

DHSSPS

Unit Cost Review

Green Park Healthcare Trust

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Prepared for: DHSSPS

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FOREWORD

This report presents the findings of the review of high unit cost at Green Park Group of Hospitals. The review team would like to thank the Trust and the DHSSPS Finance Directorate for the data analysis they undertook for the report and the time taken to work with the team.

This document is divided into 4 main sections:

1. Executive Summary: This section contains a synopsis of the approach, findings, conclusions and recommendations of the review.

2. Introduction: The Introduction provides the background to the review, the Terms of Reference and the approach taken by PA.

3. Findings: The Findings section contains an account of the key issues identified through investigation at the Trust under the Terms of Reference. These issues are grouped into 4 themes:

- **Unit cost Variance**
- **Delivery of Efficiency Improvements**
- **Performance Improvement Infrastructure, and**
- **The Future Agenda.**

4. Recommendations: Section 4 provides the recommended actions in relation to each issue identified.

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1. EXECUTIVE SUMMARY

The Appleby Review highlighted that fewer outputs across a range of measures are delivered at the Green Park¹ per given level of input than in English Trusts. From a value for money perspective, this begs the question as to whether there are opportunities to reduce unit costs to the level of hospitals in England, thereby freeing resources for other priorities such as improved patient access and quality.

This review confirms that costs at Green Park hospital can be reduced by increasing efficiency and productivity.

This investigation of high cost considered the use of resources at Green Park against NHS best practice, as recommended by organisations such as the NHS Institute. It also considered the potential to improve based on internal benchmarks and, notwithstanding comparison, the potential that exists for better use of existing resources.

The review found that while there is not unit cost variance between the Trust and its English orthopaedic hospital peer group, there is significant opportunity for Green Park to maximise use of available resources. A range of bed utilisation indicators highlight the potential to improve efficiency. The variation in use of theatres by consultant significantly reduces the Trust's ability to make best use of this expensive resource. Not all consultants are delivering their contracted lists, which compounds the Trust's challenge in meeting the inpatient wait time target.

This report therefore recommends actions to improve Green Park's efficiency, based on the experience of other Trusts.

It is recommended that the pace and degree of improvement are monitored on an ongoing basis using the set of high-level productivity and performance indicators set out in this report at Table 1.1. These are based on the "NHS Better Care, Better Value Indicators" which monitor productivity, efficiency and quality². For each indicator, the review team has provided a target performance level. These levels are based on NHS best practice where this information is available, or an assessment by the level of performance the Trust should be aiming for as part of its drive to improve productivity and reduce cost. These indicators can also be used for ongoing internal benchmarking and external comparison against best practice.

The recommended actions and indicators are based on general principles designed to promote good resource management across the Trust rather than targeting particular specialties or clinical pathways. Of the recommendations set out in Section 4, we highlight the following as priority for the Trust to take forward:

- An increased focus on the collection and use of management information to drive performance improvement
- Reduction in the variation of the use of resources by consultants
- The introduction of comprehensive discharge planning for all patients
- The introduction of pre-operative assessment.

¹ Green Park Healthcare Trust – referred to as 'Green Park' in this report. From April 2008 Green Park has been incorporated into the new Belfast Trust

² Launched 23 October 2006 by Andy Burnham, Minister of State for Delivery and Quality

As part of the review, links to support sharing of best practice were established with two English Trusts (Guy's and St. Thomas' and South Devon Healthcare Trust). These Trusts were selected as they have a demonstrated track record in delivery of similar efficiency and productivity improvements. South Devon Healthcare in particular has focussed on improving the efficiency of its orthopaedic pathway.

Finally, the review found that the programme of health reform driven by the DHSSPS is acting as a catalyst for better use of resources at Green Park. The formation of the new Belfast Area Trust must be viewed as the key opportunity to transform services and increase efficiency.

Table 1.1 Recommended Productivity and Performance Indicators

The aims for these performance measures are stretching and represent best practice. A recommended next step is for the Trust and the Health and Social Care Authority (designate) to agree timescales and trajectories for achievement. The current Trust position reflects the data provided by the Trust for the review (including the Quarterly Orthopaedic Reports), the DHSSPS snapshot of delayed discharges and the diagnostic interviews with the Trust. Regarding Performance Measure 1.3, please note the impact of regional specialty and casemix may result in a lower Day of Surgery Admission percentage.

Resource	Performance Measure	Current Trust Position	Aim	Source	
1. Beds	1.1	Pre-Operative Assessment Rate	Pre-operative assessment is not in place for most patients	100%	NHS Modernisation Agency Checklist for Pre-Operative Assessment 2004
	1.2	Day Surgery Rate Based on the British Association of Day Surgery Basket	Varies between 46% and 91% for procedures monitored	77.1%	NHS Top Quartile Day Surgery Rate
	1.3	Day of Surgery Admission	DoSA is not routinely in place	90%	NHS Institute – Reducing Pre-operative Bed Days
	1.4	Delayed Discharges	1,227 (Total Trust at June 2006)	0	Trust and Community aim for medically fit patients to be discharged
	1.5	Occupancy Rates	84%	90%+	See section 3.2.2 c of this Report
2. Theatres	2.1	Cancelled Operations	4.37%	0.8%	NHS Best Practice Performance
	2.2	Percentage of patients readmitted within 28 days of operation cancelled for non-clinical reasons	To be collected as cancelled operations are reduced	100%	NHS Best Practice Performance
	2.3	Utilisation of Available Sessions	>50% of consultants not delivering all staffed, funded sessions	90%	NHS Best Practice Performance, Bevan Report
	2.4	Utilisation of Sessions	Less than 85% for 1/3 of consultants	92.5%	Audit Commission, 2003
3. Staff	3.1	Sickness Absence	4.94%	3%	Best Practice Performance against NHS Better Care, Better Value Indicators
	3.2	Agency Cost % of Total Staff Spend	To be collected	1%	Best Practice Performance against NHS Better Care, Better Value Indicators

2. INTRODUCTION

2.1 THE ORGANISATIONAL CONTEXT

Prior to its incorporation into the Belfast Trust in April 2007, the Green Park Healthcare Trust (Green Park) provided regional and local specialised services to patients in Orthopaedics; Rheumatology; Sports Medicine; Care of Older People; Child Psychiatry; Regional Disablement Services; Rehabilitation; Direct Access AHP Services; Respite Care and Diagnostic Services.

The Trust was based on two sites:

- Musgrave Park Hospital (Orthopaedic, Rheumatology, Spinal Cord injury, Amputee Rehabilitation and Care of Older people)
- Forster Green Hospital (Neurology, Acquired Brain Injury, Child & Family centre and Care of Older people).

Activity data for the Trust in 2005/06 showed that almost 15,500 patients were treated – over 8,000 of whom received elective Orthopaedic care, and nearly 114,000 received outpatient consultations.

Green Park now forms part of the new Belfast Area Trust - amalgamating the current Belfast City Hospital, Royal Group of Hospitals, Mater Infirmorum, North & West Belfast (including Muckamore Hospital) and South & East Belfast HSS Trusts.

2.2 BACKGROUND TO THIS REVIEW

This report contains the findings of a review of reasons for high unit costs at Green Park. A similar review has been undertaken for the former Royal Group of Hospitals, the findings of which are contained in a separate report.

In August 2005, Professor John Appleby of the King's Fund reported on his review of the provision of Health & Social Care Services in Northern Ireland³.

Professor Appleby reported that Northern Ireland exhibited lower productivity than the UK average across a range of indicators including activity per member of staff, per available bed and per pound of health spend. Higher than average unit costs were also reported and these varied significantly between Trusts. This analysis highlighted both Green Park and Royal Healthcare Trust as outliers – in fact excluding these hospitals from the analysis would have removed the overall Northern Ireland cost difference with England.

Whilst a number of hypotheses were suggested to explain this variance, the Appleby review did not have sufficient evidence to comment on the cause(s). Professor Appleby therefore recommended: "Further investigation is needed to explore possible reasons for high unit costs at the Royal and Green Park Trusts". This current review is aimed at addressing the Appleby Report's recommendation.

³ Independent Review of Health and Social Care Services (Aug 2005)

2.3 TERMS OF REFERENCE

It was agreed with the DHSSPS Finance Directorate that the review should have a particular focus on the current pathways of patient care, and how they could be improved to increase efficiency and reduce cost. In this way, the review aimed to identify practical actions that the hospital could take forward to reduce cost. This focus included the identification of:

- The features of care delivery at Green Park that reduce efficiency and increase cost
- The opportunities to increase cost efficiency and productivity at a local level, notwithstanding comparative performance
- The best practice could be adopted based on the learning and performance of other hospitals
- The sources and peers could Green Park link with to inform implementation of best practice
- Action taken by Green Park to better understand its high unit cost
- The future or strategic actions to reduce cost, outside the immediate gift of the Trust, need to be considered.

Table 2.1 below sets out the Terms of Reference and the section of the report in which they are addressed.

Table 2.1: Terms of Reference

	Term of Reference	Section
1.	An assessment as to which English Trusts within the relevant Audit Commission peer group are the most appropriate comparators for each Trust recognising the desire for NI Trusts to attain best practice levels of performance	3.1
2.	An explanation of the various factors identified which explain the material reported variations	3.1, 3.2
3.	A determination of the relative significance of each factor explaining the material variations	3.1, 3.2
4.	A summary of work carried out and results, in particular, as to whether investigations of cost carried out by the two Trusts were sufficiently thorough	3.1
5.	Recommendations as to possible methodologies to adopt for future cost benchmarking	3.1
6.	On the basis of the above, recommendations regarding action that can be taken to improve the efficiency and effectiveness of delivery of the range of acute services provided by the two Trusts towards the NI average through to English best practice levels to the extent considered appropriate; and	4
7.	Identification, with justification, of any factors that can not be influenced by direct Trust action in the short term but which in part explain apparent underperformance, that could be addressed in the longer term	3.4

2.3.1 Our Approach to Delivering the Terms of Reference

PA's approach to delivering these terms of reference involved:

- Mobilising a multi-disciplinary project team including an NHS Chief Executive and a former NHS doctor.
- A review of the considerable body of comparative and internal unit cost analysis work that had been undertaken by the DHSSPS and the Trust.
- Diagnostic interviews with key stakeholders at the Trust. This process included meetings with Trust executives and managers across the Orthopaedic Services Directorate, Theatres, Finance, performance and costing information.
- An assessment of the use of resources at Green Park against best NHS practice. This included beds, theatres and staff, using the diagnostic framework deployed as part of the National Orthopaedic Project. This included beds, theatres and staff and also involved the review of patient pathways in place as well as analysis of performance.
- Development of findings, conclusions and recommendations, which were discussed and tested with the Trust and the Department.
- Completion of this report.

3. FINDINGS

3.1 UNIT COST VARIANCE

The Appleby Report identified that unit costs at Green Park were high when compared to English Trusts. In response to the Terms of Reference, the review team considered the following questions:

- Does unit cost variance with English Trusts still exist (given that the Appleby Report was based on 2002/03 data)?
- What investigation into the reasons for unit cost variance has the Trust undertaken?
- What factors comprise the unit cost variance? What is their relative significance?
- What are the implications for future cost benchmarking?

The team drew on the extensive analysis and associated research work provided by the Trust and the DHSSPS Finance Directorate including:

- Interviews and discussions with staff from the Trust and the Department;
- Data and analysis provided by the Trust and the Department and a wider range of secondary research material pertaining to Unit Cost calculation and benchmarking
- The Appleby Report.

This section presents our findings in relation to each question.

3.1.1 Does Unit Cost Variance with English Trusts exist?

The **overall** variance in unit cost between Trusts in Northern Ireland and Trusts in England has decreased but is still significant. It narrowed from 9% in 2003-04 to 6% in 2004-05. The notional saving that would ensue if equivalent English averages were applied to all actual Northern Ireland activity and casemix was £31m⁴. The biggest single difference between Northern Ireland and English unit costs is in Maternity services, which constitute £16.7m of the variance in 2004-05.

Comparison of **Green Park** unit cost in particular with English average unit costs confirms that Green Park is higher cost. The cost variance identified by Appleby remains.

HRG benchmarking is a tool best used in the context of an understanding of Trust service configuration, methodological difference, specialty appropriate peers etc. When compared with specialist orthopaedic facilities (which is a more appropriate approach), Green Park's unit costs are quite similar - some of Trust's unit costs are higher, and some are lower and comparison to the 'basket of goods' shows the Trust average cost is 6% less than average.

⁴ DHSSPS Finance Directorate Report, 2004-5 Reference Costs, 2006

Figure 3.1: Unit Cost Variance with English Orthopaedic Hospitals

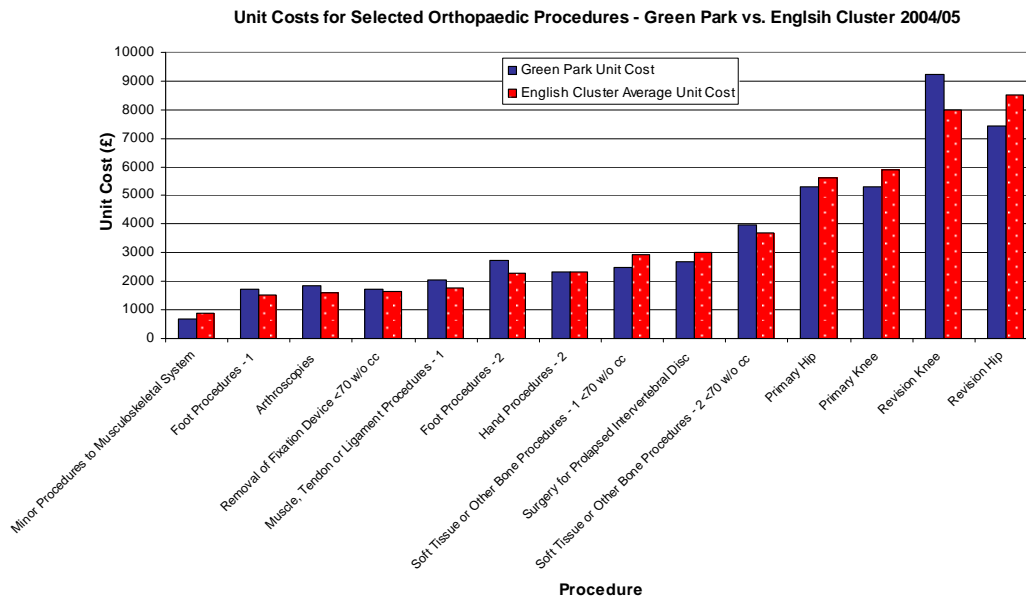


Table 3.1 shows cost comparison between the Green Park Trust, Audit Commission Groups and the Northern Ireland average.

Table 3.1: 2004/05 Cost Comparison⁵

	Actual Cost (£m)	Audit Commission – English Peers (£m)	Northern Ireland Average (£m)
Green Park	28.6	32.3	26.1
Green Park excluding the Elderly	26	30.9	24.6

The Trust is higher cost than other Trusts in Northern Ireland and high cost compared to English average unit cost, but not when compared to peer (English orthopaedic hospital) unit cost. There is no strong evidence however to suggest that higher spending in orthopaedic specialist hospitals is justified. Good performance in terms of peers does not necessarily represent the best practice performance the Trust should be working towards.

⁵ This analysis includes elective inpatients, day cases and non-elective inpatients for acute specialities, elderly medicine, obstetrics and gynaecology. It does not include critical care, renal dialysis, community services, PSS services, outpatient services or rehabilitation. HRG level activity has been multiplied by peer averages and Northern Ireland averages respectively to indicate what the activity would cost if delivered elsewhere. 1m of actual costs relate to neurology in Greenpark. Rehabilitation is not included.

3.1.2 What investigation into the reasons for unit cost variance has the Trust undertaken?

The Trust undertook a unit cost benchmarking exercise to explore whether there was variance with other specialist orthopaedic hospitals. The Trust also benchmarked length of stay for some procedures.

This initial analysis did not reveal significant variance, therefore the Trust did not investigate further.

3.1.3 What factors comprise the unit cost variance?

There are many factors that influence hospital unit costs, such as the type and range of services provided, service frequency, the population served, clinical practice and treatment, the extent to which available resources are used efficiently.

We contend however that the single biggest influencer is how a hospital manages these factors. The dominant reason why unit costs vary is because hospitals do things differently, not because their patients are different or their circumstances are unique. For example, casemix of patients is often cited as a reason why a hospital has a high unit cost, whereas in fact the high cost is often caused by the planning, management and treatment pathways in place for these patients. For this reason, our review approach placed great emphasis on a diagnosis of the current practices in the Trust and the identification of opportunities to maximise resources and reduce excess capacity.

Efficiency is the system's optimal use of available resources to yield maximum benefits or results. It shows a system's ability to function at lower costs without diminishing attainable and desirable results.

Whilst comparison to English orthopaedic hospital does not show variance, our assessment of the use of resources at Green Park against best NHS practice indicates that current practices reduce efficiency and lead to increased cost. The review of Green Park's data indicates that the Trust is not as productive as it could be in light of the system inputs and outputs. The areas highlighted as requiring focus and change to reduce costs are the utilisation and management of beds, theatres and staff. The analysis supporting this conclusion is provided in Section 3.2. Analysis of the current use of beds, in particular shows considerable potential for improvement for example:

- Excess bed days – equating to 29% of the Trust's total bed days for the whole hospital (not just trauma and orthopaedics)
- A high volume of delayed discharge
- Admission of patients the day before surgery

The value of excess bed days⁶ at Green Park in 2004/05 was £5,796,852 a figure which highlights the considerable cost of long hospital stays⁷.

⁶ Excess bed days are those bed days that are above the maximum of the range normally expected for an episode in respect of any given HRG

⁷ Note: this includes the *total* cost of those bed days, and as such cannot be interpreted in total as a target saving through better management of beds.

3.1.4 What is the relative significance of the factors increasing cost?

The way Green Park uses its key resources of beds, theatres and staff impacts all of its procedures, and all unit costs. It is a cross-cutting issue that affects all HRGs. Therefore productive use of resources is the most important factor driving unit cost.

Of these resources, based on the findings of this review, the current use of beds is the most significant factor increasing cost.

Later in this section, in line with the approach adopted by the NHS Institute and based on data provided by the Trust, we have provided a sense of scale to possible gains to be made from taking forward the recommended productivity and efficiency actions.

3.1.5 What are the implications for future cost benchmarking?

Unit cost benchmarking with English average and English orthopaedic hospital unit costs is an important macro indicator of efficiency for the Trust. This cost benchmarking should be complemented by an increased focus on internal Trust productivity indicators. These measures highlight opportunities to reduce cost and improve efficiency, which the Trust should pursue regardless of relative unit cost performance. It is important that the Trust focuses on how well it manages the factors that influence its own costs and regardless of whether their patients are different to other providers or their circumstances are unique.

The review team has established links with two English Trusts consulted regarding delivery of efficiency improvements (South Devon Healthcare, an NHS Centre for Innovation and Guy's and St. Thomas' NHS Foundation Trust), which provides an opportunity for Green Park to share best practice.

3.1.6 Unit Cost Variance: Conclusions

The variance between Green Park's unit costs and English average unit cost still exists.

The Trust undertook a unit cost benchmarking exercise to explore whether there was variance with other specialist orthopaedic hospitals. This initial analysis did not reveal significant variance, therefore the Trust did not investigate further.

The use of resources at Green Park against best NHS practice indicates that current practices reduce efficiency and lead to increased cost.

The most significant factor causing the unit cost variance at Green Park is that current practices reduce efficiency and lead to increased unit costs. Based on the pathway analysis undertaken, this review concludes that the current use of beds is the most significant factor driving the unit cost variance. Each of the factors outlined in this section contribute sufficiently to the unit cost variance however to merit changes and these recommendations are set out in Section 4.

Unit cost variance is a useful comparative indicator and should be used in conjunction with performance and productivity indicators, such as those recommended in this report as part of future benchmarking, which give a clear view of areas where the Trust must increase efficiency. Linking with Trusts that have achieved such efficiencies should play an important role in attaining best practice levels of performance.

Full harmonisation of the costing methodologies is not possible due to different national cost structures. Green Park's performance against a range of performance and

productivity indicators clearly shows a need for improvement, therefore complementing unit cost analysis with such analysis reduces any debate regarding validity of unit cost comparison.

3.2 DELIVERY OF EFFICIENCY IMPROVEMENTS

In considering 'action that can be taken to improve the efficiency and effectiveness of delivery of the range of acute services', the review team undertook an assessment of the use of resources at Green Park against best NHS practice. This involved the review of patient pathways in place and analysis of performance and utilisation data against a range of indicators for each resource. Contextually, it is important to note that the English health service is at a more advanced stage of service reform than hospitals in Northern Ireland however this comparison is useful in identifying the areas of efficiency improvements Green Park should focus on. The review focuses on elective orthopaedic services as these form the bulk of the Trust's elective activity (outpatient services are currently the focus a province-wide improvement programme and we do not wish to duplicate efforts).

Data was not available for some indicators. In these cases the findings reflect the diagnostic interviews undertaken with the Trust.

The review team considered the following questions:

- What action has been taken by the Trust to improve efficiency and reduce cost?
- Is bed capacity maximised based on:
 - Day surgery rates
 - Day of Surgery Admission
 - Pre-operative assessment rates
 - Occupancy rates
 - Delayed discharges
- Is theatre capacity maximised based on:
 - Cancelled Operations
 - Reasons for cancelled operations
 - Use of Day Surgery
 - Cancelled Sessions
 - Utilisation of sessions
- Are other resource issues increasing cost?

3.2.1 What action has been taken by the Trust to improve efficiency and reduce cost?

The Trust has a range of projects underway, however in the context of the current modernisation agenda, and the volume of change underway at other Trusts, there are opportunities for greater internal reform.

The Trust reported that delivery of the 2007 access targets had acted as a catalyst to increase the utilisation of resources, for example:

3. Findings. . .

- Bed occupancy rates on adult wards have increased and averaged 84% between July 2005 and June 2006.
- The day surgery rate has increased from 28.9% to 36.4%.

The Trust has introduced a nurse led pre-admission clinic. Trust staff also conduct pre-admission telephone calls to patients to minimise cancellation rates.

The Trust encourage early mobilisation of patients post-operatively to minimise post-operative length of stay. The Nurse Specialist role is developing further to include assessing patients post-operatively. The Anaesthetic Assistant role, which has both patient safety and efficiency benefits, has been developed at the Trust with success.

Protocol-led discharge is in place for most patients and this helps to reduce discharge delays by removing the constraint of the availability of senior medical staff to authorise discharge. The Trust has a project underway to understand reasons for delayed discharges and has set a target to reduce delayed discharges by 15%. The Trust has set a target (as part of Priorities for Action) to reduce the average length of stay by 5%.

3.2.2 Is bed capacity maximised?

The Trust's role as a specialist centre in Northern Ireland sees them treat the more complex orthopaedic patients in Northern Ireland, who typically have a longer length of stay. There is clear evidence however that regardless of casemix and catchment population issues, there is significant potential for the Trust to increase efficiency and reduce cost through better management of their bed capacity.

a. DAY OF SURGERY ADMISSION

Patients are admitted earlier than they should be prior to elective procedures. Patients, even those who are designated as day-cases, are admitted on the day or night before surgery. The new Trust should provide an opportunity to work with anaesthetists to agree the protocols and practical job planning arrangements required to support the introduction of day of surgery admission (DoSA), which has been shown to reduce cost and increase efficiency. The NHS Institute has identified that 99% of primary hip and knee patients at high performing Trusts are admitted on the day of surgery. Introduction of anaesthetic involvement in pre-operative assessment would support day of surgery admission and reductions in length of stay.⁸

⁸ Changing the admission process for elective surgery: an economic analysis Boothe P, Finegan, Canadian Journal of Anaesthesia 1995 May;42(5 Pt 1):391-4.. The Peri-operative System: a new approach to managing elective surgery. Anaesthesia and Intensive care Kerridge R, Lee A, Latchford E, Beehan SJ, Hillman KM 1995;23:591-6. Liverpool Hospital, Sydney, New South Wales

3. Findings. . .

b. PRE-OPERATIVE ASSESSMENT RATES

Pre-operative assessment is not yet comprehensively in place, increasing pre-operative stay and cancelled operations, and reducing opportunity to commence discharge planning⁹.

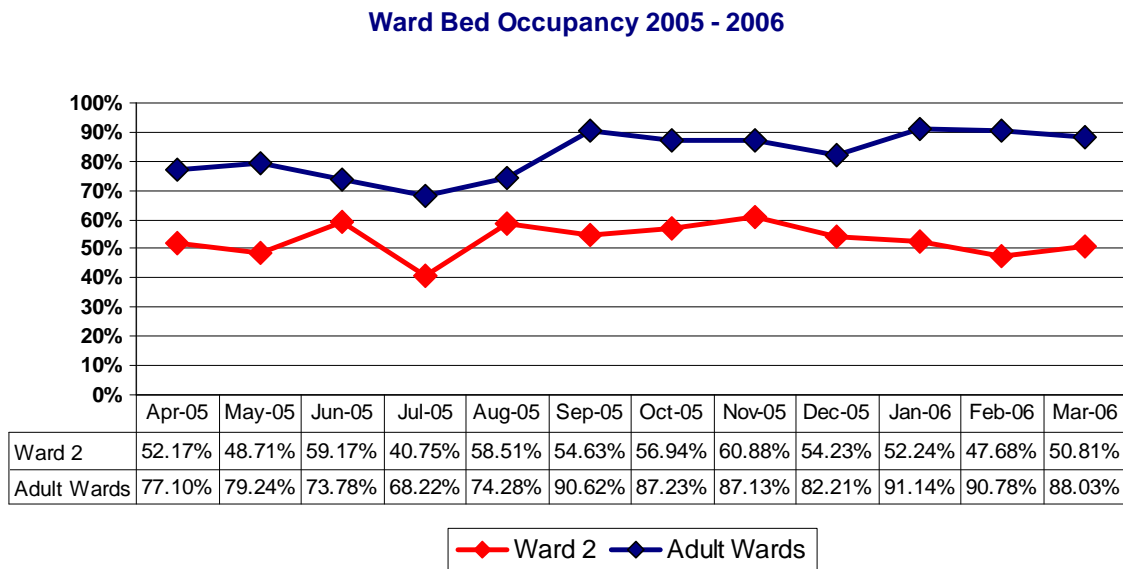
⁹ The Peri-operative System: a new approach to managing elective surgery. Anaesthesia and Intensive care Kerridge R, Lee A, Latchford E, Beehan SJ, Hillman KM. 1995;23:591-6. Liverpool Hospital, Sydney, New South Wales

c. OCCUPANCY RATES

Bed occupancy rates on adult wards have increased and averaged 84% between July 2005 and June 2006 (Figure 3.2). The Trust's bed occupancy rate is low when considered in the context of the elective nature of the site, low rates of day of surgery admission and occurrence of delayed discharges. The graph shows occupancy rates in paediatric wards (Ward 2) separately from adult wards as it is more appropriate to have a lower occupancy rate for paediatrics.

There is no single desirable level of bed occupancy across a hospital. Instead an acceptable occupancy with its corresponding refusal rate is a complex function of casemix, size of bed complement and variability in patient LOS¹⁰. The concept of seeking to reduce bed occupancy to around 85%¹¹ has now been superseded by emphasis on understanding and managing the hourly availability of beds. Scheduled-elective units should run at occupancies over 90%, and many non-elective Trusts are also achieving good emergency flows at these occupancy levels by monitoring occupancy on an hour by hour inflows basis¹².

Figure 3.2: Bed Occupancy Rates¹³



¹⁰ Modelling for the Planning and Management of Bed Capacities in Hospitals PR Harper and AK Shahani, Journal of the Operational Research Society, 53 (2002), 11-18

¹¹ Total time in English accident and emergency departments is related to bed occupancy. Cooke MW, Wilson S, Halsall J, Roalfe A. Emerg Med J. 2004 Sep;21(5):575-6.

¹² NHS Library Emergency Care Briefing Modernising Bed Management Original author: Nathan Proudlove; Updated in January 2006 by: Nathan Proudlove and Deidre Barr; Series Editor: Matthew Cooke

¹³ Ward 2 is a paediatric ward

d. *DELAYED DISCHARGES*

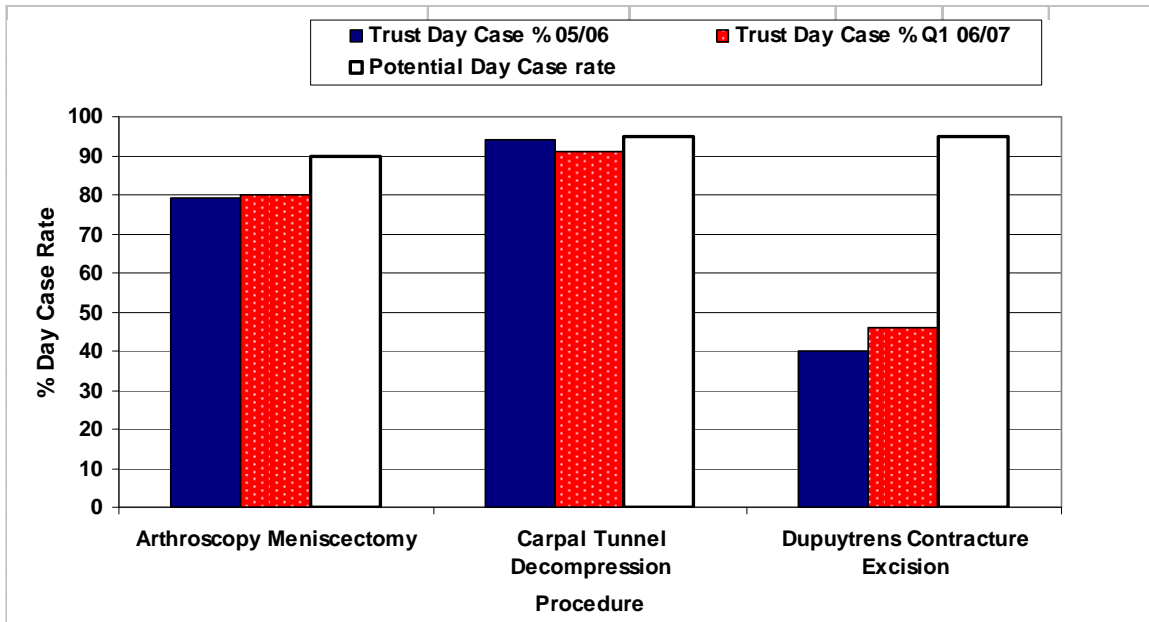
158 days were lost to delayed discharges of more than 3 days in Q1 06/07, compared to 278 days for the whole of 05/06. This data relates solely to orthopaedics. The indication from the delayed discharge project is this is a major issue across the Trust as a whole across all specialties – in a snapshot at June 2006, 27 patient discharges were delayed, equating to 1,227 delayed days.

The link with the community, in particular social services, has been flagged as a key reason for delayed discharges: the Trust are keen to involve social service at the pre-admission, rather than once the patient has been declared medically fit for discharge, as is the practice with some areas.

e. *DAY SURGERY RATES*

There is significant potential to further increase day surgery rates, which are currently less than NHS average. The average figure for orthopaedics at the Trust is 36%, an increase on 28.9% in 2004/05. The English national rate for orthopaedics is approximately 50%. Based on the basket of BADS procedures (British Association of Day Surgery) below 69.8% indicates poorer than NHS average performance; above 77.1% is top quartile NHS performance. The Trust does not currently review day surgery rates for all of these procedures – in the 3 procedures monitored the day surgery rate varies between 46 and 91% for a volume of 152 cases in Q1 this year.

Figure 3.3: Day Surgery Rates



f. LENGTH OF STAY

Average length of stay for primary hip (6.25 days) and primary knee (6.33 days) replacements compare favourably to other specialist orthopaedic Trusts. There is considerable variation by consultant however. This indicates that the average length of stay is significantly influenced by the practices of one consultant, rather than the Trust approach to management of patients and bed capacity. The NHS Institute indicates that organisations providing high quality care and value for money have primary hip LoS of less than 6.7 days and primary knee LoS of less than 6.5 days. Whilst the Trust averages are below these levels, the consultation level variation is evidence of opportunities to improve use of beds.

Figure 3.4: Length of Stay Compared to English Orthopaedic Hospitals

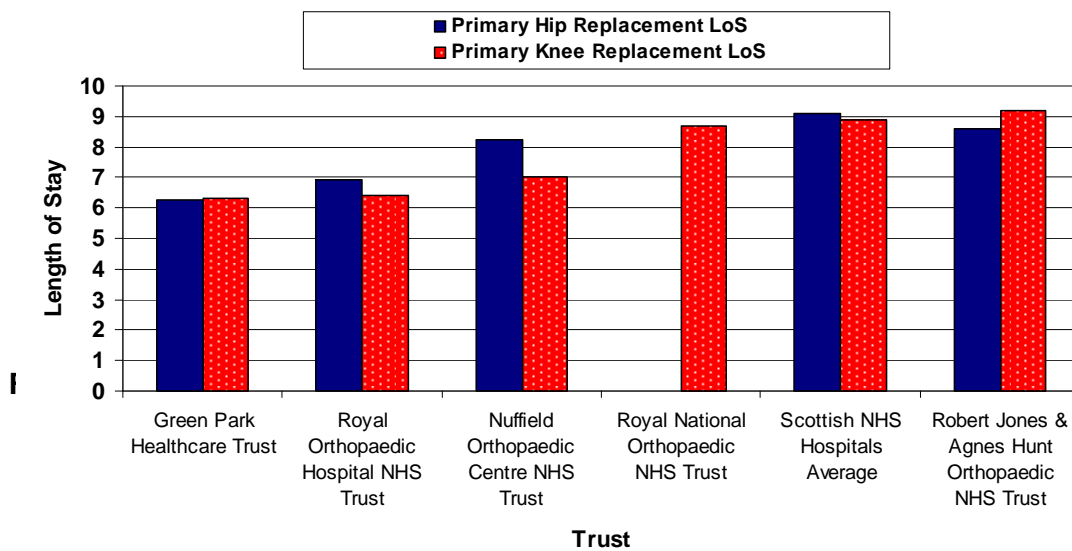


Figure 3.5: Variation in Primary Knee Length of Stay at Green Park

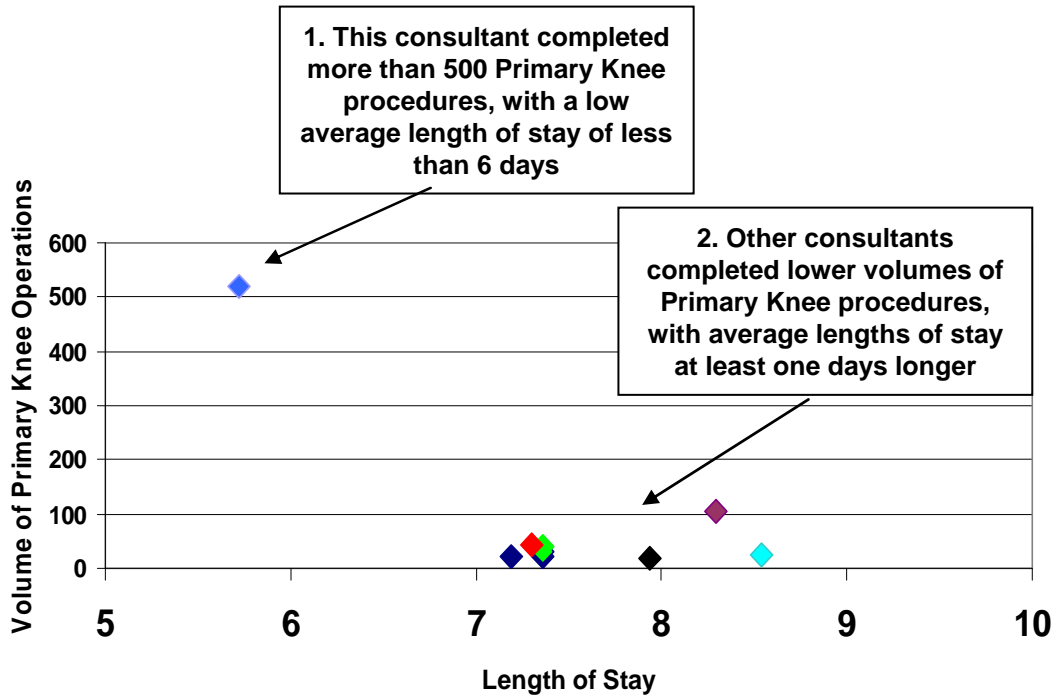
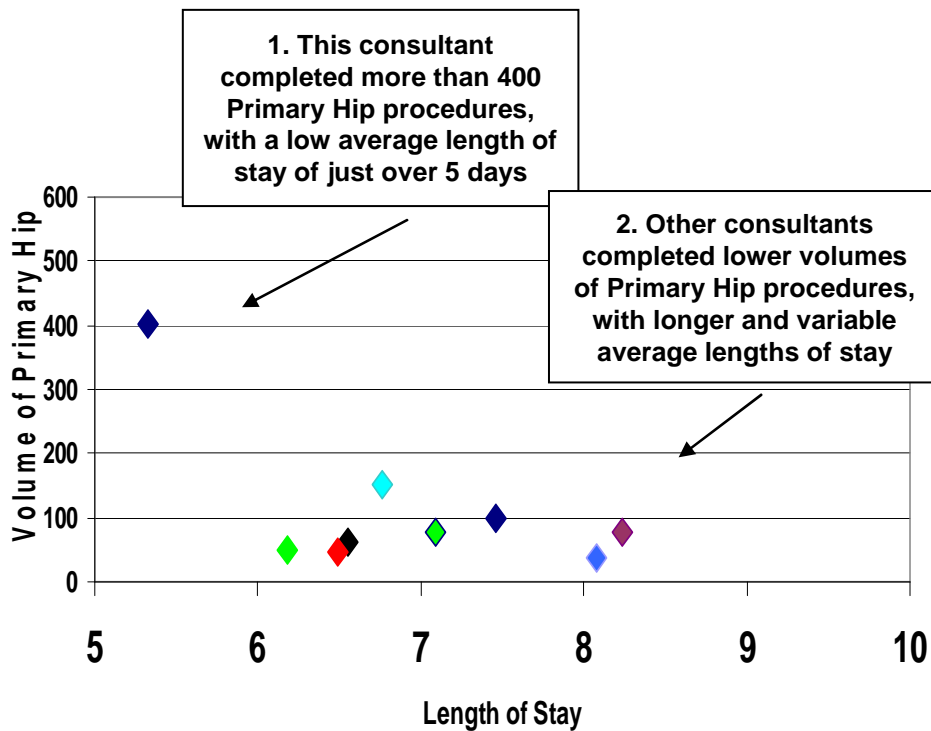


Figure 3.6: Variation in Primary Hip Length of Stay at Green Park



g. EXCESS BED DAYS

All of the above factors lead to excess bed days at Green Park. Excess bed days are those bed days that are above the maximum of the range normally expected for an episode in respect of any given HRG. Excess bed days accounted for 29.8% of total bed days at Green Park in 2004/05. The cost of excess bed days equated to 19% of the total inpatient costs.¹⁴ The total cost of excess bed days highlights further the considerable cost of long hospital stays. The value at the Green Park was £5,796,852 in 2004/05 across all specialities.

3.2.3 Is theatre capacity maximised?

A range of indicators and practices demonstrate that theatres could be more efficiently used.

a. CANCELLED OPERATIONS

Theatre cancellations are consistently below 5%, however the NHS is now achieving cancellation rates of 0.8% in elective activity and therefore we suggest the Trust aim for this benchmark.

b. REASONS FOR CANCELLED OPERATIONS

The majority of the cancellations (69%) are avoidable with process changes as the following breakdown, based on this year's quarter one data, shows:

- Patient did not attend (DNA) (25.3%)
- Treatment no longer suitable (15%)
- Hospital Cancellation (12.6%)
- Patient on medication/not fasted (8%)
- Other (4.6%)
- Patient decided against treatment (3.5%).

The remainder of the cancellations could be reduced with increased pre-operative assessment: Non-Acute Medical Problem (27.6%); Acute Medical Problem (3.4%).

The Trust is working to decrease the cancellation rate and as an elective site, it should be possible to achieve non-medical cancellations rates of 0.8%.

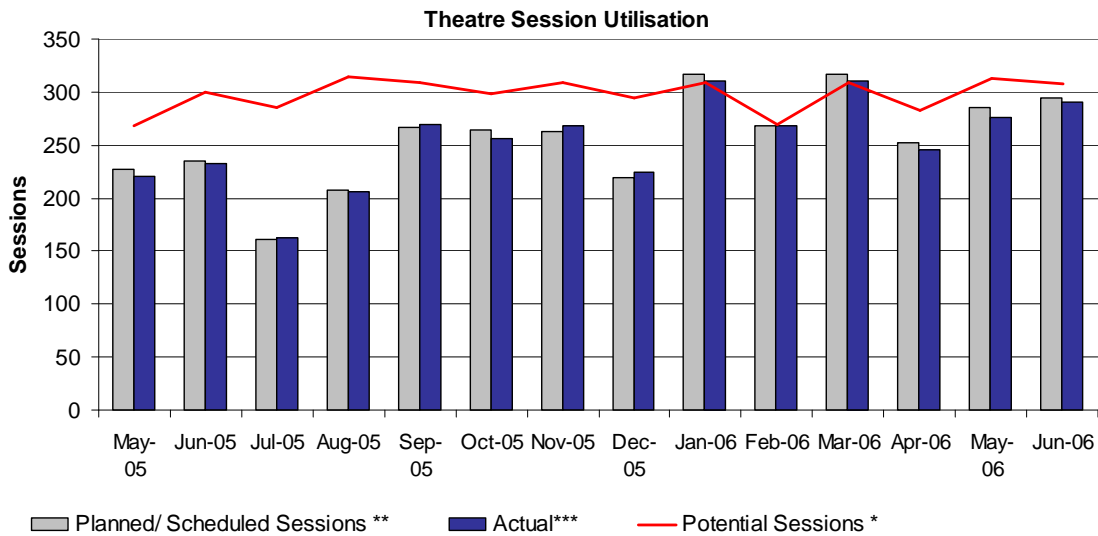
c. USE OF DAY SURGERY

There are no dedicated day case lists, which increase efficient use of session time and would support the drive to increase day case rates.

¹⁴ Source: data provided by DHSSPS Finance Directorate

d. USE OF FUNDED SESSIONS

Figure 3.7 Theatre sessions increased over 05/06



* Potential Sessions = The theoretical number of sessions which could occur if all medical/nursing staff were available (i.e. no leave etc)

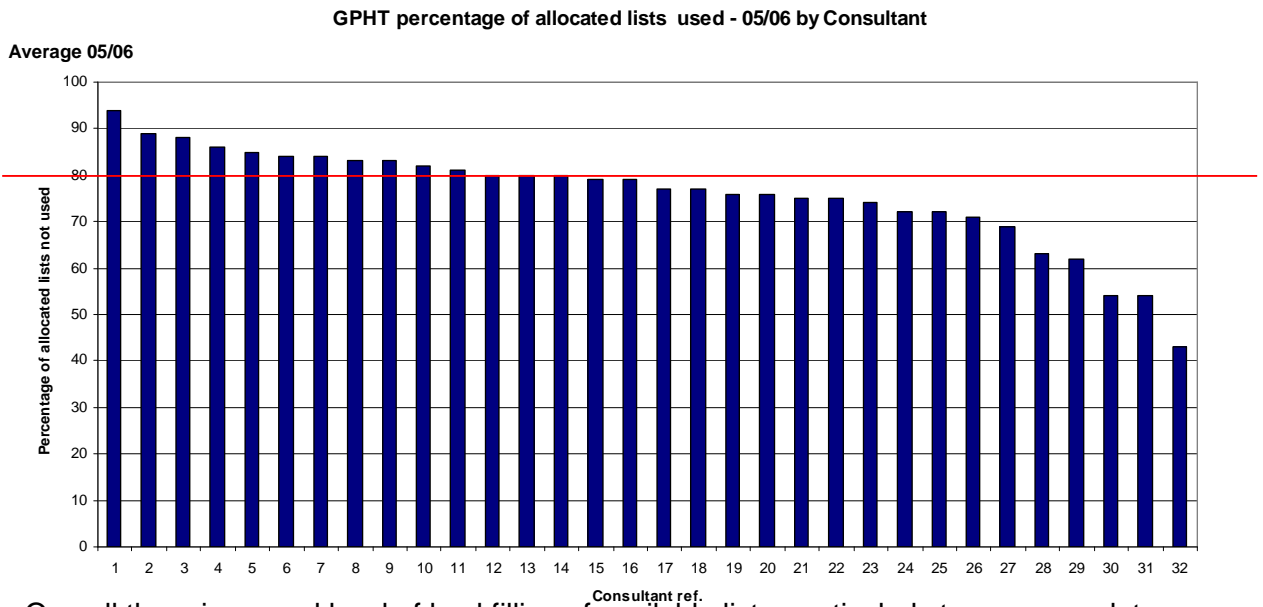
** Planned Sessions = Annual, Statutory, Study and Audit days deducted from Potential Sessions (as Scheduled at the time of Bed Booking)

*** Actual Sessions = Figures established at end of the month, includes short notice cancellations, emergency sessions and additional lists

The variation in use of theatres by consultant significantly reduces the Trust’s ability to make best use of this expensive resource. Not all consultants are delivering their contracted lists, which compounds the Trust’s challenge in meeting the inpatient wait time target. The filling of the Orthopaedic Clinical Director post and strengthening of the process for performance management of consultant use of theatres is necessary to improve this situation.

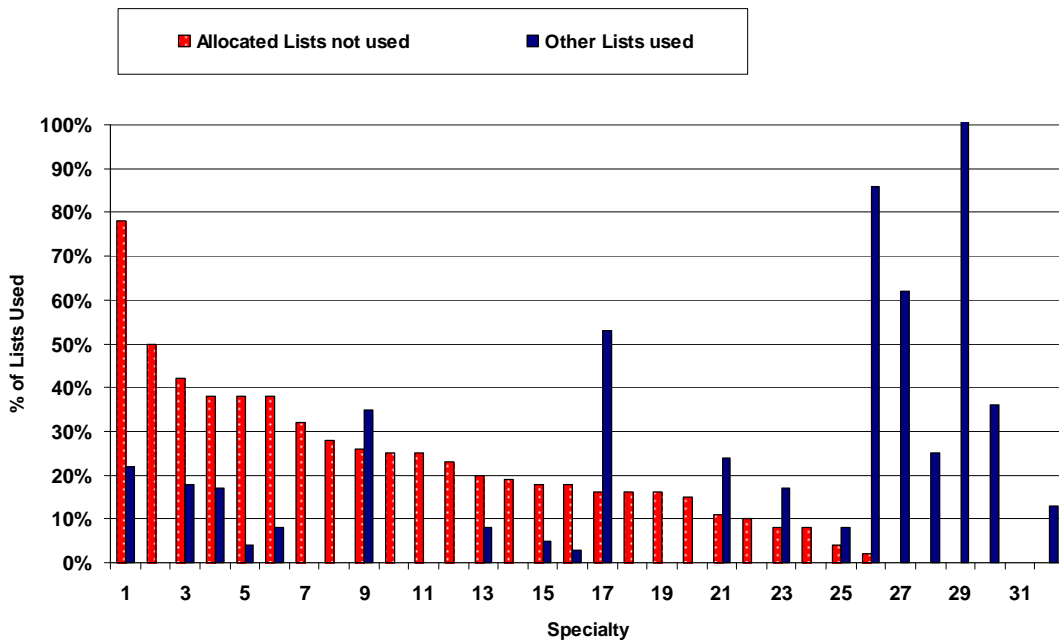
31 of the 32 consultants operating at Green Park used less than 90% of lists allocated to them on the theatre schedule in 2005/06. Once annual/study leave is taken into account, 80% of lists should be used. Graph 3.8 illustrates that over half of consultants do not deliver the full 80% (which is indicated by the red line). There are valid reasons why some consultants do not use their planned sessions including, management responsibilities, education and training responsibilities, interviewing of junior staff, prioritization of trauma in relation to annual leave, and one consultant works part-year. In the context of the challenges faced by the Trust in reducing wait times for surgery, these activities must be monitored and prioritised to ensure optimum use of theatre time.

Figure 3.8: Variation in use of Allocated Funded Lists by Consultant



Overall there is a good level of backfilling of available lists, particularly to accommodate the increase in throughput to reduce patient wait times. The diagnostic interviews with the Trust indicated however, that this re-allocation of lists is not even across consultants, rather the consultants who use most of their own sessions also pick up other lists. This finding is supported by the limited data available, drawn from the Trust Quarterly Orthopaedic Report and shown in Figure 3.9. This shows that those consultants already using their allocated lists (with no red bars, to the right of the graph), are picking up other lists, as indicated by the blue bars. The method of calculating 'Other Lists Used' is now under review by the trust, however at the time of the review this data was confirmed by the Trust as accurately representing the situation.

Figure 3.9: Variation in use of Allocated Funded Lists by Consultant



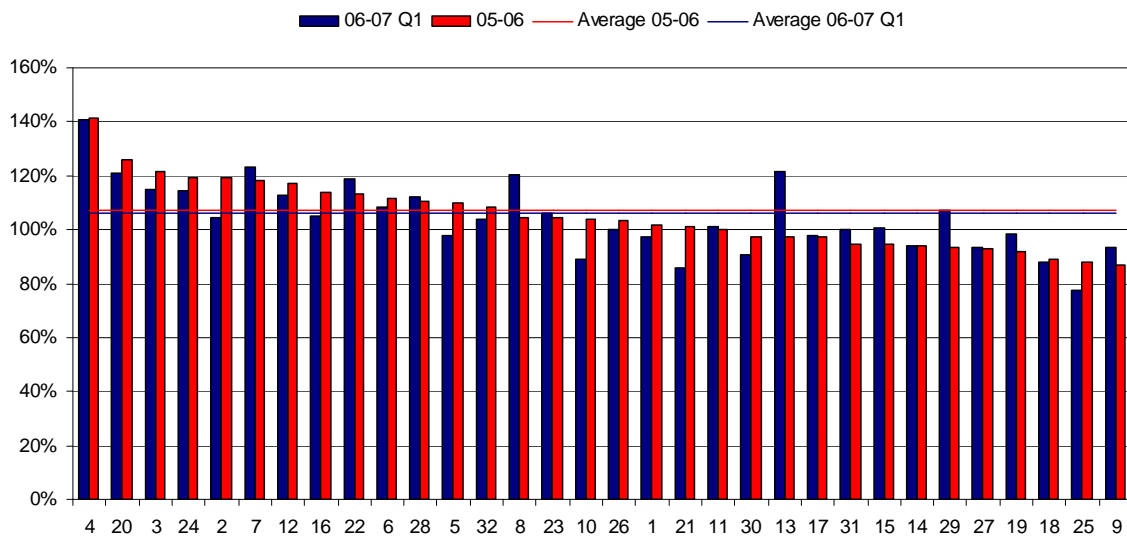
The most common reason for theatre cancellation by consultant after bed booking is annual leave (38.5%), other non-medical duties (15.6%), other medical duties (14.7%) and study leave/course conference (10.7%).

e. UTILISATION OF SESSIONS

Based on the current method of calculating theatre utilisation at the Trust, utilisation of theatre sessions is high with an average session utilisation rate of 107% per session last year. This method of analysing over/under utilisation of sessions however does not show where there are late/early starts and finishes, and the opportunity to reduce down-time between cases, which more detailed analysis would reveal. There is also a lack of clarity at the Trust regarding how theatre utilisation is calculated, which limits understanding of the extent to which theatres are used efficiently. This reduces the effectiveness of the data in performance management of theatres.

Theatre utilisation varies across consultants. This also appears to confirm anecdotal reports that some lists are “usually light”. Whilst there are clinical limitations to the improvements that can be delivered, this analysis indicates that there is opportunity to increase theatre throughput. Responsibility for ensuring that operative lists are always scheduled or planned to fully utilise the operative time available is not clearly delineated.

Figure 3.10: Variation in Theatre Utilisation by Consultant



3.2.4 Are other resource issues increasing cost?

High levels of sickness and dependence upon agency staff are increasing cost for the Trust. Absenteeism caused by sickness is running at above NHS good practice levels at 4.94%. NHS Trusts are currently achieving sickness absence rates of between 3 and 6% and agency spend of less than 1%. Best practice therefore indicates that the Trust should aim for a sickness absence rate of 3% and agency spend of 1% of total staff costs. Nearly 7,500 days were lost to sick leave in the Orthopaedic Directorate in the 12 month period up to June 2006 and during the same period the cumulative % on sick leave was 21%. Long-term sickness accounted for three-quarters of all absenteeism.

The Trust has experienced difficulties in recruiting full-time staff to some areas and there is a resultant dependency on high cost agency staff. Ward staffing levels have tended to be below the establishment – between 5 and 20 over Q1 06/07.

Over last year, payroll costs were 13% over budget for medical staff (which spiked to 35% for the first quarter of 06/07, with theatres also almost 30% above budget). Expenditure on Anaesthetic services has exceeded the budget by nearly 36% for the year-to-date – largely due to the need to employ locum Anaesthetists.

It should be noted that some of the over-run in staff costs is due to waiting list initiative activity, but it has not been possible to separate it as a cost base to measure its direct impact.

Interventions to improve of sickness absence and reduce dependency upon agency staff and sources for further information are provided in the recommendations section of this report.

3.2.5 What are the Potential Benefits of Improving Efficiency?

This section illustrates the potential benefits of tackling some of the individual efficiency issues described in this section.

a. *REDUCING VARIATION IN LENGTH OF STAY*

The following examples are based on 2005 /06 data provided by the Trust.

Scenario	Saved Bed Days
Consultant average LoS for Primary Hip reduces by 50% of difference between average and best ALOS	840
Consultant average LoS for Primary Hip reduces to Trust best ALOS	1681
Consultant average LoS for Primary Knee reduces by 50% of difference between average and best ALOS	656
Consultant average LoS for Primary Knee reduces to Trust best ALOS	1313

Applying an indicative cost per bed day of £250¹⁵ to these scenarios illustrates the potential scale of benefits to be achieved. If consultant average length of stay reduced to the Trust best performance for primary hips and primary knees, the potential saving would be £453,500.

Recent analysis by Dr. Foster¹⁶ further underlines the importance of reducing length of stay. This analysis of English Trusts concluded that if Trusts with longer than average lengths of stay moved just 25 per cent closer to the median length of stay, the average potential bed saving would be 13 per cent of the total hospital capacity.

¹⁵ Please note this is a full cost including overheads and therefore the full amount could not actually be saved in cash terms.

¹⁶ Source: Dr Foster Intelligence Analysis 2006

b. *DAY OF SURGERY ADMISSION*

Statistics for current levels of day of surgery admission were not available. Based on the 2005/06 data provided by the Trust which recorded 5162 elective orthopaedic inpatients, and assuming a current level of DoSA of 40% (based on the interview feedback that most patients are admitted the day before surgery), the table below illustrates the potential benefit of increasing DoSA:

Table 3.2 Potential Benefit of Day of Surgery Admission

Scenario	Saved Bed Days
Increase DoSA to 50%	516
Increase DoSA to 60%	1032
Increase DoSA to 70%	1548
Increase DoSA to 80%	2064
Increase DoSA to 90%	2580

Applying an indicative cost per bed day of £250¹⁷ to these scenarios illustrates the potential scale of benefits to be achieved. If DoSA rates were increased to 90%, the potential saving would be £645,000 however it is noted that the impact of regional specialty and casemix may result in a lower Day of Surgery Admission percentage.

¹⁷ Please note this is a full cost including overheads and therefore the full amount could not actually be saved in cash terms.

c. *DAY SURGERY*

Initial consideration might indicate that the gains to be made from increasing day surgery at the Trust rates are not significant, however it is important to bear in mind that day surgery is increasingly regarded at the potential mode of delivery for all surgery. The NHS Institute recommends that day surgery is regarded as the norm for elective surgery, with an emphasis on justifying the need to admit the patient. As the Trust does not currently monitor day surgery rates for BADs basket of procedures, considering changes to the *overall* rate for day surgery provides a good indication of potential benefits. The following scenario is conservative, estimating a saving of one bed day per patient treated as a day patient rather than an inpatient. Based on the 2005/06 data provided by the Trust which recorded 5162 elective orthopaedic inpatients, if the Trust repeated the 2004/05 achievement of increasing day surgery by 7%, 564 bed days could be saved, equating to a potential saving of £141,000. If the overall rate was further increased to 50%, 1,125 bed days could be saved, equating to a potential saving of £281,250.

d. *DELAYED DISCHARGES*

In the orthopaedic directorate alone, the data indicates that over 600 bed days per year could be saved if delayed discharges for a small number of patients (15) were reduced to 0. Applying an indicative cost per bed day of £250¹⁷ confirms the potential benefit of this improvement: £150,000. The delayed discharges project indicates greater potential for savings across the rest of the Trust. Applying an indicative cost per bed day of £250¹⁸ to the 1,227 delayed days identified in the June 2006 snapshot suggests a potential benefit of £306,750.

e. *TACKLING CANCELLED OPERATIONS*

Based on 2005/06 activity data, if the level of cancelled operations were reduced to NHS best practice of 0.8%, an additional 241 operations could take place.

f. *AGENCY COSTS*

Data from the Trust Financial Return (TFR) can be used to illustrate potential gains for reducing the cost of agency staff, however as recommended in Section 4, Recommendation 3 this should be taken forward and validated by the Trust.

The total of the TFR return for salaries and wages for the financial year 2005/06 was £39.8m, of this, £873,000 was on non HPSS staff, a category mostly comprised of agency staff costs. This would equate to a percentage agency spend of approximately 2.2%. In this context, reducing agency spend to 1% would realise savings of £475,000 however there would be additional costs within the paybill to the extent that the agency spend is related to vacancies (rather than sickness).

¹⁸ Please note this is a full cost including overheads and therefore the full amount could not actually be saved in cash terms.

g. **SICKNESS**

Drawing on the same Trust returns, the total costs associated with employed staff were £39m. This data indicates that savings of £757, 000 could potentially be achieved if sickness absence were reduced to 3% from 4.94%.

3.2.6 Delivery of Efficiency Improvements: Conclusions

The Trust reported that delivery of the 2007 access targets had acted as a catalyst to increase the utilisation of resources and there is a range of efficiency projects underway, which are starting to yield results.

The scale of improvement and modernisation needs to increase however - facilities dedicated to elective procedures should achieve higher levels of efficiency.¹⁹

The use of beds and theatres differs by consultant. This variation should be reduced through performance management to improve efficient use of expensive resources.

There is opportunity to improve the use of the beds and theatres, and specific recommendations are made in Section 4.

Reducing dependency on agency staff and decreasing sickness levels requires increased focus by the Trust.

The Trust faces a significant challenge in the breadth and scale of change that it must deliver: to continue to deliver improvements in the way beds and theatres are used, to increase throughput and reduce waits, and to deliver cost efficiencies.

There is opportunity to improve the use of the beds and theatres, and reduce sickness / absence.

3.3 PERFORMANCE IMPROVEMENT

In exploring the 'action that can be taken to improve the efficiency and effectiveness of delivery of the range of acute services provided', the review team examined the performance improvement infrastructure in place at the Trust to deliver the identified improvements.

The team considered the following questions:

- Is a performance improvement infrastructure in place at the Trust, through which targets are identified and communicated to staff, progress monitored and managed, and change delivered?
- Is appropriate data collected by the Trust to drive performance change?

¹⁹ House of Commons Health Committee (2006) Independent Sector Treatment Centres, Fourth Report of Session 2005-6 Volume I, London: The Stationery Office

The investigation team drew on interviews with senior staff at the Trust and the documents the Trust produces to report on performance

3.3.1 Is a performance improvement infrastructure in place at the Trust?

The Trust faces a significant challenge in the breadth and scale of change that it must deliver. As the 'wash-through' of conversions from additional outpatient clinics are added to the inpatient waiting lists, maintaining the 6 month wait time in 2007 is likely to prove as difficult as achieving it. To successfully meet this challenge the Trust must have in place a management process that provides a focus on performance improvement and the achievement of meaningful results. Our review suggests that there is opportunity to strengthen the performance improvement infrastructure in place at the Trust.

Successful delivery of this approach will necessitate a strengthening of the performance management regime within the organisation. This includes:

- Increasing the focus on increasing efficiency and reducing cost to equal the emphasis on access targets. As discussed earlier the use of cost information is only one part of the performance management framework. There needs to be a focus within senior management on those factors that drive hospital efficiency as well as cost. Our review has highlighted a number of factors that drive hospital efficiency and these need to be subject to regular review by senior management.
- Greater focus from by the executive tier of the Trust on performance managements of resource utilisation. Current theatre and bed utilisation indicates that greater performance management of how consultants use these resources is required. There needs to be in place appropriate accountability mechanisms to ensure that action is taken within directorates and that a process exists to ensure effective follow-up of decisions taken at a senior level on performance improvement.
- Greater involvement of consultants. The vacant Orthopaedic Clinical Director post (to be filled shortly) results in difficulties fully engaging consultants corporately in discussions on how to improve efficiency and reduce cost. While the Medical Director is to be commended for the dual role he has maintained to cover this vacancy, and his introduction of a data-based approach to involving consultants in the delivery of change, the new appointee needs to be bedded down quickly. There should be a clear linkage with the overall performance improvement agenda of the Trust.
- Better resourcing of performance and cost data analysis, and increasing the range of analysis undertaken. The Trust has issues resourcing data analysis, resulting in important performance data not being available to those who need it to manage the service. To support staff in increasing efficiency and reducing cost, the Trust will need to resource the provision of regular internal performance information (such as benchmarking information in Section 3.2) and external performance benchmarking. Both these data sets can be used to better understand operational performance. This may necessitate further enhancement of the consultant level data that is produced on a monthly basis and the report of directorate level performance that is produced quarterly.

We recognise that improvements are being delivered as part of business as usual. This increases sustainability and local ownership of change, however in the current context of

a need to deliver significant changes internally and the ambitious and fast-paced reform programme driven by the Department, the burden on operational managers creates risk. There is a requirement, therefore, to have a more focused approach to performance improvement within the organisation.

3.3.3 Performance Improvement: Conclusions

There are opportunities to improve the performance improvement infrastructure.

Link with Trusts who have delivered improvements in use of resources. As part of the review, links to support sharing of best practice were established with two English Trusts with a demonstrated track record in similar efficiency improvement.

There are opportunities to increase internal benchmarking between individuals, specialties and divisions. This is particularly valuable given the different stage in the reform agenda of the Trust's English peers, as highlighted in Section 3.2.

3.4 FUTURE AGENDA

The review team was asked to identify ‘factors that can not be influenced by direct Trust action in the short term but which in part explain apparent underperformance, that could be addressed in the longer term’.

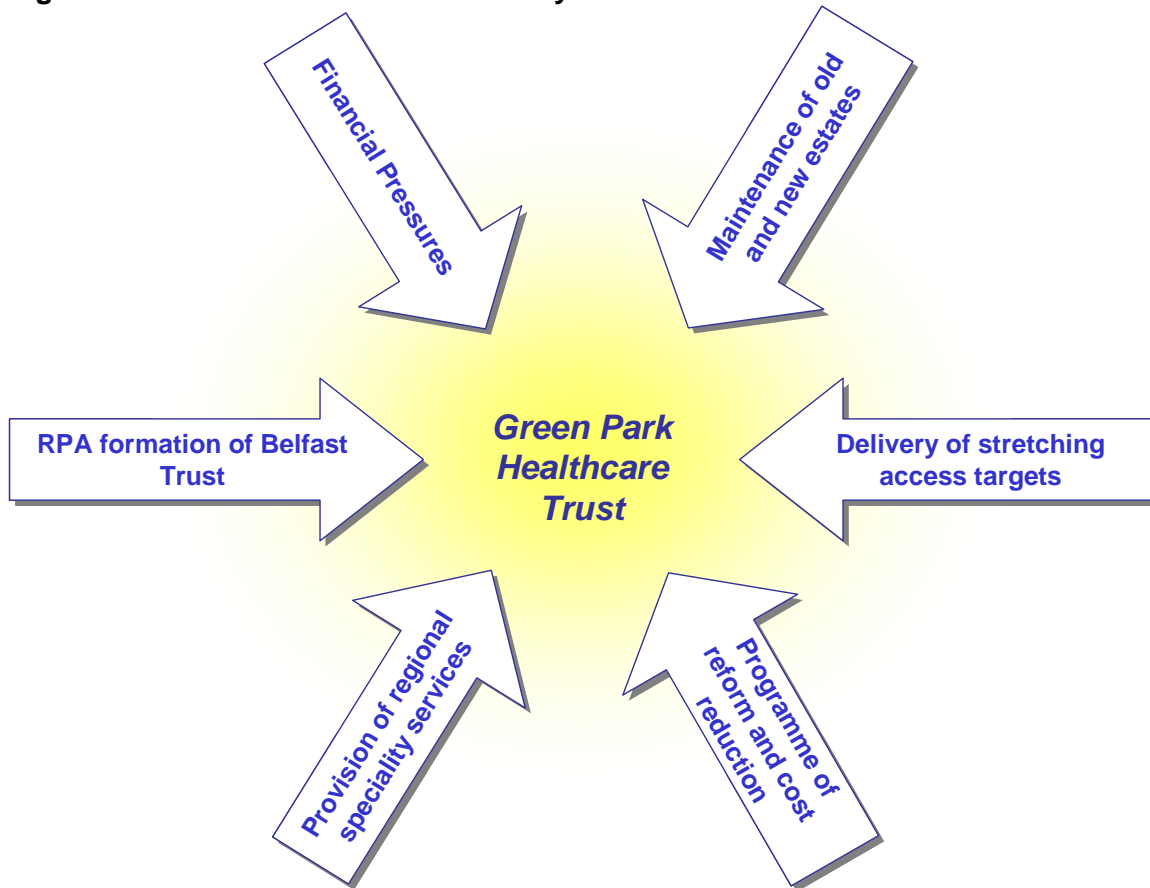
In addressing this requirement, the team considered specifically:

- The current context of healthcare delivery at Green Park
- The areas in which the advent of the new Belfast Area Trust should provide a valuable opportunity to drive efficiency
- Aspects of service delivery at Green Park where strategic, rather than discrete operational, decisions to reduce cost are required

3.4.1 Current healthcare delivery context at Green Park

The pace and scale of healthcare reform in Northern Ireland is ambitious. The reform agenda presents both challenges and opportunities to Green Park, however, overall, these are not exceptional and are similar to challenges faced by Trusts in England and elsewhere. Green Park, which is currently tasked with:

- Delivering a series of wide-ranging and stretching targets access targets in several areas of the patient pathway including outpatients and inpatients, without incurring the same level of cost as 2006/07
- Achieving cost reductions and efficiencies, and preparing for the introduction of tariff
- Participating in a range of improvement and change projects including Outpatients Improvement Programme, implementation of the Hospital Registration Offices, ICATS, roll-out of the Theatre Management System, waiting list management, fracture services, procurement savings etc.
- Engaging in the Reform of Public Administration and the creation of the Belfast Area Trust.

Figure 3.4.1: Current healthcare delivery context at Green Park

This programme of reform is acting as a catalyst for better use of resources by Green Park. Delivering these changes simultaneously is challenging however and can result in apparently conflicting objectives at the operational level. Such magnitude of change over an ambitious timeframe places pressure on the performance improvement infrastructure and capability at Green Park, and may prove a threat to sustainability.

3.4.2 In which areas would the advent of the New Belfast Trust provide a valuable opportunity to drive efficiency?

There are a range of areas where the structure of the new Trust could be used to increase efficiency and reduce cost. Green Park will form part of the new Belfast Area Trust - amalgamating the Current Belfast City Hospital, Royal Group of Hospitals, Mater Infirmorum, Greenpark, North and West Belfast (including Muckamore Hospital) and South and East Belfast HSS Trusts.

The new Trust should prove a major opportunity to support efficiency initiatives underway and planned in areas which were more difficult to influence under the previous structure. Specific operational factors include:

- Improving links with community health service provision, for example to support reduction of delayed discharges

- Planning of consultant commitment across sites to facilitate all-day theatre sessions, pre-operative assessment of patients and reduce travelling time between sites
- Rationalisation of the on-call rota e.g. sharing cover across sites
- Base lining the allocation of theatre sessions according on demand, rather than historical allocation of this resource
- Improving the collection and sharing of performance data, such as the indicators used in this report, to enable internal benchmarking.

3.4.3 What aspects of service delivery should be considered strategically by the new Trust before cost reduction is pursued operationally?

The review team identified a number of areas for the new Trust and new health authority to consider as part of strategic planning

In some areas, if the cost of services is to be significantly reduced, then a strategic decision by the new Trust and the new Health Authority, to change the shape and type of service provision is needed, rather than discrete cost reduction. The review identified these areas where direct Trust action to reduce cost was either inappropriate or not possible under the previous organisational structure:

- The blueprint for the future provision of orthopaedic services in Northern Ireland
- The modernisation of the workforce, to reflect a move from consultant delivered services to consultant led services e.g. in support of pre-operative assessment clinics
- The level of outreach service provision e.g. outpatient clinics
- The increased provision of services in the community, rather than the acute Trust.

The review identified the above as areas where direct Trust action to reduce cost was either inappropriate or not possible under the previous organisational structure.

3.4.4 Conclusion

To ensure sustainable improvements, the impact and deliverability of the reform agenda in totality must be assessed as a whole from the view point of Trust, in conjunction with the Department.

This is increasingly important in the light of the huge cost incurred reducing waiting lists at the Green Park so significantly in one year

This would necessitate increased joint-working with the Department on the co-ordination of reform initiatives, operational do-ability and impact and incentives.

The new Belfast Area Trust must be viewed as an opportunity to transform services and increase efficiency rather than an administrative change across all the hospitals within its remit.

4. RECOMMENDATIONS

Recommendation 1: The review team recommends that a dedicated infrastructure and dedicated resource is established within the Belfast Trust to address the strategic and operational points raised in this report, given the fundamental nature and extent of reform underway and the wider re-structuring and reform agenda under consideration by the new Trust and Health Authority.

Recommendation 2: The aims for the performance measures set out in this report are stretching and represent best practice. The recommended next step for the Trust and the Department is to agree timescales and trajectories for achievement these aims.

Recommendation 3: The Trust should seek to obtain indicative costs to give a sense of scale of the improvements that could be delivered on foot of the recommendations made in this report being implemented.

4.1 UNIT COST VARIANCE

Recommendation 4: Unit cost variance is a useful comparative indicator and should be used in conjunction with the performance and productivity indicators recommended in Table 1.1 as part of future benchmarking, which give a clear view of areas where the Trust must increase efficiency.

Recommendation 5: As the methodology for unit cost benchmarking cannot be fully harmonised, the Department and the Trust should confirm that they both support a more holistic approach to unit cost comparison. Characteristics of a holistic approach would include:

- Use of unit cost variance as one of a suite of indicators.
- Agreement that unit cost variance is an indicator of where savings and efficiencies can be achieved.
- A move away from focus on variance of specific HRGs, to a more rounded approach agreed by the Trust and Department. This could include specialty level variance against specialty specific peers, rather than trying to match overall trust service profile.

Recommendation 6: We recommend there is value in the Trust re-developing its link with the Specialist Orthopaedic Alliance, and the Department may be able to support the Trust in this regard. As well as access to comparative data, this would aid the Trust in specific exercises such as the demonstration of the cost of complex procedures.

4.2 DELIVERY OF EFFICIENCY IMPROVEMENTS

Section 3.2 sets out the significant number of efficiency improvement projects planned and underway at the Trust.

In this section, recommendations to improve use of resources are made based upon pathway assessments, discussions with the Trust and on the data analysis provided by the Trust.

The review team has established links with two English Trusts consulted regarding delivery of efficiency improvements (South Devon Healthcare, an NHS Centre for Innovation and Guy's and St. Thomas' NHS Foundation Trust), which provides an opportunity for Green Park to share best practice.

We have provided benchmarks based on best practice for a range of indicators to inform ongoing performance monitoring.

4.2.1 Beds

Recommendation 7: Plan patient discharge from the point of pre-operative assessment (elective) or within 24 hours of admission (non-elective). Implement an escalation procedure for delayed discharge. The Trust should aim to reduce delayed discharges to 0.

Recommendation 8: Use the advent of the new Trust as a catalyst to improve delayed discharges and link with the community. Community Trusts need to be involved earlier in the discharge process to reduce the impact of delayed discharges

Such involvement would require the acute and community Trust to meet to agree processes to support:

- Adequate notice of discharge to all concerned parties
- Consultation with patients and carers throughout the discharge process
- A system of information collection and dissemination between hospital and community
- Co-ordination by a named professional
- Multidisciplinary approach involving different health and social care professionals
- Early and coordinated assessment of patient's needs and home circumstances
- Early planning of the needs for further care
- Effective communication between hospital and community.

Recommendation 9: Introduce same-day admission as the norm for all clinically appropriate patients. We recommend aiming to achieve DoSA rates of 90% however it is noted that the impact of regional specialty and casemix may result in a lower Day of Surgery Admission percentage.

Recommendation 10: Introduce pre-operative assessment: this should reduce the need to admit patients the day before surgery and also contribute to reduced cancellations. We recommend aiming to pre-operatively assess 100% of patients.

These improvements in the use of beds should be reflected in higher bed occupancy rates of over 90%.

4.2.2 Theatres

Recommendation 11: Responsibility for ensuring that operative lists fully utilise the session time available should sit with the Patient Treatment List Manager and the Clinical Service Manager for Theatres in conjunction with the operating Consultant.

Recommendation 12: Using the data available from BOIS (Belfast Orthopaedic Information System), the average durations for each procedure for each consultant could be used to plan lists that make better use of the available session time.

Recommendation 13: This should be supported by efforts to widen the extent of “agreed sharing” or “pooling” of the inpatient waiting list.

Recommendation 14: In seeking to increase day surgery rates, the Trust should explore further the feasibility of setting up dedicated day surgery lists. We recommend aiming to achieve top quartile NHS performance (77.1%) in the BADS basket of procedures.

Recommendation 15: The Trust should increase the proportion of all-day theatre sessions

All-day theatre sessions can be a more efficient way of using theatre time, particularly where the operative time for individual cases is long.

Recommendation 16: The new Trust may provide a good opportunity to re-visit Consultant Orthopaedic schedules and develop rotas that support improved productivity and efficiency – though it is acknowledged that there are other Trusts with which consultants are shared, so this may not be possible in some cases.

We recognise that this will also have implications for the rotas of Anaesthetic and other theatre staff that will need to be resolved.

Recommendation 17: Review how to increase utilisation of funded sessions to 100% through changes to medical/nursing staff scheduling and rotas.

Recommendation 18: Reduce the proportion of cancelled operations. The best performing NHS Trusts are now achieving 0.8%. Given the policy of over-booking in some specialties, the Trust will need to consider with the Department the implications of aiming of 0.8%. Any patient cancelled for non-clinical reasons should be re-admitted within 28 days.

4.2.3 Staff

Recommendation 19: Measure sickness absence and report rates to the Board regularly, including trends and benchmarking against other NHS Trusts via the NHS Institute www.productivity.nhs.uk

Recommendation 20: Consider using an absence review technique such as the Bradford Scoring System (see case study in Appendix A)

Recommendation 21: Monitor and plan for the use of temporary staff, including understanding and controlling the demand for agency staff. (see case study in Appendix A)

A range of health provider specific supporting materials are available on the both the DHSSPS and Department of Health websites, including Model Employer / Improving Working Lives (Policy and guidance section on DH website) and the Review of Occupational Health Services in the HPSS: Supporting a Healthy Workforce March 2004 on the DHSSPS website.

NHS Trusts are currently achieving sickness absence rates of between 3 and 6% and agency spend of less than 1%. Best practice therefore indicates that the Trust should aim for a sickness absence rate of 3% and agency spend of 1% of total staff costs.

4.3 PERFORMANCE IMPROVEMENT INFRASTRUCTURE

Recommendation 22: Internal and external benchmarking exercises should explicitly drive the search for better practice that can then be rolled out within the Trust to improve performance.

- For example, the variance in LoS for Arthroscopy (0.14 to 1.29 days in Q1 06/07) or Primary Knee arthroplasties (5.4 to 11.25 days in Q1 06/07) within the Trust should focus attention on how the gap between the longest and shortest LoS could be reduced.
- The variance in use of sessions and theatre utilisation by consultant should focus attention how overall practice could be improved.
- Alternatively, benchmarking pre-operative bed days with other Trusts can help Green Park identify ways of introducing new practices, e.g. admitting patients on the day of surgery.

Recommendation 23: Efforts should also be made to approach external benchmarking, for example, in the following areas

- Day surgery rates for: Excision of Ganglion (if done); Arthroscopy; Carpal Tunnel Decompression; Excision of Bunion; Removal of Metalware; Dupuytren's Contracture Excision;
- LoS for high volume elective Orthopaedic procedures – the following HRGs at a minimum: Foot Procedures; Hand Procedures; Soft Tissue or other Bone Procedures; Primary Hip; Primary Knee; Revision Hip; Revision Knee
- Pre-operative bed days; delayed discharge bed days

- Staff turnover; staff sickness; agency costs
- Staff productivity (we are aware of some recent progress with acquiring the data to support this at RGHT).

Recommendation 24: The appropriateness of other organisations to be comparators and the question of whether this type of benchmarking needs to be done with a particular peer group (or can be done with all Trusts) will depend on the exact indicator. For example, sites or Trusts that only provide elective services could be expected to have lower last-minute cancellation rates than sites that also perform emergency surgery and it may be more appropriate for Green Park to benchmark its cancellation rates with other Trusts that focus on elective surgery.

Recommendation 25: We recommend there is value in the Trust re-developing its link with the Specialist Orthopaedic Alliance, and the Department may be able to support the Trust in this regard. As well as access to comparative data, this would aid the Trust in specific exercises such as the demonstration of the cost of complex procedures.

Recommendation 26: The Trust should make the appointment of a Clinical Director for Orthopaedics a high priority. The individual should work alongside the Directorate Manager for Orthopaedics and a separate Clinical Director for Anaesthetics, and with other leaders in the Trust to develop a strong approach to performance management. The clinical leadership that the role could offer would provide valuable support to the roles of Medical Director and Directorate Manager. A key part of this role should be to support the performance improvement agenda and in this particular context, the clinical aspects of efficiency improvement. The Trust is now in the advanced stages of appointing to this post.

These actions to strengthen the performance improvement infrastructure would support the trust in reducing variation in use of resources by consultant.

4.3.1 Incentive Scheme

Targets for the incentive scheme are set objectively and equitably across all Divisions at the beginning of the Business/Financial year for example:

- 3 targets common to all Divisions (access, CIP, financial balance)
- 3 targets that are Division specific (e.g. LoS reduction)

Performance against targets is measured regularly against a predefined timetable.

Divisions which hit targets are given earned autonomy and allowed to make decisions without reference to central authority – for example, to fill replacement posts, or decide how to spend a pre-defined portion of the capital budget.

Individuals and directorates who do not use resources (e.g. beds, theatre sessions) efficiently have their resource allocation reviewed. This data is also incorporated as part of the Consultant appraisal process.

Where targets are exceeded (predominantly in financial terms) this is shown as genuine over-performance and acknowledged as such with original targets standing.

This incentive scheme could be used as a first step towards consideration of a more mature incentive model, with revenue implications (e.g. Divisional retention of a proportion of surplus).

4.4 FUTURE AGENDA

Recommendation 27: As the new Trust is seeking to affect a transformation in healthcare delivery, rather than an administrative re-structure, we would recommend the following areas are considered:

- Increase joint-working with the Department on the co-ordination of reform initiatives, operational do-ability and impact and incentives
- Capitalise on the advent of the new Belfast Area Trust to increase efficiency through facilitation of operational changes
- Support the development of the blueprint for the future provision of orthopaedic services in Northern Ireland.

APPENDIX A: PERFORMANCE IMPROVEMENT CASE STUDIES

A.1 CASE STUDY 1

Resource: Beds	Case Study
Trust: Guys and St. Thomas'	Improvement Achieved: 4 medical wards were closed over 2 years without any negative effect on readmission rates.
	<p>Action Taken:</p> <ol style="list-style-type: none"> 1. Information on Length of Stay was made available and used including a daily report on the bed state by LOS with a red/amber/green system for alerting the consultant in charge to patients exceeding ALOS. 2. Length of Stay was performance managed. <ol style="list-style-type: none"> (a) Multi-disciplinary 'Cluster meetings' were held each week involving the consultant in charge, their junior team, ward sister, physio etc. Each patient under that consultant team was discussed and their discharge plan reviewed. (b) Monthly performance data on LOS by consultant was issued (as well as other key measurables such as income per bed day) 3. Changes were clinically championed. Clinical champions worked with analysts to improve data credibility and piloted changes to clinical process to lead by example for other clinicians.
Contact	Adrian Hopper, Mark Kinirons

A.2 CASE STUDY 2

Resource: Beds	Case Study
Trust: Barking, Havering and Redbridge Trust	Improvement Achieved: Reduction in average length of stay of 2.26 days.
	<p>Action Taken:</p> <ol style="list-style-type: none"> 1. The National Orthopaedic Project team undertook benchmarking and recognised that the length of stay for emergency orthopaedic operations was higher than the national average. 2. The Trust established a project group and developed a plan to identify actions required to reduce the length of stay for orthopaedic trauma patients. 3. The Trust introduced two additional weekly trauma theatre lists, and implemented daily discharge monitoring, with an emphasis on protocol led discharge.

A.3 CASE STUDY 3

Resource: Theatres and Beds	Case Study
Trust: South Devon Healthcare Trust	<p>Improvement Achieved: Reduction in patient recovery and length of stay to three days after surgery when the norm was 10-14 days through pre-operative assessment</p> <p>Action Taken:</p> <ol style="list-style-type: none"> 1. On hearing about a multi-modal (care bundles) approach to peri-operative care for at The Royal College of Surgeons, the team at Torbay decided to change their practice and introduce a new pathway. Key steps in the programme were pre-op assessment (planning ahead), change to surgical technique (designing a reliable system) and preparation of patients on the ward (patient involvement in the pathway). 2. As part of the project plan, the team tried to make it difficult for staff NOT to follow the new care pathway, e.g. the only paperwork available was the Integrated Care Pathway paperwork, whilst drug prescription charts were already written for required drugs. 3. Another way of driving the pathway was giving patients their own care pathway documentation. This informed patients of what should happen from pre-assessment onwards, and also meant that they were given the paperwork on admission. The patient and their carers recorded what the patient ate or drank, as well as the distance walked and when catheters and epidurals were removed. 4. The Enhanced Recovery nurse drove the programme, checking that the pathway and pain management procedures were being followed. The nurse and ward sisters had extended skills enabling them to dispense epidural top ups so they weren't reliant on other teams to do it. The nurse also collected data and collated evidence of improved morbidity and success.

A.4 CASE STUDY 4

Resource: Theatres	Case Study
Trust: James Paget University Hospital, Great Yarmouth	<p>Improvement Achieved: An equalization of waiting times achieved through baselining theatre capacity according to demand.</p> <p>Action Taken:</p> <ol style="list-style-type: none"> 1. The Trust looked at all aspects of the clinicians' working practices: <ul style="list-style-type: none"> • Level of outpatient clinics • Conversion rate • Waiting list size • Case complexity • Theatre allocation • Theatre utilisation – underruns/overruns • Alternative procedure areas, i.e. LAs – minor surgery 2. This information was used to plan the level of theatre sessions required by each speciality to achieve the required waiting time and led to a major reorganisation of theatres, increasing allocation to some specialities and a reduction in allocation to others. 3. All of the information was made available to the clinicians and discussed with individual specialities and the proposed realignment of services was templated.

A.5 CASE STUDY 5

Resource: Staff	Case Study
Trust: Guy's and St. Thomas'	Improvement Achieved: Dependency on agency nursing staff from 21% of the total spend in 2001/2 to 5% of the total spend in 2005/6
	<p>Actions Taken Included:</p> <ol style="list-style-type: none"> 1. Temporary staffing strategy group chaired by chief nurse, attended by director of finance and director of HR 2. Timely, detailed, readily available management information improved understanding of reasons for use of temporary staff 3. Promotion of in-house bank - currently 80-90% bank use and 10-20% agency use compared to 46% bank and 49% agency in September 2003 4. Complete control of booking processes and recruitment to bank 5. Close involvement of finance, procurement and HR departments 6. Close monitoring and support to divisional teams from assistant director of nursing 7. Improvement in permanent recruitment supported by return to practice and adaptation programmes 8. Flexing of permanent staff between wards 9. Measurement of patient acuity and dependency to inform business planning and establishment setting 10. Key part of clinical nurse manager/modern matron role to monitor and control use of temporary staff 11. Introduction of trust wide rota policy and implementation of IT rostering system.

A.6 CASE STUDY 6

Resource: Staff	Case Study
Trust: The Whittington Hospital NHS Trust	Improvement Achieved: The trust tackled staff sickness absence by focussing on problem area and saved approximately 700 days in sickness absence - a reduction of 16% in the average rate of sickness.
	<p>Actions Taken Included:</p> <ol style="list-style-type: none"> 1. Identifying the trust's 'top 50' absences, which consisted of 15 long-term sickness absence cases. The other absences were made up of 35 individual's with the highest Bradford scores in the trust. DN footnote. 2. Developing individual plans jointly between managers and HR project manager to reduce the top 50 highest absentees and estimated savings tracked. These savings were calculated based on the reduced reliance on temporary additional staffing, and percentage of sickness absence. 3. Streamlining IT systems, which capture sickness absence data, particularly concentrating on the Bradford score system 4. Identifying training needs and delivering training across the trust to enhance manager's skills to effectively manage sickness absence 5. Communicating the project widely for example through hospital wide staff briefings by the chief executive and director of HR and the staff magazine 6. Revising and implementing changes in policy and procedures e.g. updating the sickness absence guidelines 7. Working in partnership with staff side colleagues e.g. through a partnership steering group. <p>DN [2] The Bradford Score System is a method of recording and setting a trigger point for action. An individual Bradford score - which measures irregularity of attendance is calculated as: $S \times S \times D = \text{Bradford points score}$ S= Spells of absence D= days absent over last 365 days</p>

A.7 CASE STUDY 7

Resource: Staff	Case Study
<p>Trust: South Eastern Sydney Illawarra Area Health Service</p>	<p>Improvement Achieved: 49% reduction in nursing overtime and a 54% reduction in sick leave</p> <p>Action Taken:</p> <ol style="list-style-type: none"> 1. To establish the full extent of the problem, overtime, call backs, sick leave, nursing recruitment and retention, after hours operating room allocations data was collected and reviewed. Staff were consulted 2. The main contributing factor to high absence and overtime levels was unreasonable and variable nursing workloads. 3. A new booking system was implemented 4. Continuous collection of overtime, sick leave, call back, staff satisfaction surveys, recruitment and retention data and clinical priority coding benchmarks. 5. Over a five month period between Jan 06 and May 06, despite a 31% increase in emergency cases, the data indicates that there has been a 32 % reduction in overtime and a 24% reduction in sick leave.