

CAPITA



Improving the quality of costing in the NHS

Payment by Results data
assurance framework

June 2014

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Summary

For the past seven years the Payment by Results data assurance framework has provided assurance over the quality of the data that underpin payments in the NHS.

In 2013/14 we audited the costing arrangements and the 2012/13 reference costs submissions of 50 acute trusts. We selected 30 trusts identified as being 'at risk' of having poor cost information. 10 'low risk' trusts and 10 trusts were selected at random¹. Although this briefing is based on the findings from acute trusts, the key messages are relevant to all NHS organisations – mental health, community and ambulance trusts.

We found that improvements are needed in the quality of cost information at the majority of trusts audited. Reference cost submissions at one third of trusts audited were materially inaccurate, with 'at risk' trusts in particular struggling to cost accurately. Just 12 per cent of trusts had good quality costing across all services. These findings demonstrate the challenges that using this information present at national and local levels.

Trusts who had poor costing arrangements and inaccurate cost submissions exhibited poor processes and a lack of organisational understanding of the importance and benefits of costing. These issues will impact on any cost collection exercise. In most cases errors occurred not because of mistakes by individual costing accountants, but because of inadequate support to the costing process within the organisation.

The NHS is facing unprecedented financial challenges. Having a clear understanding of the cost of running an organisation is crucial to identify and realise long-term, sustainable savings. Costing data provides detailed business intelligence

on the activity a trust delivers, how much it costs to do this, why it costs that much, and how much income is received for that activity. Yet there were only a limited number of organisations where cost information was used routinely outside of the finance department, and even less where it was used by clinicians to improve their own efficiency and the care that they delivered.

Data quality continues to challenge the NHS. No matter how detailed and accurate costing methodologies are, if the activity data is incorrect, then so will be the unit costs. Local NHS organisations are responsible for ensuring their data accurately represents the care they are delivering. Assurance arrangements for the accuracy of all the data used in costing need to be improved.

Trusts with visible senior leadership, encouraging the organisation to use cost data, were more likely to have accurate costing. Using the data across the trust will improve it. Engaging clinicians and improving their understanding of the costs of services they deliver will help trusts manage and drive down costs. Improving the prominence, importance and use of cost information at trusts will deliver clinical engagement and improve its quality both locally and nationally.

Whilst Monitor have stated a desire to move to a cost collection based on patient level data to support pricing, at the moment reference costs is the only national return that can be used to inform tariff. The issues we identified relate to costing as a whole. Costing guidance available to the NHS has improved in recent years. It is now down to trusts to implement this guidance, using the whole organisation to achieve this.

Findings from the previous review of reference costs² resulted in the self-assessment checklist and board assurance process that all trusts now have to complete as part of the reference costs submission. Senior support to the costing process, from boards and clinicians, continues to be vital to achieving

accurate costing. Over the page we have provided a checklist of 10 areas designed to enable senior managers and board members to improve the quality and utilisation of cost information, based on the key messages presented in this briefing.

To find out more about the PbR assurance framework, or to discuss costing at your organisation, please email: pbrassurance@capita.co.uk

¹We selected the 'at risk' and 'low risk' trusts using a risk assessment that covered previous audit results and benchmarking of cost information. We selected 30 trusts identified as being 'at risk' of having poor cost information to support local improvement. We selected 10 'low risk' trusts in order to understand what constitutes good practice. Because of the targeted nature of the audit sample the findings may not be representative of performance at all acute trusts.

²Improving coding, costing and commissioning: Annual report on the Payment by Results data assurance programme 2010/11, September 2011.

Board checklist to improve the quality and usefulness of cost information

Areas for boards and senior managers to support, challenge and seek assurance on to increase the quality and realise the benefits of cost information.



1	Senior champions	Visible senior leadership will encourage the whole organisation to support better costing. This should come both from the board and from senior clinicians who can talk about the benefits of good quality cost information
2	Use the data	Actively using cost information will improve its quality, as issues with data quality are identified and resolved, and costing methodologies are refined. Cost information will not accurately reflect the services delivered until it is linked to the ongoing management of the trust.
3	Engage clinicians	Sharing cost information with clinicians won't just help improve accuracy – clinicians can use it to improve their efficiency, and the care they deliver. Embedding the use of cost information is a long process, so delaying this will delay the benefits.
4	Management oversight	Subjecting the production of cost information to ongoing scrutiny from a senior manager (such as an assistant director of finance) will help costing leads address issues and ensure adequate checks are in place.
5	Management oversight	The accuracy of costs is only as good as the activity information it is based upon. Integrated support from the informatics department, covering all Trust activity, not just the information captured on PAS, will ensure that all aspects of hospital and community care are accurately captured and included in cost information.
6	Project plan	Developing a comprehensive project plan for the production of cost information with clear timescales will improve accountability from the different departments involved and increase confidence when engaging with clinicians.
7	Check inputs and outputs	Comprehensive checks will improve the accuracy and usability of cost information, and these checks should not just be the responsibility of the costing lead. Activity and other inputs should be checked on an on-going basis, and sharing outputs with colleagues will identify areas for improvement and refinement.
8	Document the process	Clear process notes, an up-to-date list of known issues and how they are being addressed, audit trails for changes made and a well documented costing system will reduce the risk for human error, remove duplication of effort, provide assurance on processes in place and enable business continuity if key staff leave.
9	Review the costing system	Costing methodologies are becoming increasingly complex – reviewing your cost system on an annual basis to ensure it is fit for purpose, and that the appropriate IT support is in place, will stop problems occurring during business critical periods.
10	... and plan for PLICS	Granular cost information provides detailed knowledge of how much services cost, and why they cost what they do. It informs clinicians about the resources consumed and potential wastage. This information is the level of detail clinicians look for, and the process of implementing patient level costing will improve the quality of costing overall.

Background and approach

For the past seven years, the Payment by Results data assurance framework has provided assurance over the quality of the data that underpin payments between commissioner and providers, promoting improvement in data quality and supporting the accuracy of payment within the NHS.

The assurance framework is the only independent and comprehensive data quality programme within the NHS and is an integral part of the payment system. The focus of this work is to improve the quality of data that underpins payments, but the data we review is also of wider importance to the NHS as it is used to plan and oversee healthcare provision.

In 2013/14 the assurance framework audit programme focused on three key areas:

- auditing the arrangements and accuracy for the submission of reference cost returns at 50 acute NHS providers;
- undertaking clinical coding audits at 50 acute NHS providers; and
- supporting tariff development and implementation by undertaking payment data quality reviews at 25 NHS mental health providers.

This briefing outlines the key messages from our review of costing arrangements at acute trusts. Findings from our coding and mental health audits will be reported separately, although relevant messages from our review of costing arrangements at mental health providers have been included here.

The assurance framework is delivered by Capita CHKS. Responsibility for the data assurance framework has moved to the Department of Health from the Audit Commission.

The Department of Health, Monitor, NHS England and the NHS Trust Development Authority provide overall managerial direction for the agreed work programme in 2013/14.

Approach

Between September 2013 and March 2014 we audited costing at 50 acute trusts. These trusts consisted of:

- 30 trusts deemed 'at-risk' of poor data quality to support local improvement;
- 10 trusts deemed 'low risk' to ensure we capture best practice; and
- 10 trusts selected at random.

We used a risk assessment to identify the 30 'at-risk' and 10 'low risk' trusts³. This assessment covered:

- previous costing audit results;
- other data quality audit results from the assurance framework; and
- benchmarking of reference costs, based on the analysis available in the National Benchmark⁴.

Our audit methodology covered the processes at an organisation to support accurate costing, from board level down to the individual cost allocations used to determine each unit cost. We looked at the:

- production of costing information;
- checks and known issues;
- clinical engagement;
- board review and submission sign-off;
- data quality; and
- approach to costing.

Where trusts had implemented service line reporting (SLR) or patient level costing (PLICS) we looked at the arrangements in place to support this, and how this related to the production of the reference costs submission.

We used rules around materiality to guide judgements on the accuracy of the overall submission, and for the individual areas of detailed testing. Whilst we focused on specific areas in the detailed testing, auditors drew judgements across the whole submission based on findings from all aspects of the audit methodology. A detailed quality assurance process ensured consistency across audits and enabled fair and comparable judgements to be made for organisations with varying approaches to costing.

Practitioner involvement

We undertook all audits in conjunction with costing experts from the NHS. Using NHS practitioners enabled us to:

- provide expert input into the audit, ensuring the quality of the review;
- offer opportunity for development and learning for the practitioners, improving the quality of future cost submissions;
- encourage the sharing of best practice and learning between costing staff within the NHS; and
- support the NHS in moving toward peer review for costing and data quality.

Combining experienced NHS practitioners with Capita CHKS staff who have a background in financial audit and data quality reviews enabled us to:

- ensure consistency in the delivery of audits and the judgements made on individual organisations;
- identify and challenge the causes of poor costing at different levels within organisations;
- provide targeted feedback relevant to the organisation to support changes in behaviour; and
- capture learning across the audit programme for use at a national and local level.

³The risk assessment identified the worst scoring 25 per cent of trusts as 'at risk' based on the risk criteria. The best scoring 25 per cent were deemed 'low risk'. The random trusts were selected from all acute trusts irrespective of risk rating.

⁴The national benchmarker is freely available to the NHS at www.nationalbenchmarker.co.uk.

Findings

Each audit resulted in the following judgements:

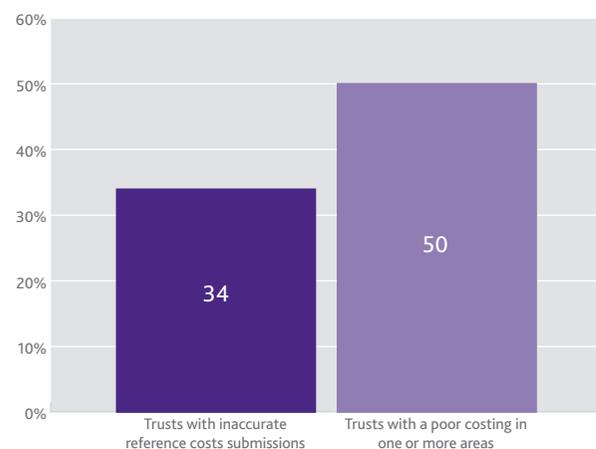
- the overall reference costs submission is accurate or is not accurate; and
- the quality of costing is good, adequate or poor in:
 - admitted patient care;
 - non-admitted patient care (non-admitted services with a national payment tariff: outpatients, A&E and diagnostic imaging); and
 - other (all services delivered by the trust that do not have a national payment tariff, from critical care to community therapies, and everything in between).

Figure 1 shows that:

- 34 per cent of the trusts audited had a reference costs submission that was materially incorrect; and
- 50 per cent of trusts had poor costing in one or more of the three areas.

60 per cent of trusts audited were selected because they

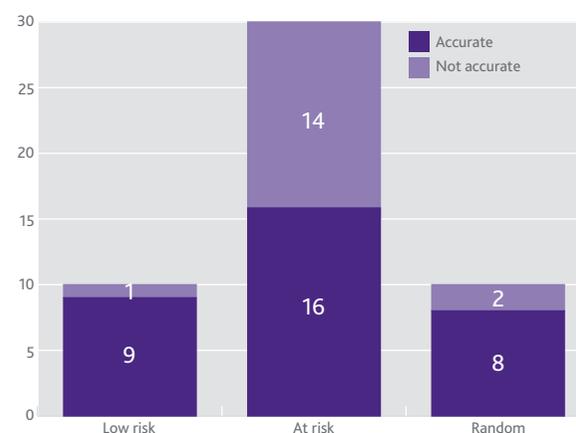
Figure 1: the accuracy of 2013 reference costs submissions and costing arrangements at audited acute trusts



were identified as being 'at risk' of having poor cost information, and 40 per cent were selected as high-performing organisations or at random.

Figure 2 shows that the majority of trusts with inaccurate submissions had been identified as being 'at risk' of poor cost information. 20 per cent of trusts selected at random had inaccurate submissions.

Figure 2: the accuracy of 2013 reference costs submissions broken down by risk assessment group



A few trusts' submissions were inaccurate solely because of errors in what costs should and should not be included in the reference costs quantum, such as:

- incorrect financial treatments, such as income from donated assets not being excluded and impairments being double counted; and
- exclusions of services not authorised by the Department of Health⁵.

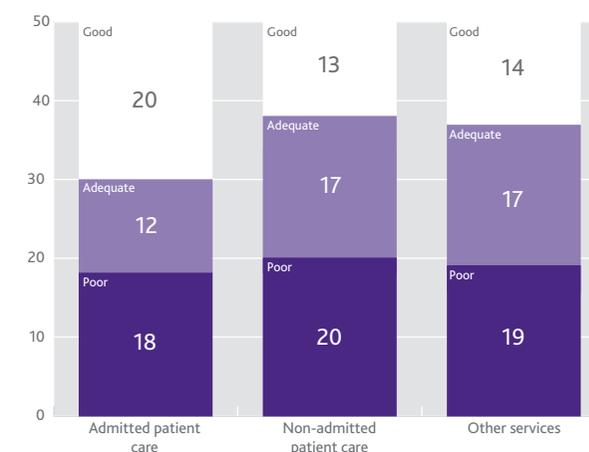
However, the majority of errors identified through our audits were related to costing as a whole, not just reference costs – and the causes of inaccurate submissions were often a combination of factors. The main issues included:

- a complete failure of arrangements to produce accurate cost information, including no board assurance process;
- costing systems failure;
- inadequate checking of cost outputs;
- inaccurate activity data used in many areas of the submission;
- a poor approach to costing leading to errors in allocations; and
- use of out of date information such as job plans and floor area.

Figure 3 shows the breakdown of judgments across the three areas tested (admitted patient care, non-admitted and other). Costing of admitted patient care is marginally better than the other two areas tested, but not significantly so.

Just 12 per cent of trusts had good quality costing across all services. Organisations with poor quality costs and inaccurate submissions had many of the same problems. Most errors were the result of poor arrangements across the whole organisation and were not errors made by individual cost accountants.

Figure 3: the accuracy of acute costing across the three areas tested at audited trusts



⁵Any service a trust excludes which is not listed in Section 13 of the reference costs guidance and has not been signed-off by the Department of Health in that year.

Findings: *The production of cost information*

The accuracy of costing, and the quality of individual unit costs, was more reliable at organisations where basic project management principles were adhered to – a project plan in place, detailed project documentation, and senior management scrutiny at key stages.

The number of trusts without a **project plan** for the production of cost information, or one that only covered the actions of the costing team, was very high. Where trusts had effective project plans in place, these would:

- place the reference costs submission within the ongoing production of SLR and PLICS cost data;
- include adequate time to check outputs and recalculate costs, at regular intervals throughout the year;
- cover inputs from, and was signed up to by, other parts of the organisations – as we will see later in this briefing, good quality costing is dependent on the support provided by informatics and other departments;
- be monitored on an ongoing basis, with formal checkpoints that fed into the board assurance and senior sign-off process.

Trusts with PLICS or SLR but with no clear project plan for the ongoing production of cost information often struggled to embed costing into the organisation. Transparent timescales for the timely production of cost information, which are monitored and met, are key to increasing clinicians' confidence in costing.

Good **senior scrutiny** will result in accurate cost information, yet only 24 per cent of trusts had good arrangements in place to ensure a senior manager oversaw the costing process. Where this worked well there were regular check points linked to key steps in the project plan. Where senior scrutiny was poor, mistakes occurred – and when issues arose, costing leads struggled to address them without senior support. The worst performing organisations did not support their costing leads. In some cases we found that they had to produce cost information in less than a month at the end of the financial year.

A fit-for-purpose **costing system** is crucial to achieve accurate costs. Many trusts reported issues with their costing systems: 20 per cent of all trusts, and 50 per cent of trusts with inaccurate submissions, had major issues with their costing systems:

- one trust had 35% of all elective u-codes in the country because issues with processing meant they were unable to check outputs adequately;
- a software bug at another organisation resulted in an addition of £5m to the overheads allocated to pathology; and
- a complete software failure at another trust meant that the reference costs submission had to be done in excel in two weeks, which led to human error.

Improving the accuracy of allocations within PLICS results in more and more complex algorithms, often beyond the original capacity of the system and the server it is stored on. For large teaching hospitals with high numbers of cost pools and services this has become a significant issue. Ensuring costs systems and IT hardware are fit for purpose should be an annual process for trusts, including reviewing calculations to make sure they run as efficiently as possible.

As costing systems become increasingly complex, documentation becomes more and more important to understand and validate the costs that are being produced. There were a number of trusts who had systems that were not transparent, meaning the costing lead had no clear understanding of whether the calculations within the systems were accurate.

Inadequate **documentation** was a recurring theme across many trusts audited – 56 per cent of trusts with inaccurate submissions also had poor documentation. Issues with documentation lead to many errors, especially in organisations where divisional accountants had responsibility to support the costing lead: in one organisation an excluded service was incorrectly included in the quantum because there was no central documentation and the divisional accountant responsible was on leave during the submission process. The trust's submission accounted for 97 per cent of all activity for this service.

Only 38 per cent of all trusts had good quality documentation covering the production of cost information. This included:

- detailed allocation methodologies in a usable format that could be shared with service managers and clinicians;
- version control on all documents and an audit trail on allocation methodologies, identifying who signed off each apportionment, when they were changed and for what reason;
- known issues and improvement plans stored centrally and prioritised;
- all checks and reconciliations undertaken, and their outcomes;
- services excluded from reference costs, reviewed annually;
- total cost quantum on the cost system, linked to the reference costs reconciliation statement and final accounts; and
- operational notes for the costing team, including the process for using the costing system to produce cost information

The board assurance process requires organisations to confirm they are adequately staffed to complete reference costs submissions. Despite this, we found capacity to be an issue at many trusts; often staffing levels included in the board reports covered staff that had responsibilities beyond costing. **Costing capacity** and knowledge within the NHS is a finite resource. The focus on cost information is increasing both nationally and locally. There is concern within the service about the small pool of knowledgeable staff available, and with the demise of SHA leads support to local networks is variable and fragile.

Findings: Checks and known issues

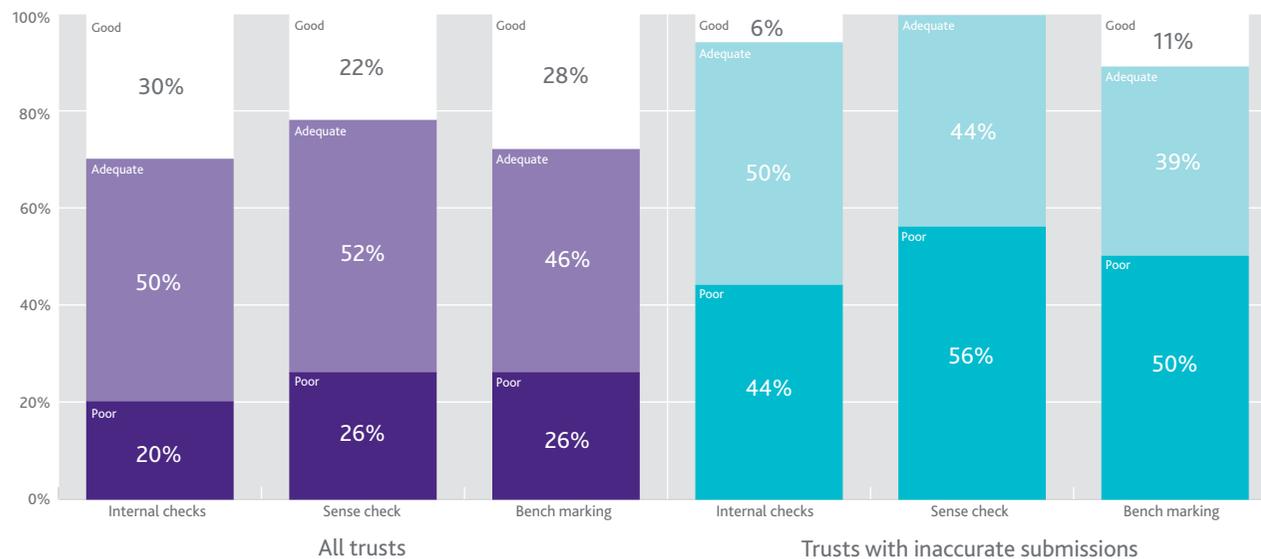
Our previous review of costing identified that more than half of trusts were not undertaking basic checks on costs. This has improved, but the quality of these checks is not consistent. The correlation of our risk assessment with the number of inaccurate trusts shows that inaccurate costs can be identified using tools available to the NHS.

Figure 4 demonstrates that trusts with inaccurate submissions had poor arrangements to check their cost outputs. It also shows that most trusts could improve how they check their cost information.

High performing organisations treated costing as an **ongoing process** and checked as much as possible throughout the year, including:

- inputs such as job plans and floor areas;
- activity levels, reconciled in-year to identify issues early;
- non-PAS data, to provide assurance where provided directly from the service;
- cost allocations, shared and discussed with service representatives;

Figure 4: the quality of checks on 2012/13 cost information



- the previous year's costs, benchmarked to identify outliers; and
- this year's costs, compared to previous years.

Organisations with good arrangements used all the information available to them to check their data, and where resources are tight trusts were intelligent in how they check their information, focusing on materiality (local and national), and local intelligence. One trust looked at all unit costs over £5000, all long theatre times, and all short theatre times.

It is also important to **check all available guidance**, not just the latest changes. Some trusts with otherwise good quality costing made simple mistakes. National guidance has improved in recent years – costing leads should routinely review guidance and share relevant parts with colleagues to reduce the risk of basic errors.

Benchmarking continues to be an effective tool for refining costing methodologies, yet only 28 per cent of trusts had

good arrangements for benchmarking cost data. Many trusts rely on year-on-year comparisons when checking outputs, which is dependent on the accuracy of previous costing methodologies and activity data. Some specialist trusts and teaching hospitals used their specialist nature to justify outliers without looking for assurance that these costs were accurate. However, trusts with good quality costing shared benchmarking information alongside their cost data throughout the organisation. Analysis of the previous reference costs submissions are available in the National Benchmarking, which is freely available to the NHS.

There is not a structured approach to the audit of costing within the NHS. Despite having its own HFMA standard and question in the assurance checklist, just 12 per cent of trusts had effective audit arrangements for cost information.

- The use of internal auditors is limited. Where they were used it was to review processes in place to support the board assurance process – there was no drill down to look at individual unit costs and without this many reviews failed to identify material issues that lead to poor cost information. Where internal audit did identify issues to do with capacity or controls these were often not acted on.
- There was also no independent external audit and assurance sought: some trusts relied on the opinions of their costing systems supplier that their processes were sound, however the quality of these opinions was variable.

Organisations that had robust checks in place did not just rely on the costing team, but **used all appropriate colleagues** to undertake these checks. Divisional accountants engaged with service managers and clinicians to check individual unit costs. Information leads reconciled activity against other data sources. Finance managers reviewed the cost quantum and exclusions. Where there was joint ownership of cost information within an organisation, its quality improved. And, because of the reliability, it was then consistently used by different teams to benefit many different aspects of the provider's business.

Findings: *Checks and known issues (continued)*

Checking the reference costs submissions

Timescales are tight, especially when producing the reference costs, so trusts need to plan their checks and do as much as possible in-year. Leaving a short window for checking the outputs of reference costs means it is difficult to address fundamental issues.

Alongside a trust's own checks, the Department of Health's non-mandatory validations also allow for numerous comparisons. These are updated daily on Unify2, yet most trusts relied on the validations in the reference costs workbooks and failed to focus on material issues.

It is important that the overall cost quantum is correct, for reference costs as well as PLICS. 83 per cent of trusts with inaccurate submissions, and 34 per cent of trusts overall had major errors in the total cost quantum used. Many costing leads did not fully understand how to complete the reconciliation sheet in the reference costs submission. It is important to have the cost quantum in the costing systems for reference costs and the reconciliation statement checked by the senior accountant at the trust.

Similarly all exclusions should be checked each year. From 2012/13 the Department of Health must sign off any non-standard exclusion every year, including historic exclusions allowed previously. Section 13 of the latest reference costs guidance provides information on excluded services.



Findings: *Clinical engagement*

Clinical engagement is vital to achieve accurate unit costs. It refines allocations and challenges data to ensure costs appropriately reflect how care is actually delivered. However clinical engagement at most trusts was sporadic and unstructured. 20 per cent of trusts had good arrangements in this area.

Where there was poor clinical engagement, there were errors in costing that would have been spotted, or refinements that could be made. 50 per cent of trusts with inaccurate submissions had poor or no clinician engagement.

There was **limited use of cost information** outside of finance, and sometimes outside of the costing team itself. We found many trusts where the quality of costing was incorrectly perceived to be poor by clinical staff, and sometimes by finance as well.

Where divisional managers had responsibility for the quality of cost information, supported by the costing lead, engagement with services improved, as did the accuracy of costs. Trusts where cost information was sent out with no direct follow up achieved less feedback and refinement.

Patient level costing has increased the appetite and opportunity for clinical engagement. Clinicians engage best when the cost information shared is representative of how they view the care they deliver. Specialty level budget reports do not provide the level of detail clinicians want to see, and the HRGs in reference costs are often too generic and cover too many individual procedures.

Sharing granular cost data with clinicians can be resource intensive. Many trusts used targeted **deep dives** to improve costing quality and to engage divisions in cost information. Multi-disciplinary teams covering all functions with responsibility for the data – costing, coding, finance managers, informatics, general managers and clinicians – achieved the best results. However, because these deep dives were one-off exercises there was a lack of follow-up by costing staff, and changes in clinical staff and further developments in the delivery of care meant they had limited long-term effect.

Where clinical engagement was **fully embedded** clinicians accessed their own granular cost information using on-line tools. Information provided at the most granular level encouraged clinicians to review their own behaviour - and that of their colleagues - to identify efficiencies and improve patient care.

- At one trust there was multiple evidence of clinicians interrogating data, identifying cost savings and improving patient care based on the information provided. One example of this was a new gynaecology one-stop-shop, where ultrasounds and hysteroscopies are now undertaken in a single attendance improving the patient experience, reducing the charge to the commissioner and still covering the costs of the service.
- At another trust using the analysis of cost information resulted in a reduction of non-clinical tasks for clinicians, which has allowed appointment slots to be longer, improving the patient experience.

Some organisations chose not to share overheads as part of clinical engagement. Whilst this moves the debate onto costs within the services, it also risks a lack of specificity in some areas. For example, the estates cost at one trust was based

on the whole site, not on a percentage of individual buildings. Discussing floor area costs with clinicians would not only result in more accurate costs, this engagement should then lead to a more efficient use of the space available.

Improving the quality of cost information is secondary to the **benefit that comes from sharing cost information** with clinical leaders. High performing organisations routinely used cost information as part of its day-to-day business, using costing to inform contract negotiations and set local prices, assess service performance and profitability, and to identify anomalies and efficiencies in delivery.

Many trusts were reticent to share costs with clinicians until they were perfect. Clinical engagement is a protracted process which takes years before it is embedded – any delay will put off the long-term benefits. Ensuring the data and methodologies are accurate is often the first stage of this engagement, so sharing costs will improve their quality. Good engagement occurs once clinicians move beyond challenging the data and realise that detailed costing can identify inefficient use of resources and differences in clinical practice within their own teams.



Findings: *Board assurance*

We found that an engaged and informed board always resulted in more accurate and better costing at an organisation. Visible senior leadership improved the understanding of costing and the support provided by the rest of the organisation.

Increased scrutiny at a senior level will result in improved accuracy. Where the board assurance process failed, trusts invariably had poor costing and inaccurate reference costs submissions. 67 per cent of trusts with inaccurate submissions had poor board assurance.

Trusts in financial trouble fell into two camps: there were those that had embraced cost information as an opportunity to empower clinicians in order to address the financial challenges, and the quality of their cost information improved as a result; and there were those where boards had limited exposure to costing, often with inaccurate submissions. The latter also demonstrated failings in other areas of our arrangements review.

National costing guidance requires each trust's **board to confirm it is satisfied** with the trust's costing processes and systems in advance of the reference costs submission; 72 per cent of trusts met this requirement. However, high performing organisations understood that the board assurance process was not just about national requirements. Detailed cost information can be used within an organisation to drive change. As such it needs to be accurate for the organisation itself, and the board has a clear role to play in that governance process.



Signing – off the reference costs submission

The Director of Finance is required to sign off the reference costs return confirming that the trust has fulfilled the requirements of the board assurance process and to provide assurance about the accuracy of the return. The quality of senior sign-off at trusts was variable, with 36 per cent of trusts demonstrating good arrangements.

A trust's reference costs submission should be subject to the same scrutiny and diligence as other financial returns submitted by the trust, and the Director of Finance is the senior professional responsible for the data used to inform tariff. Material errors in reference costs submissions will impact on the accuracy of any resultant tariff, and the effectiveness of the payment system overall.

Often the sign-off of the reference costs submission did not go through a formal meeting, was not documented, and the Director of Finance relied on other staff to provide assurance on the accuracy of costs. However, what was important to ensuring the quality of costing was ongoing scrutiny from senior management during the production of cost information. This was normally not the Director of Finance, but a deputy with delegated responsibility for the operational management of costing.

The Department of Health has used the learning from this year's audit programme to strengthen the section on board assurance and senior sign-off in the reference costs guidance. It describes the Director of Finance's responsibility as the designated lead at the trust. It also outlines expectations for ongoing senior scrutiny and how this links to the final sign-off process, based on findings from trusts where this process worked well (reference costs guidance 2013-14, pages 26 and 27).

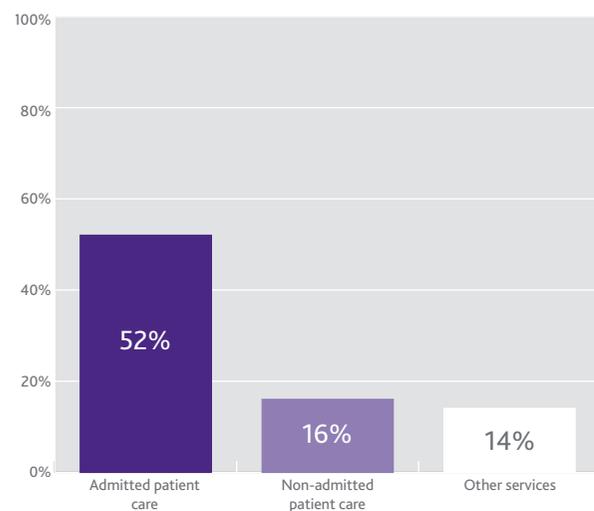
Findings: *Data quality*

Data quality continues to be a challenge for the NHS. Many trusts had poor arrangements to ensure good quality data to support costing. No matter how detailed and accurate costing methodologies are, if the activity data is incorrect, then so will be the unit costs. Figure 5 shows the percentage of trusts with robust data quality arrangements across the areas tested, and table 1 outlines the issues identified during the audits.

There was **lack of ownership of the data used in costing**, and this is leading to inaccuracy. 50 per cent of trusts with inaccurate submissions had not reconciled their activity against another data source.

- At most trusts the informatics team oversaw routine PAS data, covering admitted patient care, outpatients and A&E. However, there was often very poor communication between information and finance departments. Many costing leads took the view that the data provided by

Figure 5: trusts with good data quality arrangements 2012/13 for the areas tested



informatics was correct and did not require further checking, yet often informatics did not understand the specifics of what data was needed for costing and how the data would be used.

- Data for other services, such as radiotherapy and community services, often comes direct from the service itself. It is extracted or collected by administrative staff not

supported by the informatics teams. Ownership of clinical data by non-informatics staff increases the risk of error in data reporting. At one trust, audiology neonatal service activity reported was double the actual level, thus halving the costs allocated to individual unit costs. This was the result of a simple spreadsheet error by the service.

Area	% trusts with good arrangements	Issues
Admitted patient care	52	Data quality arrangements often focused on the clinical coding of admitted patient care. One trust included the quality of information provided by clinicians for use in clinical coding as part of the revalidation process for medical staff, making it a disciplinary offence to provide inadequate clinical notes. However, many trusts relied solely on the clinical coding audits delivered by the assurance framework.
Outpatients and A&E	16	<p>Checks were usually just comparisons with previous time periods to ensure volumes looked consistent.</p> <ul style="list-style-type: none"> Actual data quality reviews – ones that ensured that the activity recorded accurately reflected the care delivered – were limited for outpatients. As the shift of activity into less acute settings continues across many specialties (from elective to outpatient), it is important that this activity is accurately counted for costing and payment purposes. Despite high error rates being identified in A&E data during last year's assurance framework audit programme most trusts had no processes for assuring the data. One trust with otherwise excellent costing had a 50% HRG error rate in A&E that they had not yet addressed.
Other	14	In many cases data quality arrangements for other services not covered by tariff are very poor ⁶ . Data quality policies were limited and ineffective in this area. There were very few examples of audit of this information, and these usually occurred when new services were set up or new systems were implemented. Community, critical care and pathology were all areas where data quality consistently impacted on the accuracy of costing. There were examples of good parallel processes for trusts with large community services, but very few trusts had a complete overview on the quality of all their data. Expanding the coverage of the payment system is reliant on accurate unit costs but activity recording is undermining this in many areas. Whilst costing leads often prefer to go direct to services for their data, it is important that this data is assured by a robust governance process.

⁶Some standalone systems, such as clinical oncology, had very robust audit mechanisms associated with the data, particularly where there is an electronic system for the administration of drugs. However, as a general rule, the scrutiny of non-tariff data was poor.

Findings: *Data quality (continued)*

Costing also uses other **information beyond activity data**. Again the quality of this data was inconsistent, and always fell outside the purview of any data quality policies.

- For staff costs most trusts had good controls in place to ensure overall cost were accurate, but the job plans that allocations were based on were often out of date, sometimes more than four years old. When they were up-to-date, clinicians felt they did not accurately reflect the actual care they delivered. At some trusts clinicians actively refused to share job plans with finance. However, there were also examples of improved co-operation with medical staffing once they understood how the data was to be used.
- The quality of floor area data used to inform costing was similarly variable, but there were more examples of this data being accurate. Many trusts had quarterly updates from estates, with the floor areas reported within the cost information. But again there were trusts using data years out of date.

The costing process relies heavily on data, and as such should be a **joint project** between finance, information and other departments. The data professionals need oversight of all data feeds whilst the costing lead provides expert input based on the guidance and their knowledge. Covering both should be an over-arching data quality policy that assures all inputs into the costing system, which will improve their accuracy for the other uses of this data.



Findings: Approach to costing

The quality of costing across the country was generally adequate. Error usually occurred because of issues described on the preceding pages, not because of mistakes by individual cost accountants. However, many trusts struggled to be good across all aspects of costing.

Most trusts were using **HFMA standards** but many struggled to implement them properly. 32 per cent of trust had well defined cost pools in line with guidance; 34 per cent had identified costs correctly as direct, indirect and overheads.

The introduction of **PLICS** has improved the quality of costing in the NHS – 78 per cent of trusts with an accurate submission had implemented PLICS. However, patient level costing is still in its infancy, and half of trusts with inaccurate submissions had a PLICS system in place. Whilst many trusts have implemented PLICS, only a small number of trusts had patient level inputs for all material cost components. Even high performing organisations struggled to source patient level data for all material costs, such as prostheses information. Accuracy continues to vary between specialties; whilst methodologies may be improved, issues such as out-of-date job plans will still impact on the accuracy of cost allocations.

Despite improved guidance on costing, there is still much variability in how costing methodologies are implemented, and this **inconsistency** becomes much more marked for trusts with PLICS⁷.

- How a general ledger is mapped to a trust's costing system can lead to variation in unit costs across separate organisations.
- Very few of the trusts audited had successfully managed to take nursing acuity into account when costing medical specialties.
- Whilst information on staff and theatre time allocated

solely to non-elective activity was available at some trusts, the true costs of emergency activity are very difficult to identify and calculate.

- Non-admitted patient care services still present the same challenges to cost with or without PLICS.

Because the HFMA standards are not mandated this has led to an inconsistent approach to their implementation. Organisations that do not try to achieve higher scores on their MAQS⁸ assessment will settle for relatively simplistic costs. For example, at one trust length of stay weighted by activity was used as a driver for most costs. This meant that a patient's time in the cardiac catheter laboratory was not taken into account. Cardiology HRGs either received inflated costs for patients that had not been treated in the catheter laboratory, or deflated costs if they had, with 349 HRGs changing unit costs.

Because of these issues, benchmarking PLICS unit costs, or any cost information, often results in spurious outliers. Trusts then have to undertake further analysis of comparator groups to understand how costs have been apportioned at other trusts in order to identify whether the comparisons are accurate.

Other challenging areas of costing are outlined below.

- The costing of emergency patients is particularly difficult, with only 10 per cent of trusts performing well in this area. This is often due to a lack of detailed information: one trust applied a weighing of 1.2 to emergency medical patients in the absence of any better information on patient acuity. At another trust, junior doctors' job plans were based on the daytime consultant job plans, which will not take account of junior doctors' time on A&E rotation.
- Clinical negligence premiums (CNST) were a common cause of error, especially for maternity patients. Sometimes

these were allocated as overheads across maternity, or across the whole trust, where it is more appropriate to allocate this to birth HRGs. Depending on the approach unit costs could vary between organisations by thousands of pounds.

- PFI build costs should be applied to the services that use them, and 32 per cent of trusts did this well. However, at some organisations these were treated as an overhead and allocated across all services. Where only one service was using the PFI building this had a material impact on that service's unit costs.
- Cost of training, education, research and development and non-patient income should be separately identified from patient activities. Just 18 per cent of trusts had good arrangements to do this, which has implications for the new education and training cost returns.
- 32 per cent of trusts had good arrangements to identify and exclude costs associated with non-NHS patients (private patients and non-English) and 44 per cent of those trusts with inaccurate submissions were unable to do this.

Only 11 per cent of trusts had poor arrangements for producing the reference costs submission from their PLICS systems. However, some trusts with well developed PLICS systems and accurate costing methodologies often made simple errors in their reference costs submission. At one trust 58,000 community midwifery appointments were omitted from their submission.

⁷There are specific issues with national funding schemes that are leading to inconsistent costs. Revenue assistance given to struggling trusts and income for regional pilots is included in the costs calculations for that service, therefore reducing the overall costs of the service, deflating unit costs, and giving a distorted picture of how much it would cost to run that service if trying to set an accurate and fair tariff based on these unit costs.

⁸The Healthcare Financial Management Association's (HFMA) materiality and quality score (MAQS) is a methodology for organisations to measure the materiality and quality of their costing systems and processes, where a higher score is given for more accurate methods of apportionments and allocation of costs.

The implications for tariff setting

The Health and Social Care Act (2012) gave Monitor and the NHS England joint responsibility for the pricing of NHS-funded services in England. Monitor will lead on calculating prices; NHS England will lead on the scope and design of currencies (the services to be priced). The Department of Health will continue to collect reference costs on behalf of Monitor and NHS England.

Monitor has stated a desire to use patient level data to underpin tariff in future. Until that point, reference costs will continue to be collected and used to inform tariff setting. However, the level of inaccuracy identified in our audits, both trust wide and within individual areas, raises questions on how cost information collected from local organisations should be used nationally. The accuracy of costs is variable, and only a small handful of trusts had good quality costing across all three areas tested. This was not just in the reference costs submission, but across costing as a whole, including PLICS.

Most trusts that had accurate submissions still had many areas to improve. Costs were usually accurate at service and specialty level – the accuracy of unit costs being much more variable. Errors that may not have been material at trust level still reflected incorrect unit costs, which would lead to an incorrect tariff if included in the overall calculation. This would be particularly marked for specialist areas, where the pool of trusts contributing costs nationally is smaller.

The issues of inconsistency highlighted in the previous section will impact on national cost collections, both reference costs and the voluntary PLICS submission. Not only are Monitor and other organisations unable to obtain a consistent picture of cost drivers at individual organisations, but unit costs for use in the tariff setting process will be based on various methodologies irrespective of the relative accuracy of the costing approach identified through our audits.

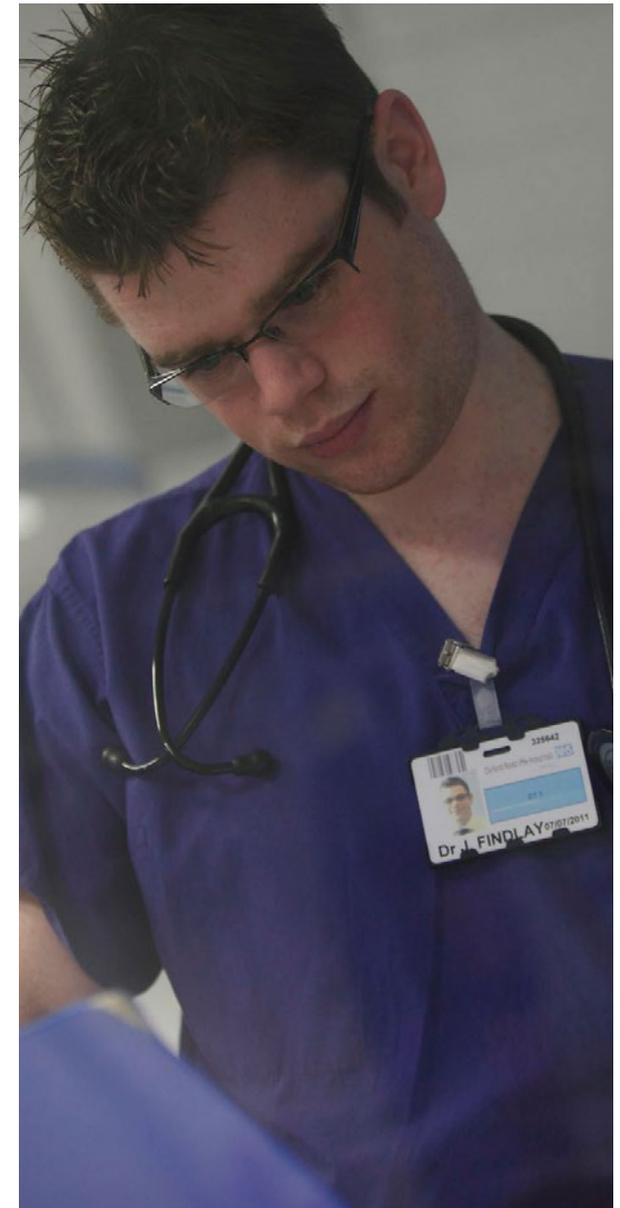
Improving consistency nationally would improve the usefulness of costs locally and nationally, and costing leads looked to national organisations to address this, mandating allocation methodologies where appropriate and potentially mandating a basic level of accuracy for inclusion in the tariff and benchmarking groups.

Areas of improvement for national guidance

National guidance on costing has improved considerably in recent years. There are only limited areas where reference costs guidance could be improved, such as what constitutes a radiotherapy test. Activity and costs for chemotherapy drugs are still a challenge to some organisations.

However, broader issues around data definitions continue to persist, and are resulting in specific data items being recorded inconsistently, such as:

- the recording of daycase and outpatient procedures;
- the counting of emergency assessment units activity; and
- issues in identifying and recording multi-disciplinary activity, outpatient phone calls and similar activity.



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