HEALTHCARE COSTING FOR VALUE INSTITUTE

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Using costing data to improve efficiency in an acute hospital

Case study

Maidstone and Tunbridge Wells NHS Trust

May 2018

Contents

Synopsis and key learning points	3
Introduction	4
The role of costing information in addressing service overspends	4
Using national data to build confidence in the accuracy of the trust's ophthalmology costing data	5
How PLICS data supported the ophthalmology deep dive	10

Synopsis and key learning points

Trusts have increasing amounts of data about their services, including from patient-level costing (PLICS), the Model Hospital and the Getting It Right First Time (GIRFT) programme.

This case study provides a practical example of how a trust is using the data from these three sources to improve efficiency in one service, as well as address quality and performance concerns.

Maidstone and Tunbridge Wells NHS Trust has had an overspend in their acute ophthalmology services for some time. Historically there had been a lack of confidence in the accuracy of the internal costing data, so a triangulation process with two national benchmarking sources was undertaken; the Model Hospital and GIRFT.

Data from both the Model Hospital and GIRFT identified performance, financial and outcome concerns within the ophthalmology service. These external sources validated the information clinical teams had been previously been given, when service-level reports had shown financial losses over a period of several years.

Now that there is a higher level of confidence in the accuracy of internal costing data, it is being used as part of a deep dive process to help the trust improve service quality, and work towards achieving a balanced financial position. This work has identified potential cost saving or income generating opportunities totaling £1.3m.

Key learning points

- Although financial reporting at service-line was well established, there had been limited action or change resulting from the information that was shared with clinical teams.
- It is important to recognise that clinical confidence in financial data cannot be assumed; it needs to be developed.
- The national benchmarking tools provide a good opportunity to encourage clinical teams to review various aspects of performance, and to triangulate with internal reporting data.
- It is important for services be able to challenge internal cost allocations, and to see changes being made as a result.
- Combining data from Model Hospital, GIRFT and PLICS can support improvements in patient care and identification of efficiencies.

Introduction

Maidstone and Tunbridge Wells NHS Trust (MTW) is a large acute hospital trust providing care to around 560,000 people living in the south of West Kent and the north of East Sussex. It operates from two main clinical sites: Maidstone Hospital and Tunbridge Wells Hospital at Pembury.

The trust has an annual income of £430m, and is currently in financial special measures, facing an overspend of around £19.3m for 2017/18.

The role of costing information in addressing service overspends

Routine reporting of service-line profitability has been embedded at MTW for around five years, with the Finance Committee and the Board receiving quarterly reports. These routine reports have consistently identified 10 specialties as overspending against the income received for their services, but, other than some challenge as to the quality of the data used, it had been difficult to embed the use of this information to improve the delivery of clinical services.

In August 2016, NHS Improvement determined that the trust met the criteria for financial special measures. This was because the trust was planning a deficit for 2016/17 and was unable to agree a control total. It was this event that proved to be the catalyst for costing data becoming a key factor in addressing the trust's overspend.

The Carter Review had been published in 2015, and this had identified MTW costs as being higher than the national average in several specialties. A reduction of MTW's costs to the national average level would result in a saving of £44m overall. In fact, eight of the ten specialties highlighted on the Carter Review were those that had regularly been identified as poor performing in the trust SLR reports.

A 'deep dive' investigation into the performance of three specialties was planned to identify why these services were losing money, and recommend actions that would move them to a break-even position.

One of the chosen specialties was ophthalmology. This service should have been making a surplus, given it had high activity volumes, and a case mix that was predominantly elective day surgery, so is less affected by spikes in emergency admissions.

This case study describes the work done in MTW to address the overspend, as well as quality and performance concerns about the trust's ophthalmology service.

Using national data to build confidence in the accuracy of the trust's ophthalmology costing data

Although a PLICS system was in place, the data from that had mainly been used by MTW to produce service-line reporting across all specialties. Only two clinical service-lines, chemotherapy and radiotherapy, had shown any surplus. However, the accuracy of the data used for service-line reporting was frequently challenged by those services running a financial deficit, and hence alternative sources of information were needed to triangulate with the internal costing information.

As part of the deep dive approach, national data sources were used to enhance internal costing information and support the premise that there were operational and performance issues that needed investigation. These external information sources confirmed the concerns which had been highlighted in the internal reports, and hence provided a level of credibility for the internal costing data.

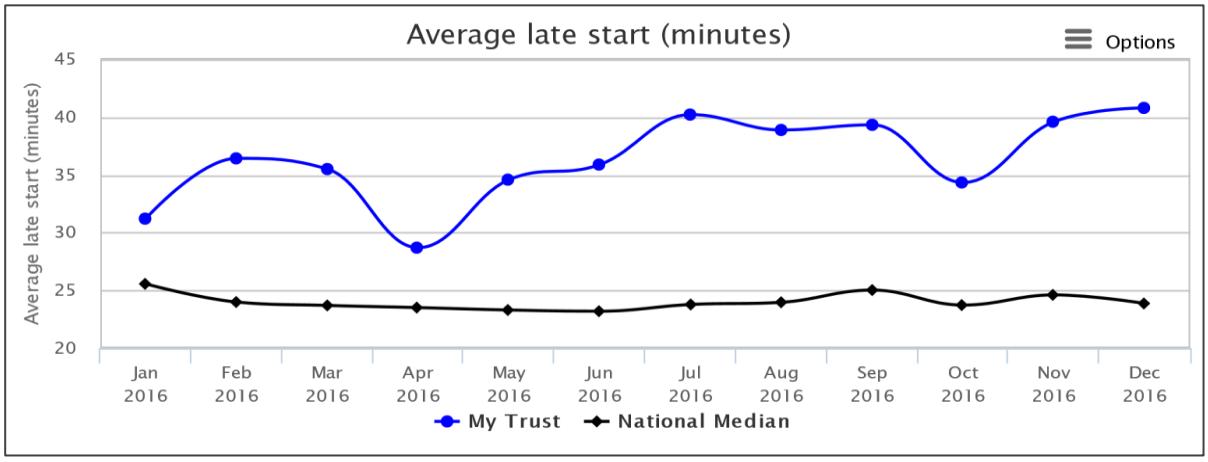
The Carter Review and the Model Hospital

Lord Carter's review of efficiency in hospitals, *Productivity in NHS hospitals*[1] outlined how large savings can be made by the NHS, with opportunities for non-specialist acute trusts to reduce unwarranted variation in productivity and efficiency, resulting in a potential £5 billion each year for the NHS by 2020/21. To support this review, a 'Model Hospital' tool has been developed by NHS Improvement to enable NHS trusts to measure performance against other organisations.

The Model Hospital data provided evidence that all surgical specialties at MTW performed poorly against other trusts. Areas of poor performance included late starts and early finishes to theatre sessions, as well as comparatively large gaps where theatres were not being effectively utilised.

In particular, ophthalmology performed particularly poorly in these comparisons.

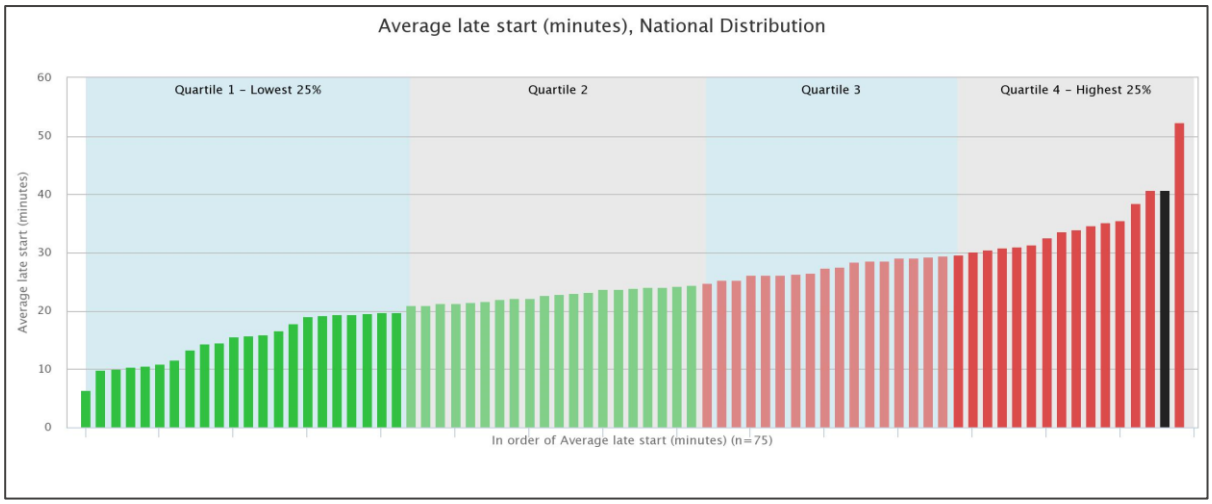
- During 2016, MTW consistently had a higher average late start for all ophthalmology theatre sessions, compared with the national median.



Source: Model Hospital

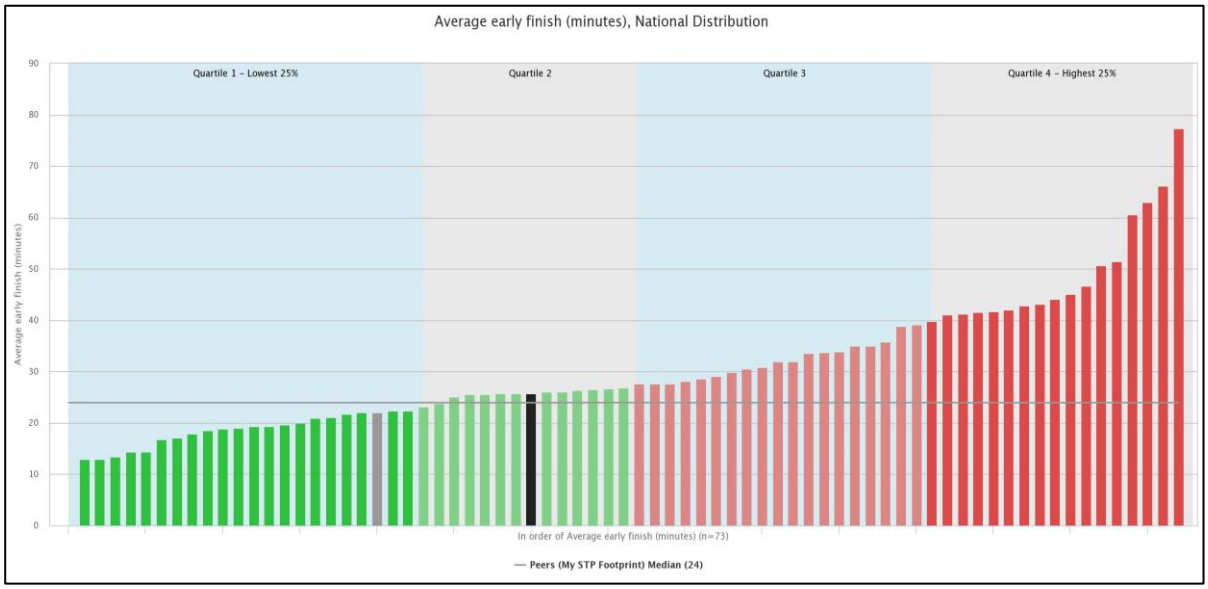
[1]Operational productivity and performance in English NHS acute hospitals: Unwarranted variations
An independent report for the Department of Health by Lord Carter of Coles February 2016

- The trust had the second highest average late start of all NHS ophthalmology services nationally.



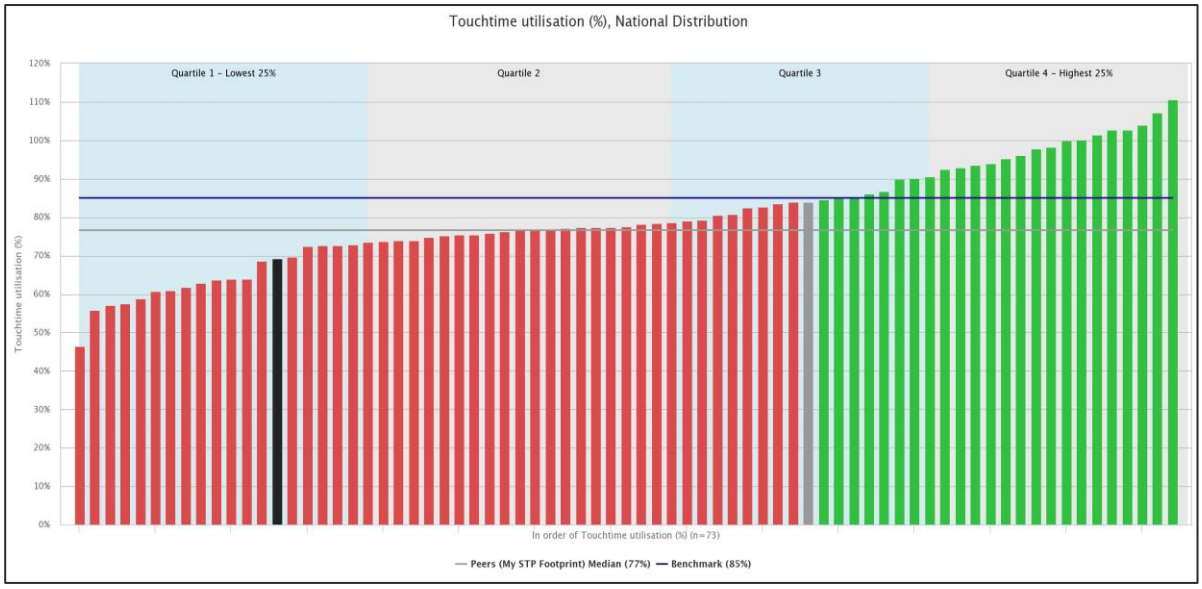
Source: Model Hospital

- Although the trust's performance on early finishes was better, this was only just above the national median.



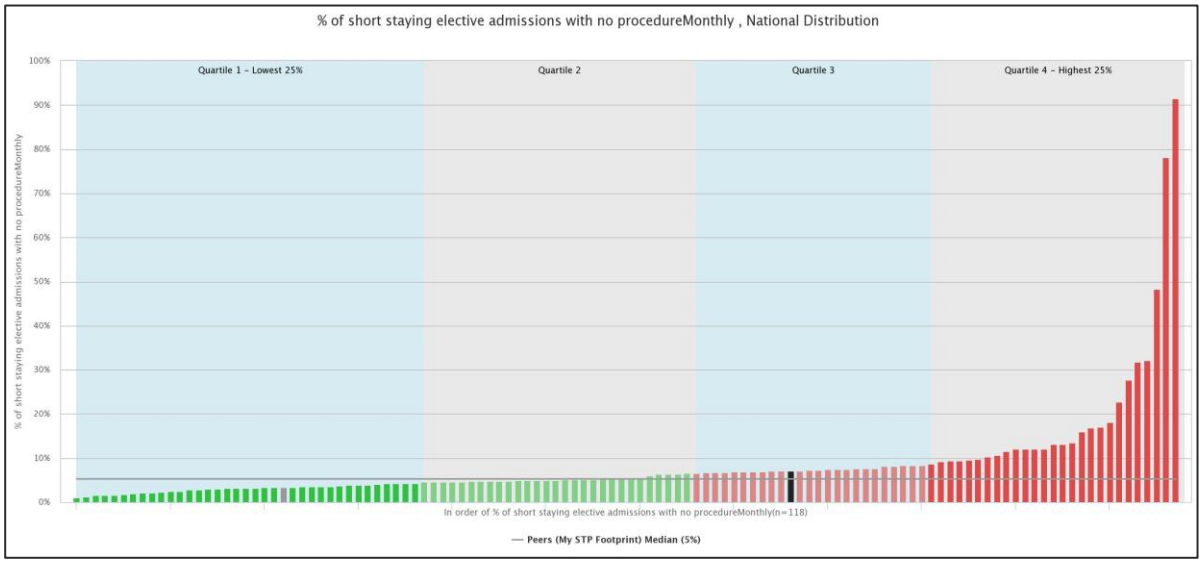
Source: Model Hospital

- The MTW ophthalmology service also performed poorly on touch time. This is the measure of the time that clinical staff have a patient in front of them in theatre, including anaesthetic time. The lower the touch time, the less effectively theatre time is being used.



Source: Model Hospital

- The proportion of elective patients who were admitted without having a surgical procedure was poorer than the national median. Some of these may be patients who had been pre-assessed as being fit, but were not fit on admission, but it can also be an indicator that the trust might not be undertaking planned work due to a shortage of appropriate kit, staff or resources. Given that the vast majority of ophthalmology surgery is day case, then elective work is relatively rare, and it is even rarer that it is not undertaken.



Source: Model Hospital

GIRFT

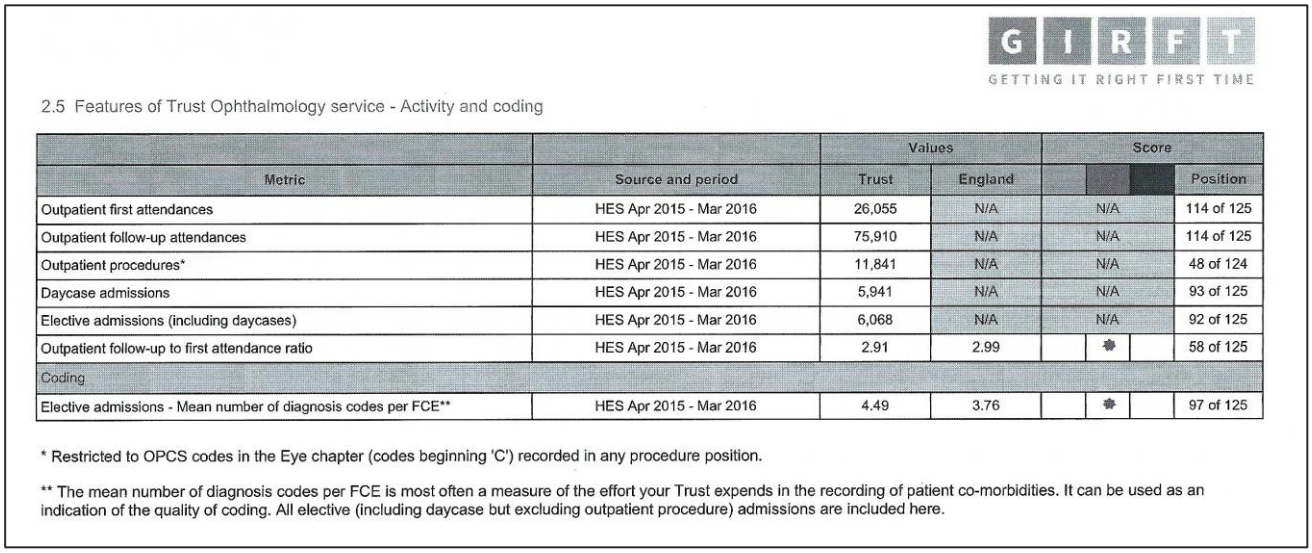
The aim of the Getting It Right First Time (GIRFT) programme is to improve the quality of care within the NHS by reducing unwarranted variation, bringing efficiencies and improving patient outcomes. This initiative is supported by NHS Improvement, and involves clinicians reviewing their own data, in partnership with their clinical peers, to promote wider adoption of evidence-based practice.

The programme originated in orthopaedics but has now been extended to other surgical and medical specialties, including ophthalmology.

The GIRFT process starts with an extensive data gathering process, followed by a visit from the GIRFT team for that speciality. During a visit the trust is represented by members of the executive team, including the CEO, medical director, chief nurse, finance director and chief operating officer, as well as consultant and other clinical representation. The visit includes a review of the data, which may run to 80 pages, and includes activity and financial data, as well as clinical outcomes.

Once again, the GIRFT data also showed the MTW ophthalmology service to be performing comparatively badly, compared to other NHS services:

- The activity review showed the trust to be performing an unusually low number of outpatient procedures compared to the rest of the ophthalmology activity at the trust.
- Coding quality was comparatively poor.



GETTING IT RIGHT FIRST TIME

2.5 Features of Trust Ophthalmology service - Activity and coding

		Values		Score	
Metric	Source and period	Trust	England		Position
Outpatient first attendances	HES Apr 2015 - Mar 2016	26,055	N/A	N/A	114 of 125
Outpatient follow-up attendances	HES Apr 2015 - Mar 2016	75,910	N/A	N/A	114 of 125
Outpatient procedures*	HES Apr 2015 - Mar 2016	11,841	N/A	N/A	48 of 124
Daycase admissions	HES Apr 2015 - Mar 2016	5,941	N/A	N/A	93 of 125
Elective admissions (including daycases)	HES Apr 2015 - Mar 2016	6,068	N/A	N/A	92 of 125
Outpatient follow-up to first attendance ratio	HES Apr 2015 - Mar 2016	2.91	2.99		58 of 125
Coding					
Elective admissions - Mean number of diagnosis codes per FCE**	HES Apr 2015 - Mar 2016	4.49	3.76		97 of 125

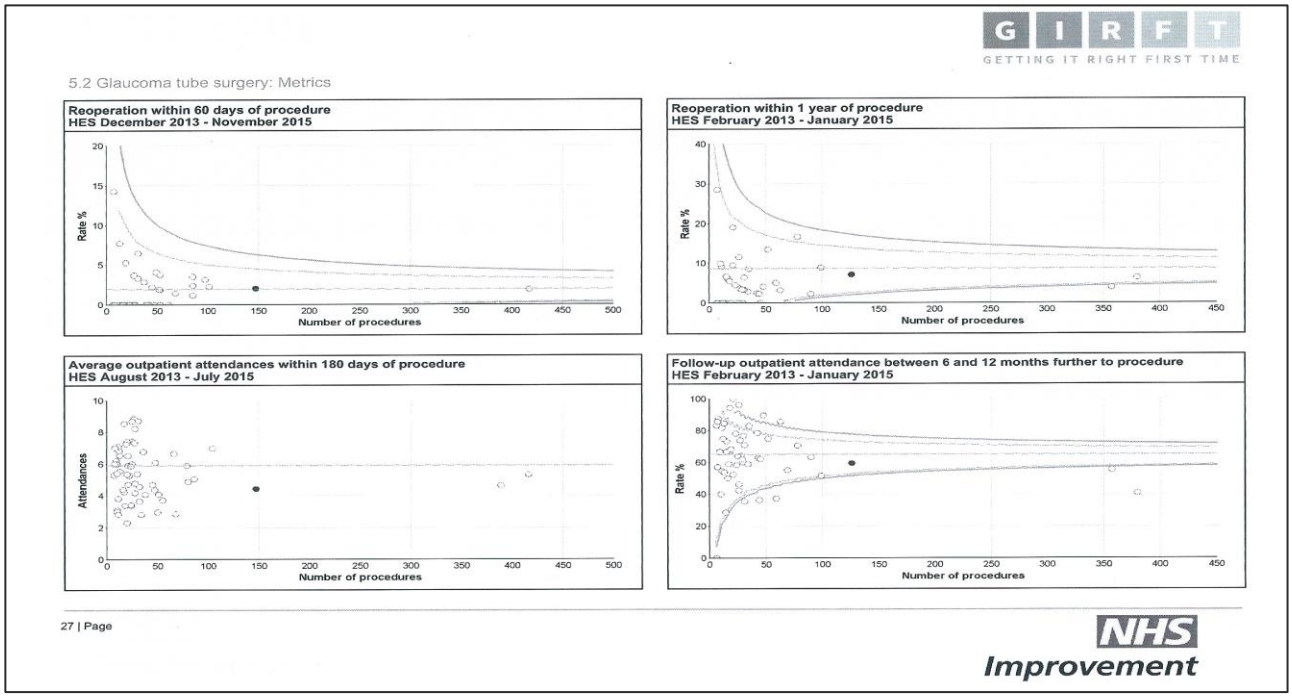
* Restricted to OPCS codes in the Eye chapter (codes beginning 'C') recorded in any procedure position.

** The mean number of diagnosis codes per FCE is most often a measure of the effort your Trust expends in the recording of patient co-morbidities. It can be used as an indication of the quality of coding. All elective (including daycase but excluding outpatient procedure) admissions are included here.

- The number of operations which had to be repeated appeared to be comparatively low compared to other providers, which should have provided additional capacity. However, the apparent good performance on this indicator needed validation during MTW's deep dive to ensure that operations which were a repeat of a previously unsuccessful procedure were correctly coded.

- The number of glaucoma related procedures was relatively high, but the number of follow ups was relatively low within 6 months of procedure

- The rate of outpatient attendances was also relatively low, and below national median.



- There was some considerable variation in the costs of some of the procedures carried out at the trust compared to the national average.

GIRFT
GETTING IT RIGHT FIRST TIME

10.3 Financial data - Reference cost (cost reported by Providers)

		Values		Score			
Metric	Source and period	Trust	England				Position
Cataract - minor procedure delivered in outpatient setting	Ref. Cost Apr 2015 - Mar 2016	£201.78	£123.75	XX			98 of 103
Cataract - minor procedure delivered in daycase setting	Ref. Cost Apr 2015 - Mar 2016	£857.29	£544.92		✓		48 of 120
Cataract - major procedure delivered in daycase setting	Ref. Cost Apr 2015 - Mar 2016	£795.43	£954.07			✓	25 of 120
Phacoemulsification cataract extraction and lens implant procedure - delivered in daycase setting	Ref. Cost Apr 2015 - Mar 2016	£854.25	£893.09		✓		54 of 118
Cataract - complex procedure delivered in daycase setting	Ref. Cost Apr 2015 - Mar 2016	£1,024.31	£1,532.51			✓	11 of 94
Cataract - complex procedure delivered in ordinary elective setting	Ref. Cost Apr 2015 - Mar 2016	£1,460.91	£2,181.15			✓	4 of 31
Glaucoma or iris procedure - minor procedure delivered in outpatient setting	Ref. Cost Apr 2015 - Mar 2016	£181.25	£124.78	X			93 of 105
Glaucoma or iris procedure - major procedure delivered in daycase setting	Ref. Cost Apr 2015 - Mar 2016	£934.96	£1,241.93			✓	21 of 114
Glaucoma or iris procedure - major procedure delivered in ordinary elective setting	Ref. Cost Apr 2015 - Mar 2016	£2,244.13	£2,115.90		✓		25 of 45
Vitreous retinal procedure - minor procedure delivered in outpatient setting	Ref. Cost Apr 2015 - Mar 2016	£205.84	£118.15	XX			109 of 117
Vitreous retinal procedure - major procedure delivered in outpatient setting	Ref. Cost Apr 2015 - Mar 2016	£185.38	£176.05	X			88 of 104
Vitreous retinal procedure - major procedure delivered in daycase setting	Ref. Cost Apr 2015 - Mar 2016	£1,052.22	£1,365.64		✓		34 of 103

52 | Page

NHS Improvement

How PLICS data supported the ophthalmology deep dive

The use of these national initiatives to provide benchmarking against other NHS services was very effective in engaging the trust's clinicians, especially the GIRFT programme. There was an acceptance that this national information supported the message that had been consistently reported through the internal costing data used for service-line reporting. The next stage of the deep dive for ophthalmology therefore involved the use of PLICS data to look in more detail at individual elements of the service.

The overall internal trading position for MTW ophthalmology in 2015/16 was a loss of £769k, with the majority of this attributable to outpatient procedures (£898k). This trading loss was less than the Carter target of the £1.8m attributable to ophthalmology, but that methodology had excluded Healthcare Resource Groups (HRGs) that were below average cost.

Detailed analysis undertaken by M&TW's costing team using output from the PLICS system supported a broad range of investigations into elements of the delivery of ophthalmology services at the trust.

Some examples of issues uncovered by the deep dive include:

1. Activity comparisons using reference cost information

Reference cost data identified a lack of consistency in the recording of outpatient sessions, outpatient procedures and inpatient admissions. Investigations into how clinical data was being recorded found that some activity, such as injection clinics, were not being correctly recorded or charged to commissioners.

2. Day case surgery

PLICS analysis showed that there were opportunities to increase capacity in day case theatre sessions by:

- reducing the number of minutes per case in theatre to the national average
- reducing cancellations by 25% to provide additional day case slots
- ensuring that theatre sessions which were under-utilised by more than 60 minutes were made available for additional operations.

This would remove the need for the Saturday waiting list slots, as well as some mid-week waiting list sessions.

3. Clinic utilisation

Analysis of the patterns of use of outpatient clinics showed that there was unused capacity in outpatient clinics in some locations. Rationalisation of clinic sites would result in reductions in estate and staff costs.

4. On call costs for ophthalmology inpatients

On call junior doctor cover was provided in A&E, yet analysis of the data showed that the trust had only around 140 non-elective inpatients each year. Consultation is underway to remove this cover, which will result in salary savings.

5. Allocation of accommodation costs

It was identified that some of the accommodation that had been thought to be used by the ophthalmology department was in fact being occupied by another clinical service, and the costs were reallocated, reducing the facilities charge for ophthalmology. Whilst this had no impact on the overall trust spend, it did provide credibility about the rationale for the cost inputs into PLICS, and that the assumptions that could be challenged where they were inaccurate.

In total, the results of the ophthalmology deep dive resulted in potential cash savings to MTW of around £1.3m. Work is now underway to release those savings through renegotiation or termination of contracts, consultation with staff groups, and more effective utilisation of ophthalmology theatre time.

This approach has now been repeated in a number of other specialties including maternity, care of the elderly, emergency medicine and trauma and orthopaedics.

The Healthcare Costing for Value Institute programme 2018/19 is built around four themes:

Confident costing

Supporting improvements in costing

Costing is high on the NHS agenda with NHS Improvement's mandation of new costing standards. The Institute provides a support network where members have the opportunity to discuss costing challenges with their peers, as well as share learning. Our wide range of Confident costing events and publications ensure we support both those new to costing as well as more experienced costing staff.

Translating data

Making the most of patient-level cost data

Providers of NHS services have increasingly large amounts of data about their patients, with the roll-out of patient-level costing (PLICS) across the NHS. The challenge is how to make the most of patient-level cost data to support improvements in patient care and deliver efficiencies. The Institute has a series of toolkits to support members turn the data generated by PLICS into powerful intelligence. The Institute's support network allows members to share examples of how they have embedded PLICS within their organisation and encouraged clinicians to use PLICS data to support service redesign.

Driving value

Improving patient outcomes at lowest possible cost

The concept of 'value' in healthcare – maximising the outcomes which matter to people at the lowest possible cost – is increasingly seen as a key lever for supporting the delivery of high quality sustainable healthcare. The challenge is how to do this in practice. What is clear is that clinicians and finance staff need to work more closely together to support improvements in value. The Institute has a growing reputation for bringing together senior finance and clinicians to explore what value means for the NHS. Institute members have the opportunity to hear from those at the cutting edge – both nationally and internationally – and take back practical ideas for their own organisations. Our value challenge projects work with members to put the theory of value into practice.

Innovation

Pushing costing and value boundaries

The Institute continues to push forward and promote costing and value-based healthcare. This is supported by Institute-led projects which aim to challenge current practices and the existing culture. The Institute works with its Members, Partners and Associates to learn from and share good practice in the UK and internationally. We are always looking for new ideas and opportunities to ensure that we are at the cutting edge of costing and value.

To view the 2018/19 Institute programme **click here**

Further information

For more information on this case study, contact

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