

Right data, right payment

Annual report on the Payment by Results
data assurance programme 2011/12

August 2012

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We also help public bodies manage the financial challenges they face by providing authoritative, unbiased, evidence-based analysis and advice.

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Summary

1 Payment by results (PbR) is the tariff system that governs payments to hospitals by local NHS commissioning organisations. It is fundamental to many policies. It seeks to ensure fair funding for hospitals for the work they do. It also encourages greater efficiency, best practice, greater patient choice and competition between providers.

2 The Audit Commission's PbR data assurance programme helps improve data quality in the NHS. For the past five years we have provided assurance over the quality of the data that underpins payments made under PbR.

3 In 2011/12 we:

- reviewed commissioner arrangements to secure good data quality on the information that underpins PbR;
- audited inpatient clinical coding and the key data set that supports payment under PbR at every acute NHS trusts and foundation trusts; and
- followed up recommendations made in previous audits to see how well NHS trusts and foundation trusts have delivered.

4 In 2012 we also published [*By Definition: Improving Data Definitions and their Use by the NHS \(2012\)*](#) emphasising the importance of clear and consistent data definitions.

Commissioner arrangements for identifying and managing provider data quality

5 Most primary care trusts (PCTs) had adequate arrangements in place to ensure quality data were being used for contracting purposes. However, very few PCTs could be regarded as performing well in all the areas reviewed. Clinical commissioning groups and clinical support services can learn from the best practice shown by some PCTs in involving and engaging GPs and in benchmarking their acute providers. We have developed a checklist to help commissioners.

Provider Data Quality

6 Accuracy rates have improved compared to our previous review of all acute trusts. This year the overall national average Healthcare Resource Groupⁱ (HRG) error rate is 7.5 per cent compared to 9.1 per cent in 2009/10.

7 In 2011/12, we audited 33,373 episodes of care, equating to approximately £51 million of NHS expenditure. Nationally, coding errors continue to result in both under and overpayments balance, suggesting there is no systemic upcoding error. We estimate that, nationally, acute trusts undercharged PCTs by approximately £60 millionⁱⁱ for PbR activity in 2011/12. We estimate that PbR underpayments and overpayments amount to between £600 million and £700 millionⁱⁱⁱ of admitted patient care paid on the wrong HRG.

8 This year we audited key data that is used, as well as clinical coding data, to determine the payment under PbR for a patient's time in hospital. We checked the accuracy of admission and discharge dates, which create the length of stay; the sex and age of the patient; and if the patient was admitted to hospital as an elective (planned) or an emergency. We found very low error rates, less than 1 per cent, in these areas.

9 When we look at all trusts as a whole, performance on clinical coding has improved since the PbR assurance framework started, with lower average error rates each year and a smaller gap between the top and bottom of the error range.

10 Individual trust performance varies each year and many trusts are not able to consistently achieve good levels of clinical coding accuracy. This is partly because we focus on areas where commissioners and benchmarking suggest there is room for improvement and clinical coding complexity also varies from area to area. Only four trusts have consistently been in the lower quartile, or best performing 25 per cent of trusts, with error rates of between 0 and 4 per cent. More have performed consistently poorly or have varied between mediocrity and poor performance.

11 Commissioners should do more to get assurance that performance is improving at trusts with variable performance, and ensure they are consistently achieving good HRG assignment accuracy across all specialties.

i HRGs are the casemix grouping methodology used to support PbR. The groups are organised by the body system and given clinical coherence by clustering diagnosis and procedure code combinations into groups which consume a similar level of resources. The HRG error rate is calculated at episode level for the purposes of the audit.

ii We estimate that the undercharge by acute trusts is between £43m and £76m. This is the net amount.

iii This is the gross change showing the total financial value of the errors identified.

Progress on recommendations made in previous audits

12 We followed up progress on the recommendations and areas for improvement made in previous reviews. Overall progress was disappointing, with, for example, less than half of trusts completing or making satisfactory progress on recommendations following outpatient data audits. Providers should do more to implement audit recommendations to stop the issues that affect data quality continuing. Commissioners should be more robust in getting assurance that their providers are implementing audit recommendations and data quality is improving.

13 Most trusts that had errors in their overall 2009/10 reference cost submissions, or in individual unit costs, have corrected these; or are making adequate progress in improving the accuracy of the most recent reference costs submission. However, 40 per cent of trusts have not made satisfactory progress in implementing one or more of the recommendations made in the reference costs audits. Five of the 19 trusts that had inaccurate overall submissions had not adequately resolved the issues by the time of their next submission.

Continuing assurance and improvement

14 The Audit Commission will continue to provide an assurance programme in 2012/13 (Ref. 1). Our work will provide assurance both locally and nationally by:

- providing a flexible audit resource to commissioners to deliver reviews driven by local issues and areas identified from previous work under the framework; and
- supporting tariff development and implementation by undertaking national data quality reviews of PbR in mental health and best practice tariffs.

15 The assurance framework's work programme will be developed and delivered in 2012/13 by our business partner, Capita Business Services Limited. The national benchmarker will continue to be available to NHS bodies.

16 We will continue to support and work closely with:

- the Health and Social Care Information Centre (HSCIC) and others to develop a more consistent and coherent framework for assuring the quality of data;
- Department of Health (DH), Monitor and the future NHS National Commissioning Board (NCB) to develop an approach to assuring costing information that underpins national tariffs; and
- commissioners, both the NHS NCB and clinical commissioning groups, to ensure that assurance over the accuracy of data underpinning local payments continues to be provided.

Recommendations

The DH, NHS NCB and Monitor should:

- review their approach to assuring PbR costing and payment data in the light of changing responsibilities and developments to PbR.

Clinical commissioning groups should:

- use the checklist provided to improve the quality of data used for payment;
- require positive assurance that providers are implementing recommendations made at audits;
- ensure that providers with variable or poor performance demonstrate that data quality is improving; and
- review their approach to ensuring that assurance over the accuracy of data underpinning local payments continues, in light of developments made by the DH, Monitor and the future NHS NCB.

Acute NHS and foundations trusts providers should:

- focus improvement on the accuracy of clinical coding on specialties where data quality is known to be poor, to reduce variation in performance year on year;
- ensure that reference costs data that underpins tariff setting is accurate; and
- demonstrate to commissioners that they have implemented recommendations accepted at audits.

Introduction

17 The PbR data assurance programme helps improve data quality in the NHS. It has been operating since 2007/08. This report presents the key findings from the 2011/12 programme which included:

- a review of the effectiveness of commissioner arrangements to secure good data quality on the information that underpins contracts with providers;
- an external audit at all acute NHS trusts and foundation trusts in England of inpatient clinical coding and other key data that supports payment under PbR; and
- following up audit recommendations made in previous work.

18 In addition, the PbR National Benchmarkerⁱ continues to be developed. It allows commissioners and providers to identify data quality issues. It can be used to analyse trust efficiency and productivity. The new reference costs tools help providers improve the quality of their costing information. We have new benchmarks for volumes of activity that enable commissioners to understand variances in the level of care their population receive.

19 In April we published [By Definition: Improving Data Definitions and their Use by the NHS](#) (Ref 2). This summarised our work on reviewing data definition issues in the NHS. It clarified national guidance on how to classify a patient who stays in hospital for a very short period – the main cause of dispute between commissioners and providers. It also made recommendations to national and local organisations about the steps needed to improve data definitions and resolve disputes about them.

20 We publish summary results from all the audits on our website at www.audit-commission.gov.uk/pbr. A summary of the results of our audits was also provided to the HSCIC for their recent publication on data quality across health and social care (Ref.3). This emphasised our commitment to supporting the need for wider improvement of data quality within the NHS.

21 All previous local reports, both benchmarking and audit, are available to PCTs and trusts in the National Benchmarker report library.

ⁱ www.audit-commission.gov.uk/pbrbenchmarking

Commissioner arrangements for identifying and managing provider data quality

Approach

22 In 2011/12, we completed our review of the arrangements commissioners put in place to stop poor quality data being used for contracting. Our 2010/11 annual report (Ref.1) reported on the interim findings.

23 Table 1 summarises the areas reviewed in each of the two phases of work.

Table 1: **Commissioner arrangements: areas reviewed under phase one and two of the 2010-12 PbR data assurance programme**

Phase one: 2010-2011	Phase two: 2011-2012
<p>A review of the commissioner arrangements to stop poor quality data, covering:</p> <ul style="list-style-type: none"> ■ accountability for improving poor provider data; ■ agreement about the quality of data that providers must supply to PCTs; ■ engagement with GPs to promote understanding of data quality and its impact on finances; ■ effective sharing within the PCT of provider data that is cleaned, validated and benchmarked; and ■ procedures to follow up PbR queries and audit recommendations on providers that impact on data quality. 	<p>A focus on the quality of data used in contracting for 2011/12 reviewing how effectively PCTs:</p> <ul style="list-style-type: none"> ■ work to ensure Secondary Uses Service (SUS) and local data flows are accurate, covering: <ul style="list-style-type: none"> – data validation and checks; – challenge and follow-up on providers on data issues; and – actions to reduce variances between reconciliation and post-reconciliation inclusion dates; ■ work with GPs to involve them in contracting and data validation including reviewing: <ul style="list-style-type: none"> – involvement in contracting and data validation; and – use of benchmarking to improve data quality.

Source: Audit Commission

24 Auditors made judgements on the commissioners' performance in the areas reviewed. These judgements are outlined in Table 2.

Table 2: **Auditors' key judgements on commissioner performance in the areas reviewed**

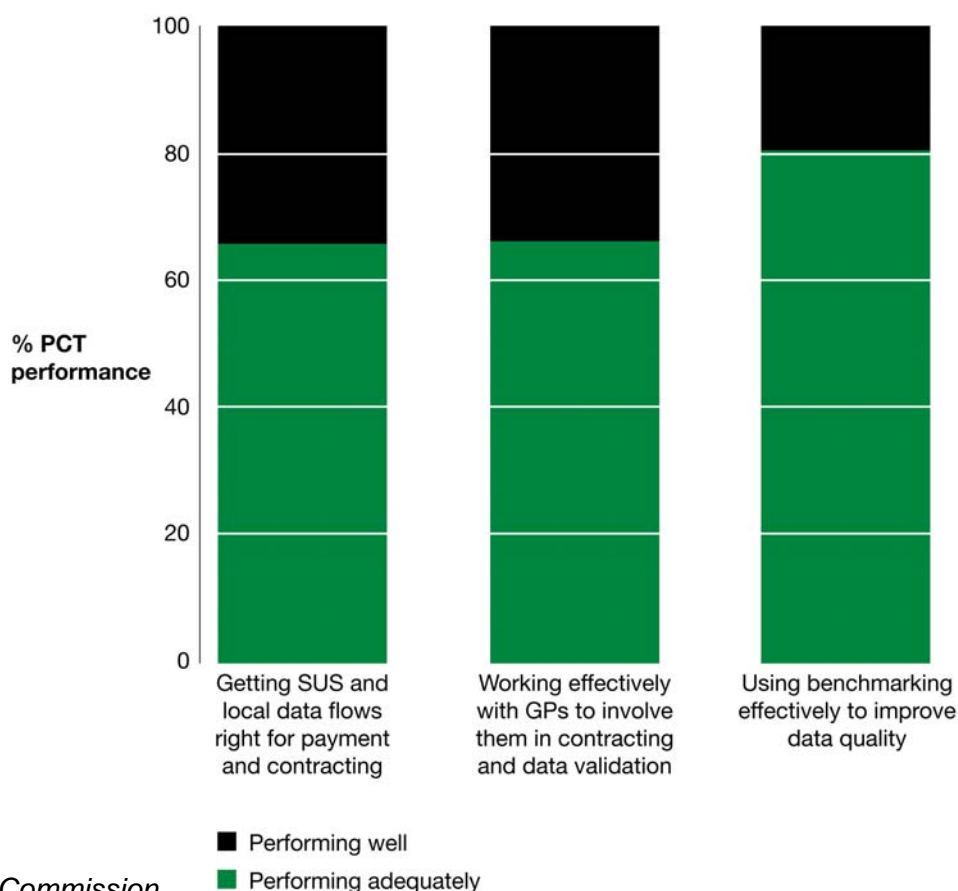
At minimum requirements: performing adequately	Consistently above minimum requirements: performing well
<p>The PCT is taking a strategic approach that is achieving outcomes. The PCT's approach is developing and improving over time. One-off projects or short-term work is not acceptable evidence.</p>	<p>The PCT is innovative in specific areas, or implementing policy ahead of schedule. There is evidence that the PCT is performing consistently above minimum requirements and outcomes demonstrate it is achieving value for money.</p>

Source: Audit Commission

Findings

25 Auditors found that nearly all (99 per cent) PCTs are working to at least minimum requirements and performing adequately. Table 3 shows the split between those PCTs who perform adequately and those that perform well in each of the three areas we reviewed. Only eleven (10 per cent) were performing well across all three areas we reviewed.

Figure 1: **Percentage of PCTs performing adequately or well in each of three review areas**



Source: Audit Commission

Using SUS for payment and contracting

26 PCTs perform the basic checks on data used for contracting and payment effectively. But one in three PCTs was using SUS as the main source of data for payment. All commissioners should now be ensuring providers use SUS for performance monitoring, reconciliation and paymentsⁱ. We found good performing commissioners, who use SUS data for payment and improve the accuracy of this data, reducing the amount of disputed cases (case study 1).

Case study 1

Getting SUS and local data flows right for payment and contracting: Teesside PCT cluster

The PCT cluster's validation and follow-up work has reduced variances between monthly SUS data at the reconciliation and post-reconciliation date at their two main acute trust providers.

The cluster undertakes data validation checks on SUS and non-SUS data flows. Following the monthly inclusion date, all data is checked at patient level to ensure SUS matches other locally received data sets. SUS and non-SUS activity is summarised monthly by cost and activity. Approximately 80 per cent of the cluster's payments are made on SUS data. At the request of GPs, SUS data has been locally supplemented to provide more information – for example, time of admission and discharge and ward number (now proposed for inclusion in CDS6.2).

At inclusion date, disputed cases for the two providers have fallen from over 700 cases in 2010/11 to under 200 in 2011/12.

GP involvement and engagement in data quality

27 All PCTs involve and engage GPs in data quality. But only one in three PCTs is performing well. PCTs that perform well use benchmarking analysis to focus on specific sets of data with GPs and help them focus on areas where they will have the most impact.

28 Auditors found a range of GP involvement and engagement in data quality. We found good commissioner systems that provide monthly data packs, either online or emailed to GPs regularly. For example, some PCTs gave GPs online access to SUS data and supported this with training to assist and encourage GPs to review cost and activity data. The most

ⁱ The Operating Framework for the NHS in England 2012/13

effective systems allow GPs to analyse a large range of data across PbR activity.

29 Case study 2 shows how one PCT is supporting its GPs to identify the right questions to ask, so that they can focus action on the right areas of hospital activity data for their patients.

Case study 2

GP involvement and engagement in data quality: Cornwall and Isles of Scilly PCT

The establishment of clinical commissioning groups is leading to greater interest in PbR. GPs are involved in contract discussions, performance monitoring and checking data quality through performance management group meetings.

GPs have access to SUS datasets, PbR spells and episodes, outpatient and Accident & Emergency data via the local system. They also have access to their main provider's data. In 2010/11 the PCT saved £84,000 through correction of data quality errors identified from data validation at practice level, with £74,000 relating to incorrect allocation of patients to practices, and the remainder on other issues.

Making better use of benchmarking

30 We found the area with the lowest number of PCTs 'performing well' was in the use of benchmarking to identify poor data quality. Auditors concluded that only one in five PCTs is above adequate. They do not compare the providers they commission from against clinical best practice, or those who achieve best (lower quartile) performance.

31 PCTs that perform well compare their providers' acute service delivery against clinical best practice. One example is where a PCT sets upper threshold targets for areas such as new to follow-up outpatient appointment ratios using benchmarking analysis. This identified that spend on a specialty at its local trust was higher than expected, resulting first in a review of the quality of the data, and then an action plan to cut activity. Case study 3 describes a PCT using benchmarking to improve the accuracy of outpatient procedure recording.

Making better use of benchmarking: Tameside and Glossop PCT

The PCT is monitoring activity using comparisons of their provider's acute service delivery against clinical best practice and upper quartile performance of other providers. These comparisons are used to identify data quality issues and set contract targets for improving data quality.

It has undertaken a benchmarking exercise covering all procedures that could be coded as either an outpatient or a day case delivery setting. They compared their SUS activity data against SUS data from other PCTs. This work identified dermatology cases that were being recorded by their main provider as treatments carried out as a day case, whereas other trusts were recording these as an outpatient. The trust agreed to change the recording of this which resulted in a net saving for 2011/12 of £264,000.

Improving the quality of data used for contracting in the future

32 Clinical commissioning groups are now in the process of being authorised. The authorisation process considers effective commissioning of servicesⁱ. Senior leadership and involvement is critical to improving data quality. Based on the findings from our audits, we have created a checklist to help senior leaders in clinical commissioning groups and commissioning support services ensure good quality data is used for payment.

ⁱ *Clinical commissioning group authorisation: Draft guide for applicants.* Domain 4: Proper constitutional and governance arrangements, with the capacity and capability to deliver all their duties and responsibilities including financial control, as well as effectively commissioning all the services for which they are responsible.

Checklist to improve the quality of data used for payment

- | | |
|--|---|
| <p>1. Ensuring providers improve their data quality by checking that:</p> | <ul style="list-style-type: none">■ contracts require providers to carry out regular audits on data quality and report these to commissioners;■ providers demonstrate they are improving data quality or are maintaining high standards; and■ providers give assurance that audit recommendations to improve data quality are being implemented. |
| <p>2. Improving the use of benchmarking to identify data quality issues by checking that benchmarking:</p> | <ul style="list-style-type: none">■ is identifying provider activity outliers and that these are followed up;■ covers all areas of provider service provision;■ compares provider service delivery against clinical best practice; and■ compares local providers to providers nationally that have best performance. |
| <p>3. Involving GPs in contracting and data validation to identify potential data quality issues by:</p> | <ul style="list-style-type: none">■ supporting GPs to understand provider data and how accurate data results in correct payment under PbR rules;■ using benchmarking analysis to focus on specific sets of data with GPs so their input is focused on areas where the greatest problems may be; and■ using GPs clinical knowledge to challenge potential areas of poor data quality. |
| <p>4. Improving data used for payment by:</p> | <ul style="list-style-type: none">■ paying for PbR activity using SUS data;■ setting targets for reducing variances between provider data submissions at the SUS monthly reconciliation inclusion date and at the monthly post reconciliation inclusion date;■ checking providers correct errors in SUS data when they are identified by the commissioner; and■ ensuring non-SUS aspects of contracts are reported and monitored at patient level as if operating under PbR. |

Provider data quality

Approach

33 In 2011/12 we audited the accuracy of coded clinical data at all acute NHS and foundation trusts in England.ⁱ We reviewed 200 Finished Consultant Episodes (FCEs)ⁱⁱ from PbR qualifying spells at each trust. 100 FCEs were chosen randomly. 100 FCEs were audited from a specialty chosen by the commissioner.ⁱⁱⁱ We also audited other data that can affect the price a commissioner pays for a spell under PbR rules. We used SUS data throughout.

34 To check if trusts are making the improvements, we followed up the recommendations made in previous years on:

- reference costs reviews;
- outpatient audits; and
- clinical coding data assurance audits.

35 For each recommendation in the three areas, auditors came to one of the following judgements:

- complete; or
- satisfactory progress has been made and it is reasonable to expect it to still be in progress because the action completion date has not passed at the time of the follow-up; or
- unsatisfactory progress has been made on the recommendation and it is not reasonable to expect it to be still in progress.

Data accuracy error rates

HRG error rate

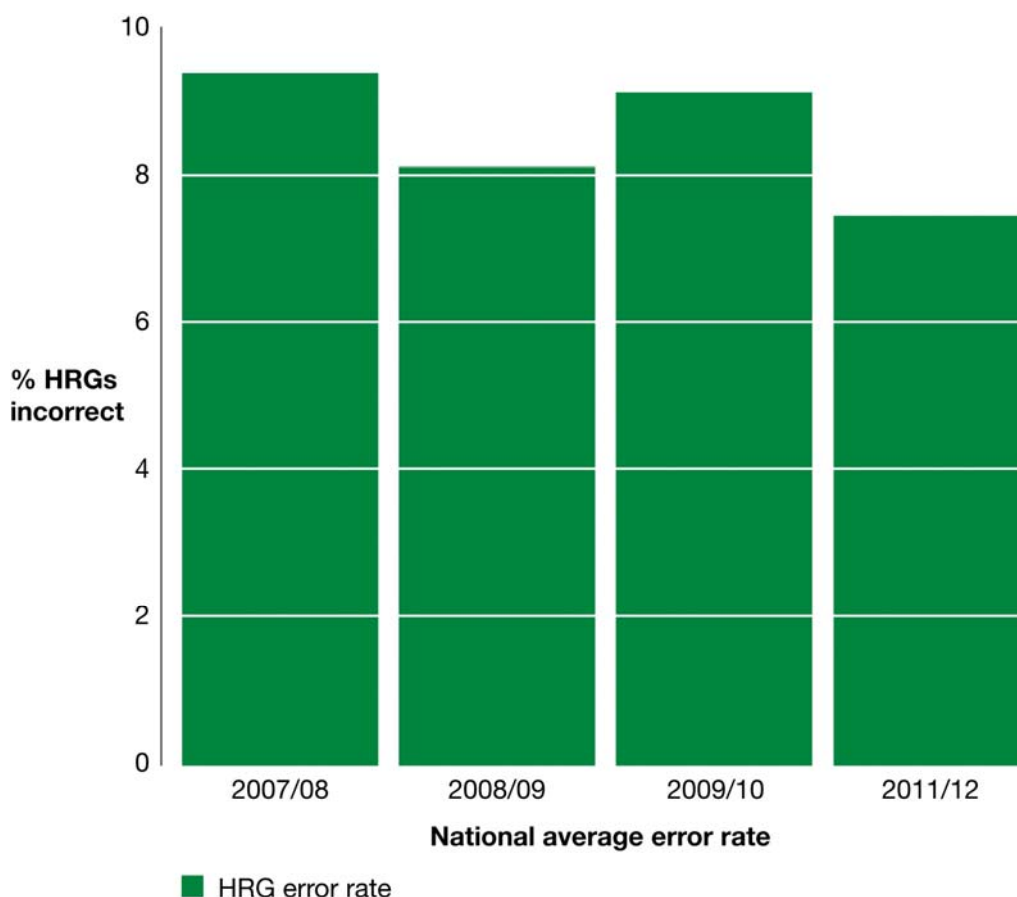
36 The audits analyse the impact of coding errors on the derivation of the HRG and use PbR tariff rules to quantify the financial impact of coding errors identified. We combined the two samples – the random sample and the specialty sample – to give an overall HRG error rate for each trust.

- i** We use NHS Connecting for Health (CFH) clinical coding audit methodology version 5. The last year we reviewed the accuracy of clinical coding data at all NHS and foundation trusts was 2009/10. This means that all comparisons are against 2009/10 data and the years preceding this. In 2010/11 we audited reference cost data, PCT arrangements, independent sector organisations and focused outpatient and clinical coding audits on the poorest performing trusts.
- ii** In previous years we audited 300 FCEs at acute provider trusts.
- iii** We excluded spells with more than four episodes. We did not audit episodes with more than 12 procedure codes or 13 diagnosis codes to keep the audit approach the same as previous years.

The overall national average HRG error rate is 7.5 per cent compared to 9.1 per cent in 2009/10. The difference between the average random sample and average specialty sample error rate is marginal: 0.5 percentage points.

37 Figure 2 shows that there has generally been improvement year on year. The exception to this is in 2009/10 when there was a small increase in the error rate. This was caused by the change from HRGv3.5 to HRG4ⁱ.

Figure 2: **The national average HRG error rate (%) from the financial year 2007/08 to 2011/12**



Source: Audit Commission

38 The spread of error rates continues to narrow with the poorest performing trusts reducing high error rates. The upper quartile error rate has reduced from 12 per cent to 10.3 per cent. Table 3 shows that the gap in the inter-quartile ranges has narrowed each year.

ⁱ A full explanation of the change can be found in our 2009/10 annual report: [Improving Data Quality in the NHS - Annual Report on the PbR Assurance Programme](#)

Table 3: **Percentage of incorrectly derived HRGs broken down into inter-quartile range changes by financial year from 2007/08 to 2011/12**

Inter-quartile range / Year	2007/08	2008/09	2009/10	2011/12
Minimum	0.3	1.0	0.0	0.0
Lower quartile	4.0	4.7	5.1	4.0
Average	9.4	8.1	9.1	7.5
Upper quartile	12.0	10.6	11.7	10.3
Maximum	52.0	39.7	28.3	23.0

Source: Audit Commission

39 Trust performance varies each year and many trusts have not been able to consistently achieve good levels of accuracy. This is partly because we focus work on areas where commissioners and benchmarking data suggest there is room for improvement. We also audit different areas each year. Coding is more complex in some areas than others and this can lead to varying trust error rates.

40 Consistent good performance is rarer than variable or consistently poor performance. Only four trusts have consistently been in the best performing category each year since we started the assurance programme in 2007/08:

- Cambridge University Hospitals NHS Foundation Trust;
- Kingston Hospital NHS Trust;
- Tameside Hospitals NHS Foundation Trust; and
- Wrightington, Wigan and Leigh NHS Foundation Trust.

41 Fifty-one trustsⁱ have been in the best performing category just once since 2007/08 and 64 trusts have never been in that category.

42 At the other end of the scale, we audited 29 trusts in 2010/11 because they had performed consistently poorly. Six of the 29 have improved performance and are now in the best performing category:

- Barnet and Chase Farm Hospitals NHS Trust;
- Homerton University Hospital NHS Foundation Trust;
- Croydon Health Services NHS Trust;
- Moorfields Eye Hospital NHS Foundation Trust;
- Royal Surrey County Hospital NHS Foundation Trust; and
- United Lincolnshire Hospitals NHS Trust.

ⁱ We audited 164 acute NHS and foundation trusts in 2011/12.

43 But ten of the 29 are still in the worst performing category of trusts:

- East and North Hertfordshire NHS Trust;
- Colchester Hospital University NHS Foundation Trust;
- Guy's and St Thomas' NHS Foundation Trust;
- Heart of England NHS Foundation Trust;
- Heatherwood and Wexham Park Hospitals NHS Foundation Trust;
- King's College Hospital NHS Foundation Trust;
- Leeds Teaching Hospitals NHS Trust;
- The Mid Yorkshire Hospitals NHS Trust;
- Royal Free London NHS Foundation Trust; and
- The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust.

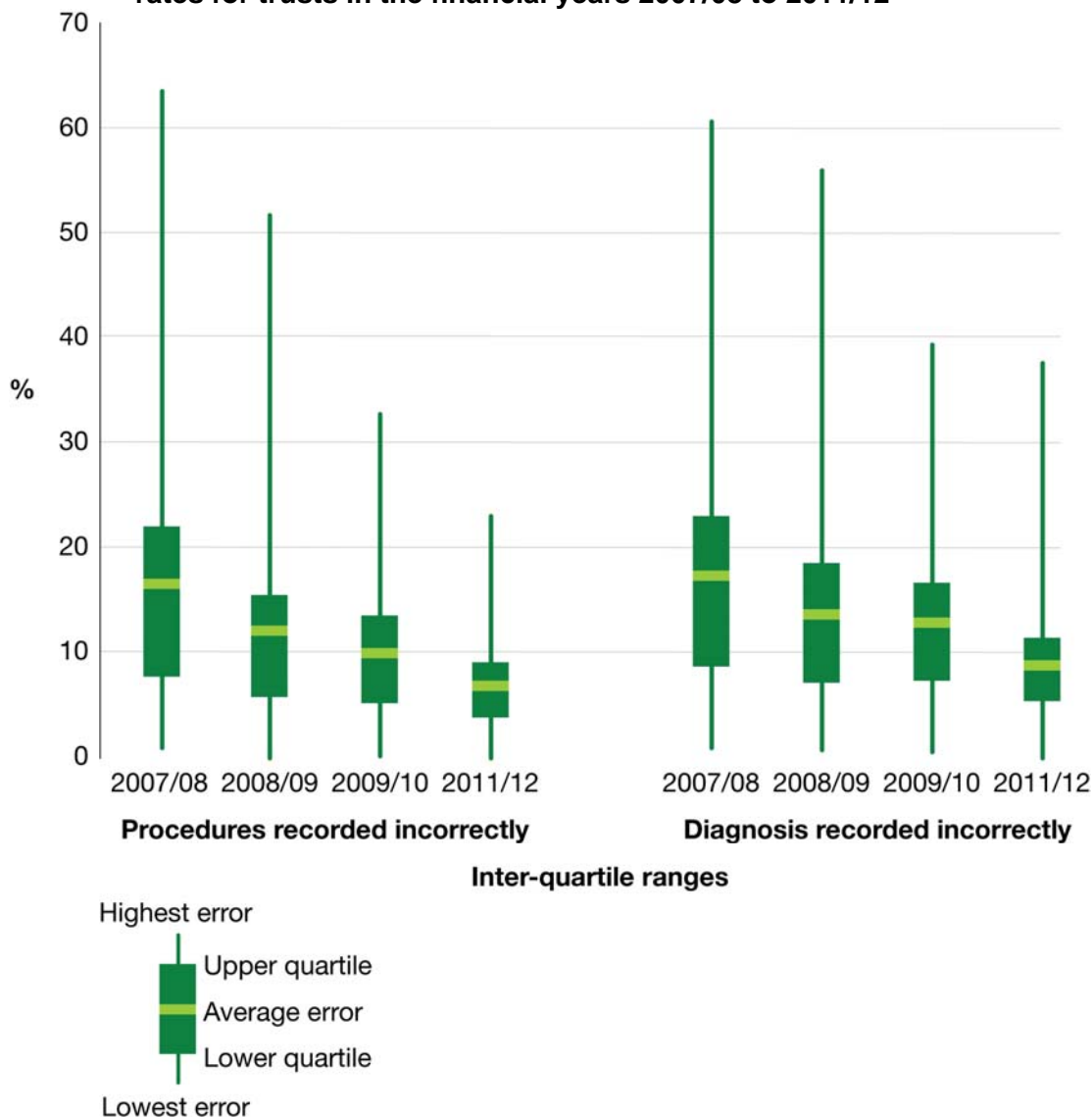
44 Commissioners should use the checklist on page 12 in the section 'Improving the quality of data used for contracting in the future' to challenge and improve provider data quality. It is also important for commissioners to continue to get assurance about performance at individual trusts. In 2012/13 our commissioner driven, locally risk-based focused, assurance work will help and support improvement.

Clinical coding error rate

45 We found that the accuracy of the clinical coding data is better than at any point since 2007/08. Average procedure and diagnosis error rates have reduced by nearly nine percentage points in five years.

46 Figure 3 shows the improving accuracy of procedure and diagnosis coding. Each year the gap between those trusts performing well (lower quartile) and the poorly performing (upper quartile) is reducing.

Figure 3: **The range of clinical coding procedure and diagnosis error rates for trusts in the financial years 2007/08 to 2011/12**



Source: Audit Commission

47 But further progress can be made, particularly in the accuracy of diagnosis coding. We found that 88 per cent of trusts had trouble accurately coding comorbidities in the sample we audited. In March 2011, NHS CFH released updated guidance for recording comorbidities. We audited against these standards and found many cases where trust clinical coders had not followed the standards set by NHS CFH. At times this was due to human error. However, we found many instances where the source documentation used for coding did not accurately reflect the full clinical record for the patient. This was mainly due to trusts using source documentation, such as discharge summaries, instead of the full patient record.

Age, sex, admission method and length of stay error rate

48 For the first time we have reviewed the accuracy of four key fields that impact on the accuracy of payment under PbR rules. This involved reviewing the accuracy of the patient's:

- length of stay (LoS) by checking admission and discharge date;
- sex;
- age; and
- admission method.ⁱ

49 Overall, the data we reviewed was accurate. Table 4 shows that across all trusts the average error rates for the four areas: LoS, sex, age and admission method, that affect payment were at or less than 0.2 per cent. 72 per cent of trusts had no errors affecting payments in these fields.

Table 4: **LoS errors, sex, age and admission method errors that affected payment**

	LoS	Sex	Age	Admission method
National error rate	0.2%	0.0%	0.0%	0.1%

Source: Audit Commission

50 LoS relies on accurate recording of admission date and discharge date. When we looked at all LoS errors, including those that did not affect payment, 50 per cent of trusts had one or more LoS errors. This means that an admission or discharge date, or both, were not accurately stated in SUS. Accurate recording of admission and discharge dates is important in the compliance with readmission rules.

51 The LoS errors were mainly attributed to poor data entry. A common example of this is when ward clerks enter data from a discharge summary that is inconsistent with the patient's case notes.

Financial impact of errors

52 In 2011/12, we audited 33,373 episodes of care, equating to approximately £51 million of NHS expenditure. Table 5 shows that the average net errorⁱⁱ continues to be low (less than 1 per cent of the sample reviewed). Nationally, the under and overpayments balance, suggesting there continues to be no systemic upcoding errors.

- i This is a split between elective and emergency admissions because these are the primary driver of price change.
- ii A net change is the actual impact of changes on the sample. A negative figure indicates that PCTs should have been charged less. A gross change shows the total financial value of the errors identified. The polarity of the changes for each error is ignored (positive or negative), and the total value of the changes is summed to contextualise the impact of data quality on the payment system.

Table 5: Net and gross financial error (%) by trust for the financial years 2007/08 to 2011/12

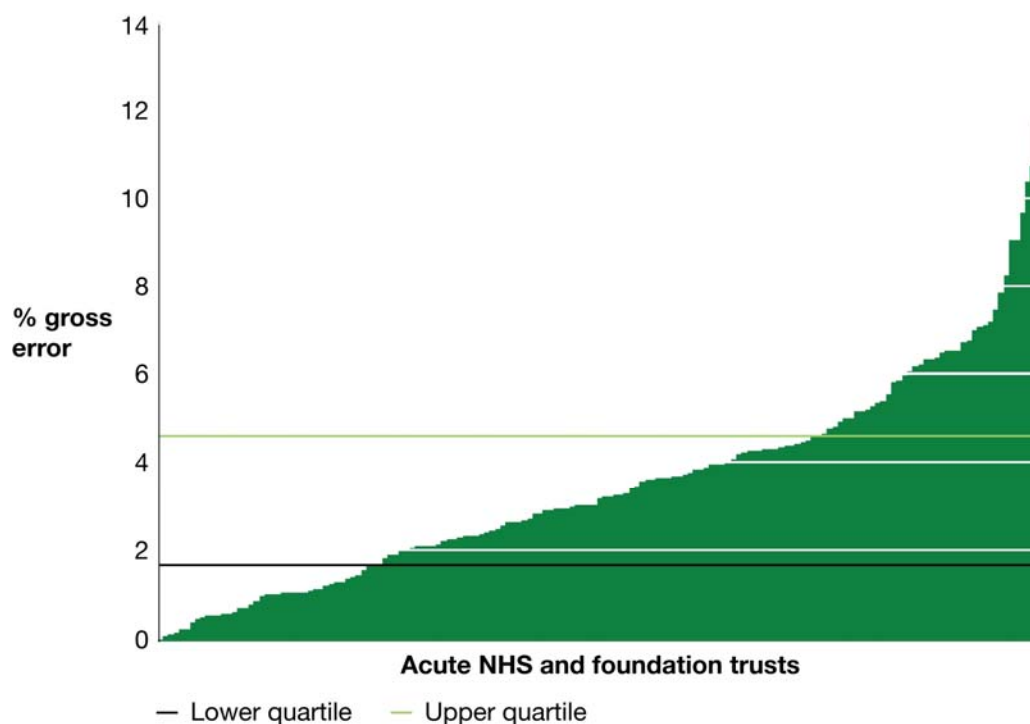
	2007/08	2008/09	2009/10	2011/12
Net	-0.1%	0.0%	0.9%	0.3%
Gross	4.6%	4.0%	4.3%	3.5%

Source: Audit Commission

53 Table 5 shows that in 2011/12 the average gross financial error rate is one percentage point lower than in 2009/10 at 3.5 per cent or approximately £1.6 million of the sample reviewed. The gross financial error is the sum of all financial errors we found, irrespective of whether they favoured the commissioner or provider. This gives an indication of the financial risk associated with the poor data quality.

54 Although the average error rate is falling, Figure 4 shows we still found that 25 per cent of trusts had a gross financial error rate between 4.6 per cent and 11.7 per cent. Continuing to reduce the HRG assignment errors by improving coding accuracy will reduce the gross financial errors.

Figure 4: Trust gross financial error rates (%) for acute and foundation trusts in 2011/12



Source: Audit Commission

55 We have extrapolated the gross and net financial error against the total value of PbR qualifying spells in 2011/12.ⁱ This enables us to estimate the financial impact of poor data quality that underpins PbR nationally.

56 We consider that nationally acute trusts undercharged PCTs by approximately £60 millionⁱⁱ for PbR activity in 2011/12. Also, between £600 million and £700 million of PbR qualifying activity was paid on the wrong HRGⁱⁱⁱ.

Progress on recommendations made in previous audits

57 Auditors followed up the recommendations that were made in previous audits to see how well NHS and foundation trusts are delivering them. This includes the recommendations we made during our reference costs reviews and our work in focusing on the poorest performers in 2010/11.

58 All recommendations are agreed with the trust when we issue our audit reports. They provide an important steer for trusts to focus on to improve data quality in the areas reviewed. Clinical commissioning groups should now ensure trusts are acting on the recommendations from audits to improve the quality of data^{iv}.

Inpatient and outpatient follow up

59 Table 6 shows the percentage of trusts that had completed recommendations or are making satisfactory progress. In many cases the issues that we identified as causing data quality errors have not been fully addressed.

Table 6: **Completion of recommendations**

Audit area	% of trusts with all recommendations completed or where satisfactory progress is being made	% of trusts making unsatisfactory progress in one or more recommendations
Inpatients	58	42
Outpatients	44	56

Source: Audit Commission

i Because 50 per cent of the audit sample was chosen randomly from PbR qualifying spells at each trust, we are able to extrapolate this information.

ii We estimate that the undercharge by acute trusts is between £43m and £76m. This is the net amount.

iii This is the gross change showing the total financial value of the errors identified.

iv The checklist in the section 'Improving commissioner arrangements for ensuring the quality of data used for payment is accurate' should be used by clinical commissioning groups to improve data quality.

Reference costs follow up

60 When we followed up the recommendations we made in the 2010/11 reference costs reviews, we found over 40 per cent of trusts had not made satisfactory progress in implementing one or more of the recommendations auditors had made. While the majority of trusts (57 per cent) had taken action to resolve the key errors found in the audit, some trusts had not done so.

61 Following the publication of our 2010/11 annual report (Ref. 4) we shared details of the trusts that had incorrect reference costs with DH. We also shared details of the trusts that had one or more unit costs that were not accurate.ⁱ DH used this information to review the effect on national prices and in a number of cases removed these costs from the tariff calculation.

62 Nineteen (12 per cent) trusts did not submit correct 2009/10 reference costs. Six of these trusts had fully addressed the problems in submitting data for 2010/11. Eight of the 19 trusts are making adequate progress in improving the accuracy of their reference costs. Five trusts did not demonstrate that they had adequately resolved the issues that were referred to in the report and therefore may still have an incorrect 2010/11 reference costs submission. The five trusts are:

- Heatherwood and Wexham Park Hospitals NHS Foundation Trust;
- Isle of Wight NHS Primary Care Trust;
- Northern Devon Healthcare NHS Trust;
- South London Healthcare NHS Trust; and
- The Newcastle Upon Tyne Hospitals NHS Foundation Trust.

63 The majority of trusts that had one or more unit costs wrong when we carried out our review on the 2009/10 reference costs had corrected the issue for the 2010/11 submission. In the 2009/10 submission, 41 (24 per cent) trusts had one or more individual unit costs that were incorrect. When we followed up their progress we found that:

- 28 (68 per cent) of these trusts have corrected the unit costs for the 2010/11 submission; and
- 13 (32 per cent) of these trusts still have an inaccuracy in the same unit costs, or did not provide evidence to support that they were correct for the 2010/11 submission.

64 Reference costs will continue to be used as the basis for setting national tariffs in the medium term. Trusts must continue to ensure they provide accurate reference costs. In our 2010/11 annual report (Ref 4) we published a checklist to help organisations improve the quality of reference costs. Trusts should continue to use this to improve the accuracy of their reference costs submission.

ⁱ An overview of the reference costs audit methodology can be found online at www.audit-commission.gov.uk/nhsdataqualitymethodologies

Continuing assurance and improvement

65 Although it is clear that error rates have fallen over the last five years, helped by our work, data quality continues to vary at trusts, with only a small percentage being able to consistently demonstrate to their commissioner that their data is accurate. Some trusts have performed consistently poorly and PbR spend continues to be paid on the wrong HRG.

66 It is important for commissioners to continue to get assurance about performance and to seek improvement where necessary. Commissioners can improve data quality by challenging providers' data, informed by GPs knowledge and benchmarking, more effectively.

67 The Audit Commission will continue to provide an assurance programme in 2012/13. We set out the 2012/13 work programme in March 2012. The programme has been developed in consultation with the DH and other stakeholders to reflect the improvement in clinical coding, the broadening scope of PbR, and the challenges the changes in commissioning responsibilities present to the NHS. Our work will focus on both local and national assurance by:

- providing a flexible audit resource to commissioners to deliver locally focused reviews driven by local issues and areas identified from previous reviews under the framework; and
- supporting tariff development and implementation by undertaking national data quality reviews of PbR in mental health and best practice tariffs.

68 The assurance framework's work programme will be developed and delivered in 2012/13 by our business partner, Capita Business Services Limited.

69 Improving the quality of data is a key component of the wider [NHS Information Strategy](#) (Ref. 5), developments of national tariffs and the widening of PbR, and ensuring new commissioners have reliable information on which to plan and pay for provider services.

70 We will continue to support and work closely with:

- the HSCIC and others to develop a framework for assuring the quality of data more widely than PbR;
- DH, Monitor and the future NHS NCB as they review the approach to assuring costing information that underpins national tariffs; and
- clinical commissioning groups as they review their approach to ensuring that assurance over the accuracy of data underpinning local payments continues in light of developments made by the DH, Monitor and the future NHS NCB.

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