



## CASE STUDY: THEATRE IMPROVEMENT PROGRAMME



### BACKGROUND

The theatre service in the hospital was spread across three buildings, and was directly managed by a group of theatre team leaders. These team leaders reported to a theatre manager, with the various consultant teams falling under Business Development Managers. The system and processes in place showed a general lack of control over the inputs and

outputs of theatre and an inability to effectively control the available resources, with the result that the service was not achieving its potential in terms of throughput and value for money.

### STUDY FINDINGS

Following a week long study across the three theatre suites within the hospital, combined with extensive discussion with the theatre management team, Meridian identified a number of areas of potential opportunity in planning, scheduling, resourcing and general theatre utilisation.

Observational studies showed an average of 65.4% of time in theatres was spent in direct patient contact (anaesthesia or procedure time). There was an additional 4.6% utilisation of the planned session time incurred in overruns across the course of the study period, which had a significant impact on the staffing resource and subsequent theatre sessions. 81% of the sessions which were planned to run on the theatre schedule did not go ahead as planned. Process analysis found no links between patient demand on theatre to the sessional allocation. It was also found that there were mismatched capacities in the various theatre resources (namely Nursing, Anaesthesia and Consultant) leading to non-optimum use of the individual resources. The staffing establishment and rostering techniques were found to be historic, bearing no direct association to what was planned to take place in theatres.

The review mechanisms and meetings in place were ineffective, occurring sporadically and with poor attendance. The ineffectual outputs had led to a lack of belief in their efficacy. Alongside the identified statistical underutilisation of the available resources, there was also a prevalent opinion amongst staff that the theatres were not in control, simply having to process whatever work 'was thrown at them'. This universal attitude had led to a significant slump in staff morale.

### OBJECTIVES

The elements of the project focussed on adding control and discipline in the utilisation of the four major components of the management system:

1. Forecasting  
Development of a demand modelling tool to link time requirement by specialty and consultant to sessional allocation in theatres. All available waiting list

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information was incorporated to provide a robust report on misaligned capacity allocation. Using the Theatre Master Schedule, alongside an agreed staffing resource model by theatre session, overall staffing requirement was established.

## 2. Planning

Installation of a Planned Utilisation Report to highlight potential underutilisation in theatre sessions with enough time to take action. Installation of weekly Planned Utilisation Review Meetings to review planned utilisation 6-weeks in advance of the day of surgery.

## 3. Assigning

Development and installation of a rostering tool allowing the planned theatre sessions to accurately inform the staffing resource, putting the right people in the right place at the right time.

## 4. Following-up

Development and agreement on specific performance metrics including in-session utilisation and utilisation of available theatre slots. Installation of daily performance summary reports to track variances from target.

The installation of the above was reinforced with a series of workshops based around management techniques and productivity concepts. These had the effect of enabling the theatre management to hold effective schedule review meetings which informed the schedule and enabled much greater commitment from the staff in relation to effective planning and amelioration of potential lost theatre time.

## PROJECT RESULTS

1. Links between theatre demand via waiting lists to sessional allocation allowed better informed decisions to be made on how theatre capacity was made available to the theatre teams. This also highlighted specific areas of concern in terms of waiting times.

2. Resource analysis based on agreed staffing models highlighted a surplus of 3.02 WTE nursing staff based on the in-place theatre schedule resulting in annualised savings of £76,743.

3. Increased utilisation to agreed targets of 85% for theatres and 100% for endoscopy rooms, represented a potential £641,771 in annualised savings, based on a reduction in sessions and offsetting of additional theatre lists back into plain time.

4. Visibility in the levels of sessions held in theatre by consultant/specialty against agreed targets, allowing non-anecdotal action to be taken on any variances.

5. Accurate and comprehensive daily performance reports allowing for actions to be delegated on any non-achievement against agreed targets. Identification and quantification of recurrent issues led to significant increases in achieved in-session utilisation levels.

6. Theatres required to validate lists prior to day of surgery, creating accountability and a level of control over the inputs to theatres.

7. Ability to review the utilisation status of theatre sessions in advance of the day of surgery, allowing changes and decisions to be made with enough time to achieve maximum productivity of the available resource.

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8. A fully informed staffing requirement based on the work planned in theatres. The ability to roster staff to demand, as opposed to planning work around the availability of the staffing resource.

9. The combined WTE & Increased Utilisation opportunity offered the client a savings of £718,514, a return on investment of 7.1:1.



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