Ward stock replenishment:

Developing a future state to ensure right product in right place at the right time

Nick Holding and Sally Hodson, Improvement Team, Shrewsbury and Telford Hospital NHS Trust

Problem

Staff in clinical areas do not always have, or can not find, the right product at the moment they need it. This leads to time being wasted looking.

Stock replenishment is not responsive to need and leads to overstocking in some cases, and stock outs in others.

Spend on clinical supplies is inconsistent. Overall, we need to reduce non pay expenditure.

Scope

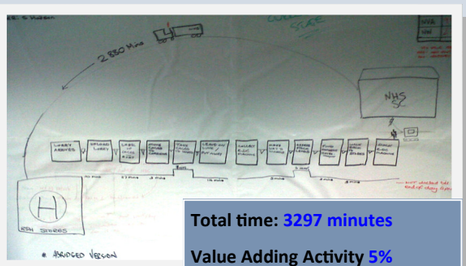
Clinical products which are used in wards, operating theatres and clinical departments across Royal Shrewsbury Hospital and Princess Royal Hospital. Predominantly supplied by NHS Supply Chain, with additional products provided direct from other suppliers.

Background

A trial was carried out between October 2011 and May 2012 of daily replenishment of a number of products to wards, operating theatres and clinical departments at Royal Shrewsbury Hospital, from a central store. (Stock Control Centre)

Current State

Stock is supplied to wards and departments on a 1 week top up. eDC operatives attend 'installations' once a week collecting ordering levels from a variety of sources, including set lists, hand written notes, visual observations and verbal conversations with ward Housekeepers Stock replenishment levels are historical and based on Housekeeper instruction. No visual aids, such as a 2-bin approach, 'order lines' or 'Kanban' are currently used.



Total time: 3297 minutes

Value Adding Activity 5%

Non-Value Adding Activity 95%

Orders are collated using the eDC device, and docked at a central PC once all data has been collected. Stock is delivered with a 2 day lead time direct from NHS Supply Chain.

Minimal central warehousing exists and is only available for a limited number of 'non-stock' products. The warehouse at the Royal Shrewsbury Hospital is recognised as one of the largest in the West Midlands, and the stores function currently operates Monday – Friday 8.00am – 4.00pm

Stock room layout is inconsistent, with little or no visual signage to show product, replenishment levels or value. No obvious prompt to show how much needs to be ordered. Critically, it is not obvious if the product is in date.

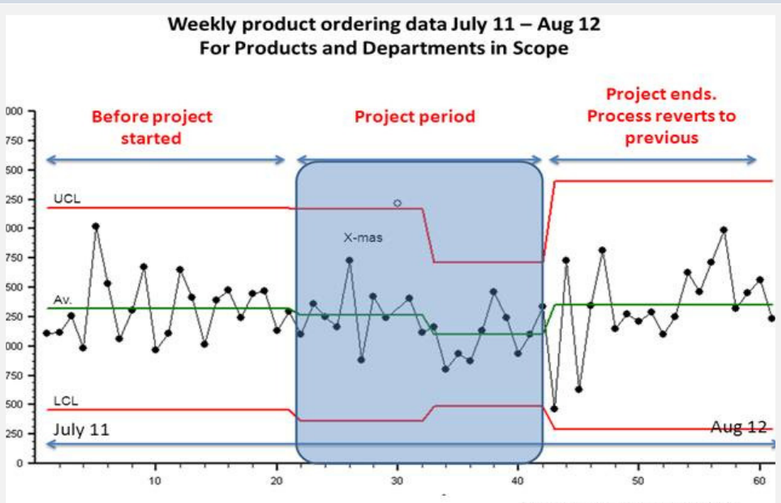
Wards and department have multiple stockrooms which are used to hold a variety of products. On average, these stockrooms are holding 4 weeks of stock at any one time, with approximately 400 different products in stock.

We currently expect ward housekeepers to forecast in advance what products, and to what level, the ward is likely to need for the coming week. This is effectively an inefficient **push system** rather than a more reliable **pull system**. This leads to over-ordering and excess stock in some cases, and under-ordering and stock outs in others.

Testing the concept

Between October 2011 and May 2012, a trial was carried out to test the concept of daily replenishment of a limited number of stock items to a number wards, operating theatres and clinical departments. The number of product lines increased throughout the trial, to a maximum of 30 lines at the end of the trial.

Results show a decrease in spend variation, and a decrease in mean spend during the trial period. Results also show the effect following the completion of the trial and the return to the current state.



Builiding the infrastructure to succeed

The Stock Control Centre

Located within the existing Central Stores area at the Royal Shrewsbury Hospital, the Stock Control Centre (SCC) is a central resource established to redefine the way stock is processed in the Trust. It aims to:

- Provide significant improvements in stock control and management.
- Reduce inventory levels in wards and departments
- Reduce value of stock held in wards and departments
- Buy in large volumes, benefiting from improved pricing.
- Provide a stock holding area for less frequently used, high value items, but which are required in all areas.
- Through intelligent management reports, the SCC is able to provide local budget holders with monthly records of product usage, and comparisons against previous months.

5s local store rooms

Through daily replenishment of products, inventory levels reduced considerably, **releasing up to 50%** of storage space. This gave an opportunity to 5s these areas, which included labelling all shelves with product details including bar-code, min/max levels and unit price.


Before

Shelves are colour coded by product group i.e. red = IV and blue = respiratory, making identification easier and quicker.


After

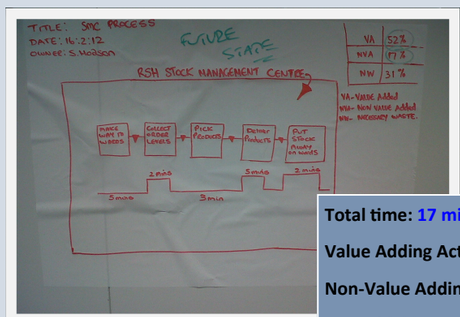
Releasing time to patient care

In the current state, housekeeping staff spend around 3 hour per day dealing with supplies issues. During the trial, this was reducing by half, freeing up their time to support patient care and ensure a clean and tidy work environment. There were **zero** reports of stock outs during the trial.

Future State

The proposed future service model will provide a highly innovative supply chain process which reduces costs and removes waste. This will be achieved by:

- Daily delivery of stock into wards, operating theatres and clinical departments



Total time: 17 minutes

Value Adding Activity 52%

Non-Value Adding Activity 17%

Unavoidable waste 31%

- Setting clear minimum and maximum stock levels so re-order quantities are clear
- Reducing inventory levels by half
- Establishing a theatre replenishment system based on activity
- Introducing real-time visual usage reports