

## **Clinical Stocks management utilising NHS Supply Chain systems**

### **Background**

Derby Teaching Hospitals Foundation Trust is an acute foundation trust located in the city of Derby in the East Midlands. The new Private Funded Initiative (PFI) Royal Derby Hospital was opened in 2010 and has 35 theatres, 1100 beds, day case services, outpatient suites, midwifery and paediatric services on site. A second site located on the site of the old Derbyshire Royal Infirmary has been upgraded and provides a limited number of outpatient facilities and 4 Care of the Elderly Rehabilitation wards.

Under the terms of a PFI the Trust has taken out a mortgage to pay for the new building, which is repaid on a monthly basis.

The 'Soft Facilities Management services' i.e. portering, catering, logistics, materials management, cleaning are contracted out to 'ISS world' who are an international company providing facilities management services across the globe.

As we are a PFI, Derby Healthcare PLC (DHC) oversees the operation of contracts with our third party suppliers such as ISS, Synergy Healthcare and Skanska.

As with others in the NHS the trust is under severe financial pressures and all systems and processes are being examined to identify where efficiency savings can be made in the non-pay budget in order to support the pay budget and continue to support staff to deliver first class healthcare. The Trust received a 'Good' rating from the CQC in the inspection which took place at the end of 2014 <http://www.cqc.org.uk/provider/RTG> the trust was commended for the quality of the care it gave.

### **Introduction**

The use of effective stock management systems have been identified as an area where efficiency savings can be made. This paper explores one of the approaches being used for ward based stock management systems. An alternative innovative scanning system is being introduced into our theatre suites.

The Trust contracts out its materials management service to ISS and this team looks after the orders placed with NHS Supply Chain (NHSSC) for ward consumables stock. It is a fully managed service and performance review meetings are held on a monthly basis. The monitoring of the service from the Trusts perspective falls under the remit of the Facilities General Manager.

One of the key result areas of my role as Clinical Procurement Specialist nurse was to identify opportunities where we could make savings from the NHSSC budget. The

trust spends approximately £8million annually with NHSSC on clinical consumables and stationary.

Along with representatives from ISS and DHC the Facilities General Manager and I developed a proposal to review the current materials management service, benchmark it against the terms of the contract and then re-design what we wanted the service to look like to meet the current needs of the Trust.

We decided to focus on the ordering system used by the majority of clinical areas. We excluded our theatre areas as they are introducing an alternative stock management system which provides patient level costing details.

We needed to identify the current systems being used in the areas, measure those systems against the contract, understand how the current systems had been developed in that area and then decide on a common approach to be implemented across the Trust. The key activity which identified this was the shadowing of the materials management team on every clinical area by members of the project team. We used a standard questionnaire and timed the team member whilst they generated the order for that clinical area. At the same time focus groups were set-up with sisters and housekeeping staff to understand their views of the current situation, explain the trusts position and give them the opportunity to put forward suggestions for improvement to the existing systems. A critical aspect of the focus groups was the presence of a clinical nurse from procurement to facilitate the group discussion as it gave the sisters and housekeeping staff the confidence that their clinical opinions would be listened to in discussions about changes in the operation of the system. An analysis was taken of the areas of spend with NHSSC to provide a financial baseline.

We identified that we had 67 clinical areas essentially ordering their clinical products from NHSSC 67 different ways. There was a lack of confidence in the service provided by the ISS team and the team did not feel valued by the organisation. Ward based housekeepers had taken it upon themselves to ensure that their own areas were stocked and to the best of their knowledge stocked with the correct quantities. We had ward sisters who took various levels of interest in the process which varied from being very involved in the management of stock levels and budget controls, to others who had no real involvement or understanding of what the process was on their ward or how they could influence it as budget holders. Many staff had no concept that we were customers of a service that ISS were contracted to deliver. The system was heavily dependent on product knowledge and quantities carried around in people's heads. After removing certain clinical areas from the rollout programme we were left with 49 areas to look at.

We developed an options appraisal, the executive summary of which is detailed in appendix 1. After consulting with NHSSC and reviewing the various ordering systems available to us we chose to go with their 'top-up' system. This system works

to an agreed stock level which cannot be manually overridden. If an area requires additional stock over and above their agreed stock level the order is placed via the NHSSC online ordering system. This allows us to audit the orders placed and use intelligent information to adjust the stock levels. It was identified that the current system is reliant on local knowledge of products and stock levels. This knowledge was often only known by the housekeeper and the allocated materials management operative for that area. Issues always arise when one or both of them were on leave. Top-up removes this element of variation as any member of staff who can operate the bar code scanner can generate the wards order.

### **Purpose of this Economic Assessment:**

To assess, both financially and qualitatively, the impact of the introduction of a uniform stock management system across a group of clinical areas within an Acute NHS Trust.

‘With the objective of delivering a flexible stock solution which provides reassurance that stock is available for patient care whilst providing robust financial controls’ (Project Outline Document DTHFT 2015).

All costs are true economic costs including both direct and indirect costs. The staffing costs are based on 2015’s agenda for change salary scales and have been adjusted to include on-costs. Consumable costs are based on 2015 NHS Supply Chain prices and are inclusive of VAT and delivery.

### **Focus of the Economic Assessment:**

This economic assessment is focused on the impact we have made on 49 identified clinical areas and their consumable spend via NHSSC. Cumulatively these areas spend approximately £4million per annum via NHSSC.

It will hopefully show that we have maximised the financial savings available to the Trust via NHSSC, as well as supporting the principles of the Trusts ‘For-ward project’. This project is aimed at identifying how nurses can increase their contact time with patients by ensuring the correct staff are involved in the ordering, delivery and putting away of stock.

A Pathway to Outcomes Model and a Stakeholder Matrix were completed as part of the economic assessment process (Appendix 2 & 3)

### **Project methodology:**

We formed a project steering group which consisted of:

- Trust
- Facilities General Manager
- Clinical Procurement Nurse Specialist
- Derby Healthcare PLC

- Assistant General Manager
- ISS
- Receipt and Distribution Manager

The steering group undertook the options appraisal and identified a ward to pilot the revised process on. The steering group identified what the success criteria were to be for the project.

1. A sustained reduction in the cost per bed of consumables spend
2. A reduction in the numbers of online orders (ad hoc) placed in addition to the weekly order
3. A reduction in the amount of time spent by the materials management team creating the order
4. A reduction in the amount of time spent by the ward teams preparing the order
5. Housekeepers to spend less time 'walking' the corridors trying to find stock
6. Reduced anxiety levels about what was going to be ordered if the Housekeeper or the materials management operative allocated to that ward was on leave

The pilot ward was chosen as I had worked closely with that ward when we rolled out 'Releasing time to care' across the Trust and I knew the housekeeper had maintained the principles of the Well Organised Ward Module. We piloted top-up for 12 months on ward 402 and monitored the results both financial and qualitative every 3 months. As we saw a reduction in spend per bed day it was decided to roll 'top-up' out across the Trust.

Following the pilot it was identified that additional dedicated resources were required from both ISS and the Trust. The trust decision was to appoint 0.6wte additional nurse to the project team initially for 6 months to support me in the rollout of the project such was the need to be seen to retain clinical control of the project. Following the initial 6 month contract the 2<sup>nd</sup> specialist nurse post was made substantive. ISS allocated 0.58wte out of the materials management team leaders' role to support the project.

An initial roll-out plan was made with the aim of moving all 52 areas to top-up over a 6 month period. This has been frequently revised and due to the various delays which happen with any project we are now looking at an 18 month roll-out plan.

The involvement of myself and the project nurse in the process was seen as vital in gaining clinical engagement right through the nursing structure from the Chief Nurse

through to the ward teams. We could articulate the process in their language, listen to and debate their concerns as nurses who have been budget holders and ward leaders. We both have extensive experience of working in the organisation and understand how the organisation functions as well as the wider NHS agenda. We are there to support the ward teams to work differently and put them back in control of the processes in their clinical areas. It transpired that as we began the roll-out of this piece of work the Chief Nurse and her Deputy were looking at models of care and different ways of working on the wards. The underlying principle of their piece of work was to increase patient contact time by reviewing who carried out what tasks on a ward and who the appropriate person to carry out the task was. This has become known as the 'For-Ward' project and at the feedback from the 3 pilot wards ward storage and availability of the correct products was identified as being a contributing factor to allowing nurses to increase their contact time with patients.

We developed a process which every ward follows when starting on the top-up journey; this has changed and developed as we have listened to feedback from areas. Our original estimation of the time needed in the set-up phase from working with our pilot ward has not altered that much.

### **Evaluation framework**

We have developed an evaluation framework whereby we use the 'cost per patient per bed day' as our basis for comparison. We compare cost per bed day on a monthly basis pre and post the introduction of top-up. This has been signed off by the Director of Finance as a suitable methodology for evaluating the success of project top-up.

The cost per bed day is calculated by looking at the total consumable spend for the month divided by the total number of occupied bed days on the ward. This cost does not include staffing costs and is based on the true cost of the consumables purchased from NHSSC. NHSSC prices include VAT and delivery costs.

### **Initial Set-up costs (appendix 4):**

This includes the membership of the steering group, project team resources, input from the finance department. The steering group has developed from the original task and finish group which initially met weekly. The group now meets on a fortnightly basis and this will be subject to review once the work has moved from the project stage to the 'business as usual' stage.

### **Ward set-up costs for 49 wards (appendix 4):**

In order to set the process up on each ward we defined the time required for the first 3 initial meetings.

At the first meeting the concept is introduced to the ward senior sister and modern housekeeper. It is important for the senior sister to engage with the process, as part of the contractual review process requires the senior sister to 'sign-off' the ward catalogue. The senior sister/charge nurse is also the budget holder for the ward. When undertaking the options appraisal we found that many sisters were not fully engaged with this process as they saw it as cumbersome and not a meaningful exercise. At this first meeting a report that details what the ward has purchased over the past 12 months is presented with suggested maximum stock levels. The project nurse prepares this report prior to the meeting and takes it as an opportunity to undertake a review of the products purchased and ensure all standardised products are in the catalogue. This ensures that the Trust can maximise the rebates and discounts available via NHSSC.

The ward team are asked to review the stock levels in preparation for the second meeting.

At the second meeting the stock levels are agreed between the senior sister/charge nurse, the housekeeper and the project nurse. This meeting is used as a check and challenge exercise, the project nurse is able to offer clinical advice re the products. Once the levels are agreed the computer system is up dated by the materials management team leader to reflect the new stock levels. These levels are formally reviewed once the ward has been live on the system for 3 months.

The third meeting is between the materials management team and the housekeeper to agree stock locations and to label the shelves accordingly.

## Case Studies

As no two clinical areas are identical, I identified 3 wards which I believe to be representative of the range of outcomes achieved from introducing the new system. I will include an economic assessment of the process they were using prior to the introduction of top-up and the impact of the introduction of top-up both financially and qualitatively.

### Ward 301

An 18 bedded young adult neurological rehabilitation ward where the patients have complex needs. The housekeeper requested that the ward be one of our early implementer wards. It is a ward where the senior sister is actively engaged in the management of her stock and she is fully engaged with the project concepts. One of her junior sisters was nominated to be our main contact and the senior sister identified that in the housekeeper's absence the Healthcare Assistants would support and put away the delivery.

Prior to the introduction of "top-up", the team were spending a total of 408 hrs pa on the stock management process at a cost of £5,007.59 pa. Post "top-up" this has reduced to 99hrs pa at a cost of £1210.19pa and the cost per bed day has on average reduced by £1.45 per patient per bed day.

When additional stock is required, either due to activity or the electronic data capture (edc) order being incorrect, the wards raise what is called an 'ad-hoc' order which is entered separately by the materials management operative after the edc order has been processed.

In the 11 months prior to top-up the ward submitted 267 ad-hoc orders and since the introduction of top-up they have submitted 108 ad-hoc orders which is a 40% reduction

Reported benefits from the ward team and the Materials Management team:

1. Not running out of stock and labelling the shelves ensures the stock is put away correctly
2. Less time being spent preparing the order so more contact time available to spend with patients
3. Delivery all comes on the same day and is smaller. Less NHSSC cages taking up space on the wards and corridors.
4. On arrival the materials management operative doesn't have to wait for the prepared order and spends less time entering ad-hoc orders post the edc read.

5. A stationary catalogue has been developed in conjunction with the revised clinical products catalogue and this has reduced the amount and variety of stationary being ordered by the clinical areas.
6. The catalogue is now 'live' and the time taken to undertake the review process has reduced – this is a requirement of the contract.

### **Ward 304**

A 28 bedded gastroenterology ward.

This ward was chosen as it was a ward where the senior sister was actively engaged in the development of her weekly order and managed the budget very tightly. It was seen that to generate a saving on this ward would challenge the underpinning ethos of 'top-up'. We also wanted to identify if top-up could free up senior sister time and give nursing time back to the ward.

The housekeeper spent a lot of his time going from ward to ward 'borrowing' stock. Within top-up we have included a process whereby if a ward needs stock at short notice the staff makes use of the information available from the stock management system. This system is accessed via the materials management team leader who can tell at a glance where stock could be borrowed from and then she arranges for either the transfer of the costs or the 're-payment' of the stock. The housekeeper should then be able to spend more time on the ward.

Prior to the introduction of top-up, the team were spending a total of 452 hrs pa on the stock management process at a cost of £7841.93 pa. Post top-up this has reduced to 126hrs pa at a cost of £1533.09 and the cost per bed day has on average reduced by £1.24 per patient per bed day.

When additional stock is required, either due to activity or the edc order being incorrect, the wards raise what is called an 'ad-hoc' order which is entered separately by the materials management operative after the edc order has been processed.

In the 9 months prior to top-up the ward submitted 63 ad-hoc orders and since the introduction of top-up they have submitted 35 ad-hoc orders which is a 55.5% reduction

Reported benefits from the ward team and the Materials Management team:

1. Easier to see where stock should be put away due to the clear labelling of shelves
2. Senior sister now has no involvement in the ordering process as she is confident in the process. This has given her back time to spend on other



duties. She doesn't have to worry when the housekeeper is off as she knows the order will come and be correct to her stock levels.

3. Modern Housekeeper spends more time on the ward attending to ward based tasks. Previously he spent a lot of time walking the hospital corridors looking for additional stock. This has been feedback to the project team by other housekeepers.

## **Ward 406**

A 28 bedded care of the elderly ward.

This ward was chosen as the senior sister maintains a 'hands-off' approach to the development of the order. This ward was the pilot ward for 'Releasing time to Care' and the housekeeper has maintained the standards introduced following the implementation of the 'Well Organised Ward' module.

The ward carries low stock levels and is seen as an example of a well-run stock management system. The challenge for us was to see if we could improve on what was considered to already be good.

At the start of the process the senior sister did not see why she needed to be involved as to date her only involvement was if the budget statement was showing an overspend or if the stock needed to be put away on delivery day. She was however persuaded to take part in the catalogue review process as we explained then she wouldn't have to undertake a formal one for at least another 6 months. Her input was valuable as the housekeeper did not feel empowered to make decisions about stock levels or the removal of certain items from the catalogue.

Prior to the introduction of top-up, the team were spending a total of 124hrs pa on the stock management process at a cost of £1517.80pa. Post top-up this has remained the same. The cost per bed day over the 9 months of the project has increased by 8p. However, for 6 months out of the 9 the cost per bed day has decreased. In July 2015 the cost per bed day rose but on analysing their monthly spend it can be seen that there was a one off purchase of an expensive piece of kit from NHSSC and 2 adhoc orders were placed for one product which would suggest an increase in the acuity of the patients on the ward. September 2015 also saw an increase in the cost per bed day but it can also be seen that there was an increase in the number of patients admitted that month.

When undertaking a comparative analysis of the same time period for the ward in 2013 a downward trend is seen in the cost per bed day over the 3 financial periods

When additional stock is required either due to activity or the edc order being incorrect the wards raise what is called an 'ad-hoc' order which is entered separately by the materials management operative after the edc order has been processed.

In the 9 months prior to top-up the ward submitted 55 ad-hoc orders and since the introduction of top-up they have submitted 51 ad-hoc orders which is an 8% decrease.

Reported benefits from the ward team and the Materials Management team:

1. Housekeeper reports that she now has more time to spend on patient facing duties
2. The time the housekeeper spent preparing the order is now spent decanting stock out to the areas where the nurses can access the stock.
3. The main change on this ward has been the fact that the materials management operative goes round the ward unaccompanied rather than with the housekeeper.
4. The Housekeeper used to double order prior to her holidays but this practice has now stopped.

## Benefits to the various Stakeholders

Referring back to the primary objective of the project:

'With the objective of delivering a flexible stock solution which provides reassurance that stock is available for patient care whilst providing robust financial controls'  
(Project Outline Document DTHFT 2015)

It can be seen from the pathways to outcomes model (appendix 2) that there have been various benefits delivered to the stakeholders identified in the Stakeholder matrix (appendix 3).

### Internal

Trust strategic level:

At a corporate level the project has delivered both financial and time saving benefits for the organisation. To date (Dec 2015) the project is live in 39 out of 49 areas and we have financial data on 17 areas. Financial data is compiled once an area has been 'live' for a full 3 calendar months. This is then followed up with a full catalogue review at 3 months post implementation.

Financial savings have been identified in the NHSSC budget of which this project is one of many factors. NHSSC have themselves generated savings by price reductions and we have generated savings by changing supply route for some products.

If we take the average saving per bed day across the 3 case studies wards of £0.87 and multiply that by the total number of occupied bed days within the Trust from Jan 15 – December 15 the potential savings from the project could equate to £275K

Ward	Cost per bed day pre	Cost per bed day post	Difference
301	£6.91	£5.46	-£1.45
304	£6.94	£5.71	-£1.24
406	£7.85	£7.93	£0.08
		Average saving	£0.87

Any savings made within the non-pay budget contribute to protecting the pay budget and the jobs of frontline staff. Ultimately this has to contribute to patient safety and the reputation of the Trust.

Less stock is going out of date as the storage bays on the shelves are designed to hold the maximum number of units for that product. Stock rotation has also improved.

The ISS team have also reported a reduction in the numbers of items being returned to NHSSC as fewer errors are being made in the ordering process since the introduction of top-up.

Ward teams:

The ward teams feedback that the storerooms are tidier and the labelling makes it easier to find and put stock away. The practice of double ordering because the housekeeper was going on leave has stopped and this has contributed to keeping the storerooms tidier, ward sisters have reported that do not have to worry about what stock will be delivered when the housekeeper is on leave.

Double ordering also led to over stocking in storerooms and stock being put away somewhere else as staff put the stock away in the housekeepers absence, with the potential for it being forgotten about and hence going out of date or being reordered when the housekeeper returned from leave. Double ordering also affected the accounts process as finance would not be forewarned that an area was putting in a large order.

One ward where the housekeeper is on maternity leave are managing their stock themselves where as previously another housekeeper would have had to provide support, spreading themselves between 2 wards.

Senior sisters have become more engaged in the process and embraced the new 'live' catalogue system. The contract still requires a formal 6 month catalogue review but the process is now streamlined and time required halved.

As the wards weekly orders are generally smaller, we have seen a reduction in the number of 'cages' which deliver the stock being delivered to the wards. This has resulted in less empty cages filling the hospital corridors.

Various comments have been received from housekeepers and senior sisters when undertaking a formal 3 month review of the process.

Comments include from housekeepers

"I have had to eat my words I really like it. I was not happy about moving to this system"

"love it, really like it"

"hard to let go at first, felt I had lost control"

“first time I’ve had a holiday and not received texts asking where can they get stock from. When I came back from holiday did not have to spend the first day running round the Trust trying to find them stock”

“less borrowing going on”

“my delivery is smaller and I have less delivery cages taking up space in the corridors”

Senior sisters

“much better over the Christmas break, didn’t run out of anything nor did we seem to have as much extra stock”

“Don’t want to go back to the old system”

“We have less stock on our shelves but haven’t run out of anything”

“Don’t even realise mat man is here doing the order”

ISS:

The ISS operatives like the system as it is based on them counting the available stock located in its allocated stock location and entering the level in to the electronic handheld scanner. The system then automatically calculates how many units of product to order to reach the agreed stock level. The system is reliant on the ward staff putting the stock away in the correctly labelled locations. If staff has put stock away in the wrong location then there is the potential for too much stock to be ordered, however the ‘blame’ for over ordering can no longer be placed on the ISS operative as they cannot override the handheld scanner.

The ISS operatives can also complete their reads a lot quicker as they are not waiting for housekeepers to go round with them or waiting for ‘shopping lists’ of products to be passed to them. The operatives have become knowledgeable about their wards and the stocks held; previously many wards did not allow the operative past the reception desk. Every ward is set-up using the same principles which means that anyone who can operate the handheld can undertake the read. Previously problems were encountered when they covered each other’s wards and this did nothing to encourage the staff’s faith in the system.

## **External**

As an organisation ISS have supported the project and see that the project’s success will help them when bidding for contracts with other organisations as they have proven that they can deliver an effective Materials Management service. To date Derby is the only site where ISS deliver this service. Derby Healthcare PLC have monitored the implementation of the project to ensure both parties remain in

the terms of the service contract. They have seen the benefits to the Trust of an improved service and the cost savings generated.

By using the NHSSC ordering systems we have delivered a replicable system which can be delivered in any healthcare setting.

The project was identified on the Trusts Transformation plan and has therefore formed part of the organisations Cost improvement Programme for Monitor. The trust is seen as being proactive in its stock management systems and this has been acknowledged at National levels. Alongside the NHSSC system we have a separate project team implementing a system called hTrak (appendix 6) which manages the stock purchased via our e-procurement system.

The results achieved so far from this project have been shared with other Trusts via the Clinical Procurement Specialist Network of which both clinical procurement nurses are members. The outcomes have also been shared and included in joint national presentations with the Royal College of Nursing.

From the supplier's perspective, whose products we buy from NHSSC, we have been able to take advantage of product rebates and discounts offered as we have a system which allows us to easily monitor and control what products are ordered. Rebates from NHSSC account for approximately £300K of our annual CIP target for the procurement team.

## Conclusion

The project has taken longer than originally scheduled as the aim was to complete the rollout within 6 months to coincide with the length of the secondment of the project nurse. This would require 4 wards per week going live. However, it soon became apparent that this was an ambitious timeline and in fact a realistic time line is one clinical area per week. In some cases where the ward team had better engagement we have managed 2 clinical areas per week. The appointment of the project nurse to a substantive post at the end of the 6 month secondment has allowed us to work at a more realistic pace and complete a more thorough implementation of the project. This project has shown the value of having nurse's within clinical procurement and that by being experienced senior nurses we can support our clinical colleagues and non-clinical support staff through a fundamental change in a system.

During the project we have seen collaborative working between a third party provider to the Trust (ISS) and Trust staff. Relationships have improved, on the wards which have gone live and after the initial teething issues, staff report that they have more confidence in the ISS service. The ISS operatives report improved job satisfaction and now feel that they are part of the ward teams and respected for their product knowledge. The trust project team have also successfully nominated the ISS team for ISS team awards known as GEM (**G**oing the **E**xtra **M**ile).

Financial savings have been identified within the NHSSC budget and using the cost per patient bed day as a measure we have also seen a reduction in cost per bed day. However, is difficult to extract exactly how much of these savings can be attributed to the project introducing a more efficient system to the wards and how much is due to NHSSC reducing their prices in line with direction from the Department of Health.

Storerooms are better organised and the Trust is now looking to invest in better storage systems and shelf labelling systems. One of the wards that piloted the 'For – Ward' project has been selected to pilot an alternative storage system.

## The Future

We are now planning to implement the NHSSC top-up system on our other site which consists of 3 Care of the Elderly Rehabilitation Wards and the relocation of ward 301 from the Royal Derby Site. 301 are acting as champions for the system on our other site as they requested that when they moved in November 2015 they wanted to transfer on top-up and not revert to the 'shopping list' approach.

Following the move of 301 to our other site the 3 remaining wards are now asking when they can go on to the top-up system. The plan is for these 3 wards to be live by the end of August 2016. This will mean the project has taken in total 2 years to rollout across the Trust.

The project nurse is now leading a similar project with our other main supplier of consumables to the ward areas – Synergy Health. She has adopted the same project methodology and is working to review and establish maximum stock levels for Synergy products.

Once both pieces of work have been completed then the project steering group will cease to function.

Monitoring of compliance will continue via the 6 month catalogue review process, the performance review meetings and the financial reports available from NHSSC.

*This case study was completed by **Stephanie McCarthy**, Procurement Specialist Nurse; Clinical Procurement, Derby Teaching Hospitals NHS Foundation Trust in **December 2015**.*

*Stephanie successfully completed a collaborative learning programme designed to empower nurses to understand, generate and use economic evidence to continuously transform care. The programme was delivered by the Royal College of Nursing and the Office for Public Management, funded by the Burdett Trust for Nursing and endorsed by the Institute of Leadership and Management.*

You can contact Stephanie by email [Stephanie.mccarthy1@nhs.net](mailto:Stephanie.mccarthy1@nhs.net).



## **MATERIALS MANAGEMENT SERVICE**

### **RAPID REVIEW OPTIONS APPRAISAL – OCTOBER 2012**

#### **Executive summary**

A Materials Management service rapid review group was set up at the beginning of August 2012 to explore options for improved NHS Supply Chain ordering systems for the Royal Derby Hospital (RDH) and the London Road Community Hospital (LRCH) and provide recommendations for the transformation of the service to support the Trust's finance and procurement strategy principles of Best Care Best Value and in accordance with best practice guidance – NHS Standards of Procurement, published in May 2012 which details the key role procurement can play in the delivery of Quality, Innovation, Productivity and Prevention (QIPP).

Membership of the rapid review group included representatives from DHFT Facilities Management, DHFT Procurement, DHC and ISS.

The Materials Management Service at the Royal Derby Hospital forms part of the contracted out PFI Soft Facilities Management service specifications currently managed by ISS. The service primarily encompasses the ordering, receipt, distribution, stock management and return of edc products via E-DC and on line ordering.

#### **Types of Ordering Used**

1. **EDC** – 3 systems available all utilising a barcode scanner
  - a. **Manual**
  - b. **Automatic**
  - c. **Top-up**
  - d. **Online**
2. **Online** – same as undertaking a supermarket style shop
3. **Stationary** – ordered on an ad-hoc basis **via the online system**

#### **Other processes explored**

Ward Storerooms and utilisation of space  
Processing orders  
Catalogue reviews and updating  
Product masking and the impact of product standardisation  
Delivery and Distribution of goods  
Product returns  
Operational performance and feedback

#### **End User involvement**

This was achieved by sending out a questionnaire to every ward and department about the current service.

Every area that had an EDC read was then visited and an observational study was undertaken of the process including methods used and time taken in the area developing the order using the bar code scanner.

A focus group was then brought together and the merits of the differing EDC systems debated. Online ordering was also presented.

The findings of the group were then brought together and presented to the Trusts Transformation group and Clinical Products Advisory Steering Group.

**Other sources of information:**

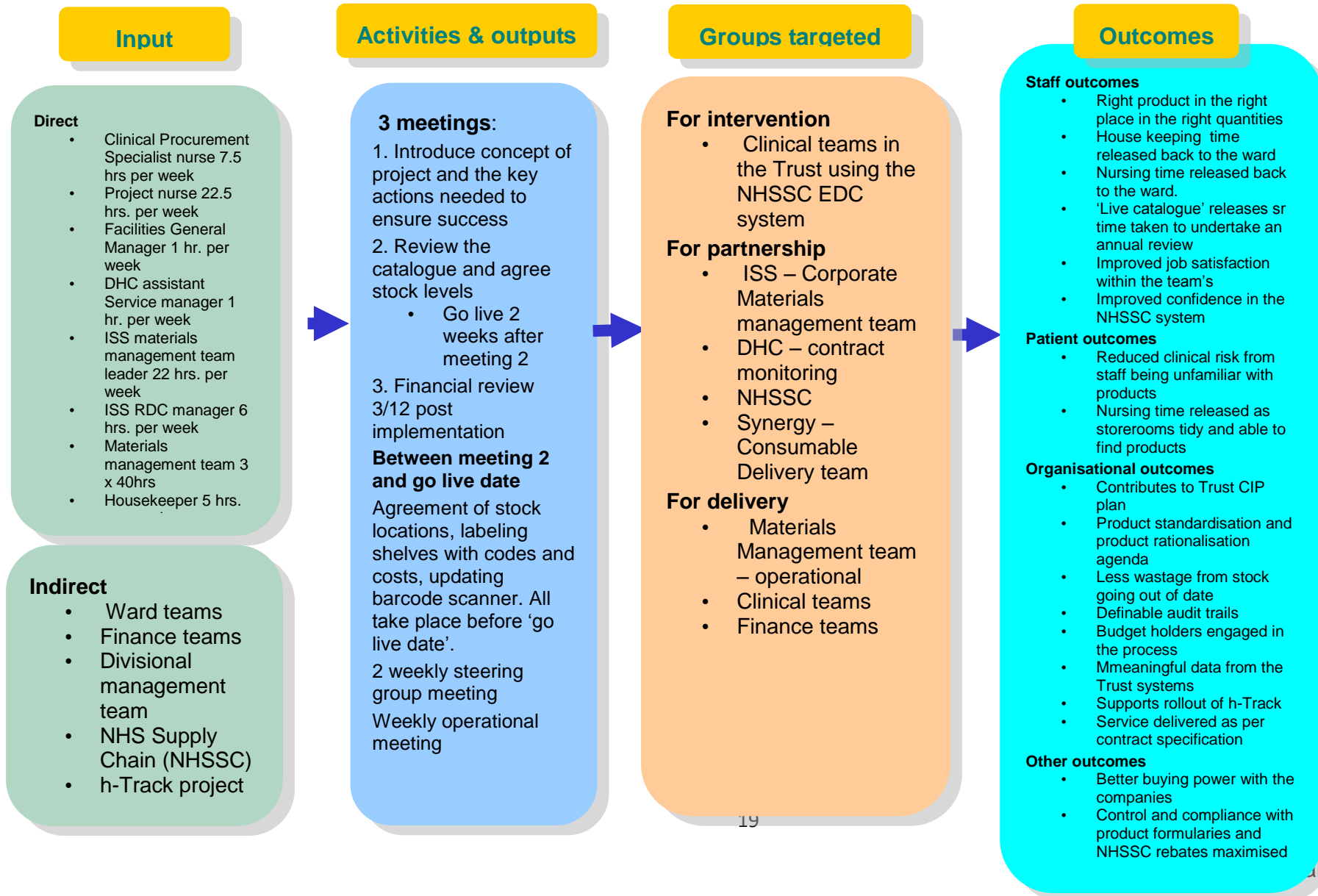
Discussions with NHSSC to understand the key specifications and benefits of each EDC system

Site visits to other Trusts using Top-up and automatic

External questionnaire to other Trusts asking about their Materials Management service.

**Conclusion:**

The focus group opted for Manual or online as their preferred ordering systems. The review group felt that both these systems are labour intensive and require input from ward staff. Both have the potential to fail in the absence of key staff. One of the original objectives was to come up with a system which was not reliant on key personnel. Therefore the rapid review group have decided to pilot the 'top-up' system and if successful then top-up will be rolled out across the Trust. This will be accompanied by the introduction of online ordering to specific areas such as small clinical areas and areas whose function is mainly administration.



**Stakeholder Matrix**

**DIRECT**

<p>Ward/department teams: Nurses, Housekeepers, Receptionists          General Manager Facilities Management          Procurement Team          Corporate Division Finance team          ISS – Materials Management team          Synergy Healthcare – Central Distribution Team          h-Track implementation team</p>	<p>ISS – Senior Management Team          Synergy Healthcare – Senior Management Team          Derby Healthcare PLC          NHS Supply Chain</p>
<p>Divisional Management teams: Finance leads, Nursing leads, Divisional managers          Medical Teams          Allied Health Professionals          ISS – Delivery team          Synergy Healthcare – Delivery team          Patients          Trust Board</p>	<p>Monitor          Company Representatives</p>

**INTERNAL**

**EXTERNAL**

**INDIRECT**

## Set-up costs

Steering group	Calculated over the 17 months of the project roll-out		
Chair	2 hours per fortnight	£2,159.38	Trust
Deputy Chair	2 hours per fortnight	£1,806.69	DHC
ISS Receipt and Distribution Manager	6 hours per week	£8,817.93	ISS
Clinical Procurement nurse specialist	7.5 hrs per week	£12,546.91	Trust
Project nurse	0.6 wte	£42,653.07	Trust
ISS materials management team leader	22hrs per week	£19,813.46	ISS
Finance representative	1 hr per ward (based on 49 wards)	£1,112.30	Trust
Secretarial support	3 hours per fortnight	£843.56	Trust
Total		£89,753.30	

Ward set-up costs	Calculated over the 49 identified areas		
Senior sister	4 hrs x 49 = 196 hrs	£4,420.24	Trust
Modern Housekeeper	4 hrs x 49 = 196 hrs	£2,211.32	Trust
Printing of requirement report (catalogue) x49	2 reams of paper	£4.24	Trust
Starter kit for each ward x49	1 ream of paper	£2.12	Trust
Shelf labels	2 packs of 250 labels	£364.32	Trust
Total		£7,002.24	

This includes the time commitments required by the ward team to the initial project process, the materials management team and the project nurse costs are included in the calculation above

## Direct ward costs

## 301: Pre the introduction of top-up

Staff role and grade	Time	Annual Salary Cost (including add-ons)	
Band 2 Healthcare assistant	168 hours per annum	£1,710.20	Trust
Band 5 Registered nurse	116 hours per annum	£1,779.59	Trust
Band 3 Modern Housekeeper	92 hours per annum	£1,124.75	Trust
Band 2 ISS operative	26 hours per annum	£238.63	ISS
Band 7 Senior sister	6 hours per annum completing catalogue review	£154.42	Trust
<b>TOTAL</b>	<b>408 hrs per annum</b>	<b>£5,007.59</b>	

## 301: Post the introduction of top-up

Staff role and grade	Time	Annual Salary Cost (including add-ons)	
Band 2 Healthcare assistant	12 hours per annum when Housekeeper on leave	£122.15	Trust
Band 5 Registered nurse	12 hours per annum when Housekeeper on leave	£184.09	Trust
Band 3 Modern Housekeeper	46 hours per annum	£562.38	Trust
Band 2 ISS operative	26 hours per annum	£238.63	ISS
Band 7 Senior sister	4 hours per annum	£102.94	Trust
<b>TOTAL</b>	<b>99 hrs per annum</b>	<b>£1,210.19</b>	

## Financial review

Top-up when live on 301 in November 2014 therefore NHSSC spend data available for 11 months, presented as totals for the 11 months.

Bed days pre	Spend pre	Cost per bed day pre	Bed days post	Spend post	Cost per bed day post	Difference (represents a saving)
5996	£41421.61	£6.91	6458	£35277.13	£5.46	£1.45 per bed day

### 304: Pre the introduction of top-up

Staff role and grade	Time	Annual Salary Cost (including add-ons)	
Band 7 senior sister	192 hrs per annum	£4,941.55	Trust
Band 3 modern housekeeper	230 hrs per annum	£2594.99	Trust
Band 2 ISS operative	30 hrs per annum	£305.39	ISS
<b>TOTAL</b>	<b>452 hours per annum</b>	<b>£7,841.93</b>	

### Post the introduction of top-up

Staff role and grade	Time	Annual Salary Cost (including add-ons)	
Band 7 senior sister	4hrs per annum	£102.94	Trust
Band 3 modern housekeeper	92 hrs per annum	£1,124.76	Trust
Band 2 ISS operative	30 hrs per annum	£305.39	ISS
<b>TOTAL</b>	<b>126 hrs per annum</b>	<b>£1,533.09</b>	

## Financial review

Top-up when live on 304 in March 2015 therefore NHSSC spend data available for 9 months, presented as totals for the 9 months.

Bed days pre	Spend pre	Cost per bed day pre	Bed days post	Spend post	Cost per bed day post	Difference (represents a saving)
7382	£51253.37	£6.94	7427	£42378.40	£5.71	£1.24 per bed day

#### 406: Pre the introduction of top-up

Staff role and grade	Time	Annual Salary Cost (including add-ons)	
Band 3 modern housekeeper	92 hrs pa	£1,124.75 pa	Trust
Band 2 ISS operative	26 hrs pa	£238.63 pa	ISS
Band 7 Senior Sister	6 hrs pa	£154.42 pa	Trust
<b>TOTAL</b>	124 hrs pa	£1,517.80	

#### Post the introduction of top-up

Staff role and grade	Time	Annual Salary Cost (including add-ons)	
Band 3 modern housekeeper	92 hrs pa	£1,124.75 pa	Trust
Band 2 ISS operative	26 hrs pa	£238.63 pa	ISS
Band 7 Senior Sister	6 hrs pa	£154.42 pa	Trust
<b>TOTAL</b>	124 hrs pa	£1,517.80	

#### Financial review

Top-up when live on 406 in April 2015 therefore NHSSC spend data available for 9 months, presented as totals for the 9 months.

Bed days pre	Spend pre	Cost per bed day pre	Bed days post	Spend post	Cost per bed day post	Difference (represents a saving)
7390	£57999.89	£7.85	7441	£59023.08	£7.93	0.08 per bed day



**hTrak**

hTrak is a barcode scanner system for use in surgical theatres. The devices are used to track the medical equipment used, time taken and staff needed for each operation undertaken at the Royal Derby Hospital.

The technology to scan stock barcodes is available in many hospitals across the country. But Derby is the first Trust to combine the system with the barcodes which appear on wristbands worn by patients during their hospital stay. These barcodes identify the patient and allow the software to create a record of each patient's operation. This record shows which staff were in theatre during the procedure, how long the operation took, precisely what equipment was used and how much it all cost. The software then automatically re-orders the used equipment, according to pre-set stock limits. This has led to stock-taking procedure time being reduced from two days to half a day. The scanner also flags up if any equipment is out of date, improving patient safety. Since its introduction in March 2014, the technology - developed by a team of consultants, finance, procurement and theatre staff, has saved the Trust £10,000 a month.



(Healthcare Finance Oct 2014 pages 12-14)