The Royal Wolverhampton NHS
NHS Trust

Integrated Electronic Patient Record Phase 3 Business Case

Agenda Item No: 10.3

The Royal Wolverhampton NHS Trust	

Trust Board Report

Meeting Date:	28 April 2014
Title:	Integrated Electronic Patient Record Phase 3 Business Case.
Executive Summary:	Business Case seeking approval to continue the development and implementation of a Electronic Patient Medical Record at Trust. The work undertaken since August 2011 to augment and improve the electronic Patient Medical record (PMR) has identified a number of work streams which need to be completed in order to be able to move to an electronic PMR across all clinical settings. The Trust is committed to moving to an electronic PMR in line with the Health Secretary mandate for the NHS to be paperless by 2018. If the Trust does not wish to progress with this project, there will be an ongoing risk of records being split between the electronic Clinical Web Portal record and the paper casenotes. This business case identifies the funding required for both the progression of the electronic Patient record and also the hardware to support other Trust wide work streams and support innovation in ways of working. Savings have been identified within the business case to recognise reduction in required staffing levels for administration to support Outpatient clinics. Please note this project will enable the delivery of the Health Records CIP for 2014-15.
Action Requested:	Approval of Business Case – Option 4
Report of:	Lisa Myatt, Head of Patient Access Nick Bruce, Acting Divisional Manager ICT Kevin D'Arcy, ICT Programme Manager
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Resource Implications:	Capital expenditure is required for procurement of new computer hardware and provisions of development resources to allow for development of the Trust Clinical Portal. Funding is further requested for Provision of a Business Analyst, Desk Top Engineer, Trainer, Inpatient Scanning Team, System Security Analyst and System Support to facilitate the implementation and delivery via the Trust Clinical Web Portal of PMR.
Public or Private: **(with reasons if private)**	Public
References: **(eg from/to other committees)**	Approved by CRG – 9th April 2014
Appendices/ **References/**	http://www.dh.gov.uk/health/2013/01/paperless/

Background Reading	
NHS Constitution: **(How it impacts on any decision-making)**	In determining this matter, the Board should have regard to the Core principles contained in the Constitution of: - Equality of treatment and access to services - High standards of excellence and professionalism - Service user preferences - Cross community working - Best Value - Accountability through local influence and scrutiny

Background Details

1 Current State

The NHS plans to go paperless by 2018, mandated by the Health Secretary in 2013. The Price Waterhouse Report commissioned by the Health Secretary in 2013 identified 4 Key actions, one of which was

> "Ensuring the widespread provision of complete and accurate clinical and attendance information to clinicians and carers at the point of care via clinical portals or other similar solutions. "

The Trust has a programme of work which has the overall aim of developing a fully integrated patient record. The work required for 2014-2015 will need to be split into the following work streams:

1. Required changes to the clinical web Portal to provide a solid foundation which provides reliable, robust and efficient access to the PMR including Pathology E-requesting integration within the Clinical Web Portal
2. The extension and application of the electronic workflow solution for the creation of e-referrals, test requests and delivery of test results
3. Pilot of remote access for providing PMR into the community setting including consolidation of patient identifiers from both PAS and iPM

Full Business Case Proposal
Version 4.0

TITLE OF PROPOSAL
Integrated Electronic Patient Record Phase 3

PROJECT LEAD (ACCOUNTABLE OFFICER)
Lisa Myatt

EXECUTIVE SUMMARY
The work undertaken since August 2011 to augment and improve the electronic Patient Medical record (PMR) has identified a number of work streams which need to be completed in order to be able to move to an electronic PMR across all clinical settings.

The Trust is committed to moving to an electronic PMR in line with the Health Secretary mandate for the NHS to be paperless by 2018.

If the Trust does not wish to progress with this project, there will be an ongoing risk of records being split between the electronic Clinical Web Portal record and the paper casenotes.

This business case identifies the funding required for both the progression of the electronic Patient record and also the hardware to support other Trust wide work streams and support innovation in ways of working. Savings have been identified within the business case to recognise reduction in required staffing levels for administration to support Outpatient clinics. Please note this project will enable the delivery of the Health Records CIP for 2014-15.

BACKGROUND INFORMATION

The future need for a complete electronic record is an inevitability and part of a National strategy

A programme of work in order to achieve noteless outpatients is already under way and has been in progress since August 2011 with the aim of developing processes to enable the creation of an electronic patient record to reduce the reliance on the paper casenotes. As per Appendix 1 currently, 11 specialties out of 24 specialties are working with some or all Outpatient clinics working without notes and 22 out of 46 wards are having their inpatient documentation scanned at the patient discharge. The rollout of noteless working to further areas has been impacted by requirements raised during the rollout process which has necessitates further work as identified below.

This business case is to undertake the work and continue the rollout of the noteless outpatient working by October 2014 as well as looking to further develop this with a pilot by March 2015 for working with an electronic record in the Community setting.

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> "Ensuring the widespread provision of complete and accurate clinical and attendance information to clinicians and carers at the point of care via clinical portals or other similar solutions. "

The Trust has a programme of work which has the overall aim of developing a fully integrated patient record. The work required for 2014-2015 will need to be split into the following work streams:

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2. The extension and application of the electronic workflow solution for the creation of e-referrals, test requests and delivery of test results
3. Pilot of remote access for providing PMR into the community setting including consolidation of patient identifiers from both PAS and iPM

Reference:
http://www.dh.gov.uk/health/2013/01/paperless/

CASE FOR IMPROVEMENT
The Trust is committed to establishing a full electronic medical record by 2016. Significant clinical risks are known to exist in using the paper Patient Medical Record (PMR).

- The paper PMR is not complete and it cannot be made complete.
- The paper record can only be available in one location at a time resulting in possible time delays in treating patients
- Questionable clarity of content of the PMR poses significant risk to patient care.
- Users of the PMR may make assumptions regarding its content and the completeness of such content as so may not access or utilise complete information in their decision making.

Additionally, time spent filing paper documentation and distributing the record is a significant administrative burden to the Trust.

During the rollout of noteless working in 2012-2013, it was identified that there needed to be:

- Further developments to Portal to improve features (e.g. provide a preview facility for documents, develop further electronic forms, develop delivery of reports to the dashboard). This would provide a more streamlined interface for the clinical user to aid efficiency and improve the workflow and experience of using Portal
- More versatile ways to create correspondence and capture workflow generated documentation such as Operative Plans and notes – this will provide real benefits during data capture and review
- Roll out of equipment to a wider range of clinical rooms to support the move to electronic records
- A whole system process review that included remote access to either the Portal in real time or a facility to have an offline feature for specific records to facilitate the rollout of the electronic PMR to the Community setting, i.e. patient homes. The lack of this facility has prevented rollout of noteless working into Paediatric outpatients this year.

Completing these streams of work will enable greater coverage of staff who are able to access the electronic record and thus allow the transition from reliance on the paper PMR; this will reduce the clinical risks currently associated with patient information being split between two records (the electronic and the paper).

If the Trust does not pursue the move to the electronic PMR, then the work undertaken thus far must be reviewed to quantify the risk created by having two sets of patient records and it is possible that the electronic information would need to be replaced into the paper records.

OBJECTIVES

1. To improve Portal functionality to improve speed of accessing documents and robustness of the system
2. To complete rollout of noteless working for all Outpatient clinics at the New Cross site and West Park
3. Analyse workflow and data flows from the Acute setting through to the Community setting (patient homes) to develop a model for providing remote access to the electronic PMR.
4. Develop and test solution for remote access to the electronic PMR in the Community setting with a view to submitting future business case to fully roll out to the Community teams.
5. Augment Desktop and System support teams to support the additional equipment and user base
6. Reduce the number of case notes
7. iPM/ICS PAS- merge electronic patient casenotes into one repository visible as a unified record to the user
8. Identify reports yet to be integrated into Portal and support services in developing integration plans.

OPTIONS

Option 1
Do Nothing

This option would mean that the programme of work would cease immediate effect, and the ability to deliver any further objectives would not be possible. Furthermore, the Trust may need to reverse the work undertaken so far.

Advantages
- There will be no further costs associated with the rollout of IEPR

Disadvantages
- Part of the organisation will already be noteless within outpatients with other outpatient areas still using notes exacerbating the clinical risks currently associated with the paper PMR
- We will be unable to deliver on all of the objectives
- Information governance and legal risks due to part of the patient record being electronic and other parts being paper which would result in incomplete electronic and paper records
- Cost of regression to full paper casenotes
- No evolved EPR system for further expansion into other RWT sites such as Cannock

Option 2
Fund the additional I.T equipment and implementation team to complete Trust Wide Noteless OPD working, provide equipment in associated surgical areas and complete a Community remote access trial.

To fund the resources required to deliver the I.T solution, co-ordinate the streams of work and provide overall business analysis critically needed to understand operational processes and workflow to deliver an integrated electronic patient record. This includes development, business analyst and programme manager costs over a 12 month period to complete the rollout within outpatients and undertake a Community mobile working trial.

Advantages
- This investment will enable the integrated electronic records project to progress, and staff savings to be released.
- Facilitates access to the electronic patient record in all clinical settings on at the New Cross site including theatre areas which currently have limited computer equipment
- Enables verification of ways to use integrated electronic patient records across all care settings
- Will enable a focused / ring fenced approach to be taken with the project utilising dedicated skilled resources to deliver the trusts vision of IEPR within the required timeframes to outpatients.
- Enabling transformational change across the Trust and innovation in ways of working e.g. standardising data capture for patient contacts
- A fully electronic PMR will be accessible to more people at the same time - e.g. patient care, dealing with complaints, audits – reducing time to undertake tasks
- Provides specialist resource to clinical teams to analyse working practices with a view to changing to electronic records
- Once the PMR is fully electronic, case notes will not need to be created for new patients and the number of case notes being stored will be reduced by scanning resulting in estate savings

Disadvantage
- Increased short term investment both in terms of capital and revenue expenditure
- Increased recurrent revenue expenditure to provide support for the additional equipment and user base

Option 3
Fund the additional I.T equipment and implementation team to complete Trust Wide Noteless OPD working, provide equipment in associated surgical areas without a Community mobile working trial.

To fund the resources required to deliver the I.T solution, co-ordinate the streams of work and provide overall business analysis critically needed to understand operational processes and workflow to deliver an integrated electronic patient record. This includes development, business analyst and programme manager costs over a 12 month period to complete the rollout within outpatients where the patients do not have a Community element to their treatment pathway.

Advantages

- A small reduction in Capital costs due to not having to purchase additional equipment for testing in the Community.
- This investment will enable the integrated electronic records project to progress, and staff savings to be released.
- Facilitates access to the electronic patient record in all clinical settings on at the New Cross site including theatre areas which currently have limited computer equipment
- Enables verification of ways to use integrated electronic patient records across the Acute care settings
- Will enable a focused / ring fenced approach to be taken with the project utilising dedicated skilled resources to deliver the trusts vision of IEPR within the required timeframes to outpatients.
- Enabling transformational change across the Trust and innovation in ways of working e.g. standardising data capture for patient contacts
- Provides specialist resource to clinical teams to analyse working practices with a view to changing to electronic records

Disadvantage

- Increased short term investment both in terms of capital and revenue expenditure
- Increased recurrent revenue expenditure to provide support for the additional equipment and user base
- Rollout of electronic PMR and noteless working in OPD will not be possible for patients who have a community phase of their treatment pathway
- The PMR will still not be complete and this will continue to pose a clinical risk for patient care
- Unable to complete remote access pilot.

Option 4 *(Reduced capital investment inn line with current capital allocation)*

Fund the implementation team to complete development required for Trust Wide Noteless OPD working and work with community to develop a solution

To fund the resources required to deliver and improve the I.T solution, co-ordinate the streams of work and provide overall business analysis critically needed to understand operational processes and workflow to deliver an integrated electronic patient record. This includes development, business analyst and programme manager costs over a 12 month period to complete the rollout within outpatients and undertake development of solutions that facilitates Community mobile working trial.

Advantages

- This investment will enable the integrated electronic records project to progress
- Enables verification of ways to use integrated electronic patient records across all care settings
- Will enable a focused / ring fenced approach to be taken with the project utilising dedicated skilled resources to deliver the trusts vision of IEPR within the required timeframes to outpatients.
- Enabling transformational change across the Trust and innovation in ways of working e.g. standardising data capture for patient contacts
- A fully electronic PMR will be accessible to more people at the same time - e.g. patient care, dealing with complaints, audits – reducing time to undertake tasks
- Provides specialist resource to clinical teams to analyse working practices with a view to changing to electronic records
- Once the PMR is fully electronic, case notes will not need to be created for new patients and the number of case notes being stored will be reduced by scanning resulting in estate savings
- Will improve experience

Disadvantage

- Increased short term investment both in terms of capital and revenue expenditure
- Increased recurrent revenue expenditure to provide support for the additional equipment and user base
- Does not provide the necessary equipment to access the patient records in areas where such access is required
- Staff savings may not be able to be released as the means to access the PMR will be compromised in year 1 due to not being able to provide adequate IT equipment to view the record when and where required.
- Does not facilitate access to the electronic patient record in all clinical settings on at the New Cross site including theatre areas, computer equipment is currently limited.
- Impact on other initiatives such as EPMA as we would not be adding to current It equipment levels in the upcoming year.
- Ability for Health records to CIP target in doubt for 2014-15
- Other planned initiatives in the Trust require additional computer equipment, assumptions was made

that this programme would meet the needs, therefore those other initiatives are at risk in terms of being able to deliver their requirements.

Preferred Option

The preferred option is Option 2, Option 3 would not enable a complete electronic PMR and Option 4 whilst allowing development of the PMR to required specification would not allow the realisation of benefit in year 1 as no additional equipment implemented to augment existing estate also prevent further development of the electronic PMR and possibly even rollback to paper.

Option 4 reflects current available capital allocation for this project so whilst viable it is not preferred and benefits in year 1 are reflected below in potential savings.

FINANCIAL SUMMARY

Potential Savings - Option 2

This project will deliver the identified savings below in addition to savings already achieved from Project - IEPR2. Please note this business case provides the scheme to achieve the CIP identified for 2014-15 for Health Records.

	Rate of return	Year 1	Year 2	Year 3
	Full year savings			
Clinic Prep Staff	£117,000	£58,500	£117,000	£117,000
Stationery	£18,767	£18,767	£18,767	£18,767
Totals	£135,767	£ 77,267	£ 135,767	£ 135,767

Potential Savings - Option 4

This project will only deliver a proportional level of savings based on the reduced amount of IT equipment deployed. Assuming that full capital requirement is met in year 2 then full year savings may be achieved.

	Rate of return	Year 1	Year 2	Year 3
	Full year savings			
Clinic Prep Staff	£117,000	£18,000	£117,000	£117,000
Stationery	£18,767	£18,767	£18,767	£18,767
Totals	£135,767	£ 36,767	£ 135,767	£ 135,767

Financial Summary of Options

Option	1ST YEAR Surplus (Deficit)	Capital 1st Year	Revenue 1st Year	2nd Year Surplus (Deficit)	Capital 2nd Year	Revenue 2nd Year	Recurrent Surplus (Deficit)
1	£0	£0	£0	£0	£0	£0	£0
2	£0	£505,204	£253,372	£0	£0	£38,016	£0
3	£0	£497,596	£253.372	£0	£0	£38,016	£0
4	£0	£115,414	£246,757	£0	£389,790	£63,753	£0

PUBLIC CONSULTATION– *(determine which level of consultation, if any, is appropriate)*

The change is not a substantial change or cessation of a service and is improvements to internal procedures. As such patient consultation is not required.

EQUALITY IMPACT ASSESSMENT
The system will not impact any groups as it replaces current systems to provide the prescribing and medicines administration service.

BENEFITS (of the preferred option) –

Benefit	***Measure and approach***	***Date benefit will be realised***
Reduction in number of casenote requests e.g. the blood bank calls 400 sets of notes per year simply to audit treatment	Number of notes requested	Quarter 3
Improved PMR availability – especially for patient care at other sites	• Number of offsite locations able to access electronic PMR	Quarter 2
Reduction in storage estate as the number of casenotes diminish	Area of estate used for storage	Quarter 4
Improved conduit for data sharing with other Healthcare agencies and Social Services	Change of clinical and administrative practices	Quarter 3

RISK MANAGEMENT APPROACH (of the preferred option) –

Project risks are recorded on the Project Risk log and where necessary, risks which need to be escalated are recorded on the Programme Log maintained by the Programme Manager and reviewed by the IEPR Governance Group.

Risks identified are

Risk	***Grade (R,A,G)***
• During current transition period in moving from PMR to electronic medical records, there is an additional vulnerability for information being incomplete in either record and the wider recognition of this by the clinical teams.	Red
• Unable to release potential savings without full implementation of a note less OPD – there are significant opportunities to release savings through the implementation of an integrated electronic record that will not be released without the development of the new system.	RED
• The success of the programme is dependent on server performance – when clinicians are working within a clinic or inpatient environment with no paper records, they will be an expectation that the performance of the network will be optimum so as not to cause unnecessary delays	RED
• The recommendations concerning case notes made in light of the Francis Enquiry (*12 The trust should review its record-keeping procedures in consultation with the clinical and nursing staff and regularly audit the standards of performance)* focussed heavily on the poor state of the medical records. The implementation of an electronic solution will ensure standardisation of all reports and correspondence into a single place, rather than the current un-coordinated approach to filing such information into the case notes. Areas have large stores of reports that are held outside of the case notes, meaning that the paper record is not a full and complete patient history. This carries a significant clinical risk.	RED
• Duplicate records – it is known there is an undefined quantity of duplicated records with the PAS system which although may have been merged there, they still show as independent records within the Clinical Web Portal. A banner has been added to the patient view to raise awareness of the existence of additional records and a longer term solution to integrate multiple records into a singular entity has been identified and is in progress.	Amber
• Resistance to change from paper PMR -	Amber
• iPM/ICS PAS – currently there are two patient record databases which are not linked therefore patients who are not in the ICS PAS are not visible through Portal	Amber
• Insufficient Equipment in clinical areas which previously relied only on paper PMR – the funding from this business case will provide the foundation for ensuring that clinical areas which currently have limited IT equipment will be fully covered in terms of the equipment needs.	Amber
• Trust reporting systems yet to be integrated – there are numerous systems, particularly within Ophthalmology which do not produce electronic files of results/reports. There needs to be a programme of work to connect all these devices to enable electronic data storage and retrieval which may require additional work streams to be set up with the relevant Directorates.	Amber

DETAILED IMPLEMENTATION PLAN

Key Actions (Option 1)	Person responsible	Timescale Option 1
Business Case Approved	Lisa Myatt	April 2014
Complete Inpatient Scanning for all Wards	Bally Shoker	April2014
Procurement of additional equipment	Bally Shoker	May 2014
Commence installation of additional equipment	Phil Morgan	July 2014
Undertake Portal development improvements	Nick Bruce	May 2014
Complete OPD noteless working for all specialties	Lisa Myatt	October 2014
Community mobile working analysis	Bally Shoker	October 2014
Design and develop Community access to ePMR	Nick Bruce	November 2014
Undertake Community trial to ePMR	Bally Shoker	January 2015
Review Operational Finance Committee	Lisa Myatt	March 2015

AGREED BY:

	Date
IT Strategy Group	
Medical Procurement Group	
Capital Review Group	
Division One	
Estates & Facilities	
Procurement	
Others – please state	

	Date
Medicines Management	
NICE Implementation Group	
Division Two	
Human Resources	
Education	

APPROVED BY:

Divisional Director…… Divisional Manager ……

Divisional Accountant…… Head of Nursing ……

APPROVED BY:

Contracting & Commissioning ……..Name……Date……

APPROVED BY

Trust Management Team ……..……..Name……Date……

APPROVED BY

Trust Board …….. ……..Name……Date……

Appendix 1: Noteless Outpatient Clinics

Noteless OPD Report 14/12/2013

Division 1	Clinical Director		No. Clinics	Total Noteless	% Noteless
Divisional Medical Director - Ian Badger	S Elgaddal	General Surgery	110	0	0%
	S Elgaddal	Vascular	39	19	49%
	B Waymont	Urology	49	0	0%
	N Pigadas	Head & Neck	133	0	0%
	A Bhatnagar	Ophthalmology	331	0	0%
	A Simons	Orthopaedics	113	0	0%
	D Murphy	Gynaecology	77	0	0%
	D Murphy	Obstetrics	69	0	0%
	S Vydianath	Radiology			
Divisional Medical Director - Mike Cusack	M Cusack	Cardiology/ Cardiothoracics	53	0	0%
		Anaesthetics	18	0	0%

Division 2					
Divisional Medical Director - Lee Dowson	A Morgan	A&E/AMU			
	P Carmichael	Renal	35	28	80%
	B McKaig	Gastroenterology	51	51	100%
	A Viswanath	Diabetes	67	67	100%
	L Dowson	Respiratory	79	77	97%
	K Fotherby	Stroke	16	16	100%
	D Leung	COE	10	10	100%
Divisional Medical Director - Cathy Higgins	C Higgins	Paediatrics	131		0%
	Dr Ben-Amer	Neurology	24	24	100%
	J Dixey	Rheumatology	56	23	41%
	S Oliwiecki	Dermatology	80	0	0%
Divisional Medical Director - Sue Smith	C Brammer	Oncology	52	52	100%
	C Brammer	Haematology	34	34	100%

Key

No progress
Partial Completion
Complete / nearly complete
Engaged

Inpatient Documentation Scanning at Discharge

Ward	Specialty	Status
A8	Care of Elderly	live
A7	Care of Elderly	live
A10	Flex Capacity	live 26th Feb 2014
A12	General Surgery - Female	live
A14	General Surgery - Male	live
AAA	emergency	lve
AMU	emergency	live
B7	emergency	live
Appleby	Admissions Lounge	live
Beynon Day Case		live
Beynon Short Stay Unit		live
C15	Gastro	live
C16	Acute Medical Flex	live
C17	Mix	live
C18	Respiratory	live
C19	Respiratory	live
C22	Dementia	live
C24	Renal	live
C25	Diabetes	live
CHU Day Unit	Haematology	live
CHU Ward	Haematology	live
DEANSLEY	Oncology	live
ICCU		live
STROKE	Stroke	live
West Park Ward 1		live
West Park Ward 2		live
West Park Ward 3		live
West Park Neuro rehab		live
A5	Orthopaedics	live
A6	Orthopaedics	live
A23	Surgery	live
Cardiothoracics	Cardiothoracics	Live
Cardiology	Cardiology	Live
A21	Paeds	To be agreed
A9	Surgical Assessment Unit	to be agreed
Gynae Ward	Gynae	To be agreed
Maternity Ward	Obs & Gynae	To be agreed
A8	Care of Elderly	live
A7	Care of Elderly	live
A12	General Surgery - Female	live
A14	General Surgery - Male	live
AAA	emergency	live
AMU	emergency	live
B7	emergency	live
Appleby	Admissions Lounge	live