Project Title

FLC Store Inventory Management

Organisation(s) Involved

Tan Tock Seng Hospital

Project Category

Process Improvement

Keywords

Process Improvement, Lean Methodology, Value Stream Mapping, 6S, Medical Product Inventory, Inventory Management, Stock Efficiency, Improve Staff Accountability, Timely Product Delivery, Streamline Product Supplies, Par Level Prompts, Cost Saving, Tan Tock Seng Hospital, Allied Health, Prosthetics & Orthotics

Name and Email of Project Contact Person(s)

Name: Tabitha Quake

Email: tabitha_zh_quake@ttsh.com.sg

FLC Store Inventory Management

Karen Kee, Tan Tock Seng Hospital
Trina Wong, Tan Tock Seng Hospital
Tabitha Quake, Tan Tock Seng Hospital
Desmond Tong, Tan Tock Seng Hospital
Matthias Ho, Tan Tock Seng Hospital

Introduction

The Foot Care and Limb Design Centre (FLC) has an on-site store which stocks medical products for patient use. The store lacked a system capable of organising its high inventory value of approximately 1300 items. The aim of this project was to implement an inventory system so as to promote stock efficiency and improve staff accountability. The team faced the challenge of implementing the system within the physical constraints of a new store (46% reduction in area) while striving to maintain the quality of patient care provided by our existing services.

Methodology

Value Stream Mapping was used to analyse the current state and design future state. A multi-dimensional approach including product contracts, a Microsoft Access inventory system and 6S processing was adopted (Figure 1).
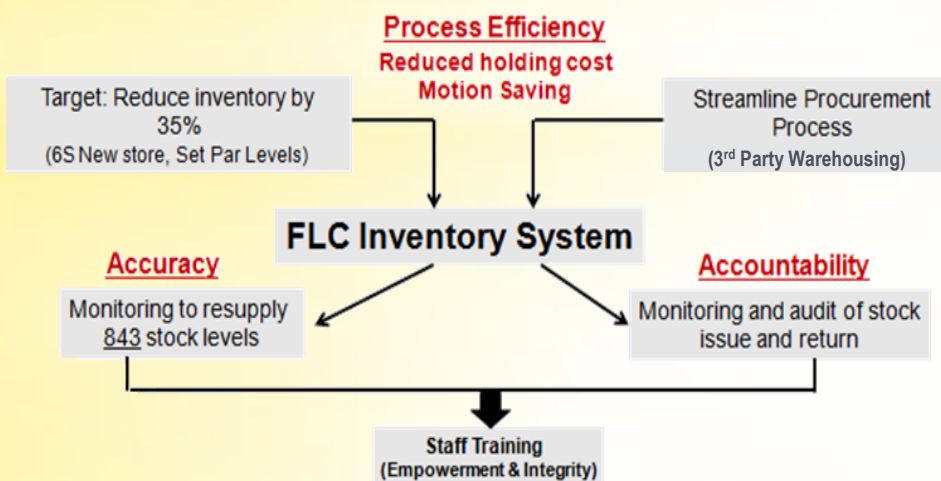

Figure 1: Value Stream Mapping showing the project process

Results

Product Contract

❖ Timely product delivery
❖ Streamlining of product suppliers and product lines
❖ Potential cost savings and patient value

Microsoft Access Inventory System

❖ Aids monitoring of stock levels
❖ Tracks retrieval and return of stock
❖ Par level prompts

Results

6S

Before	After
❖ Messy storage, inefficient use of space ❖ High motion waste and poor visual management	❖ Use of partitions and rearrangement of stock to reduce dead space ❖ Clear signage and labelling for ease of retrieval

Initial and current state testing was performed to quantify the benefits of the changes. These are shown in Table 1 below.

	Initial State	Current State	Improvement %
Time taken to locate an item	105 sec	25 sec	76
Time spent on monthly stock count	15 hours	6 hours	60
Ergonomics score	42/100	65/100	55
Staff satisfaction	55%	77%	40
Holding stock variety	1510	980	35
Hold cost value	$520,300	$342,800	34
Prosthetics order to delivery turnaround time	12 weeks	2 weeks	83

Table 1: Summary of results of initial and current state testing

Conclusion

Significant positive changes in store management and user processes were achieved. The team is looking at further improving system rigour and accountability. The success of the project offers other hospital departments with their own in-house inventories the possibility of a cost effective and user driven solution.

Figure 2: Transformation of the FLC store (Initial vs Current states)