Logos CCG Logo for all Provider organisations

Dudley Health and Social Care
Local Digital Rd Map

Version History

Version	Status	Date	Author/Editor	Details of changes
1.2	Draft	14/03/2016	Adrian Millard	First draft
1.3	Draft	17/05/2016	Adrian Millard Adam Thomas	Inclusion of DGFT information
1.4	Draft	24/05/2016	Adrian Millard Adam Thomas David Crook Richard Corner Chris Ward	Inclusion of DWMH information
1.5	Draft	25/05/2016	Adrian Millard	Merger of information from contributors to this point
1.6	Draft	31/06/2016	Adrian Millard	Updated capabilities
1.7	Draft	31/06/2016	Adrian Millard Chris Ward David Crook Adam Thomas Colin Aldridge Richard Corner Mark Ellerby	Updated based on input from LDR workshop
1.8	Draft	6/6/2016	Adrian Millard Richard Corner	New vision statement Re-drafted Capability deployment Update initiatives to include MBC
2.0	Draft	8/6/16	Adrian Millard	Further revisions from Workshop
2.1	Draft	9/6/16	Richard Corner	Updated section 7
2.2	Draft	10/6/16	Adrian Millard	Added Direction of travel slides
2.3	Draft	10/6/16	Richard Corner	Further minor updates
2.4	Draft	13/6/16	Richard Corner	Minor updates
2.5	Draft	13/6/16	Adrian Millard	Finance section added and minor update as requested by D.Crook
2.6	Draft	16/6/16	Adrian Millard	Changes as discussed at I.T Sub Group
2.7	Draft	17/06	Richard Corner	Minor updates following review
2.8	Draft	20/06/16	Richard Corner	Further changes from IT Sub Group Feedback. Section 13 added to cover risks. Minor updates to long term initiatives plan section.

1 Introduction

This document will look at the development for the Local Digital Road (LDR) Map across the Dudley Health and Social Care region.

The Dudley Health and Social Care region member organisations are as follows:

- NHS Dudley CCG (CCG)
- GP practices (GP's)
- Black Country Partnership NHS Foundation Trust (BCPFT)
- Dudley Group NHS Foundation Trust (DGFT)
- Dudley and Walsall Mental Health Partnership NHS Trust (DWMHT)
- Voluntary Services (DCVS)
- Dudley Metropolitan Borough Council (DMBC)

The LDR has been developed in a collaborative working partnership with commissioners and providers with a single vision to deliver enhanced Health & Social care through transformation that is digital-by-design.

The LDR will be aligned with the national priorities and the regional objectives of the Black Country, Sustainability and Transformation Plans (STP.)

The strategic objectives for this LDR have been identified to find efficient ways of working and to identify any gaps that may exist in supporting seamless and collaborative care across the footprint. A working group has been developed and a series of transformation workshops have taken place to ensure the LDR has been developed and aligned to the STP. The working group have also identified priorities to enhance the collective maturity of capabilities.

The LDR will detail the steps that the Dudley Health and Social care region will take to reach the 2020 paper free milestones that were mapped out in Personalised health and care 2020 and The Forward view into action.

The core content of this document will be as follows:

1. **Vision for digitally enabled transformation** – Consistent with STP vision, addressing the three national challenges stipulated in the Forward view into action.
2. **Baseline Position** - Current state – Maturity overview, current achievements and initiatives
3. **Readiness assessment** – Leadership, governance, investment, change & benefit approach, resources, programme & change structure, programme assurance
4. **Capability deployment** – Path to paper free, deployment schedule, status and optimisation against 10 universal capabilities
5. **Universal capabilities delivery plan –** Activities for the 10 university capabilities and the proposals for evidencing progress towards the defined aims of each capability
6. **Information sharing –** A common information sharing agreement
7. **Infrastructure** – Taking into account the existing and future developments to support our paper free ambitions.

2 The Vision

2.1 Background and Context

The vision set out within this roadmap is contextualised within the overall stated aims of the Black Country STP and vision and strategic intent for the Dudley Healthcare economy. It should be noted that the individual contributing organisations within the Dudley footprint will have their own individual vision statements and that this document is not seeking to redefine any such local statements.

The overarching aims of the STP are: -

- closing the gaps in health and wellbeing; care and quality; finance and efficiency;
- identifying initiatives with the greatest benefit at an early stage;
- engaging patients, clinicians, staff and wider partners;
- spreading and connecting successful local initiatives;
- using the STP as a platform for investment from the Sustainability and Transformation Fund.

2.2 Vision

"to deliver technology that enables teams and patients to connect in a collaborative way, providing secure access anywhere anytime to health and social care workers and patients alike and delivering electronically relevant information to the recipient in a timely fashion".

2.3 Vision objectives

It is important within the delivery of technology to understand that technology in itself will not deliver successful change. Our aims are therefore based on supporting operationally led initiatives and providing core technology capability to enable and simplify operational change. Our objectives can therefore be summarised as: -

- To support a patient and carer centric operational model.
- To support transformational change to the way the health and social care economy in Dudley operates.
- To enable secure information sharing and ensure that data exchange between organisations is electronic wherever possible – paper free at point of care.
- To facilitate cross organisation collaboration driving efficiency within the operation.
- To remove duplication.
- To support the principles behind patient choice, consent and accessibility for all.

Above all technology will be a fundamental building block to support the aim to close the physical/mental health gap and the social care gap.

3 Direction of Travel

LDR 2016/17

1. Current State

The current digital capability for Dudley health provider organisations varies, which means some key delivery staff do not have immediate access to patient information or the ability to share information electronically.

Teams share data between organisations at a process level.

LDR 2017/18

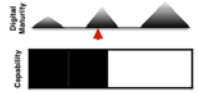
2. Digitally Enabled

Creating digital capability across all providers is key to ensuring all teams are recording data electronically.

As all providers become digitally enabled the maturity of the Integrated Patient View, which will improve connectivity across the digital footprint.

Achieved:

- All system data is digital



LDR 2018/19

3. Connected State

Connecting each system together allows bi-directional sharing of electronic data and interoperability across systems.

Delivery of full integration between providers and the Integrated Patient View.

Achieved:

- Data shared between teams electronically

LDR 2019/20

4. Integrated Patient View

The Integrated Patient View and interoperable system fully support new care models of patient led self care, care planning and a single source of truth.

Achieved:

- Paper-free at the point of care.
- Patient can access and contribute to their record
- Health care workers have a single view of data

4 Principles

Patient Centred - Services will be designed holistically around the patient and provision of their care with access provided, subject to patient consent, to all health and social care professionals who need it.

Interoperable - Through an integrated view of patient data presenting a comprehensive, standardised and consistent view of the patient by drawing relevant data from all organisations involved in providing health and social care to the residents of Dudley.

Secure - patients can be certain that their data is being securely held and is of good consistent quality regardless of source.

Accessible - Access to data will be delivered to those who need it anywhere, anytime and any device with data delivered in near real time from source systems.

Delivered Incrementally - change will be delivered incrementally in manageable steps and prioritised by areas delivering the biggest benefit.

5 Capability Plan

State:	Current State	Digitally Enabled	Connected State	Integrated State
FY:	16/17	17/18	18/19	19/20
Records, assessments and plans	Emergency care can access GP-held information on medications allergies and adverse reactions Secondary care organisations have access to GP record	All Secondary Care organisations have the ability to create electronic patient records (digital records) Secondary / acute care is recorded in digital records	Safeguarding information communicated between health and social care electronically	Integrated Patient View (IPV) supports footprint care delivery.
Transfers of care	GPs receive electronic discharge summaries from secondary care Ability to view test results GP-GP and GP - DGFT Referrals are sent electronically to secondary care and are printed Ambulance records are available to A&E electronically GPs receive discharge summaries from A&E	GPs receive structured coded electronic discharge summaries GPs receive electronic End-of-treatment summaries from cancer services	Secondary care providers receive electronic referrals into digital records	Transfers of care between all organisations is shared electronically
Orders and results management	Integrated order communications available across some secondary care providers	Integrated order communications available across all secondary care providers		
Medicines management and optimisation	Chemotherapy is prescribed electronically, and drug administration is recorded electronically		Digital reference sources available at the point of prescribing across all organisations e-prescribing available across all organisations Professionals are prompted to monitoring requirements for high risk medications Inpatient and outpatient ePMA is available across secondary care settings including adverse event reports	
Decision Support	Disease / protocol driven support available to cancer service clinicians Clinical decision support software available to prescribers in secondary care GPs have more granular cohort selection capability (risk strategy) GPs are alerted to carry out specific tests during consultations			All organisations can use data from IPV to support decision making

Remote and Assistive Care	Secondary care voice, video and instant message conferencing for peer-to-peer discussions on patient care		Workforce able to access data remotely	Patients can access Apps for condition management self-monitoring	Remote consultation with GP	Remote consultations between social care and service users	Mental health consultations are conducted virtually	Mental health teams can support remote care via wearable technology/remotely	Patient portal utilises access to a IPV to support self-care
Asset and Resource optimisation	Acute hospital at night teams co-ordinated through electronic task management	E-rostering for staff utilised across secondary care	Community teams supported by route planners / electronic appointments	Hospital Theatre resources managed electronically	Medical equipment, hospital beds and infection control monitored through RFID				

Note: The capabilities laid out in this plan indicate the timescale when the capabilities become initially available, but does not necessarily represent the final end state..

6 Capability Deployment Trajectory

	Average scores across All Providers			
Capability group	**Baseline score (Feb 16)**	**Target (end 16/17)**	**Target (end 17/18)**	**Target (end 18/19)**
Records, assessments and plans	30.7	51.7	69.7	86.7
Transfers of care	33.0	43.7	75.7	90.7
Orders and results management	42.0	46.7	60.0	88.3
Medicines management and optimisation	23.0	26.7	68.3	76.7
Decision support	40.7	66.7	76.7	88.3
Remote care	22.0	24.3	36.0	62.3
Asset and resource optimisation	16.7	31.7	60.0	85.0

Notes:

(i) This section currently excludes primary care data as this is not yet available.

(ii) The graph is a straight average across provider organisations and has not been weighted to take account of the individual provider target end states.

7 Baseline Position and Current Initiatives

7.1 Core Systems

Each provider and the CCG are responsible for their core systems including their main patient administration system. There is limited or no consistency around choice of system with each provider selecting “best of breed” to meet the functional requirements of their organisation. A capable, matured model of digital exists in the Primary care sector that is not matched by an underlying capability in other partner organisations. This is principally due to the lack of comprehensive, contemporary Electronic Patient Records that support the sharing/transfer of clinical data in these areas. Whilst electronic communication into the Secondary providers is enabled, the handling of data by providers reverts to paper processes. As a consequence, there is limited electronic communication out-bound to Primary Care Organisations, creating a finance & efficiency gap. This is a fundamental capability that is addressed within the roadmap capability delivery plan. Procurement of fit-for-purpose systems that adequately support the sector will be a rate-limiter to rapid progress. True interoperability across the STP footprint will be realized with the implementation of the Integrated patient view, which has been scheduled for implementation in 2017.

A number of initiatives have been undertaken or are in progress to rationalise the core systems landscape in order to facilitate those key aims and to ensure a state of readiness to support a fully interoperable systems landscape.

	Baseline position	**Limiting factors**
Digital Health Record	CCG - All Dudley GPs are now using EMIS (web) as their core patient system. This ensures consistency across the GP population and facilitates simpler data sharing across GPs, access to GP records by other Clinical Staff and supports the aim to share data across a common platform DWMH - Replacement Clinical System to provide full electronic care records across all DWMH care processes. The system will support the delivery of significant service improvements in terms of the quality, effectiveness, safety and efficiency of care. It will help address a number the areas for improvement identified in the recent CQC inspection report. DGFT- Dudley Group NHS Foundation Trust is currently undertaking an OJEU tender to secure an electronic patient record (EPR). There is a high degree of local ‘infrastructure' maturity and ‘readiness' maturity, however there is limited maturity in organisation wide paper-free care capability, entered around the availability of an EPR solution. The EPR programme will address this gap to support efficient acute &community care in supporting LDR capabilities BCP - Has begun integrating its existing systems (OASIS, iPM, Carenotes and NCRS) and in 2015 developed its core digital framework to put the use of technology to work for patients and care professionals.	• Data sharing agreements need to be in place to fully utilise existing EMIS functionality. • Data cannot be written to the patient record by the wider community, however, notes can be sent electronically back to the practice for update. • The voluntary sector remains fragmented due to the independent nature of the organisations operating within it. PSIAMS does provide a consistent systems platform and take up so far has been good however, there is no mandate to force all organisations to use the system.

	DMBC – Are utilizing a fully digitized electronic record. There are plans in place to procure a new citizens platform that will allow the public to gain access to information about themselves and available services.	

7.2 Patient Accessibility

To fully assist interoperability across the STP footprint, Patients/Service users will need safe and secure digital access to the information and services that support their personal health and social care. The view for the patient service user should be seamless and our ambitions include a consolidated view that will enable them to access information via a single route.

We aim to invest in our systems, to ensure that they meet Nationally set targets for Patient accessibility. Some Patient access functionality already comes as standard in the main GP clinical system Emis Web, however outside of Primary care there still remains a gap in providing online access to Clinical systems across the STP footprint.

Various initiatives have started to bridge the gap, however, creating a truly patient centric landscape requires the foundations of the core system to be in pace and the creation of a consolidated cross organisational view of data.

	Baseline position	**Limiting factors**
SMS Messaging	CCG- MJOG SMS is currently used in all GP Practices On an average 120,000 SMS messages are sent per month. Voluntary sector - Several organisations that use PSIAMS have requested SMS as an option for communicating with service users. DGFT/BCP/MHT SMS - SMS Messaging is used to provide reminders for patients and alerting friends and family.	CCG Resources are required to identify further campaigns across the STP landscape that can utilise SMS to support a paper free vision.
Patient on line access to records/services	DMBC -Communities is a central tool to aid in the development of giving access to records for the service user. GP - All CCG practices now have the ability to provide their patients with limited access to routine transactions such as booking appointments and repeat prescriptions.	DMBC- Funding is the key limiting factor. GP- The available view is for the detailed coded record only. No free text or scanned information is available.
Mobile Apps	All organisations are making limited use of mobile apps that will allow people to send in thoughts comments and feedback on services. Mi Experience used in GP's and DGFTto allow patients to record feedback. There is potential to extend the use of this app to the Mental Health Trusts and Social Care.	Usage of Apps is in the early stages in Dudley organisations. A collective viewpoint of Apps that can be used across the STP has not been addressed.

Other Telehealth Apps	DGFT Monitoring Programmes – Continuous glucose monitoring system for diabetes. Remote monitoring of cardiology devices.	

7.3 Infrastructure

To meet our interoperability ambitions, we will need to ensure that the core IT infrastructure is resilient, extensible and fit for future purpose. Whilst the majority the partners have confirmed a fit for purpose cloud based and virtualised environment, the CGG and the DWMHT are currently retendering the provision of service. Mobile working is being gradually extended and Wi-Fi enablement is underway.

	Baseline position	**Limiting factors**
Mobile working	GP - Initial rollout has been started. Several issues were encountered and are being resolved. A further stage is in the planning stage. All other provider organisations have mobile initiatives that are ongoing. Devices are used as and where required.	GP -Signal coverage, suitability of core applications and user interface constraints. Security, single sign on/authentication
Wi-Fi Rollout	All STP organisations with the exception of the GPs have full Wi-Fi capability across sites to their staff. Some offering public access. The CCG have purchased Wi-Fi devices for each surgery.	The broadband infrastructure across Dudley needs to be improved including access to Wi-Fi in homes and in Health organisations
Fit for purpose infrastructure	CCG and DWMHT- have commissioned a the retender of the current support contract aimed at moving towards cloud based provision with flexibility, scalability and resilience as core requirements. BCPFT are currently implementing a cloud based SAN and Virtual desktop infrastructure All other STP organisations have resilient access via Cloud based UK data centres.	

7.4 Data sharing/Electronic data exchange

Enhanced data sharing will improve our ability to provide seamless patient centred services across the STP. The vision includes adoption of the NHS number as the unique identifier. We will also put into places various initiatives that will provide us with digital access to documents and information about patient's/service users that support better care. We will work within data protection legislation and with our Information Governance leads to make certain that our data is secure and will only be seen by the appropriate person(s) on a need to know basis.

	Baseline position	**Limiting factors**
NHS Number adoption	NHS Number is used as the unique identifier for all registered patients in Clinical settings across the STP	CCG -A review between partners to ensure that all Health and Care partner organisations are using the NHS number to identify their patients.

		Assurance between health and social care partners that the NHS Number is the sole identifier that will be used when sharing information and data.
E-Referrals	GPs – All practices have the option of using E-referrals. It is thought that some practices are still using paper. There have been instances of staff sending patients to clinics where they do not have relevant information about available slots. There are instances of staff not referring to all available providers. VS- PSIAMS currently has the ability to send and receive information electronically. However, the "E-Referrals system in PSIAMS is only being used to receive referrals and has limited functionality. The development of a bi-directional link will be incorporated into other developments.	GPs – will need to work with providers to ensure that all offerings are available via e-referrals. Some work is also required to support practices to use e-referrals as efficiently as possible. E-Referrals are considered not to be fit for purpose in its current form as Provider organisations do not have the capability to integrate with their systems and therefore have to print and file hard copies. The Sending and Receiving systems don't currently have a consistent format.
Bi – Directional feeds from Radiology	All practices have access to online testing solution T-quest	Offerings are limited to a minimal number of tests.
Electronic discharge (and attendance) letters	GPs currently receiving electronic discharge letters from DGFT Disco Database in place supporting electronic discharge letters from the DGFT to social care.	Capability of existing core systems limits ability to send electronic discharge letters. Current letters are not fully coded and therefore manual intervention required to add coded information, e.g. diagnosis into the GP record.
E prescribing	E prescribing in place across all GP practices.	Capability of existing core systems limits ability to implement E prescribing across the rest of the footprint area.

7.5 Business Intelligence

Across the STP we will require good Business intelligence to plan, budget and deliver services. We will utilise business intelligence to acquire, better, more accurate and timely data to improve our ability to understand what is happening within our health and social care economy. We will work closely across the STP to enhance our reporting capability we will utilise clinical decision tools to support our objectives.

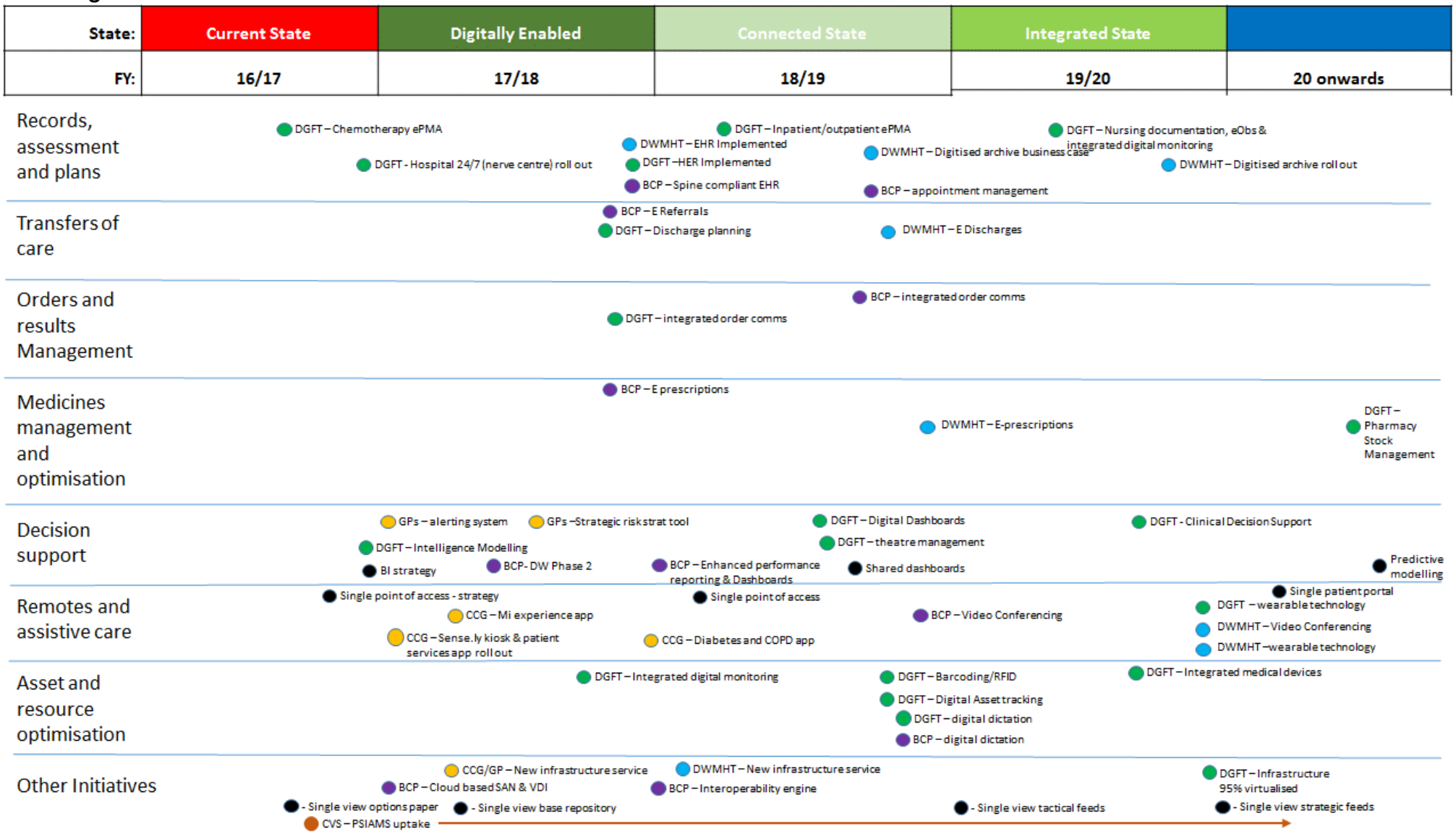
We will also continue to make certain that our data structures are presented with consistency to ensure that information is neither misplaced nor overlooked.

	Baseline position	Limiting factors
Risk stratification	Risk stratification tools are standardised in GP surgeries and Primary care. A Long term risk strategy tool to be agreed.	Secondary care data is not included within the current risk stratification tool used in primary care.
Business Intelligence	DGFT are utilising Business intelligence tools within the scope of EPR programme Voluntary Sector are currently developing/exploring a range of business intelligence solutions within the PSIAMS system, which will provide information on data and trends. CCG has a number of B.I. tools in place with limited views to available data The DWMHT have an existing data warehouse/BI system in place.	Securing a fit for purpose EPR in Secondary Care and the Mental Health Trust within timescales. CCG does not currently have an integrated B.I. tool in place that supports advanced B.I. capacity. There are gaps in secondary care data and there is limited capacity for sharing reports between providers and to monitor holistic performance and KPI.s At present cross organisation business intelligence is limited by the lack of shared information.

8 Current Initiatives

Initiative	2016/17			
	Q1	Q2	Q3	Q4
Records Assessments and Plans		**CCG** review of the enhanced SCR to understand LTC and palliative Care offering **DWMH** – Enhancement of discharge summary **DGFT** Allocate tasks electronically including enhanced access to essential information such as SBAR, supports complete structured records for future enhancement to discharge summaries.	**GP** Extended use of EMIS EPRV to provide Clinical access to Patient Records **VS** Record update and contribute to EPR **GP** Introduction of EMIS enterprise for Cross GP Practice sharing of data with full write capability **DGFT** electronic patient chemotherapy records and structured treatment protocols **BCP** Clinical E-Notes, E-Documents, E-Forms and E-Workflow -available	**GP** EPaCCS, Digital system approved. Licences purchased. Data flows between providers mapped out and DSAs authorised Review of NHS number adoption across the STP **DGFT** Can access GP held information on medications allergies and adverse reactions
Transfers of Care		**GP** Electronic attendance letters to GPs from Emergency department (ED)	**GPS** Receive discharge summaries electronically from Emergency Department	**DWMH** Electronic summaries including discharge summaries sent to Secondary care
Orders and results Management			**BCP** Integrated Order Comms- available	
Medicines Management and optimisation			**DGFT** Chemotherapy Prescribed electronically and nursing administration records/results recorded in an integrated closed loop patient record **DGFT** Digitally enabled calculation of doses based on height, weight and body surface area	
Decision support		**DGFT** Professionals are prompted to complete/close overdue or pending actions (e.g. car episodes) inturn leading to prompt contemporary EOTs being delivered to GPs **DGFT** Prescribers are directed towards relevant evidence based reference material as part of digital clinical workflows, with the digital system providing prompts to the next action in multi-step plans	**DGFT** Integrated clinical decision support, defining available treatment protocols (drug regimes) for cancer patients driven by diagnosis supporting formulary control. **BCP** Real time BI reporting and KPI monitoring **BCP** Summary Care Record available	**GP** Risk stratification tool for GPs to be confirmed **BCP** PAS alignment between OASIS, NCRS, IPM and Carenotes
Remote and Assistive Care		**GP** Pilot kiosk functionality to capture weight and BP measurements in GP practices. Patient Services to be piloted. Extend reach of mobile technology. Extend available functionality on the devices i.e. office suite and access to e-mail. Extend reach of mobile devices for staff		**GP** Implement staff Wi-Fi across all GP practices. **GP** Basic interface data provided to the new "Single view with strategic interoperability solution platform
Asset and Resource optimisation		**CCG** - testing of speech recognition pilot, subject to available funding	**BCP -** Bed Management system implemented **BCP –** E-Rostering Safe Care implemented	
Other initiatives				**DWMHT** EPR Contract signed New IT support contract in place for CCG/GPs and DWMHT

9 Longer Term Initiatives



10 Readiness Assessment

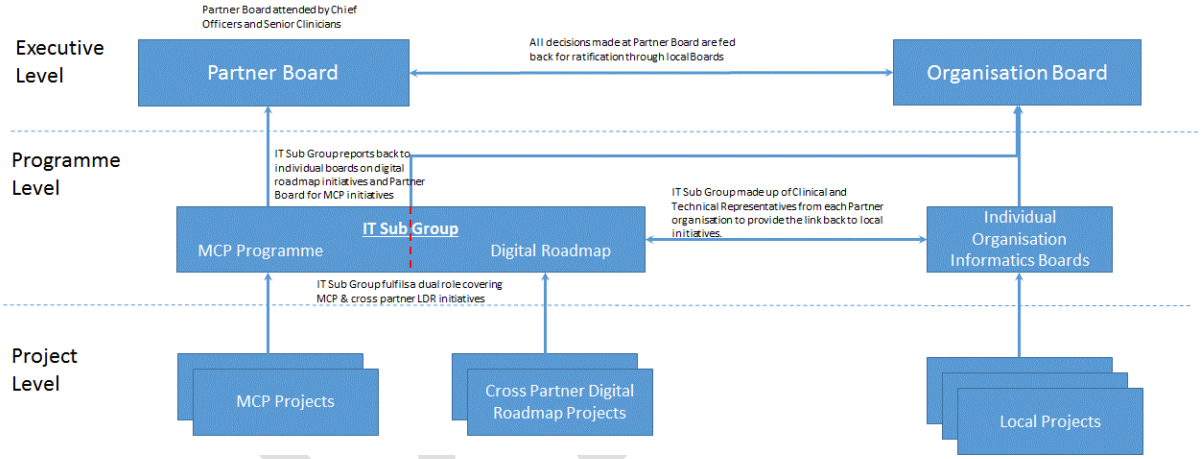
10.1 Governance Structure

Overview

At Executive level accountability remains largely with each organisation's Governing Board, however, a cross organisation Partner Board has been meeting for some time to specifically oversee the Dudley Vanguard MCP and the implementation of the new models of care.

At programme level a cross organisation IT Sub Group has been established for some time and will have responsibility for delivery of cross organisation initiatives and a broader oversight role for all Roadmap and Vanguard programmes of work. For initiatives that are clearly delineated as falling within a specific organisation delivery responsibility will remain within each individual organisation's existing governance structure.

Project teams will be pulled together either locally or on a cross organisation basis as appropriate.



Partner Board

Partner Board meets monthly and is attended by the Chief Officers of the Partner organisations, Senior Clinicians and representatives from the New Care Models Programme team. IT is represented on the Board. The focus of this Board is the Dudley Vanguard initiative and the New Care Models Programme.

IT Sub Group

The IT Sub Group was established in 2015 and was initially set up to provide the Partner Board with Strategic IT direction to support the Vanguard initiative. The group has both senior technical and senior clinical representation from all partner organisations. In addition, the IG Work-stream lead is a standing member and there is a close relationship with the Communications and Engagement Work-stream and Organisational Design Work-stream. The group will act as overall design authority and will oversee delivery of the LDR.

Informatics Boards

Individual organisations have their own governance structure to support change initiatives. This structure will continue to operate in whatever form currently exists. A link back to the IT Sub Group is provided by membership of the Sub Group. It is not intended that the Sub Group will be involved in local roadmap initiatives but will maintain oversight to ensure a joined up approach.

Local Informatics Boards will report through their organisation's normal reporting structure.

10.2 Finance

Priorities

The major priorities within this roadmap are to ensure that all provider systems are fully digitally enabled and capable of supporting extensive electronic exchange of information. Significant investment is required by both DGFT and DWMHT to support the procurement of new Electronic Health Record systems and further enhancement of the BCPFT platform is also necessary.

Infrastructure investment will also be required to support the CCG and DWMHT transition to a cloud based, virtual desktop, fully managed infrastructure.

In order to meet the vision work must also commence on sourcing the platform to host the integrated view of patient data. This remains a priority in support of the Vanguard MCP although until the main core systems are digitised interfacing to and from the platform are likely to be tactical in the first instance.

A number of pilot patient facing apps are also in evaluation phase with the primary care arena and these would require additional funding if the pilots prove successful.

All funding requests will be subject to creation of formal business cases which will be submitted according to the funding source requirements.

Funding Requirements

The main funding requirements can be split into 4 categories as follows:-

Core Systems

	Capital £'000s	**Revenue £'000s**	**Notes**
CCG/GPs	£2,000	£200	Value per annum
DWMHT	£2,164	£2,746	Whole life cost (7 years)
DGFT	TBC	TBC	
BCPFT	TBC	TBC	

Infrastructure

	Capital £'000s	**Revenue £'000s**	**Notes**
CCG/GPs & DWMHT	TBC	£2,500	To cover new infrastructure service provision. Capital spend will not be known until tender bids are received
CCG/GPs	£216	£86	Assumes additional 215 mobile devices with associated ongoing network access costs

Integrated Patient View

	Capital £'000s	Revenue £'000s	Notes
CCG/GPs	£2,000	£250	Revenue represents anticipated annual recurring license/maintenance fees
DWMHT	£200	£4,825	Digitisation including e-referrals and e-prescribing

Patient apps

	Capital £'000s	Revenue £'000s	Notes
CCG/GPs	£200	TBC	Costs to roll out app technology (known costs only)
DWMHT	£35	£1,075	Introduction of video conferencing and wearable technology
DGFT	TBC	TBC	
BCPFT	TBC	TBC	

It should be noted that all costs associated with this paper are high level estimates, in some cases orders of magnitude, and all work will need to be formally costed and subject to business case approval.

Funding Sources

Driving Digital Maturity Investment Fund - Access to this fund has not yet been agreed and until guidance is published it is not possible to confirm what/how we will use this route. However, it is anticipated that funding will be requested in support of establishing our digitally enabled state including the provisioning of EHR systems for the key service providers.

Vanguard - As a vanguard CCG the Dudley healthcare economy has access to Vanguard funding. This will provide a degree of funding to support the integrated patient view (circa £200k), however, additional funding in 16/17 is required (see above).

Additional funding has also been promised through the Vanguard initiative in support of specific focus areas as follows: -

A capital fund for 'paper-free at the point of care' is available in 16/17 to support early delivery in improving interoperability, record sharing and the on-line offer for patients. In 2016/17, we want MCPs and PACS to ensure they include a focus on four specific deliverables:

(i) enabling patients to access online primary care services including repeat prescriptions and appointment booking;
(ii) ensuring a digital summary care record can be shared across all urgent and emergency care (UEC) settings/providers;
(iii) enabling the digital transfer of patient information at discharge;
(iv) 80% of referrals to be made through the e-referral system.

Funding requests in support of these deliverables will be made accordingly.

Estates and Technology Transformation Fund (Primary Care) - This fund will also be accessed to support early development of the integrated patient view.

The fund will also be accessed to support extended use of patient apps should the initial pilots prove successful.

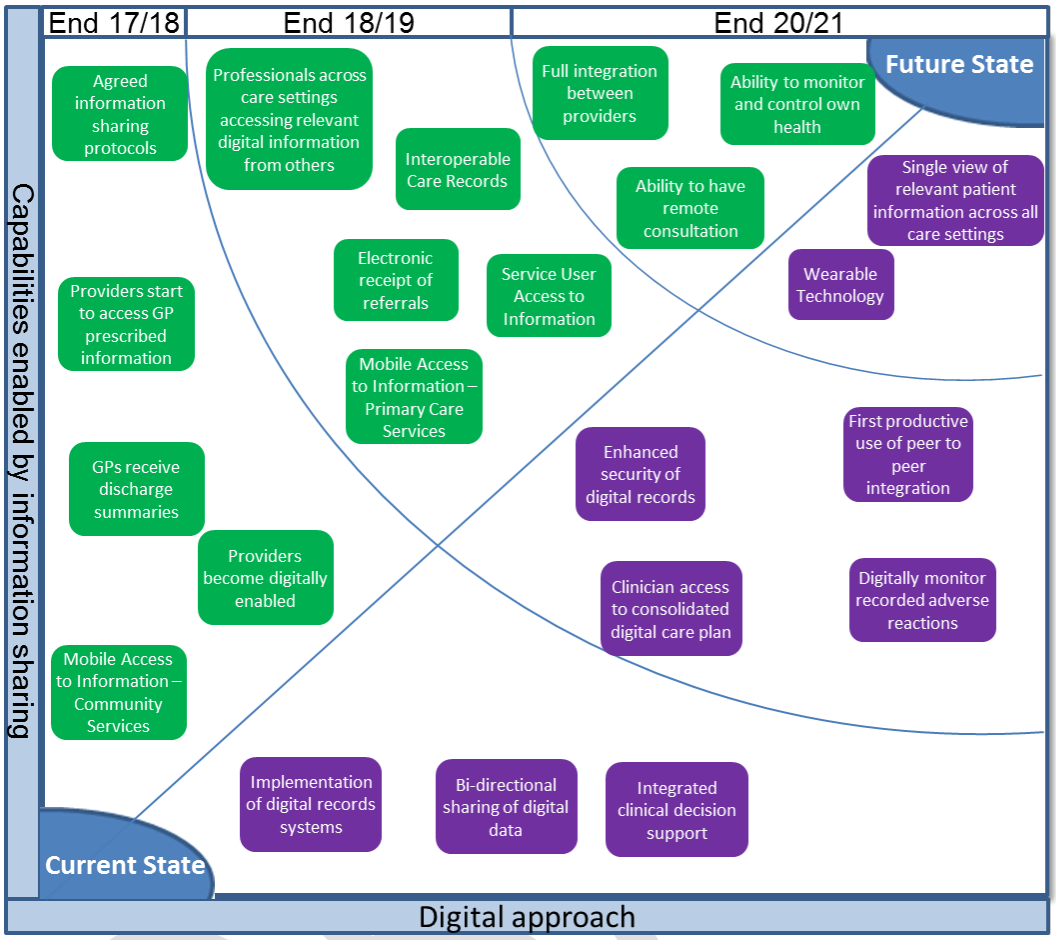
11 Universal capabilities delivery plan

Universal capability	Capability group	Aims (in terms of take-up and optimisation) [and specific16/17 targets where applicable]
Professionals across care settings can access GP-held information on GP prescribed medications, patient allergies and adverse reactions	Records, assessments and plans	• There is currently a Pilot in Acute for ED/EAU (Emergency Department and Emergency Admissions Unit) • Primary Care Data is available for UCC (Urgent Care Centre) • Community rapid response will be in place by end 16/17 • Data sharing agreements are not yet in place for all care settings.
Clinicians in U&EC settings can access key GP held information for those patients previously identified by GPs as most likely to present (in U&EC)	Records, assessments and plans	• Pilot in acute for ED/EAU • Community rapid response by end 16/17 • Urgent care staff can access GP data • U&EC can access summary care record • Data sharing agreements are not yet in place for all care settings • Admissions avoidance is a National scheme. • Emis Web has risk strategy tool that enables GP's to identify patients who are most likely to present in U&EC. • It is not yet known how, or if this information is shared with U&EC.
Patients can access their GP record	Records, assessments and plans	• Patients who request it are given access to their detailed coded GP record • 100 % Patient Access enabled in the DCCG region • The number of patients who have actually accessed their GP record has not been measured due to system limitations. • Discussions will need to take place with the Supplier (Emis) to understand available or desired solutions to address this gap.
GPs can refer electronically to Secondary care	Transfers of care	• All GPs have ben enabled to refer electronically to Secondary care • Currently 60% of all referrals are completed electronically (of the 90% that could be referred.) • There is a national incentive for this figure to be no less than 80% by March 2017 (quality premium of £1 per patient. • CCG will be working with Dudley group to increase this figure to 100% by 2018
GPs receive timely electronic discharge summaries from secondary care	Transfers of care	• Dudley Group issue all discharge letters electronically through Docman hub to GP practices •
Social care receive, timely electronic Assessment, Discharge and Withdrawal Notices from Acute care	Transfers of care	• Disco (Orderstest results system) is available Social Care

Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly	Decision support	• Staff working UC centres have child protection information that is available to them via the Emis system. The detail or level of information available to UC staff is unknown at this point • It is Unknown how this information is exchanged with Social Care or other institutions.
Professionals across care settings made aware of end-of life preference information	Decision support	• The CCG are currently reviewing electronic palliative care co-ordination systems (EPaccs) that will support the sharing of end of life care plans across care settings including the Ambulance service. • The solution will bring the following benefits • The recording and sharing of people's care preferences • Key details about their care with those delivering their care. • Supports co-ordination of care across Health and Social care • The delivery of the right care, in the right place, by the right person, at the right time. • The CCG are currently gathering requirements for an EPaacs solution •
GPs and community pharmacists can utilise electronic prescriptions	Medicines management and optimisation	• As of February 2016 all GP Practices have the capability to transfer prescriptions electronically to chosen pharmacies. Controlled drugs such as high strength meds are not currently available via E-Prescribing. • Although 100% of GPs and Community pharmacists have been enabled to utilise Electronic prescriptions the actual figures vary month on month (average 60%) • Target 80% for 2017
Patients can book appointments and order repeat prescriptions from their GP practice	Remote care	• All patients registered with Dudley GP practices can request access to routine transactions such as booking or cancelling of appointments • The available view is for the detailed coded record. No free text or scanned information is available.

12 Information sharing

Information sharing approach – Dudley Health and Care region



13 Minimising risks arising from technology

13.1 Data and Information Governance

All organisations within the footprint have confirmed that they have in place Security and Information Governance arrangements that meet the requirements defined within the IG Toolkit.

Patient data security and data security in general is embedded within the principles of this document and any initiatives outlined within this roadmap will consider data security as a prime requirement.

As part of the development of the roadmap further work will be carried out by each organisation to confirm its security regime is sufficiently robust.

In addition, a footprint wide information sharing framework and process has been developed including due consideration to patient consent and a full review of latest DPA regulations has been carried out and shared across the partners for inclusion within any future requirements specifications.

13.2 Security Controls

Appropriate security controls exist within the organisations including physical and logical system access controls.

13.3 Data Quality

Data quality has been highlighted as a potential risk area in discussions to date and has been raised to Partner Board level.

It has been agreed that each organisation is responsible for the quality of its own data and that data quality issues will need to be resolved at local level as delivery of the roadmap progresses.

In most cases this will be addressed as part of the replacement EHR systems.

13.4 Business Continuity and Disaster Recovery

BCP and DR arrangements are currently variable across organisations with some areas tested and robust, others in the process of being tested whilst in some cases no DR or BCP exists. Specific initiatives underway to address these areas include:-

- Individual BCP testing at GP surgeries to confirm robustness of EMIS BCP arrangements
- Retendering of CCG/GP and DWMHT Infrastructure provision which included a specific set of requirements around DR arrangements.
- Where new systems being sourced these are being done so with a highly resilient 24 x 7 x 365 availability model as a specific requirement.

As part of the delivery process a risk will be raised in the overall programme risk log with an action on each organisation to confirm the robustness of BCP and DR arrangements and to confirm that each has been appropriately tested.

13.5 Clinical Risk

The IT Sub Group has broad senior Clinical representation to provide appropriate challenge around clinical risk and to bring an overall clinical perspective to all initiatives. Each organisation has independently its own Clinical approval forums which will be used to support initiatives where necessary.

Appendix A – Universal Capabilities Plan

Universal Capability:	A. Professionals across care settings can access GP-held information on GP prescribed medications, patient allergies and adverse reactions
Capability Group:	Decision support
Defined Aims:	• Records assessments and plans

A. Baseline

Information accessed for every patient presenting in an A&E, ambulance or 111 setting where this information may inform clinical decisions (including for out-of-area patients) Information accessed in community pharmacy and acute pharmacy where it could inform clinical decisions

B. Ambition

Year	
16/17	N/A
17/18	Improved maturity of Integrated patient view support start of professional access to GP prescribed medications, patient allergies and adverse reactions

C. Activities

Quarter	Develop Business cases and output based specifications for Digital Records
16/17 Q1	Issue ITT and begin procurement
16/17 Q2	Business Cases to be approved by partner organisation boards, where relevant by NHS Improvement.
16/17 Q3	Contract signing and begin implementation process
16/17 Q4	Preparation for implementation & Digital engagement
17/18 Q1	Preparation for implementation & Digital engagement

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

N/A

Universal Capability:	B. Clinicians in U&EC settings can access key GP-held information for those patients previously identified by GPs as most likely to present (in U&EC)
Capability Group:	Records, assessments and plans
Defined Aims:	• Information available for all patients identified by GPs as most likely to present, subject to patient consent, encompassing reason for medication, significant medical history, anticipatory care information and immunisations • Information accessed for every applicable patient presenting in an A&E, ambulance or 111 setting (including for out-of-area patients)

A. Baseline

Mental Health and Acute Trusts are in the process of developing or procuring new digital records that will contain the complete care record for all of service users. The systems will have the capability to interoperate and share information and processes across the local health economy The architecture principles for the shared patient view has been agreed across the LDR footprint. Emis Web - A Current pilot exists to bridge the gap to deploying digital records.

B. Ambition

Year	Ambition
16/17	Complete procurement of interoperable digital records. Delivery of EMIS Web Pilot in U&EC

17/18	Implementation of the new digital records ahead of introducing the capability to interoperate in 2018/19

C. Activities

Quarter	Activities
16/17 Q1	• Develop Business cases and output based specifications for Digital Records
16/17 Q2	• Issue ITT and begin procurement
16/17 Q3	• Business Cases to be approved by partner organisation boards, where relevant by NHS Improvement.
16/17 Q4	• Contract signing and begin implementation process
17/18 Q1	• Preparation for implementation & Digital engagement
17/18 Q2	• Preparation for implementation & Digital engagement
17/18 Q3	• Implementation & Digital adoption
17/18 Q4	• Implementation & Digital adoption

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

Business Case Approval Output Based Specification (including interoperability capability) Successful OJEU tender System Capabilities aligned to organisational Output specification

Universal Capability:	C. Patients can access their GP record
Capability Group:	Records, assessments and plans
Defined Aims:	Patients should have digital access to defined elements of the patient record

A. Baseline

All Dudley practices offer this facility. But uptake cannot be monitored due to software limitations (Emis Web bug fix which is a Nationally known issue.)

B. Ambition

Year	
16/17	Work with the supplier on monitoring solutions At least 10 %cent of registered patients should be using one or more online services by 31 March 2017
17/18	N/A

C. Activities

Quarter	Continuous Promotion of Patient On line services , through various CCG work-streams/teams
16/17 Q1	Continuous Promotion of Patient On line services , through various CCG work-streams/teams
16/17 Q2	Continuous Promotion of Patient On line services , through various CCG work-streams/teams
16/17 Q3	Continuous Promotion of Patient On line services , through various CCG work-streams/teams
16/17 Q4	Continuous Promotion of Patient On line services , through various CCG

	workstreams/teams
17/18 Q1	Continuous Promotion of Patient On line services , through various CCG workstreams/teams

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

N/A

Universal Capability:	D. GPs can refer electronically to secondary care
Capability Group:	Transfers of care
Defined Aims:	• Every referral created and transferred electronically • Every patient presented with information to support their choice of provider • Every initial outpatient appointment booked for a date and time of the patient's choosing (subject to availability) • Secondary Care organisations have digital records that can accept the electronic referrals in a digital format without the need for paper. • [By Sep 17 – 80% of elective referrals made electronically]

A. Baseline

All GP practices have the ability to use E-referrals to Secondary Care providers, current adoption is 60%. Provider Organisations are in the process of securing funding and tendered digital record solutions, that meet NHS e-referral standards.

B. Ambition

Year	Ambition
16/17	Procurement of the new clinical systems (Where necessary)
17/18	Implementation of the new clinical system ahead of introducing e-referral processes in 2018/19. Ambition is to achieve over 80% adoption.

C. Activities

Quarter	Activities
16/17 Q1	• Develop Business cases and output based specifications for Digital Records
16/17 Q2	• Issue ITT and begin procurement
16/17 Q3	• Business Cases to be approved by partner organisation boards, where relevant by NHS Improvement.
16/17 Q4	• Contract signing and begin implementation process
17/18 Q1	• Preparation for implementation & Digital engagement
17/18 Q2	• Preparation for implementation & Digital engagement
17/18 Q3	• Implementation & Digital adoption
17/18 Q4	• Implementation & Digital adoption

D. National Services / Infrastructure / Standards

In progressing the universal capabilities, if you are proposing to use alternative solutions to the national services, infrastructure and standards, please provide a rationale in the box below.

N/A

E. Evidencing Progress

Business Case Approval Output Based Specification (including interoperability capability) Successful OJEU tender System Capabilities aligned to organisational Output specification CCG E-referrals team are monitoring activity

Universal Capability:	E. GPs receive timely electronic discharge summaries from Secondary care
Capability Group:	Transfers of care
Defined Aims:	• All discharge summaries sent electronically from all acute providers to the GP within 24 hours • All discharge summaries shared in the form of structured electronic documents • All discharge documentation aligned with Academy of Medical Royal Colleges headings

A. Baseline

DGFT provide greater than 90% of discharge summaries to GPs electronically within 24hrs. Currently A&E discharge letters are being provided to meet this capability and work is ongoing to improve the structured content of these letters. DWMH Are introducing sharing discharge summaries is being introduced during 2016/17.

B. Ambition

Year	Ambition
16/17	DGFT - Maintain existing performance and enhance A&E delivery within the new Digital Record system DWMH - Introduction of discharge summary capability
17/18	DWMH- Sharing discharge summaries complete DGFT- Deliver performance within the new Digital Record, including structured A&E discharges

C. Activities

Quarter	Activities
16/17 Q1	• Scoping size of discharge summaries and liaise with partners in the footprint, with existing capability
16/17 Q2	• DWMH- Implementation of discharge summaries • DGFT – Contract and scope delivery in new digital record
16/17 Q3	• DWMH- Implementation of discharge summaries • DGFT- Plan and prepare delivery in new digital record
16/17 Q4	• DWMH - Implementation of discharge summaries • DGFT- Commence work to switch over to new digital record

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

Dashboard view of KPI targets in delivering timeliness of discharge summaries to GPs. Monitor Key Quality Indicators of suitable, comprehensive, concise information transfer to GP's. Number of GPs who successfully receive electronic discharges cannot be measured by CCG until procurement of Docman Hub.

Universal Capability:	F. Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from acute care

Capability Group:	Transfers of care
Defined Aims:	• All Care Act 2014 compliant Assessment, Discharge and associated Withdrawal Notices sent electronically from the acute provider to local authority social care within the timescales specified in the Act

A. Baseline

DWMH are in the process of procuring a new clinical system that will contain the complete Care record for their service users – The system will have the capability to interoperate and share information and processes across the local authority.

B. Ambition

Year	Ambition
16/17	Complete procurement of the new clinical system
17/18	MBC Receive patient details and discharge notification in a format that can be captured directly into social care records system. DWMH Implementation of the new clinical system ahead of introducing the capability to interoperate in 2018/19

C. Activities

Quarter	Activities
16/17 Q1	• Outline Business Case approved by NHS Improvement
16/17 Q2	• Issue ITT and begin procurement
16/17 Q3	• Complete procurement and full Business Case and approval by Trust Board
16/17 Q4	• Approval by NHS Improvement, contract signing and begin implementation process
17/18 Q1	• Preparation for implementation
17/18 Q2	• Preparation for implementation
17/18 Q3	• Implementation rollout
17/18 Q4	• Implementation rollout

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

N/A

Universal Capability:	G. Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly
Capability Group:	Decision support
Defined Aims:	• Child protection information checked for every child or pregnant mother presenting in an unscheduled care setting with a potential indicator of the child being at risk (including for out-of-area children) • Indication of child protection plan, looked after child or unborn child protection plan

(where they exist) flagged to clinician, along with social care contact details
- The social worker of a child on a child protection plan, looked after or on an unborn child protection plan receives a notification when that child presents at an unscheduled care setting and the clinician accesses the child protection alert in their record.
- data flows mapped across all systems to ensure there are no gaps in capturing safe guarding information. Amalgamated information should be shared on interoperable systems across the STP footprint and where necessary with other systems where child protection information is required.

A. Baseline

Safeguarding information is stored in the existing systems. This will be enhanced with the new clinical system that will contain the complete care record for all of our service users. The system will have the capability to interoperate and share information and processes across the local health economy, including social care child protection information

B. Ambition

Year	Ambition
16/17	Maintain existing processes and complete procurement of the new clinical system Map data flows of safeguard information across STP Footprint
17/18	Amalgamate safeguarding information across the STP footprint Maintain existing processes and complete implementation of the new clinical system ahead of introducing the capability to interoperate in 2018/19

C. Activities

Please detail the activities you propose to undertake, by quarter, in the grid below. Separate activities should be separated out as separate bullet points. At the time of submission on 30 June 2016, any activities for 16/17 Q1 should be complete.

Quarter	Activities
16/17 Q1	• Outline Business Case approval by NHS Improvement
16/17 Q2	• Issue ITT and begin procurement
16/17 Q3	• Complete procurement and Full Business Case and approval by Trust Board
16/17 Q4	• Approval by NHS Improvement, contract signing and begin implementation process
17/18 Q1	• Preparation for implementation
17/18 Q2	• Preparation for implementation
17/18 Q3	• Implementation roll out
17/18 Q4	• Implementation roll out

D. National Services / Infrastructure / Standards

In progressing the universal capabilities, if you are proposing to use alternative solutions to the national services, infrastructure and standards, please provide a rationale in the box below.

None

E. Evidencing Progress

Outline Business Case Approval
Output Based Specification (including interoperability capability)

Full Business Case System Capabilities

Universal Capability:	H. Professionals across care settings made aware of end-of-life preference information
Capability Group:	Decision support
Defined Aims:	• Advanced Care plans and will capture end of life preferences. • Advanced Care plans should be shared via interoperable systems across the STP and including agencies such as the Ambulance service. • All agencies involved in end of life care to understand and respect the wishes of patients, details of which are captured in Advanced care plans.

A. Baseline

CCG are reviewing potential Electronic Palliative Care systems (EPaCCS) that will capture end of life preferences. Selected partner organisations across the STP will be part of a review group to capture data flows and to ensure the interoperable system meets the requirements for all parties involved.

B. Ambition

With reference to the defined aims set out above, please set out your ambition in the grid below. Remember that 'clear momentum' is expected in 16/17 and 'substantive delivery' in 17/18. Also note that you can go further than the defined aims – examples are provided in the Universal Capabilities Information and Resources document.

Year	Ambition
16/17	Review of EPaCCS options
17/18	Implementation of EPaCCS system

C. Activities

Quarter	Activities
16/17 Q1	• Outline Business Case approval by NHS Improvement
16/17 Q2	• Issue ITT and begin procurement
16/17 Q3	• Complete procurement and Full Business Case and approval by Trust Board
16/17 Q4	• Approval by NHS Improvement, contract signing and begin implementation process
17/18 Q1	• Preparation for implementation
17/18 Q2	• Preparation for implementation
17/18 Q3	• Implementation roll out
17/18 Q4	• Implementation roll out

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

Outline Business Case Approval Output Based Specification (including interoperability capability)

Full Business Case System Capabilities

Universal Capability:	I. GPs and community pharmacists can utilise electronic prescriptions
Capability Group:	Medicines management and optimisation
Defined Aims:	• All permitted prescriptions electronic • All prescriptions electronic for patients with and without nominations - for the latter, the majority of tokens electronic • Repeat dispensing done electronically for all appropriate patients • [By end 16/17 – 80% of repeat prescriptions to be transmitted electronically]

C. Activities

Quarter	Activities
16/17 Q1	•
16/17 Q2	•
16/17 Q3	•
16/17 Q4	•
17/18 Q1	•
17/18 Q2	•
17/18 Q3	•
17/18 Q4	•

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

Outline Business Case Approval Output Based Specification (including interoperability capability) Full Business Case System Capabilities

Universal Capability:	J. Patients can book appointments and order repeat prescriptions from their GP practice
Capability Group:	Remote Care
Defined Aims:	All patients registered with Dudley GP practices can request access to routine transactions such as booking or cancelling of appointments The available view is for the detailed coded record. No free text or scanned information is available

A. Baseline

100% of GP practices offer this service. 43% of the Dudley GP population offer repeat prescriptions (circa 135,000 patients.) Patient uptake cannot be measured due to Emis Web bug fix which is a Nationally known issue.)

B. Ambition

Year	Ambition
16/17	Further work required to understand baseline figures of 43%
17/18	Increased utilisation of this service to meet National targets

C. Activities

Quarter	Activities
16/17 Q1	☐
16/17 Q2	☐
16/17 Q3	☐Investigation into uptake
16/17 Q4	☐Targeted Campaign to encourage uptake
17/18 Q1	☐Increased uptake to meet National targets

D. National Services / Infrastructure / Standards

N/A

E. Evidencing Progress

N/A