



# Case Study

Increasing theatre throughput  
and reducing waiting times

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Everyone agrees that hospitals are there to treat patients. The work is time sensitive and smooth patient flow is essential. But how do we make it as fast, consistent and predictable as possible?

A Lean philosophy adopted by managers turns their attention to making the work flow. It empowers employees to make decisions, improve their work and solve problems, removing obstacles and eliminating wasted time and effort.



‘We are very pleased with the results achieved from our Lean interventions to date and are confident that we can sustain the progress we have made over the long term.’

**Tony Chambers**  
*Operations Director*  
Wrightington Hospital

## The Client

Wrightington Hospital (part of the Wrightington, Wigan and Leigh NHS Trust) is a world leader in orthopaedic joint replacement, and is used by many top sportsmen and women. The hospital is currently in deficit and the Trust is going for Foundation Trust status. The priority for Wrightington Hospital is to improve the operational effectiveness of its lower limb theatres.

## The Challenge

**The Consultancy Company was asked to increase theatre throughput and reduce waiting times using lean thinking.**

Under recovery of costs was occurring at the hospital, partly linked to the complexity of patient cases sent to the hospital due to its reputation for surgical excellence. Long waiting lists and slow theatre throughput at the hospital were evidenced by sub-optimal theatre utilisation and lengthy processes. There was a feeling of disempowerment among staff, and the structure encouraged thinking in terms of function ‘silos’.

## Our Approach

**We believe Lean thinking is a powerful route to improving theatre efficiency and effectiveness.**

We implement Lean by finding out directly with front line staff what is happening in the workings of the hospital.

In order to achieve a sustainable change in performance, we enable staff to redesign their work based on sound evidence. When the approach has demonstrated improvement in one pathway, we help the hospital move into others. We help managers see how their thinking is central to changing operational performance, and how to develop responsibility and autonomy in their staff.

Lean in healthcare leads to an organisation which responds flexibly to the demands and clinical needs of patients. Perfection does not mean a production line of identical transactions, but treating individual and unique patients without waste. It means an organisation which continuously improves, as the human body learns, adapts and heals itself.



'What we like about the Lean system so far is that it allows the people on the frontline of healthcare to initiate the frontline improvements.'

**Michele Egan**  
Theatre Nurse  
Wrightington Hospital

#### Can Lean work for you?

For an initial meeting, please contact:

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### **Mapping the value stream:**

#### **The Patient Journey & Theatre Process**

The Consultancy Company began by helping the hospital establish what adds value for the patient and carer and what does not. This was followed by a process of value stream mapping the patient journey, together with staff, to establish the core set of actions required to deliver patient value and to eliminate waste and delays.

Mapping of end-to-end theatre process was also undertaken in order to align processes to facilitate smooth flow of information and patients.

#### **What was Revealed:**

Staff discovered how one area impacted on another, and why systems were failing and delays of up to three hours were common.

The map that emerged clearly identified – in four main areas – where Lean was able to deliver significant benefits. These were:

- Reducing day of operation cancellations and delays in patients being ready for theatre
- Minimising the time lost between one procedure ending and the next starting
- Optimising the organisation and flow of items required for a procedure to and within the theatre
- The scheduling of theatres to optimise their efficiency.

The overall objective was to enable one additional procedure per list.

### **Minimising day of operation cancellations and patient delays**

Our Consultants together with Wrightington staff developed new measures to ensure flow through the patient process.

The situation was quantified objectively and a reference for future improvement was put in place. A picture was built from the process map; new measures and an understanding of patient demand enabled the team and management to see the way the system behaves as a whole, and this has provided a sound basis for change.

#### **Benefits**

- Learning through practical use of Lean techniques.
- Commitment from all staff – senior to frontline - towards the systematic implementation of Lean thinking.
- Rescheduling of procedure for an 'unfit' patient, in time to allow another patient to be admitted.
- Agreed targets and priorities.

#### **Emerging results**

- Day of operation admissions increased from 5% to 75% in three months.
- Smoother patient flow enabling a 25% increase in patient throughput.
- 50% reduction in lost theatre time through next patient not being ready.
- An empowered culture that supports ongoing continuous improvement.

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