

37% Reduction in Linen Expenditure – Chesterfield Royal Hospital



The Challenge

The estates team at the Chesterfield Royal Hospital wanted to apply Lean principles to re-design their processes. In doing so generate benefits for the patients, staff and the Trusts' financial position. The team also wanted to use their work as an example of what can be done and form an internal improvement resource for the Trust.

The task for Alturos was the development in Lean Thinking the cohort of "Change Agents" and then support then in achieving this aim.

The Process

1 Enablement and Empowerment

In developing internal capability - and the first steps in Lean skills and knowledge – fifteen of the estates team staff went through a three day training session in the essentials of Lean. The cohort gathered knowledge in not only the technical aspects of process re-design but also the vital change management and 'soft skills' for project success.

Then, as part of process analysis and opportunities for process redesign, the training was applied in a Process Mapping Investigation (PMI). The output from this was a redesigned or 'Future State' process.

With this emerged the specifics of enabling projects and actions required in realising the benefits of the desired Future State. In delivering the Future State and its results, the team was supported by Alturos and guided along the journey with planned review sessions with associated actions in between. Individual and tailored support was given for Change Agents. This created sustainability and developed specific skills for the Change Agent roles.

2 Creating a Baseline for Improvements : Analysis of the Current Process

Before the process could be redesigned a clear understanding of the current process was required. The team walked the process and listed all of the steps, and the sequence of these steps. The team assessed the value of each of the steps listed.

Value Assesments			
Linen			
Type	Steps	Min Time	Max Time
VA	19	298	418
ENVA	16	239	508
NVA	80		
Total Min time		537	
Total Max time		926	
%s	%VA Steps	16.52%	
	% VA time - Min	55.49%	
	% VA time - Max	45.14%	

As this was a distribution process, it was discovered that much of the activity added little in value to patients, staff or the Trust.

The team recognised that in providing the laundry function of clean, pressed linen the transportation of linen was necessary. So it was important to differentiate between moving in a clear, straight line from the Linen area to the wards and the movement, back and forth, due to the current procedures, handling limitations and the location of storage areas.

The findings of the team identified three main issues and opportunities:

- Batch (the team in the linen room prepare all the cages for the day before delivering)
- Routes (convoluted and every area is visited every day)
- Stocking areas (messy with large quantities of linen stored)

3 Benefits Realisation: the Future State

The team re-designed the “Future State” for linen delivery applying following principles:-

- Pull – only replenish Linen consumed;
- Prioritise – Replenish high volume areas more frequently, and low volume areas less frequently;
- Improve Linen storage – set levels as per consumptions and replenishment frequency. Use stock holding calculations and apply 5S housekeeping.
- Grouping – use geographic locations to deliver to multiple areas in one round, and allow enough inventory on the 4 cages to ensure round is completed – with as little excess Linen taken back as possible

The project implementation was conducted over three months with the Change Agents working on their actions and the feeding back on progress.

4 Results

During the improvement work, it was necessary to analyse “consumption” figures in order to appropriately set stock levels (as the current process was a “Push” system – true consumption was unclear. After the new process was introduced, and as part of the teams ongoing mind-set of continuous improvement, a further analysis of true consumption (as the improvement moved the process to “Pull”) was conducted to see if the variation in consumption had changed. There had also been a communication from finance querying the level of expenditure with the Linen provider (seemed too low), as well as a meeting request from the Linen provider asking to discuss the changes made and the impact it had generated.

The second analysis of consumption showed something remarkable – the actual pieces of Linen being issued had reduced by 37%. The figures were verified by both Finance and the Linen provider. The conclusion the team made is that under the old, push system, with overstocked linen storage areas on the wards was creating a false demand due to damage (creasing) and cleanliness issues created from a process that continues to push into an area and causing overstocking.

The financial benefits of this are listed below.

Monthly spend on Linen prior to changes	£43,879.00
Monthly spend on Linen after changes	£27,643.77
% Reduction	37%
Annualised Benefit	£194,822.76

Further to this, the team have not replaced of one whole time equivalent member of the Linen team who retired shortly afterwards, due to the reduction in time wasted in the Linen area and distributing the Linen around the Hospital. This is not stated as financial benefit, as it is difficult to engage with employees with the purpose of reducing staff numbers. Choosing to not replace natural turnover of staff is not an option for all organisations.

Acknowledgements

The Change Agents at Chesterfield Hospital for completing this work.

Stuart Ellis – Sponsor

Paula Hannon – Lead Change Agent

Author

Jim Hearn, Director of Operations, Alturos Ltd.