easy to add to so I don't start a new pathway each time.

Video conferencing technologies enable me to keep in touch with my colleagues without unnecessary travel.

My colleagues and I can access the same patient record electronically at the same time.

As a clinician I can travel anywhere within the local health economy and log into my hospital systems.

Improved Business Intelligence is aiding us placing the right care models where it is needed most.

I don't have so many clicks to get to the information I want.



The Roadmap Ahead

2017/18



QUARTER 1

- Community Services Exit and implementation IT Transition SLA
- Implementation of Evolve direct print module to support direct scanning
- Maternity system upgrade
- Cyber Actions: Patch Management & Security Systems upgrade
- Medway OCRR Project commencement (Order Comms and electronic results)



QUARTER 2

- Development of Medway 7 year financial plan and business case
- Completion and implementation of Cyber Security Strategy
- Implementation of major Medway EPR 4.8 upgrade to support OCRR



QUARTER 3

- Trust-wide Managed Print Deployment; consolidation of printer fleet with new Konica Minolta multi-function devices, including electronic faxing.
- Medway OCRR go-live with Radiology results reporting and ordering capability
- e-Discharge improvement project (improved smart form using Medway)
- Commencement of electronic whiteboard software development
- Implementation of Trust Telephone System Replacement



QUARTER 4

- Implementation of Safe At All Times electronic whiteboard in pilot wards
- VitalPAC Software upgrade
- Wheelchair BEST system upgrade
- Independent review of Trusts Wireless Network for future sustainability
- Completion of Evolve mobile application rollout supporting multi-user iPads
- Medway OCRR go-live with Pathology results reporting and ordering capability
- Digital Faxing solution implemented

2018/2019



QUARTER 1

- Wireless Network Replacement Plan and business case
- Rollout of wider SAAT IT project
- Medway PDS deployment (NHS Number Tracing)
- 100% Electronic GP referrals achieved
- Medway electronic discharge for in patients



QUARTER 2

- PACS and Evolve Systems contextual patient link from within Medway EPR
- Commencement of Wi-Fi network replacement
- Layer 3 network implementation
- Implementation of replacement clinical pager system



QUARTER 3

- Implementation of free 24/7 public Wi-Fi across Trust
- Trust Skype teleconference rollout to enable improved local collaboration
- Implementation of VitalPAC VTE and Fluid Balance modules
- Implementation of VitalPAC 3.5
- Commencement of Medway Careflow Project



QUARTER 4

- Implementation of C&M STP collaboration and single logon solution
- Completion of Evolve EDMS electronic Casesnote rollout across Trust
- Completion of the Trusts Layer 3 network project which provides logical network segmentation and enables Trust wide rollout of VOIP telephony
- Integration with LPRES for structured patient information sharing
- Exploration of patient experience improvement mobile applications

The Roadmap Ahead

2019/20



QUARTER 1

- Trust single sign on project to simplify logon using smart cards and password self-service resets
- Medway Clinical Noting Project commencement (Phase 1) – AED, Critical Care



QUARTER 2

- Commencement of Medway e-Prescribing Project
- Completion of Medway Careflow project



QUARTER 3

- Integration with C&M / Mid Mersey Care Record
- Patient Self Check-in and patient way finder integration into Medway EPR/ Clinical Ward Boards
- Implementation of replacement perimeter network firewalls (Cyber Security)



QUARTER 4

- Explore out of hospital telehealth opportunities
- Completion of Medway Clinical Noting Phase 1
- Medway Clinical Noting Project commencement (Phase 2) – wider trust areas

2020/21

- Explore Patient tracking solutions for benefit of clinical care and patient experience
- Medical devices tracking via trust Wi-Fi.
- Assess the market and develop a case for change to replace the Radiology Information system
- Completion of Medway e-Prescribing project

2021/22

- Server and Data storage refresh project
- Physical network refresh project
- Virtual Desktop refresh project
- Replacement of Theatres system with Medway Bluespier
- Review of EPR benefits realisation and paper light position.
- Completion of Medway Clinical Noting Phase 2

The Capital Plan

Programme	Project	18-19	19-20	20-21	21-22	22-23	23-24	24-25
Electronic Patient Record	Medway EPR	£175,000	£615,000	£975,000	£350,000	£305,000	£100,000	£100,000
	Integration	£20,000	£20,000	£20,000	£20,000	£20,000	£20,000	£20,000
	Other EPR Projects							
IT Assurance	Fixed Network Infrastructure	£100,000	£50,000	£0	£250,000	£150,000	£50,000	£50,000
	Telephony	£120,000	£60,000	£60,000	£60,000	£30,000	£30,000	£30,000
	IT Training	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000
	Wireless Network Infrastructure	£150,000	£150,000	£150,000	£0	£0	£0	£0
	Virtual Desktop Infrastructure	£25,000	£0	£0	£140,000	£0	£0	£0
	End Point Refresh (Computer/ Mobile)	£50,000	£30,000	£30,000	£50,000	£50,000	£300,000	£150,000
	Cyber Security	£50,000	£80,000	£25,000	£25,000	£25,000	£25,000	£25,000
	Datacentre	£50,000	£0	£0	£0	£150,000	£150,000	£0
	Server Infrastructure	£50,000	£50,000	£50,000	£120,000	£120,000	£50,000	£50,000
	Data Storage Infrastructure	£25,000	£25,000	£25,000	£200,000	£200,000	£200,000	£25,000
VitalPAC	VitalPAC End User Training	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000
	VitalPAC Rollout	£0	£0	£0	£0	£0	£0	£0
	VitalPAC Device Refresh	£20,000	£0	£20,000	£0	£20,000	£0	£20,000
eDMS	Evolve Rollout and Scanning	£160,000	£80,000	£80,000	£40,000	£40,000	£40,000	£40,000
	Total	£1,015,000	£1,180,000	£1,455,000	£1,275,000	£1,130,000	£985,000	£530,000



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