An efficient pharmacy is central to the smooth operation of any modern hospital. Be it in drug purchasing, stocking and dispensing, advising treatment regimes or monitoring safe dosages, the pharmacy and its highly trained personnel play a vital role at every stage of the patient pathway from admission to discharge. Using lean principles The Manufacturing Institute has been helping hospital pharmacy managers and teams across a number of organisations to rationalise their work settings and processes and maximise the contribution they make to the delivery of safe and effective healthcare.

**Activities Undertaken**
- Diagnostic review including waste walk
- Introduction to Lean presentations
- Value Stream Mapping
- Rapid Improvement events including lean stock ordering, workplace layout and organisation with 5S, process pace/’takt’ timing, process piloting, demand smoothing, visual management and visual standard systems.

**Examples of benefits achieved**
- Reduction in inventory of £150,000
- Reduction in high-volume low-cost inventory items of £10,000
- Introduction of Single Piece Flow to prescription picking with reduction of average picking time from 1.5 hours to 20 minutes
- Developed departmental layout to support automated dispensing
- Simplified design and reduced spend on automated dispensing

“...The Manufacturing Institute has shown us how to apply lean principles in the redesign of our dispensary layout and automated handling system. This has enabled us to reduce prescription turnaround time by half and provide a more responsive and desirable service to our patients.”

Amanda Blessington
Pharmacy Automation Project Manager
Blackpool Victoria Hospital
Lean and the Royal Devon and Exeter Pharmacy

Work between David Howard, a Practitioner with The Manufacturing Institute and the pharmacy team at The Royal Devon and Exeter NHS Foundation Trust has increased efficiency in a number of important areas. Initial diagnostic work, including a waste walk that helped introduce lean management principles, identified several opportunities for improvement. The impact of implementing lean across the department can be seen in:

- Reduced inventory levels and waste due to obsolescence
- Better workplace organisation with 5S
- A revised layout that gives immediate efficiency gains and supports the introduction of automated dispensing to previously unmet regulatory requirements
- Single piece flow for preparing prescriptions that has cut an average of 70 minutes from the process

Bringing lean to the Blackpool Victoria Hospital Pharmacy

At the Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust The Manufacturing Institute, has been working with the pharmacy team to realise the full benefits of automation. Value Stream Mapping was the first step in developing a robust future state system for both the six-month period of the automated dispenser’s installation and beyond. This has brought one piece flow processes to the dispensary and halved the time required to prepare prescriptions.

Continued Manufacturing Institute support activity is allowing the team to look at further improvements:

- A more efficient utilisation of capacity through close work with ward customers to introduce demand smoothing
- The implementation of workplace organisation, 5S and visual management
- Key performance indicators for measures including workload levels, automation reliability and unavailability of medications
- Lean awareness training for all remaining department staff
- Problem solving and error proofing

Lean in Emergency Pharmacy

As part of a wider organisational transformation strategy – The Stockport Improvement Programme – Dr Paul Glossop, a Principal Consultant with The Manufacturing Institute, has been working with emergency medicine pharmacists at the Stockport NHS Foundation Trust to examine the contribution they can make to improving the non-elective patient pathway.

Simple 5S principles have cleared space and made some physical changes to the ward dispensary area. One feature of this work involved rehanging a cabinet door so that it opened from the other side, a simple but very effective remedial measure. This has created a more ergonomic environment for the preparation and dispensing of medicines.

The pharmacist has also been given a dedicated workstation. From here they can complete documents and print out prescriptions without having to wait for equipment to become free. Because the pharmacist can now always be on hand, communication with colleagues is considerably improved.