

Trust Board

TB2008.71

From: Mr Mike Greenall, Medical Director, Division B

Date: September 2008

Subject: **Theatre Utilisation**

For: **Information**

Synopsis

Improving theatre utilisation is a key performance target for the Trust in terms of ensuring:

- Timely surgical intervention for patients
- Reduced length of stay
- Increased activity and income
- Improved productivity and value for money from the services provided

This paper outlines work previously done to improve theatre utilisation, together with a summary on the current approach and provides an update on the various workstreams and performance to date.

Financial, legal and risk impact

As described.

1. Background

Currently there are 35 theatres in operation which excludes the delivery suites and some of the minor operating areas within the Trust. This will increase to 39 theatres when the Cancer Centre opens although we are already considering plans for retaining some of the original Churchill theatres owing to pressure on theatre capacity on the Churchill site.

Number of Theatres in Each Suite

Gynaecology Theatres (excluding Delivery suite)	2
John Radcliffe Theatres	10
West Wing	14
Current Churchill Theatres	5
New Churchill Theatres (excluding refurbishment options)	10
Horton	4

Theatres are considered as the engine room of all surgical services within the Trust. They are an expensive commodity and it is appropriate that we should look to utilise such a resource appropriately.

Nationally there has been an increasing focus on improving theatre utilisation beginning with the work of the Modernisation Agency a few years ago looking at process redesign, a forerunner of the more recent introduction of lean management. Theatre utilisation remains a hot topic on the service improvement and modernisation agenda. Typically the standard for good utilisation is set as 85% (in line with recommendations around ideal bed occupancy). Within the Trust we have set a more challenging target of 90% for planned elective lists.

2. Previous Work on Improving Utilisation

From an operations management perspective, theatres can be viewed as a “production line” and hence lend themselves to methodologies and comparisons with a private sector industrial model. Last year, management consultants were employed to assist the Trust with improving its utilisation. The first was Unipart which specialised in “lean methodology”, looking to streamline processes and reduce waste leading to increased efficiency. Unipart concentrated its efforts on general and vascular surgery in the JR and Churchill Theatres. Within these specialties, the firm worked on a number of sub-projects:

- Streamlining of stock management including some one-off savings
- Improved visual management of planned and actual operating of lists
- Standardised layout in anaesthetic rooms
- Streamlined working area including clearing of corridor areas
- Establishing Communication Board for measuring performance
- Improved processes for bringing patients in through TDA

Further work with a second expert in the field (Mr Stephen Brown) was undertaken to help theatres to deliver the 18-week wait target. The focus of this was in offering practical solutions to the theatre efficiency conundrum such as concentrating on one element at a time to improve performance rather than spreading efforts too thinly across a range of indicators. It included a weekly meeting between theatre managers and the Divisional

Director of Operations to increase accountability and to ensure consideration of weekly performance data for theatres that had been developed by the Service Improvement team.

Neither of these management consultancy teams promised quick solutions. Lean methodology has won over some clinicians within the Trust but it is best applied to individual pathways and processes and some of the processes within theatres are enormously complicated. Breaking these down and building them back up takes time and commitment from all parties involved.

3. Current Approach

The Critical Care, Theatres and Anaesthetics Directorate is continuing to work on improving theatre utilisation. Theatre managers continue to meet with the Directorate Manager and Divisional Director and are supported to take responsibility for performance in their theatre suites. Weekly performance information is produced for each theatre suite to assist the theatre managers with understanding and managing those issues that are most relevant to their department. In addition, the Directorate is supported by a project manager from the service improvement team, who also worked on the Unipart project and who is trained in lean methodology.

Each theatre suite has a weekly “storyboard” which demonstrates the following information:

- Total activity for the suite
- Incomplete data
- % Start-on-time performance
- Top ten late starting lists
- Minutes of operating time
- Top ten best and worst starting lists over the last few months
- % utilisation

This data is displayed publicly on a communication board in each theatre suite. The information on lists that start late is annotated to include the reason for the delay as it has not been possible to download this information easily from the Theatre Management System.

Each theatre suite or manager have some individual specialty areas for which they have specific ongoing projects to improve. These include trauma, gynaecology, urology, plastics and paediatric lists (both general and specialist). Many of these projects involve complex problems that are often outside the direct influence of theatres to resolve. However, the theatre managers meet regularly with the specialties to look at joint opportunities to realise improvements that will lead to increased utilisation within theatres.

4. The Elements of Improving Theatre Utilisation

Effective utilisation is made up of several elements including:

- Starting on time
- Improving the turnaround time between cases
- Finishing on time (ie not overrunning and not finishing too early)

- Booking lists appropriately
- Separating emergency and elective workloads
- Effective pre-operative assessment
- Reminder service to reduce patient DNAs

Each of these elements is being considered within the Directorate and Trust's total approach to improving theatre utilisation with specific projects focussed on DNA's, pre-op assessment, and booking to support the overall aim to improve utilisation in theatres.

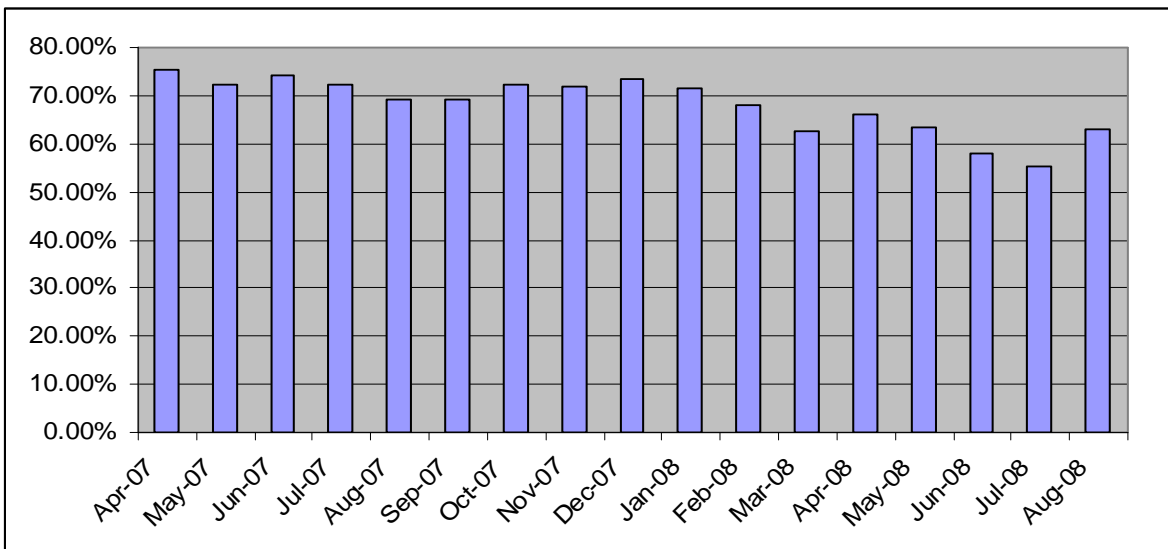
The Directorate has also chosen to continue with the emphasis started by Stephen Brown which is to focus on starting on time. We believe that if we can support lists to start on time, this will lead to better utilisation of the list overall, and should deliver a reduction in overruns. We have set a target of 50% of all lists starting on time (or within 5 minutes) and 90% lists to start within 15 minutes.

5. Performance to Date

The impact of the focussed drive on starting lists on time can be seen in the reduction in late starts on the graph below.

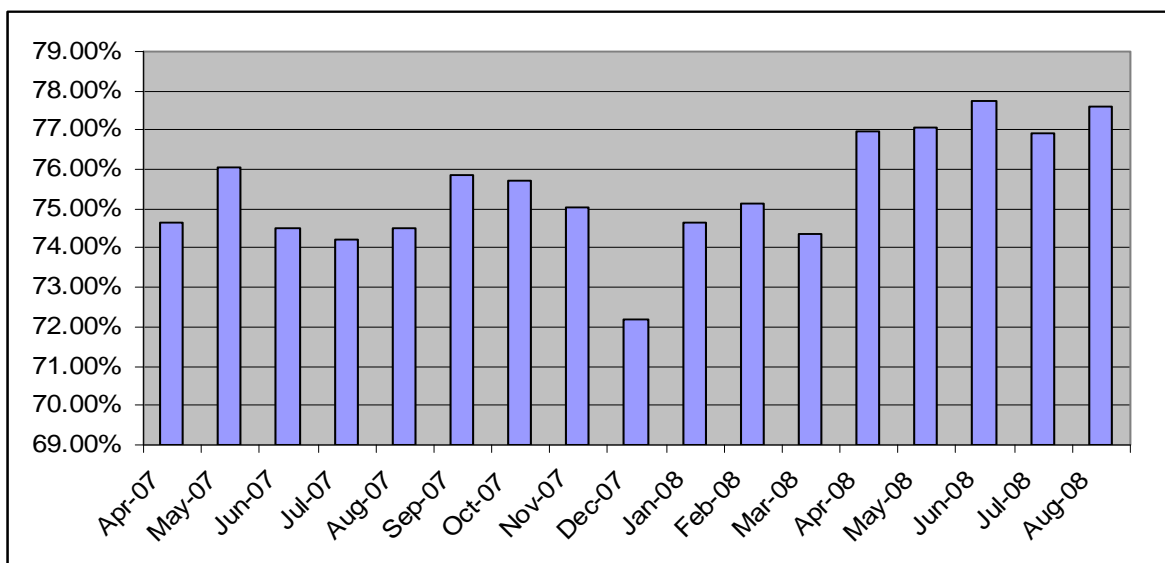
Consultants have taken the focus on starting-on-time quite personally which has resulted in a backlash in some areas. The traditional method of attributing a list to an individual surgeon has meant that staff have felt personally blamed for lists starting late. However, in many cases, the delays are due to bed pressures, consultants still seeing the patients or, indeed, trying to find the patients. These are issues which are not necessarily within the gift of either theatres or the consultants to resolve.

Percentage of planned lists which start late 2007 - 2008



The utilisation of lists has also increased overall although again this does vary by specialty and theatre suite.

Utilisation of Planned Lists 2007 - 2008



Pre-Operative Assessment

There are currently 13 separate pre-operative assessment clinics within the Trust. This project is aimed at standardising practice as far as possible including improving documentation and guidelines as well as providing feedback on patients who are subsequently cancelled because they are unfit.

The data below demonstrates the impact that this work is having so far. The most important figure to consider is the percentage as in most specialties, overall activity levels have increased.

Cancellation of elective patients due to being unfit by speciality	No electives 2007/08	No Cancellations due to unfit 2007-08	% 2007/08	No electives Apr - Jun 2008	No cancellations due to unfit Apr - Jun 2008	% Apr - Jun 2008
Plastics	4628	75	1.62%	1315	16	1.21%
ENT	2780	35	1.26%	780	15	1.92%
General Surgery	6529	145	2.22%	1855	33	1.78%
Gynae	3748	43	1.15%	879	15	1.71%
Neurosurgery	2504	55	2.20%	726	11	1.51%
Obs and Gynae	1444	29	2.01%	498	9	1.81%
Ophthalmology	5021	158	3.15%	1358	33	2.43%
Oral	1959	21	1.07%	422	2	0.47%
Paediatrics	1705	49	2.87%	498	14	2.80%
Renal	765	29	3.79%	202	4	1.98%
Urology	2529	57	2.25%	666	18	2.70%
Total	33612	696	2.07%	9199	170	1.85%

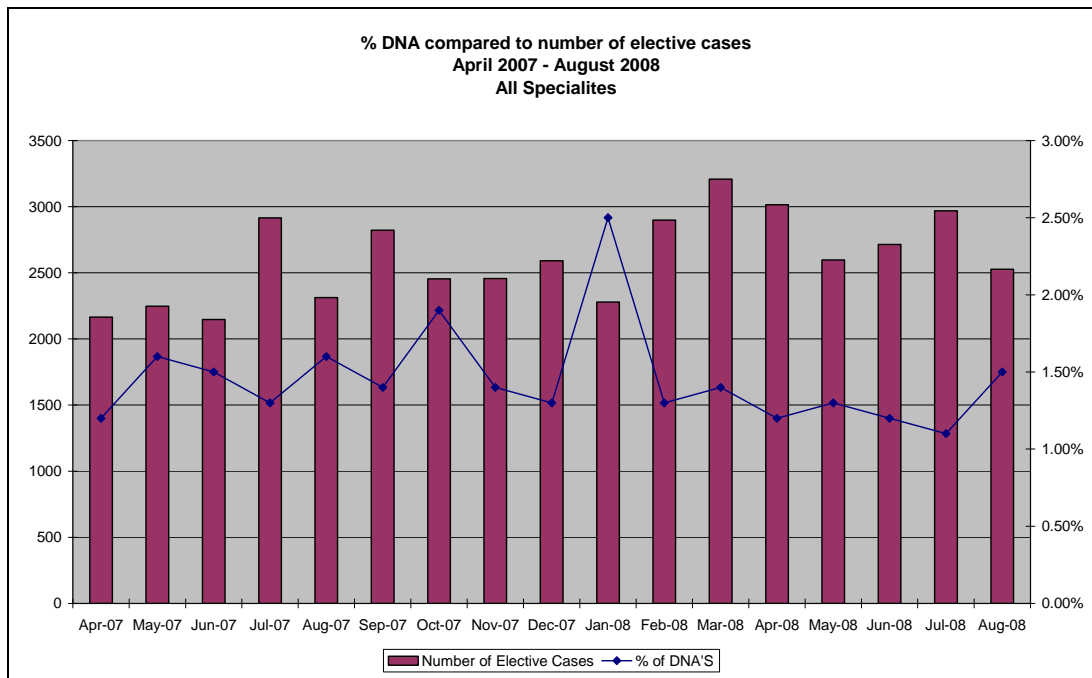
DNAs

We are now asking patients to ring the hospital 2 weeks before planned surgery to ensure that they plan to attend. If they do not ring, then they are called by the hospital. This

process will also highlight any problems in the journey, i.e. if letters have not been received or if there are any problems with the patient's health. The patient is given the relevant contact telephone numbers to change the operation date if the planned date is inconvenient, or is offered to speak to a nurse if they any clinical concerns.

This project follows a pilot in January 2008 which resulted in an 80% reduction in DNAs in the specialties of general and vascular surgery and ophthalmology. There have been some delays in implementing this system on a permanent basis due to staffing problems and capacity within the staff team but the process has been re-launched in September and we will be rolling out to urology and gynaecology at the end of September with the aim of having the top ten DNA specialties included by March 2009.

In addition, we are displaying posters in outpatient and pre-operative assessment clinic areas: "Where were you?" to encourage patients to let us know if they can't attend.



6. Successes

The performance and data detailed above demonstrates some of the successes that the projects have had to date. However there are other streams of work which we are continuing with. These include:

Booking Lists

Standardisation of the booking process commenced with general and vascular surgery and will be rolled out across the Trust. Standardising will reduce errors, administration time and cancellations; should improve theatre utilisation and most importantly, improve the overall patient experience.

We are rolling out a standardised booking form within general surgery and vascular to include the calculation of length of procedure time.

In addition, the service aims to record theatre lists on the Theatre Management System 5 days ahead of the list going ahead. This is to enable improved planning within theatres for equipment and staffing and to enable a level of discussion regarding the list content and duration.

Starting on Time

The specific focus on starting on time has highlighted some particular difficulties with lists in the West Wing which have children on the list. Through joint work between theatres and paediatrics, we have been able to move forward with a pilot paediatric Theatre Direct Admissions (TDA) service which is due to start on the 15th September.

Liaison

- Improved liaison between theatres and specialties both within and outside of bed management meetings to look at hospital capacity and likely impact on theatre lists.
- West Wing and Churchill theatres sending theatre staff to collect the first patient where the day surgery units are busy dealing with checking in patients.

Staffing

- Theatres continue to have a focussed recruitment drive for staff but still struggle with the anaesthetic and recovery discipline. As a result, West Wing Theatres have established a separate recovery unit which is having a positive effect on recruitment and will also aim to help take patients off the operating table to allow the anaesthetic team to support the next case being brought into theatre.
- In the Churchill Theatres, team-building work is ongoing to help the scrub and anaesthetic & recovery teams staff to understand each others' roles and therefore better support each other.
- At the Horton there is already a focus on rotation and a dual function for staff between the scrub and anaesthetic/recovery teams.

Data Quality

There has been an improvement in data quality as a result of the focus on the data that we are using to support performance in theatres. Each theatre suite is chasing individual data items to ensure that the information on each case and list is complete. There has also been considerable focus on defining types of list and how to record list activity when a theatre list is split and run in two theatres to ensure that the list can be completed within hours.

7. Ongoing Challenges

Improving theatre utilisation is certainly a challenging and complex project (s) and there are a number of difficulties or obstacles which we have encountered. Many of these have already been referred to within this paper but to summarise:

- Ensuring that "blame" is not incorrectly attributed.
- Access to beds, particularly Critical Care or specialist beds.
- The trade-off between putting an extra patient on the list (who needs to be seen and consented beforehand) and starting on time.

- Competing demands from emergency or unplanned urgent patients with elective planned lists.
- Sustaining momentum – we have found that when theatre managers really drive performance on start-times, it improves. But this level of personal intervention is not always possible or sustainable so we have to find other solutions.
- The time taken to solve complex problems. The elements required to ensure that a list can start on time and run smoothly are many and varied. Some of the more challenging problems with list management will now need some concentrated effort to work on the various elements which need fixing to enable the service to run more smoothly.

Mrs Kathryn Hall
Directorate Manager – Critical Care, Theatres & Anaesthetics
September 2008