The Royal Wolverhampton NHS Trust

NHS

Trust Board Report

Meeting Date:	27th March 2017
Title:	Hospital Pharmacy Transformation Plan
Executive Summary:	Following publication of the Carter Review in February 2016, every acute provider was required to develop a Hospital Pharmacy Transformation Plan in order to deliver recommendation 3: *"Trusts should, through a Hospital Pharmacy Transformation Programme, develop plans by April 2017 to ensure hospital pharmacies achieve their benchmarks such as increasing pharmacist prescribers, e-prescribing and administration, accurate cost coding of medicines and consolidating stock-holding by April 2020, in agreement with NHS Improvement and NHS England so that their pharmacists and clinical pharmacy technicians spend more time on patient-facing medicines optimisation activities;" Operational productivity and performance in English NHS acute hospitals: Unwarranted variations February 2016* The RWT HPTP describes the elements of the transformation required to meet the benchmarks described above and how these will be achieved. It also describes joint working initiatives with partners within the STP to deliver improvements.
Action Requested:	Trust Board to approve
Report of:	Dr Jonathan Odum, Medical Director
Author: **Contact Details:**	Alison Tennant, Clinical Director of Pharmacy Tel 01902 695757 Email alison.tennant@nhs.net
Links to Trust Strategic Objectives	1. To improve the culture of compassion, safety and quality in every department and service we offer. 3. To pro-actively seek opportunities to improve health services in our local health economy through collaboration and supportive partnerships. 4. To have an effective, well integrated organisation which operates efficiently. 5. To maintain the financial health of the organisation and seek appropriate investment opportunities that enable further enhancement of patient services.
Resource Implications:	The overall plan is designed to improve efficiency of services and reduce costs to the NHS as a whole. Details of the individual elements will be developed as part of the plans and submitted to the relevant committees for approval.
Equality and Diversity Assessment	n/a
Risks: BAF/ TRR **(describe risk and current risk score)**	n/a
Public or Private: **(with reasons if private)**	Public
References: **(eg from/to other committees)**	

Appendices/ References/ Background Reading	*Operational productivity and performance in English NHS acute hospitals: Unwarranted variations February 2016* https://www.gov.uk/government/publications/productivity-in-nhs-hospitals accessed March 2017
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

PHARMACY TRANSFORMATION PROGRAMME (HPTP) PLAN

1. EXECUTIVE SUMMARY

Pharmacy teams are the Subject Matter Experts on medicines. They oversee the journey of medicines from the procurement and delivery into the Trust, to the storage and supply to the wards through to the disposal of waste. During that journey they check that the prescribing is safe, that the drug is given appropriately and advise on the best medicines to use in complex patients. The value of underpinning services such as Medicines Information, Clinical Trials and Aseptic services should not be forgotten. The vision for Royal Wolverhampton Trust Pharmacy Department is to deliver more pharmacy staff on wards and in departments, talking to patients and clinical teams about medicines use. Pharmacists will spend more time providing information for clinical teams about the most cost-effective medicines, talking to training grade doctors about prescribing safely, counselling patients on the best way to take their medication and advising nursing staff on administering drugs. They will play a key role in clinical guideline management and implementation of NICE guidance, Patient Safety Alerts and statutory functions such as Controlled Drug management. Pharmacy staff will ensure that RWT is buying medicines at the competitive prices, dealing with shortages to maintain supplies and supporting good stock management. Outcomes and delivery will be evidenced by robust data systems showing stock usage, turnaround times for supply, safety indicators, staffing levels and patient feedback.

This transformation plan will be delivered over the period 2017-2020 led by the new Clinical Director of Pharmacy and supported by the Medical Director. The key deliverables required by the Carter Report are:

- Ensure that 80% of the pharmacist resource is utilised for direct medicines optimisation activities, patient safety and medicines governance
- Implement electronic prescribing and medicines administration system
- Increase pharmacist prescribers
- Ensure accurate coding of medicines
- Deliver medicines optimisation savings
- Reduce medicines expenditure and consolidate stockholding

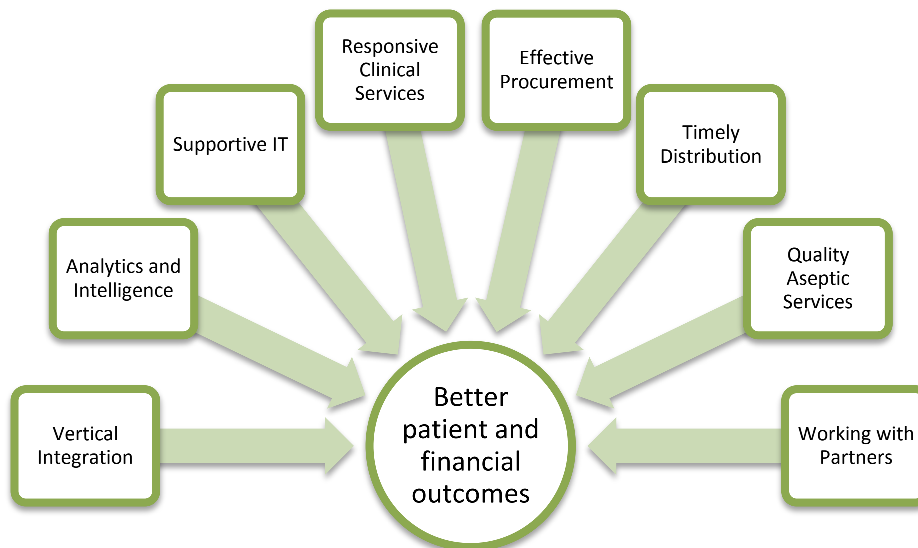
Royal Wolverhampton Trust already has:

- Reduced stockholding to an average of 13 days
- Reduced antibiotic prescribing to below median
- Implemented electronic ordering (91.8%)
- Implemented e-discharge prescriptions
- Implemented Non-Medical Prescribers working in clinics
- Procured ePMA system to be introduced in 2017

In order to improve further Pharmacy will:

- Increase electronic invoicing and reduce deliveries
- Review current working patterns to work towards 80% clinical utilisation of pharmacists through expansion of technician roles and use of technology
- Develop the pharmacy workforce through integration with clinical teams, extending roles and redeployment of staff
- Implement the ePMA system. This is a key enabler to improve safety, increase patient contact and capture medicines optimisation data.
- Work with the wider West Midlands pharmacy network to reduce unwarranted variation and improve learning
- Collaborate with STP partners on projects such as the Midlands and East Aseptic Services and Medicines Information reviews to improve efficiency and reduce costs

2. HPTP PLAN SUMMARY



The Medicines Management Transformation Programme Board will oversee the implementation of the HPTP. There is an action plan (see appendix) which underpins the HPTP and the Model Hospital Dashboard will provide benchmarking metrics for comparison with similar trusts.

The action plan for delivery consists of a number of work streams. Each work stream will have a project plan which will be assessed by the Medicines Management CIP Board. Embedded within each plan is a quality impact assessment, KPIs and timelines to provide assurance on quality and outcomes.

2.1 RESPONSIVE CLINICAL SERVICES

The Carter Report describes the benefits from pharmacy clinical staff working with multi-disciplinary teams to ensure that medicines are used effectively. They are able to take on a number of roles within teams such as prescribing, counselling patients and administering medicines.

2.1.1 Increase use of Pharmacist Prescribers

There will be a planned increase in pharmacist prescribing. RWT has a number of pharmacists who are already qualified, but are not currently practising to a significant degree in part owing to the need to back fill. Pharmacist independent prescribers run HIV and out-patient antimicrobial clinics. Pharmacist led clinics will be extended which would generate RWT income, release nursing and medical staff capacity and reduce waiting times.

2.1.2 Improve learning from incidents

The Medication Safety Officer will lead a work programme of increasing reporting of incidents and near misses. Links with the RWT Academy will be used to share learning. Data will be produced to show common issues and the impact of campaigns to reduce harm. The cost from harm caused by medicines errors is significant and efforts to identify poor practice benefit finance as much as the patients.

2.1.3 7 Day Services

Pharmacy has already extended their opening hours so there is a full dispensing service at weekends. A pilot project has been developed to measure the benefits of clinical input to AMU, CDU and SEU at the weekends. There is 24 hour pharmacist on-call service which provides advice as well as dispensing remotely.

2.1.4 Ward and Directorate Pharmacists

A review is being undertaken of the skill mix on wards to deliver KPIs such as number of patients seen, medicines reconciliation undertaken, clinical interventions made etc. to ensure there is sufficient capacity to provide a safe service. Pharmacists are also critical to the development of guidelines and protocols which are often the first non-urgent services to be dropped when the Trust is under pressure. The review will look at the skill mix across the pharmacy team to see what resource can be freed up by increased support from technician and ATO bands.

2.1.5 Research and Development

Developing the role of consultant pharmacist is part of the workforce development plan. Two pharmacists currently are interested in achieving consultant status. There is a benefit to the department in income generated by R&D but also an opportunity to undertake research on topics pertinent to our population.

2.2 MEDICINES PROCUREMENT

The Purchasing and Distribution Section purchase and invoice stock for New Cross, Aseptics, CCH, Community and Black Country Partnership Foundation NHS Trust. The stockholding value is approximately £2million at any point in time and the stockholding volume is 13 days' supply on average. The procurement staff maintain the NHS Commercial Medicines Unit contracts with recently introduced monitoring of savings; manage and monitor Patient Access Schemes; monitor and change stock levels to reduce wastage; maintain audit data required for certain drugs and ensure that medicines are appropriately flagged such that there can be accurate re-charging. Staff are frequently employed answering Freedom of Information requests and generating medicines usage reports for all denominations of staff.

2.2.1 Reducing Deliveries

There are approximately 78 deliveries over a five day period and the intention is to reduce these to 5 deliveries a day over 7 days through more effective stock management as well as negotiations with delivery companies.

2.2.2 Increasing e-ordering and invoicing

Increasing the proportion of electronic orders (currently 87%) will require more suppliers with the ability to utilise electronic data interchange (EDI) and the use of electronic signature on controlled drugs. None of the invoices are processed electronically currently. The department is about to utilise Genfin, the interface with Integra (Finance).

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2.2.3 Achieving Wholesaler Dealer's Licence (WDL)

In order to maximise income by supplying medicines to external partners RWT requires a WDL. The current store has been inspected and a number of structural and procedural changes are required before licensing. An action plan is being developed to address the issues.

2.2.4 Homecare

RWT supply homecare services for over 2,700 patients with an annual drug spend of over £14,700,000 generating £2,900,000 in VAT savings. Services range from low-tech to high tech for a range of specialties including Rheumatology, Gastroenterology, HIV, Dermatology, Renal and Paediatrics. Many of the drugs delivered through homecare are high cost biologic therapies. Biosimilars are effectively generic versions of biologic drugs and commissioners are asking for patients to be switched from branded products to the new cheaper versions. NHS England is encouraging the speed of switches though a CQUIN for 2107/18/19. CCGs are encouraging switches through gainshare agreements dividing the savings with Trusts. Switches of these products require resource from clinical teams to inform patients as well as good pharmacy systems and processes to manage two products and reduce the risk of errors. The development of high tech homecare services such as infliximab and parenteral chemotherapy increases the clinical risk associated with adverse reactions in the patients' homes. This is mitigated by ensuring the appropriate training, competencies, observation by senior RWT nurses, protocols and access to anaphylactic kits are in place.

Risk	*Mitigation*	*Risk remaining*
Reducing the amount of deliveries will increase the stockholding.	Good stock control and forward management	Variable demand will mean more deliveries
With electronic invoicing, there are challenges owing as the goods and invoices are not received at the same time.	Design of systems to check in real time deliveries. Explore possible IT solution with handheld devices.	Systems will not be robust
Lack of storage and fridge capacity	Stores have been reorganised to free up space. Medicines waste handling being reduced.	Storage capacity still not sufficient.

2.3 VERTICAL INTEGRATION/CCG JOINT WORKING

RWT is possibly unique in that it is an Acute Trust employing the Primary Care Medicines Team (PCMT), consisting of pharmacists, technicians and support staff. The PCMT provides a medicines optimisation service to 46 Wolverhampton GP Practices under an SLA with Wolverhampton CCG which runs until March 2018. The PCMT consistently delivers against all of the targets within the SLA, it is well respected and is able to demonstrate beneficial changes in GP prescribing. There is potential to extend the service to GP practices which are vertically integrating into RWT that were not previously employing members of the PCMT.

The PCMT and the hospital pharmacy team are able to work together, identifying high risk patients both on admission and discharge. This means working towards seamless discharge across the interface, potentially reducing re-admission and improving both the patient care and experience.

Risk	*Mitigation*	*Risk remaining*
The CCG vision for how the PCMT will integrate into the new primary care models in unclear. The CCG may not re-commission the PCMT service in its current form after March 2018.	RWT will develop an offer which can be commissioned by the different new models of care teams.	Development of new models of care may not wish to take up offer.

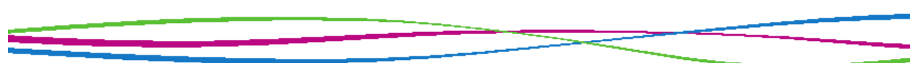
2.4 TIMELY DISTRIBUTION

2.4.1 Dispensing In-Patients and Discharges

From April 2016 to January 2017, 191,531 items were dispensed with a monthly average of 96.8 % of discharge prescriptions completed within two hours. The BD ARX robot has streamlined the dispensing process. Very late closing times incurring overtime or TOIL (and low staff morale) prior to the introduction of the robot have been turned around. The BD ARX robot holds about 75% of pharmacy stock and is used for dispensing and stock supplies. There is the facility to dispense remotely outside normal working hours into a chute which can be accessed by nursing staff.

2.4.2 Ward Services

Wards are supported by a range of staff. Most wards are currently serviced by a pharmacist and technician team who work together to review what medication the patient has been admitted on, what changes have been made and ensure that clinical checks are made before issuing medication for the patient to be discharged with. The cardiology/cardiothoracic wards have a ward-based team which dispenses for discharge from the ward utilising the automated unit (Mediwell). This model is being rolled out to other wards.



The ward teams will be expanded to include ATOs who will be required to perform several duties to include dispensing, returning stock, repatriate patients' medicines, either their own or those dispensed in the hospital (to avoid duplications in dispensing and reduce the medicines spend).

Walsall Healthcare Trust are trialling technician administration of medicines to release nursing staff time, probably for the morning drug round which is the most onerous. This could possibly be funded from nursing staff vacancies. Also pharmacy teams can encourage patient self-administration of medicines which will often improve the patient experience in addition to saving staff time, particularly with sub-sets of patients such as those with Parkinson's Disease.

2.4.3 Mediwell expansion

Automated stock units have a number of advantages.

- Reduced stock holding (e.g. two surgical wards have shared a single Mediwell Unit with a one-off stock saving of £700) and improved stock turnover reducing waste.
- Automated stock replenishment lists sent electronically to pharmacy freeing up staff time to stock take
- Improved security. Fingerprint access means that stock discrepancies can be monitored closely including controlled drugs. Keys are held in the Mediwell for fingerprint access again giving a record of who had possession at specific times. Controlled drug keys can only be released with two fingerprints giving extra assurance of security. Installation of Mediwells in the ED led to dismissal of staff for theft.
- Reduction of nursing time lost looking for keys. On two surgical wards in May 2016, nursing staff reported that they spent an hour during each of their shifts looking for keys to access medicines. Added together with nursing staff time saved putting away stock (done by pharmacy staff), this equated to approximately 6000 hours (0.7WTE of Band 5) of nursing time freed up every year per ward.

There are 5 wards working with automated units (Mediwells) to include the Emergency Department (ED), Surgery and Paediatrics. There are a further 3 units in the process of commissioning. It has been estimated that there remains 40 areas that would benefit from a similar unit. Priorities will include the Acute Medical Unit and Day Surgery (Appleby).

In the ED, there is a bespoke piece of software that enables prescription from a PC to enable an over--labelled medicine pack to be obtained from the Mediwell and annotated with the necessary patient details for direct supply. This can be expanded to other departments.

2.4.2 Dispensing- Out Patients

RWT works in partnership with Boots UK to provide outpatient prescriptions. There are three out-sourced pharmacies - Main and Eye based at New Cross Hospital and one at Cannock Chase Hospital. The possibility of re-locating the Boots UK Main to the new Out Patients Department in 2018/9 is under consideration and this would potentially allow the Boots UK Eye to close with a significant reduction in management costs (£120k). The increased space would allow improved retail sales, increased volume of internet collections (a percentage of this profit payable to the Trust) and sale of consumable goods which would also result in a reduced management cost to the Trust.

Prescriptions for hospital out-patients, day cases and the Emergency Department are dispensed. Chemotherapy is clinically checked as well as being dispensed by Boots UK staff following an intensive specially designed training course and competency checking.

Risks	***Mitigation***	***Risk remaining***
Staff capacity for supporting Mediwell use. Savings in	Restructuring of skill mix of pharmacy staff to use lowest	Staffing capacity in pharmacy still insufficient.

nurse time are offset by cost in pharmacy time to reload Mediwells more frequently than usual stock top-ups	appropriate grade. Redesign of ward team tasks to include stock top-ups on daily visits.	
Savings from stock reduction are not invested in new units or in maintenance and operational costs of existing units.	Clear costings of maintenance and operational costs built into business cases. Oversight of units kept by Pharmacy department to ensure maximum use of assets.	Lack of on-going support for maintenance and investment
The out-patient service provided by Boots UK has in the past largely been funded by a share with NHS E of the VAT savings on re-chargeable high cost drugs. The new NHSE contract for 2017/18 could result in an overall financial loss to the Trust which would threaten sustainability.	New funding flows from CCG gainshares are being developed. Maximising charging of out-sourced fee	Costs will minimise income to the Trust such that contract will not be renewed in 2019.

2.5 SUPPORTIVE IT

2.5.1. Electronic Prescribing Management System (ePMA)
A key enabler in the transformation process is ePMA. Electronic prescribing is an important element of the Black Country Local Digital Roadmap (BC LDR) and is a highly significant contributor to sustainability. RWT did extremely well in the digital maturity assessments by NHSE with an exception of the medicines management and optimisation element, which was scored 20% against a national score of 27%. This lends further support to the requirement for the implementation of ePMA. In line with there being an ambition for there to be an Accountable Care structure in Wolverhampton, there is ICT Enablement Integration between the so-called Collaborative Zones of the vertically integrated model: Primary Care (and vertically integrated GPs); Urgent Care; Secondary Care; Community Care. This means that information can be fed into these different zones and although the existing systems will not be replaced, information sharing is facilitated to the benefit of 'joined up patient care'.

The EMIS ePMA solution has been chosen as the RWT system and a limited number of wards are expected to undergo implementation in the next 12 months. The intention is that the EMIS ePMA system will integrate fully with the EMIS Pharmacy Stock Control System in order to allow automatic notification of medicines that require ordering. RWT currently use a bespoke electronic discharge system (eDischarge) which contains medical or surgical details of the admission and the discharge medication. In certain areas, this has been simplified when the patient does not require medication and can be sent directly to the GP without pharmacy sign off (Fast eDis). Some units still utilise paper systems (triplicate sheets) or hospital out-patient prescriptions and these will be phased out.

2.5.2 Chemotherapy e-Prescribing
See section 2.6.3

2.5.3 Dictionary of Medicines and Devices (dm&d) compliance
The update for Ascribe to be dm+d compliant is scheduled for April 2017. This will aid standardised reporting within the Trust and benchmarking across trusts as well as accurate reference costs.

Risk	*Mitigation*	*Risk remaining*
RWT is not included in LDR pharmacy developments due not being part of the Black Country Alliance. Interfacing mechanisms may be needed which will require resources.	Members of RWT pharmacy team part of IT/procurement subgroup of BCA	If joint developments are undertaken RWT may choose not to be involved

2.6 QUALITY ASEPTIC SERVICES

2.6.1 Infrastructure

The current unit was commissioned in 2006 as a temporary solution with an estimated usage life of 5 years. The fabric of the unit is still viable but the risk of failure increases with time. There are plans to replace the current Aseptic Unit and incorporate the facilities into a new Wolverhampton Cancer Centre. Partly in preparation for this, the Trust has continued its renewal programme for the five isolators which can be relocated at minimal cost into new premises.

2.6.2 Midlands Aseptics Review

There is an East and West Midlands Review of Aseptic Services in process, which is about to enter Phase 2. This is likely to conclude that there are savings from rationalisation of the Aseptic Units in the area and RWT would be in an excellent position to supply other Trusts with chemotherapy, to include clinical trials products. The rationalisation process could involve re-deployment of skilled staff to fill the gaps in the niche Aseptics workforce. Although it would increase logistics costs it would reduce significantly capital and maintenance costs. In addition to improving efficiency by batch production and better utilisation of pharmacists by potentially re-deploying into patient-facing duties, this would enable RWT Aseptic Unit to provide items for its Black Country STP partners: Dudley, Walsall and Sandwell and West Birmingham or indeed further afield. To achieve this the RWT unit must consider becoming a licensed unit, particularly since recently introduced standards for unlicensed units contained in Quality Assurance of Aseptic Preparation Services (5th Edition, October 2016 are exacting.

2.6.3 Chemotherapy e-Prescribing

CQUINs from 2015/16 and 2016/17 have required the implementation of electronic prescribing for chemotherapy regimens.
RWT is currently collaborating with Dudley on electronic prescribing by using similar systems (ChemoCare) due to sharing consultants. The e-prescribing system will go live in April 2017.
Dudley started work on ePMA ChemoCare some considerable time before RWT and is currently testing the next version of the software. There is a potential clinical risk as consultants working at both RWT and Dudley will be operating with two different versions. This has been mitigated by a rolling programme of prescribing regimens which will allow for an update as soon as the updated version is released for general use.

2.6.4 Manufacturing Efficiencies

There are plans to explore out-sourcing the parenteral nutrition, both for adults and particularly for neonates. This will allow quicker access for patients and also release isolator capacity which will be utilised for monoclonal antibody preparation. This will increase patient flow, improve patient experience in the Chemotherapy Day Unit (Snowdrop), increase income generation from clinical trials and raise the research profile for the Trust.
The Aseptics Unit have already expanded the range of pre-filled products following the increased implementation of dose-banding. There is potential to increase vial sharing with the co-operation of the staff scheduling the clinics.

2.6.5 Clinical workforce

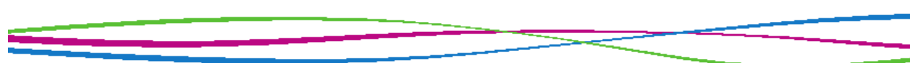
There is a move to bring the clinical oncology and haematology pharmacy service closer to the patient, by working on the oncology and haematology wards as part of the multi-disciplinary teams (to include pharmacist prescribing) and streamlining scheduling . This would be the case at both New Cross and also the satellite day unit at Cannock Chase Hospital.
The ‘Seven Day Services’ initiative may also impact on Aseptics Services in terms of provision of service to the oncology and haematology wards, or more likely in the event of chemotherapy clinics being run every day of the week providing increased/improved patient access. There is also a need to provide a chemotherapy emergency service across a 7 Day week.

Risk	***Mitigation***	***Risk remaining***
There is a clinical challenge in terms of utilising standardised parenteral nutrition rather than bespoke solutions.	Regional specialist group working on formulations and protocols	Skills may be lost for preparing bespoke solutions leading to poorer outcomes for patients
Infrastructure will deteriorate before new facilities available	Contingency plan in place to use unused facilities at WHT and DGoH in down time plus additional outsourcing	Timescale to new facility still not scoped as dependent on plans for cancer unit.
Increased use of pre-filled products will not demonstrate savings due to an increased cost of purchasing, handling, storage and wastage.	CIP PID is quantifying these issues against staff time saved	Use of pre-fills will not save time or costs
External manufacturers will not be able to meet demands of service	Contingency plans reviewed following recent events leading to temporary closure of unit. Use of other NHS facilities increased.	Available capacity will still not meet demand.
Currently, there is no interface between EMIS ePMA system and ChemoCare which means that patients requiring chemotherapy will have to have two ‘prescription records’.	IT solution being built into implementation of ePMA	IT solution may require additional resources delaying development

2.8 WORKING WITH PARTNERS

RWT belongs to the Black Country (BC) STP. In addition to RWT and Wolverhampton CCG, the BC STP includes: Black Country Partnership Trust (BCP), Dudley and Walsall Mental Health Partnership Trust (DWMHT), Dudley Group of Hospitals (DGoH), Walsall Healthcare Trust (WHT), Sandwell and West Birmingham Hospitals (SWB), Dudley, Wolverhampton, Walsall and Sandwell Local Authorities, Dudley CCG, Sandwell and West Birmingham CCG and Walsall CCG.

There are a number of joint projects being developed between RWT, WHT, DGoH and SWB which are detailed in the action plan. Collaboration with other partners eg UHNM, is also being discussed. Although the thrust of the Carter Report when considering collaboration is at a local level, there has been identification of a number of regional opportunities eg procurement lead, technician training and IT solutions.



2.8.1 Medicines Information

RWT has a small MI team comprising of a part time Band 6 technician and a Band 8a pharmacist, who is also responsible for the formulary and patient group directions.

The decision needs to be made whether or not the service will expand to offer a service for the partners. The ideal would be to collaborate in order to provide an improved facility, to include a patient helpline perhaps initially offered to patients post-discharge.

2.8.2 Midlands Aseptics Review

See Section 2.6.2

Risk	***Mitigation***	***Risk remaining***
Uncertainty around the continued provision and commissioning of nationally funded Medicines Information. Specialist Medicines Information centres eg medicines in pregnancy, medicines in breast feeding, may be procured in a different format.	WM Chief Pharmacists Network working together to influence procurement and build resilience within the WM network	MI resource may be centralised and significantly reduced.

2.9 ENABLERS

2.9.1 IT software and hardware

RWT has a number of software systems directly impacting on the pharmacy department such as Ascribe, Chemocare and e-discharge. Opportunities for better use of IT on wards through increased use of mobile devices needs to be explored. Other internal programmes, for example, SafeHands, are not currently utilised fully in ensuring safe and timely medicines services. A review will be undertaken with IT support to maximise the opportunities that effective IT can deliver. See also 2.5 and 2.6.3.

2.9.2 Workforce

One of the most valuable assets of Pharmacy is the staff. Team development and training will be key to building the flexible workforce required to deliver change. The greatest need at this moment is to retain the B6 and recruit to B7 grades. There is a planned change to the current Band 6/7 deployment. Only B6s currently rotate but a new scheme will implement an automatic upgrade to Band 7 on completion of the relevant qualification and a longer rotation will then occur.

2.9.3 Analytics and Intelligence

There is a lack of analytics and intelligence being produced consistently from the Pharmacy Department. While there are some areas of note such the antibiotic audit data, overall more data is required to assure the Board on delivery of safe, cost-effective use of medicines. The department is working on KPIs for ward services, a new format for directorate reports and a new Medication Safety Report.

Risk	***Mitigation***	***Risk remaining***
IT resources will not be available to support changes and more mobile working.	Review of current resource as well as frugal innovation projects to reduce need for more resource	Resources still required for invest to save projects
Pressure of workload erodes time available for training and development.	Review of working practices will identify time for training and development	Sickness and vacancy issues will continue to erode T&D time
Resource for delivery of training is not available	Work is progressing with the RWT Academy to provide local training reducing any need for external input	Capacity of RWT Academy to deliver
Changes to HEE funding and implementation of apprentice training format will affect recruitment to training places	Regional and local work in place to ensure places for professional training grades	Funding for maintaining current training posts will not be available
To achieve effective working of staff across a number of sites and different areas a flexible workforce is required. This will require some staff movements and training.	Staff have already been redeployed from the CCH site. Plans are in place to change ways of working and improve flexibility across departments.	Rate of change may not be as rapid as needed to implement service changes.
Insufficient capacity to produce regular reports and analytics	Restructuring of current workforce to use staff more effectively	Front line demands erode capacity

APPENDIX ONE: Metrics

MONEY AND RESOURCES	Reference period	RWT	National median performance		Comments
Pharmacy staff and Medicines Cost per WAU	2015/6	381	350		Benchmarking of staffing with peers is being undertaken. This metric is open to interpretation as it balances pharmacy staffing with medicines cost.
Medicines Costs per WAU	2015/6	345	312		This indicator is driven by the high cost drugs spend (see below)
High cost medicines per WAU	2015/6	164	112		RWT delivers specialised services which use higher cost medicines. Peer performance is £136 per WAU which suggests that more work is required on choices of HCD. In 2017/18 delivery of the MO CQUIN will drive these costs down.
Non High cost medicines per WAU	2015/6	181	196		This reflects the tight formulary control for non-PBR drugs.
Choice of paracetamol formulations (%iv formulation vs total spend)	2015/6	47	56		This reflects the clinical input to directorates to influence behaviour.
SAFE					
% ePrescribing IP	2015/6	0	50		The ePMA business case was approved in 2015/6. Implementation will take place in 2017.
% ePrescribing OP	2015/6	0	50		See above.
%ePrescribing Discharge	2015/6	90	60		RWT has a bespoke system – eDischarge. Some areas use triplicate hard copies – this will be investigated 2017/8.
%ePrescribing Chemotherapy	2015/6	0	50		ChemoCare in process of introduction. Prescribing for two cancer sites implemented by Mar 2017.
Total Antibiotic Consumption in DDD/ 1,000 adm	2015/6	3,755	4,549		. The figure quoted is therefore the 2015/6 figure
% diclofenac vs. ibuprofen and naproxen (annual)	2015/6	12.55	8.85		
EFFECTIVE					
Number of days stockholding	2016/7	13	19		The department has a robot, BD ARX.
% use of Summary care Record (or local system per month)	Aug 2016	27.6	52.1		This has fallen from 46% in last reported figures. It will be investigated further to establish reasons.
%total infliximab usage in 2015/6 that was a biosimilar product NOT originator		26.8	12		The switch process has been well implemented in Gastroenterology. Work is in progress with Rheumatology.
%Soluble prednisolone of total oral prednisolone	September 2016	6.7%	3.4%		This is a CIP project and has already decreased.
Number of Medication Incidents Reported to NRLS per 100,000 FCEs of Hospital Care	Mar 2016	313.0	285.6		
% Medication Incidents Reported as Causing Harm or Death/All Medication Errors	Mar 2016	3.7%	9.7%		
e-Commerce - Ordering (AAH)	2015/16	90.1%	82.0%		
CARING					
National Inpatients Survey - Medicines Related Questions	2015/6	73.0%	73.1%		
RESPONSIVE					
Sunday ON WARD Clinical Pharmacy Hours of Service (MAU/Equivalent)	2015/6	0	Not available		There is a project planned to assess the impact of clinical time at the weekends.
WELL LED					
% sickness					
% appraisals					
% stat and mandatory training					
% turnover		8.3%	12		

APPENDIX TWO: Workplan 2016 – 2020

Area	Deliverables	CIP	Carter	16/17	17/18	18/19	19/20
Responsive Clinical Services	Improved learning from incidents						
	7DS		Y				
	Develop R&D for Pharmacy Practice						
	80% pharmacist time clinically utilised		Y				
Effective Procurement	Reducing deliveries	Y					
	Increasing e-ordering and invoicing	Y	Y				
	Achieving WDL status	Y	Y				
	Mediwell expansion	Y	Y				
Vertical Integration	Improving interface working						
	Integrated pharmacy teams						
Timely Distribution	Care closer to patients		Y				
Supportive IT	ePMA	Y	Y				
Quality Aseptic services	Dose banding	Y	Y				
	e-prescribing	N	Y				
	MHRA licence						
	Services in new cancer centre						
	Supply to other hospitals		Y				
Analytics and Intelligence	Reporting Framework		Y				
Working with Partners	MI		Y				
	Workforce		Y				
	Aseptics Review		Y				
Contract management	CQUIN delivery		Y				
	Income generation	Y					
	Maintenance contracts						
	Boots		Y				
	Primary care team		Y				
Enablers	IT hardware						
	IT software						
	Improve project management capacity						
	Review workforce		Y				
	Team development						
	Effective training and education for flexible workforce						

APPENDIX THREE: Workplan 2017-18

Area	Deliverables	Projects	CIP	Carter	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	2018/19
Responsive Clinical Services	Improved learning from incidents	Improve MSO report																		
	Develop R&D for Pharmacy Practice	Consultant Pharmacist																		
	7DS	AMR project		Y																
	Increased clinical input to services	Reconfiguration of pharmacists/technician ward cover		Y																
		Increase pharmacists writing TTOs		Y																
		Increase clinics using NMP		Y																
Effective Procurement	Reducing waste	Increasing medicines reconciliation	Y																	
		CIP project on reduce and recycle	Y	Y																
	Achieving WDL status	Reorganisation of stores	Y	Y																
	Stream-lining stores activities	Out-sourcing i.v. Fluids	Y	Y																
		Reducing deliveries	Y	Y																
	Equipment	Fridge review	Y																	
	Mediwell expansion	Mediwell evaluation	Y	Y																
		Mediwell expansion	Y	Y																

Vertical Integration	Improving interface	Referral of high risk patients to primary care team		
		TTOs to care homes		
Timely Distribution	Care closer to patients	Increasing dispensing on wards		Y
Supportive IT	ePMA	ePMA introduction	Y	Y
Quality Aseptic services	Dose banding	CQUIN	Y	Y
	e-prescribing	Chemocare GO LIVE	N	Y
	MHRA licence			
		Increasing clinic input		Y
Analytics and Intelligence	CIP - finance projects	Generics	Y	
		Soluble Prednisolone	Y	Y
		Levobupivicaine	Y	
	Reporting Framework	Review and develop new directorate reports		Y
Working with Partners	MI	WM MI integrated network		Y
	Workforce	STP review		Y
	Aseptics Review			Y
Contract managem	MO CQUIN	Delivery of outcomes		Y

ent	Income generation	Biosimilars gainshare	Y																	
	Maintenance contracts	Review and consolidate																		
	Boots	Review of Boots contract		Y																
	Primary care team	Review contract and produce future plans		Y																
Enablers	IT hardware	Review and plan future requirements																		
	IT software	Review current programmes and do future plan																		
	Improve project management capacity	Identify PMO champions and train																		
	Review workforce	Band 6/7 combined rotation		Y																
	Team development	8a/b development programme																		
		SLT team programme																		
	Effective training and education	Departmental training and education plan																		

APPENDIX FOUR: Black Country Pharmacy Forum HPTP Work-streams

Title	a. **Pharmacy Workforce**
Aim	To ensure there is a high quality, flexible pharmacy workforce able to meet the changing needs of healthcare delivery
Project Lead	Alison Tennant
Objective	To develop a programme of training, joint posts and opportunities for development in order to train and retain staff within the Black Country STP
Current Provision	There is a strong history of joint working across acute trust pharmacy departments in the West Midlands. There are commissioned training courses for all levels of staff for professional qualifications such as clinical diplomas. HEEWM leads the planning for provision of training places regionally. There is a pharmacy workforce sub group of the West Midlands Chief Pharmacist Network which inputs to this planning. There is uncertainty to future provision of training funds as a result of the apprentice levy.
Planned Provision	This project will build on the regional work with sharing of delivering specific training needs and joint posts for the Black Country STP. It will deliver a shared programme of training for skills where there is currently no regionally funded provision. There will be a HR framework to enable working across Trusts for specialist posts and development opportunities.
Scoping plans	Establish Working Group of Education and Training leads from each Pharmacy Department to gather data and plan programmes Gather data on current staffing levels and future needs for all grades of staff to identify gaps and trends Engage with HEEWM on Trailblazer project on apprenticeship programme Liaise with other STP partners such as CCGs and Mental Health Trusts to determine gaps and trends for partners Scope development programme for specialist posts such as consultant pharmacists who can work across the STP footprint to share skills and support patient flows Scope joint training schedule for professional training
Delivery plans	Develop and cost joint training schedule for professional training - JUNE 2017 Develop and deliver HR framework to allow staff to work across Trusts on appropriate agreements such as secondments, honorary contracts etc. - MAY 2017 Develop consultant pharmacist business case – MAY 2017
Risks/issues and mitigation	see risks and issues in the Oct 2016 HPTP submission for each Trust
Financial impact (savings +/- costs)	Unable to quantify at this time but efficiencies in sharing of staff and joint commissioning of professional training programmes are likely to be the main gain. There will also be a benefit in retention and recruitment of staff. Potential for income generation for individual trusts delivering training outside of STP partners

Title	b. Aseptic Services Provision
Aim	To improve resilience, productivity and efficiency of aseptic services across the Black Country STP and wider West Midlands whilst maintaining and/or improving safety, quality and the patient experience
Project Lead	Alison Tennant
Objective	To review current provision, design the most efficient infrastructure and work towards implementation of that footprint. To develop common protocols and training where possible to improve working across sites and develop a skilled pool of staff.
Current Provision	Currently there are 3 aseptic units within the Black Country STP. These are based at Walsall Hospital Trust, Royal Wolverhampton Trust and Dudley Group of Hospitals. The two units at Sandwell and West Birmingham are in the process of being decommissioned.
Planned Provision	The Midlands and East Aseptic services scoping review has estimated the differing costs of preparation between units of different sizes. Initial indications are that some smaller units could be closed and production moved to larger central units. Current work on dose banding and vial sharing can be developed so that certain products are rationalised to single units and distributed.
Scoping plans	An initial scoping exercise has been undertaken on behalf of the chief pharmacists across the Midlands and East Region. Further work is required to deliver more detail on future configuration, commercial implications and projected savings. A business case is being presented to the regional finance directors group for resources to undertake this scoping across the Midlands and East footprint. However a local plan will be needed in parallel to look at workflows, patient case mix and the impact on services of any changes. A local steering group will be established to include all pharmacy departments, relevant clinical specialities such as oncology, haematology, rheumatology, estates and IT. Systems to share training protocols, standards etc are already in place at a West Midlands level and plans will include scoping local opportunities across the Black Country. Both DGH and RWT wish to attain licensed status and therefore opportunities to share resources such as project support, quality assurance services and training costs will be explored.
Delivery plans	Detailed delivery plans will emerge as the scoping work continues. Some areas are already working on plans for improvements. Dose banding: There is a CQUIN associated with this which is being delivered for specific products. Commercial market support: Contract reviews of products are underway to identify what can be bought in at competitive prices. Licensing: Units require manufacturing licenses to supply other units. DGH and RWT are applying for commercial licenses.
Risks/issues and mitigation	Resilience: The initial scoping indicates that four units could be reduced to one. This raises a concern about resilience across the Black Country in the next five to ten years while new developments such as the new cancer unit at New Cross Hospital are commissioned. The units already work together closely on sharing spare capacity when one unit is ‘down’ due to various issues. The nearest units in the proposed changes would be UHB or UHNM which would be challenging to use in terms of travel times between units for supply of some products. Dependence on commercial units has not always been successful. Mitigation: Consideration within the planning will be given to resilience

	Impact on services: Some products have a short shelf-life and need to be prepared close to patients. Mitigation: Planning will take account of where patients are treated and when moving parts of the treatment pathway need to be considered. Resources: Any major change requires sufficient resources to be successful. Mitigation: Plans will include scoping of additional resource requirements to ensure successful implementation Realising savings: There is a risk that savings will not be fully realised due to poor implementation, insufficient detail within the scoping or changes in NHS funding flows. Mitigation: Details of savings realisation will be included with assumptions clearly stated
Financial impact (savings +/- costs)	The initial estimate for savings across the Midlands and East Region is approximately £5million. The savings to individual economies needs to be determined as part of local scoping.

	Hospital		Aseptic Facility				Workload and Activity						
Trust	**Hospital Description**	**Number of Hospital Locations / Sites**	**Number of Aseptic Units**	**Location of aseptic units**	**Number of sites you supply to**	**Age of Facility**	**Adult PN**	**Neonatal/ Paed**	**Cytotoxics**	**Intra-thecals**	**Other Ivs**	**Preparation for stock**	**Items bought in**
Russells Hall, Dudley	DGH	1	1	Russell's Hall	3	11.0	0	0	27,753	42	0	0	Adult PN 1,341 NN PN 570
Sandwell and West Birmingham	Teaching	2	1	Birmingham Treatment Centre	2	15.0	0	0			0	0	use of pre made doses is being introduced
Walsall Manor Hospital	DGH	1	1	Walsall Manor	1		0	0	5750	0	1310	0	Adult PN 700 pa, Neonatal/paed PN 645 pa. outsourcing of 5FU, epirubicin, cyclophosphamide syringes and gemcitabine infusions
RWT	Teaching	2	1	RWT	2	10.0	972	1212	22,245	118	0	0	Buying in of pre made 'stock' doses to be commenced January 2017

Title	c. **Ward Based Digitised Medicines Storage Provision**
Aim	To consider potential operational and financial benefits of introduction of digitised medicines storage at ward level across the Black Country STP with particular current emphasis on stock holding, security and nurse convenience, and longer term emphasis on patient safety in combination with electronic prescribing systems.
Project Lead	Peter Cooke
Objective	To review current provision across Trusts, and determine the most efficient operational model for these systems and work towards improving implementation of these systems. To review interfacing between ward systems and pharmacy systems which can impact significantly on benefits of these systems. To develop common protocols and training where possible to improve working across sites and develop a skilled pool of staff. To investigate the potential benefits of integration of Pyxis technology with the electronic prescribing system currently being introduced within SWBH.
Current Provision	Currently there are 3 different electronic medicines storage products in use within the Black Country STP, together with a novel electronic medicines security option. WHT and DGH have Medi365, RWHT use Medi365/Pyxis and SWBH currently have Medi365, Omnicell and Pyxis in use together with the Abloy electronic key system.
Planned Provision	SWBH intend to increase the use of Pyxis Medstations across all wards in the new Midland Metropolitan Hospital. Further expansion in other Trusts is yet to be determined.
Scoping plans	Scoping of the Pyxis system at SWBH is currently underway and further work is required to replicate this work across other Trusts identifying potential reduction in overall stockholding, improved efficiency in stock replenishment, and benefit to nursing staff delivering medicines administration. Most Trusts will be working on future development of electronic prescribing systems and need to consider scope to link to electronic medicines storage e.g. drug will not be delivered from storage device unless drug is prescribed for patient.
Delivery plans	SWBH have already implemented Pyxis units in 15 critical areas and have plans to purchase further units for all acute wards prior to the transfer to MMH. Options to share implementation experience, training and operational protocols can be developed once local utilisation and benefits/disadvantages have been reviewed. Joint business plans will need to be developed to maximise potential benefit across all Trusts utilising optimal system.
Risks/issues and mitigation	Capital investment: optimum benefit is realised through wider use of electronic systems across highest stockholding areas within the Trust, requiring higher initial investment.
Financial impact (savings +/- costs)	Initial financial estimates suggest that the investment would be cost neutral in provision of equipment that will deliver significant reduction in stock holding, reduction in waste and operational benefits for nursing staff in the medicines administration process, and significant improvements in the safe and secure use of medicines. The financial benefits of these changes have yet to be quantified. The future integration with EP systems has potential to deliver significant patient safety benefits, which could have significant financial savings e.g. litigation. The savings for individual Trusts may be dependent upon different system in use.

Title	d. Pharmacy IT Systems Collaborative Working
Aim	To optimise the use of technology and staff involved in the management of pharmacy technology across Trusts.
Project Lead	Peter Cooke
Objective	To ensure that where possible Trusts will support each other in the delivery and on-going development of IT pharmacy systems, both hardware and software.
Current Provision	There are a wide range of pharmacy IT solutions in place across the different Trusts – these include: Hardware: Electronic Pharmacy Storage Systems: Rowa (x2), RWT Medi365 x9, Pyxis in dispensary, WHT ?. Electronic Ward Storage/Access Systems: Medi365 (x4), Omnicell (x1), Pyxis (x1), Abloy (x1) Software: Pharmacy labelling/stock control systems: JAC (x2) / Ascribe (x2) Electronic Prescribing Systems: Chemocare (x4), Cerner (x1), Allscripts (x1), WHT?, RWT?. Reporting Systems: Define, ADIoS, Medicines Information systems, Q-Pulse etc
Planned Provision	IT pharmacy specialists working with their counterparts at other Trusts are a scarce resource and the introduction of cross-site working and training will provide more resilience for all Trusts in the delivery of the whole range of pharmacy IT systems. There are opportunities for IT pharmacy specialists to work with their counterparts at other Trusts to improve knowledge and experience in the delivery of all aspects of pharmacy technology. This includes current use of hardware and software, current development of interfacing between pharmacy stock control software and medicines storage systems, and future interfacing between both these systems and future electronic prescribing systems. These are all highly specialised systems requiring both pharmacy expertise and close working with hospital IT specialists.
Scoping plans	To determine details of hardware and software systems in use, current contracts and future service plans, and the current staff employed as pharmacy IT specialists together with their particular expertise with different systems is required to identify opportunities for maximum benefit across the Trusts. Whenever IT systems are reviewed or up for renewal at individual Trusts the opportunity to consider integration into existing systems at other Trusts needs to be seriously considered.
Delivery plans	To be determined once full scoping details are available. Where common or multi-user systems are in use more efficient cross-site working will be possible, particularly rationalisation of reporting from such systems.
Risks/issues and mitigation	There is little risk with any of the options identified.
Financial impact (savings +/- costs)	Not quantified. Hardware systems are being looked at as part of a separate work-stream. A number of smaller software packages could be bought as multi-user options in future. In the longer term integration of larger software systems may generate large savings, but significant forward planning around all future pharmacy IT provision will be essential to maximise these opportunities.

Title	f. Pharmacy Technician Drug Administration
Aim	To extend the role of ward medicines management technicians to include the administration of drugs to patients. This will inform Trusts with regard to workforce planning and have the potential to alleviate some pressure on nurse recruitment.
Project Lead	Gary Fletcher
Objective	To up skill medicines management technicians to carry out drug administration. This is a natural progression for moving the boundary of pharmacy input into medicines management directly to the patient's bedside and support the work done by clinical pharmacists. To release nurse time from drug rounds so that they can focus on provision of direct nursing care.
Current Provision	Drug administration is currently carried out by nursing staff. Nurses are routinely interrupted during the round, or pulled to deal with an emergency situation. This can result in an increased risk of drug errors and potential harm to the patient. Coupled with the fact that nurse recruitment is facing difficulties, it is an additional tasks which the sometimes already stretched nursing staff have to do.
Planned Provision	Extending pharmacy medicines management directly to the patient's bedside and drug administration will free up nurse time. Technicians will be able to use their medication knowledge to ensure that doses are correctly given, that there are no missed doses, that administrations are correctly recorded. This will be due to the fact that the technician can focus on the task in hand without interruptions which nurses often encounter. Drug administration pharmacy technicians will work in conjunction with the ward clinical pharmacist to better ensure safe, timely and effective drug treatment. Pharmacy will take full and complete ownership of medicines management on the ward.
Scoping plans	A pilot project is currently being undertaken at Walsall Healthcare NHS Trust. Form January until end of March, a medical and a surgical ward have each been allocated technician resource. The first phase is to observe, followed by a period on supervised administration of oral medicines. Then, subject to competence sign off the technician will be able to administer oral medicines independently. This is sponsored at executive level by the director of Nursing and supported by Nurse Skills Development. At the end of the 3 month period, the pilot will be reviewed and an evaluation of the risks and benefits evaluated through the HPTP project board and the Senior Nurse Group.
Delivery plans	Following the pilot, if the benefits can be demonstrated, a financial and workforce model to support the extension of the project will be drawn up, along with a workforce and recruitment plan. For resilience and sustainability, it will be necessary to recruit adequate numbers of technicians.
Risks/issues and mitigation	Pilot does not demonstrate that pharmacy technicians can be sufficiently up skilled. A framework of accountability/supervisory with nursing structure needs to be agreed. Recruitment and retention of technicians may be a limiting factor. Expectations from nursing side need to be managed sensitively to avoid potential misunderstanding of the role. Governance and quality assurance needs to be in place in order to provide an adequate level of vicarious liability.
Financial impact (savings +/- costs)	Potential cost savings to be evaluated one the pilot proof of concept is established.

Title	g. PharmOutcomes
Aim	Joint Trust-Community Pharmacy interfacing across the BCA footprint using PharmOutcomes.
Project Lead	Gary Fletcher
Objective	To implement a fully integrated system of communication between each Trust's pharmacy and all participating Community Pharmacy providers in the BCA footprint. Collaborative working will reduce implementation and revenue costs.
Current Provision	Currently, there is no formal electronic centralised system for communicating with community pharmacies, other than by phone, FAX or email, which has issues of confidentiality and data protection.
Planned Provision	A fully integrated PharmOutcomes solution links with the hospital PAS system and provides a menu based messaging system out to community pharmacies and back to the Trust pharmacy. There are many possible uses for this system which could include (i) provision of discharge data to community pharmacy, (ii) requests for monitored dosage systems being made in a timely way, with sufficient information, (iii) the handover of pharmaceutical care to community to follow up as NMS or MUR – evidence suggests this has an impact on hospital readmissions. PharmOutcomes can be purchased as a single hospital or as a number of hospitals and the system has sites using both EMIS and Ascribe. Multi-site purchase cuts costs
Scoping plans	To be confirmed.
Delivery plans	Implementation plan to be agreed and delivered by PharmOutcomes. Plan will include as part of the process – CCG/Community pharmacy providers/Trusts.
Risks/issues and mitigation	There are no risks to the delivery of the project identified at this point. The risk to not doing the project rests with accepting the current situation for information flows between Trusts and Community Pharmacies.
Financial impact (savings +/- costs)	Initial indications are that the cost per single site is £3995+VAT. However, for additional sites the cost is £995+VAT. A capital saving for all four BCA sites of £9000. Further evaluation can be made of benefits accruing for (for example) reduces LOS due to MDS patients, and reduction in readmission activity.