

# CAPITA



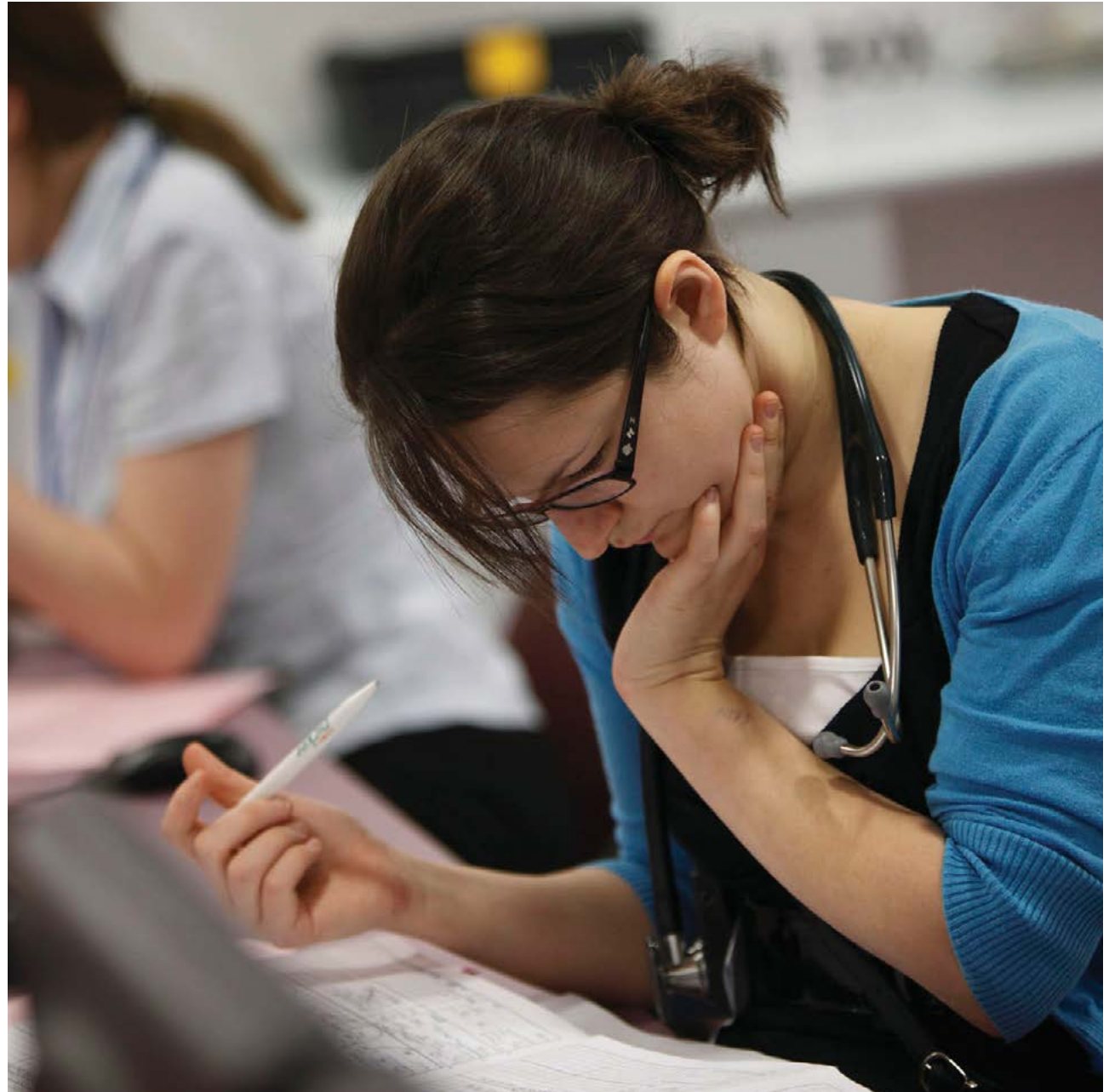
## The quality of clinical coding in the NHS

Payment by Results data assurance framework

September 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 accuracy of clinical coding at 50 acute trusts. 40 trusts were selected because of the high number of spells<sup>1</sup> changing payment in previous audits; 10 were selected at random. The audit sample at each trust was split between a national theme focusing on comorbidities, and an area of local concern selected by the commissioner.

We audited 8,990 episodes of care which equates to £15.3 million of NHS expenditure. The accuracy of clinical coding across the trusts audited was variable. No trust achieved a 0 per cent error rate, and nearly half the spells at the poorest performing trust changed payment following the audit. The overall net financial impact is minimal but there were significant over and under charges identified through the audits. **Table 1** summarises the key results from the 2013/14 audit programme.

There was poorer performance in the samples focusing on comorbidities. Despite being an area of concern for commissioners, our audits found that providers were consistently under-recording comorbidities. However, auditors reported issues around the relevancy of comorbidities. National guidance states that non-mandatory comorbidities should only be coded where identified as clinically relevant. However, clinicians are not making the differentiation between relevant and not relevant when recording comorbidities in the source documentation.

The quality of the source documentation remains a persistent cause for concern. When paper case notes are in a poor condition, it slows the coders' work and makes it difficult to extract the right information from them. To hit deadlines coders often rely on discharge summaries to clarify diagnoses and treatments. However the information in the discharge summaries is often poor and incomplete, resulting in errors in comorbidities and definitive diagnoses.

Auditors noted the pressure coding departments are under – deadlines are becoming tighter; vacant posts and inexperienced staff increase the risk of error; and coding system issues are impacting on the accuracy of data capture. Trusts should beware of cutting costs on recruitment, training and IT systems for coding in an attempt to make savings. This increases the risk of inaccurate data – and as the quality of coding goes down, so will the accuracy of payments based on it.

We also identified recurring coder errors where coding departments had not applied new guidance on areas such as heart disease, or where nationally there were persistent issues, such as the need to update diagnoses with the findings from histology reports.

Monitor and NHS England have signalled a move to a payment system that is more patient focused and outcome based. The effectiveness of these developments will depend on the accuracy of the treatments and conditions recorded. It is important that the NHS continues to improve the quality of its data so that the payment system is developed based on accurate and representative data, and that it is implemented effectively, in a way that benefits patients and improves patient care.

Throughout the assurance framework we have identified consistent issues that impact on data quality. We have developed these themes using the learning from this year's audit programme into a checklist of 10 areas designed to enable senior managers to identify ways of improving and maintaining the quality of clinical coded data.

**To find out more about the PbR assurance framework, or to discuss data quality at your organisation, please email: [pbrassurance@capita.co.uk](mailto:pbrassurance@capita.co.uk)**

**Table 1: Headline error rates and financial impact**

% spells changing payment			Net financial impact <sup>1</sup>	Gross financial impact <sup>2</sup>
Lowest error rate	Average error rate	Highest error rate		
1.1	7.0	45.8	0.1%	4.1%

<sup>1</sup> A spell is a continuous period of time spent as a patient within a hospital and may include more than one patient episode. Clinical coding is undertaken at the patient episode level; payment is made at spell level.

<sup>2</sup> A negative figure represents an overcharge to commissioners by providers.

<sup>3</sup> The gross financial change is the total value of the spells that had errors, whether in favour of providers or commissioners.

# Checklist to improve the quality of clinical coded data

Areas for senior managers to support, challenge and seek assurance on to increase the quality of admitted patient care data.



1	Source documentation	Medical records are a legal document and must be fit for their many purposes. Physical case notes should be kept in manageable volumes, with information recorded clearly and sequentially, and be made available in full for coding purposes. Electronic records should be complete and easy to use.
2	Discharge summaries	Where discharge summaries are used to support coding, they should be complete and consistent with other source documentation, containing a definitive diagnosis and all relevant comorbidities. Multi-episode spells should be coded using the full case notes.
3	Deadlines & completeness	If challenging deadlines are adopted ensure there is a process for updating coding with information that may not be available at the time of coding, such as histology reports.
4	Clinical engagement	Regular engagement with clinicians will clarify issues for both clinicians and coders about how the care delivered should be described in the source documentation for clinical coding purposes. And routine clinical validation of clinical coding data helps ensure accuracy.
5	Audit and analysis	Regular analysis of coded information and routine audit by a Clinical Classifications Service approved clinical coding auditor should be a key part of a trust's quality assurance programme, and feed into coder training.
6	Staffing	Vacant posts and inexperienced staff increase the risk of poor coded information – the skill mix and number of coders should be fit for the purpose of good quality clinical coding.
7	Training and guidance	Accurate coding relies on well trained staff who can accurately employ the four-step coding process, and who keep up to speed with changes in national standards and guidance.
8	IT systems	Ensure the IT system used for coding and other data capture are fit for purpose, allow coding in line with national guidelines, and that routine fields such as age are accurately calculated.
9	Assessment units	The process for data capture in new patient pathways such as assessment units should be formalised to make sure all patient information is captured completely and accurately, including admissions and discharge dates.
10	Broader uses	Clinical coded information underpins all aspects of health care management within the NHS – joining up its various uses will help clarify the importance of data quality and identify areas for improvement. The appendix of this briefing contains a list of these broader uses.

# Background and approach

For the past seven years the Payment by Results (PbR) data assurance framework has provided assurance over the quality of the data that underpins payments as part of PbR, promoting improvement in data quality and supporting the accuracy of payment within the NHS.

The assurance framework<sup>4</sup> is an integral part of the payment system and provides the only independent and comprehensive data quality programme within the NHS. The focus of this work is to improve the quality of data that underpins payments, but the data reviewed is also of wider importance to the NHS as it is used to plan and oversee healthcare provision.

This programme focused on three key areas:

- admitted patient care data audits at a sample of 50 NHS providers, auditing a national area of concern and a local area agreed with commissioners;
- reference cost returns auditing the arrangements and accuracy for the submission at 50 NHS providers; and
- mental health PbR data quality reviews at 25 mental health providers, supporting tariff development and implementation.

This briefing outlines the key messages from our review of coding audits at acute trusts. Findings from our costing reviews<sup>5</sup> and mental health audits<sup>6</sup> have been reported separately.

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 assurance framework's work programme for 2013/14.

## Approach

Between September 2013 and March 2014 we audited clinical coding and other data items that drive payment at 50 acute trusts. These trusts consisted of:

- 40 trusts "at risk" of poor coding quality to improve local data quality; and,
- 10 trusts selected at random.

We used a risk assessment to identify the 40 'at risk' trusts, similar to the reference costs review programme also undertaken this year. This assessment covered:

- previous coding audit results, particularly the coding of comorbidities<sup>7</sup> and complications; and
- benchmarking of coding data, using indicators that focus on comorbidities and complications, based on the analysis available in the National Benchmark<sup>8</sup>.

At all trusts, 200 finished consultant episodes (FCEs) in admitted patient care were audited. Of these:

- 100 FCEs were chosen centrally, following a national theme focusing on comorbidities and complications, with the exact HRG<sup>9</sup> sub-chapter identified from national benchmarking analysis; and

- 100 FCEs were chosen for local review by clinical commissioning groups (CCGs), to address an area of local concern or to gauge the benefit of undertaking quality improvement work in a specific area.

The coding of comorbidities and complications was selected as a national theme because audit results identified this as an issue that had an impact on the quality of clinical coding in every previous year of the PbR audit programme.

Commissioners were provided with risk profiles to help inform the local programme selection. These risk profiles combined the comparative analysis from the National Benchmarker and previous audit results used as part of the admitted patient care risk assessment process. Secondary Uses Service (SUS) continues to be the source of data for all aspects of the local audit programme. This risk profile also determined the focus of the comorbidity and complications section of the audit.

Each clinical coding audit used the Clinical Coding Audit Methodology 2013/14 – 14 v7.0, compiled by the Health and Social Care Information Centre (HSCIC).

We also tested the accuracy of other data items that affect the price commissioners pay for a spell under PbR: age on admission, admission method, sex, and length of stay. For each of these data items the information in SUS was verified against information in source documentation.

A review of each Trust's previous PbR audit action plan was also undertaken to assess its progress against previous audit report recommendations.

<sup>4</sup> For more information of the PbR data assurance programme visit [www.chks.co.uk/Payment-by-Results-\(PbR\)-Assurance](http://www.chks.co.uk/Payment-by-Results-(PbR)-Assurance)

<sup>5</sup> Payment by results data assurance framework, *Improving the quality of costing in the NHS*, June 2014

<sup>6</sup> Payment by results data assurance framework, *The quality of Mental Health care cluster costing and activity data in the NHS*, August 2014

<sup>7</sup> Comorbidities are conditions that exist in conjunction with another disease. Common examples of comorbidities are diabetes, asthma, hypertension, chronic obstructive airways disease and ischaemic heart disease.

<sup>8</sup> The National Benchmarker is freely available to the NHS. To request a log-in go to [www.nationalbenchmarker.co.uk](http://www.nationalbenchmarker.co.uk)

<sup>9</sup> HRGs are a case mix grouping methodology organised by the body system and given clinical coherence by allocating diagnosis and procedure code combinations into groups which consume a similar level of resources.

# Findings

There was a large range in the proportion of spells changing price at trusts audited. No trust achieved a 0 per cent error rate.

The best performing 25 per cent of trusts had error rates between 1.1 and 5.2 per cent of spells changing price. The average error rate at trusts audited was 7.0 per cent of spells changing price. 25 per cent of trusts had between 10.5 per cent and 45.8 per cent of spells changing price.

**Table 2** below shows the percentage of spells changing payment in the sample audited. **Figure 1** shows the spread of errors in spells changing payment across the trusts audited.

40 trusts in the audit sample were selected because they were identified as being at risk of poor data quality, and 10 were selected at random. Looking at the results of these two groups, the error rate for the random sample was lower, with an average of 7.1 per cent spells changing payment in the random sample compared with 9.5 per cent in the "at risk" group. As the areas selected varied by Trust, this does not allow a direct national comparison of the data results across all Trusts audited.

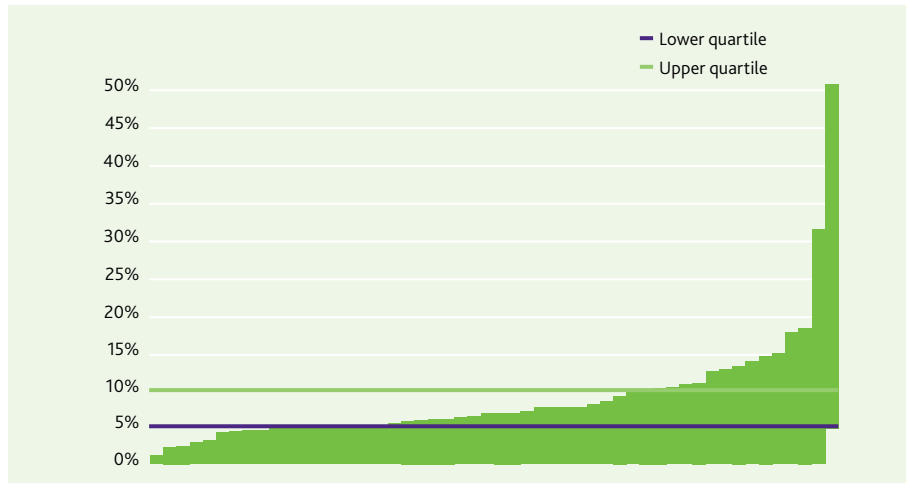
We audited 8,990 episodes of care which equates to £15.3 million of NHS expenditure. There was a gross financial error of £633,016; 4.1 per cent, for the spells audited. This is the total value of the errors, irrespective of who they favoured. The net financial error was 0.1 per cent, or £20,634, and reflected a small under-charge by providers in total.

Whilst the average net error rate is low, there were significant outliers identified through the audit. Although some trusts had low rates of spells changing payment, these errors related to activity with a high monetary value. **Figure 2** shows the net difference in charges to commissioners. A negative value reflects an overcharge to the commissioner.

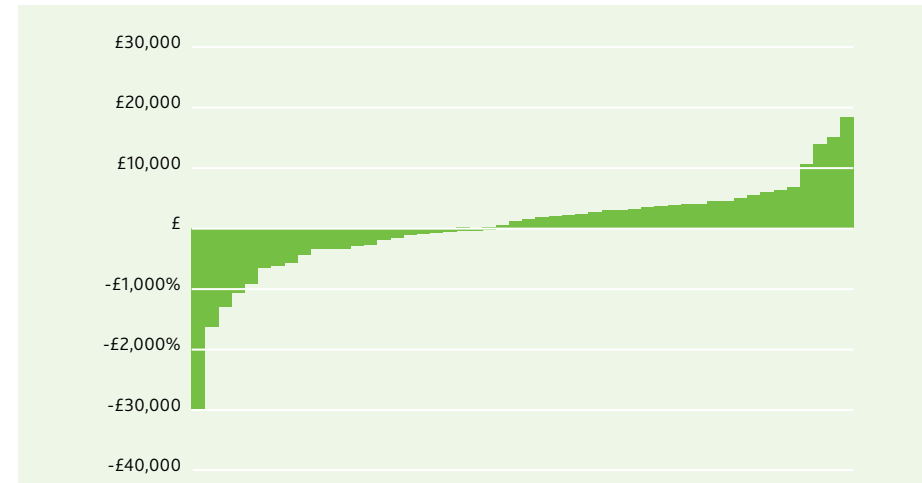
**Table 2: Percentage of spells changing payment at trusts audited**

Interquartile range	Minimum	Lower quartile	Mean	Upper quartile	Maximum
Spells changing price	1.1	5.2	7.0	10.5	45.8

**Figure 1: Spells changing payment by trust audited**



**Figure 2: Net difference in charges to commissioners by trust audited**



# Findings continued

The accuracy of clinical coding across the trusts audited was variable. **Table 3** shows the variation in performance for clinical coding data for the sample audited.

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. **Figure 3** shows the latest error rates compared to the previous error rates for the trusts audited in 2013/14. The audits also looked at the accuracy of other data items that affect the price commissioners pay for a spell under PbR: age on admission, admission method, sex, and length of stay. For each of these data items the information in SUS was verified against information in source documentation.

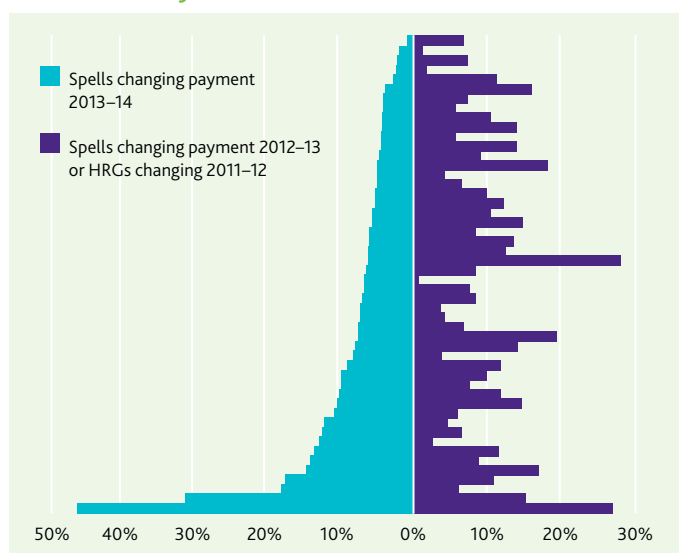
29 of the 50 trusts audited had no data item errors. Of the remaining 21 trusts with errors, these mainly related to errors in length of stay or age. **Figure 4** shows the percentage split of the errors. Spell length of stay relies on accurate recording of admission date and discharge date. Accurate recording of admission and discharge dates is important to ensure that, where applicable, the correct trimpoint and excess bed day calculations are generated. It is also important in the compliance with readmission rules.

One trust, which accounted for 10% of the spell length of stay errors, had errors specifically relating to short stay assessment units. These units sometimes have governance issues in respect of clerking in patients which can result in poor data quality. This poor data quality also impacted on the classification of patients' subsequent admission methods. Other common causes for incorrect admission and discharge information were poor source documentation and data capture not being carried out in real time which means values can often be left as a system default.

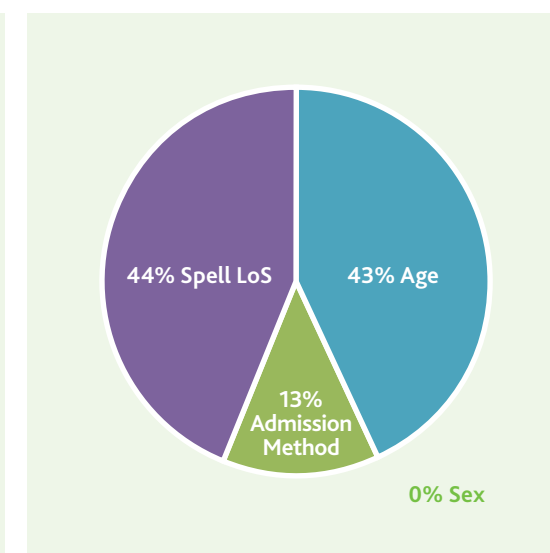
**Table 3: Variation in performance for clinical coding at trusts audited**

Interquartile range	Minimum	Lower quartile	Mean	Upper quartile	Maximum
Clinical codes incorrect	3.1	8.0	10.8	14.8	38.4
Primary diagnosis coding error	1.0	5.1	8.8	12.8	34.0
Secondary diagnosis coding error	3.4	7.6	11.4	15.2	39.3
Primary procedure coding error <sup>10</sup>	0.5	4.7	6.7	14.3	25.7
Secondary procedure coding error	1.5	10.6	17.4	29.1	72.2

**Figure 3: Spells changing payment 2013/14 results vs. 2012/13 results by trust audited**



**Figure 4: Split of errors made in other data items at trusts audited**



<sup>10</sup>In this case the primary procedure is the procedure recorded in the first position in the data, which may not be the dominant procedure that determines the HRG when the spell is grouped.

# Findings continued

Another trust accounted for 95 per cent of the errors on age. These were caused by the incorrect age being calculated by the trust's patient administration system.

The audit was split into two samples; comorbidities and complications and an area of local choice. **Table 4** shows the spread of errors in spells changing payment across the trusts audited split by type.

Whilst the results show that the interquartile spread is larger in the local area of choice, there was poorer performance in comorbidities and complications.

Generally there was little variance in trust performance in each of the samples. A trust either performed well in both samples or poorly in both.

The post audit value of the comorbidities and complications sample showed an undercharge to commissioners. As outlined in the next section, this is because on the whole the audit identified an under-recording of comorbidities. The opposite is true of the local area of choice sample, which showed an overcharge to commissioners and would often be focused on area of concern to the commissioner. **Table 5** gives the financial information split by the audit samples.

**Table 4: Percentage of spells changing payment in the sample audited**

Interquartile range	Minimum	Lower quartile	Mean	Upper quartile	Maximum
Comorbidities and Complications	0.0	6.0	8.1	11.1	45.5
Area of Local Choice	0.0	3.0	6.0	12.2	46.3

**Table 5: Financial information (percentages are of original audit value<sup>11</sup>)**

	Comorbidities and Complications	Local area of choice	Overall
Total value of sample pre audit	£8,454,536	£6,841,299	£15,295,835
Total value of sample post audit	£8,510,212	£6,806,257	£15,316,469
Gross difference	£338,926	£294,090	£633,016
Gross difference	4.0%	4.3%	4.1%
Net difference	£55,676	-£35,042	£20,634
Net difference	0.7%	-0.5%	0.1%

<sup>11</sup> The pre-and post-audit sample is priced using full PbR business rules but does not take local amendments into account such as market forces factor (MFF), non-payment for emergency readmissions, non-elective threshold, and any local agreements.



# Comorbidities

This year we focused half the audit programme on comorbidities in response to growing concern from commissioners in this area.

Comorbidities are conditions that exist in conjunction with another disease, such as diabetes, asthma, hypertension, chronic obstructive airways disease and ischaemic heart disease. The inclusion of these in the data that underpins payment may increase the price paid for individual patients.

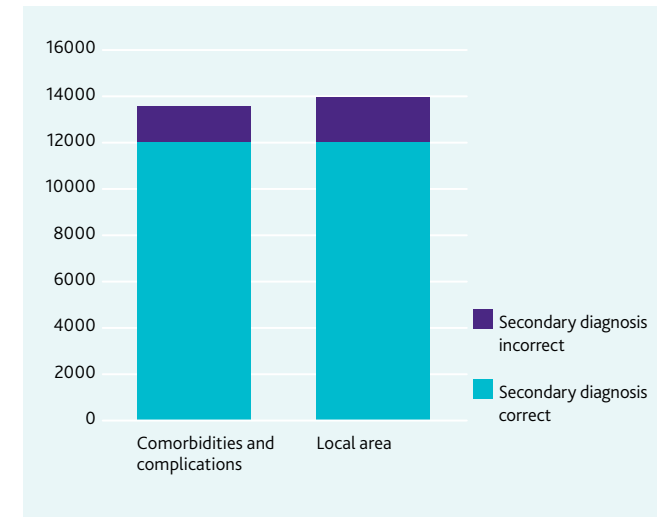
In March 2011, updated guidance for recording comorbidities was published by NHS Connecting For Health (now part of the HSCIC). This was followed in April 2013 by a list of medical conditions and other factors influencing health that are always considered to be clinically relevant. The conditions included on this list must always be coded for any admitted

patient care episode (including day cases) when documented in the patient's medical record for the current hospital provider spell, regardless of specialty<sup>12</sup>.

The audit sample in this area comprised spells that grouped to an HRG where the level of comorbidities and complications affects the price charged – half the spells were designated as “with comorbidities and complications” (including intermediate and major comorbidities and complications) and half were without comorbidities and complications.

Whilst we focused half the audit sample on comorbidities, the issue impacts on all spells that are coded. **Figure 5** shows that the number of secondary diagnoses and error rates in the local choice area were very similar to those in the comorbidities area. 13.0 per cent of secondary diagnoses were incorrect in the comorbidities and complications area, and 13.6 per cent of the secondary diagnoses were incorrect in the locally selected area<sup>13</sup>.

Figure 5: Accuracy of secondary diagnoses in the audit sample



## HRGs with comorbidities and complications

In many HRGs the fifth character indicates the level of complication or comorbidities (CC) of an HRG – for example FZ17A Abdominal Hernia Procedures 19 years and over with Major CC where the last digit “A” indicates “with Major CC”.

The first four digits of the HRG describe the disorder or treatment, such as FZ17 indicating “Abdominal Hernia Procedures 19 years and over”. The first four digits are known as the HRG root.

A fifth digit of Z (such as in PA55Z Respite Care) denotes no CC split for that HRG. There are some HRG subchapters that

have no HRGs with CC splits, such as BZ Eyes and Periorbita Procedures and Disorders.

When the grouping logic for a HRG with a CC split changes as part of HRG design updates, the HSCIC change the fifth digit, which is why some HRGs use different letters such as D-F or S-V to denote the level of CCs.

Whether a comorbidity impacts on the level of CC of an HRG depends on whether it appears on the code to group CC list for that HRG subchapter produced by the HSCIC as part of the documentation for the local payment grouper, these lists contain conditions likely to impact on the resources used for the delivery of care for each HRG subchapter. Despite the

name, the majority of HRGs that grouped to a level of CC in the audit sample were as a result of comorbidities, not complications.

Length of stay can also impact on HRGs. For example, a gastrointestinal bleed with a length of stay of 1 day will group to FZ38F gastrointestinal bleed with length of stay 1 day or less irrespective of the level of complications and comorbidities recorded. The patient would need to stay in hospital 2 days or more to group to HRG FZ38D Gastrointestinal Bleed with length of stay 2 days or more with Major CC, dependent on the secondary diagnoses recorded.

<sup>12</sup> Page 40 of Coding Clinic April 2014.

<sup>13</sup> HSCIC clinical coding audit methodology excludes errors from the final audit figures that result from including codes that are not relevant to the episode of care. The PbR data assurance framework admitted patient care audits include all error types, including “not relevant” codes in the report data as they can have a direct impact on the assignment of HRGs and therefore payment.

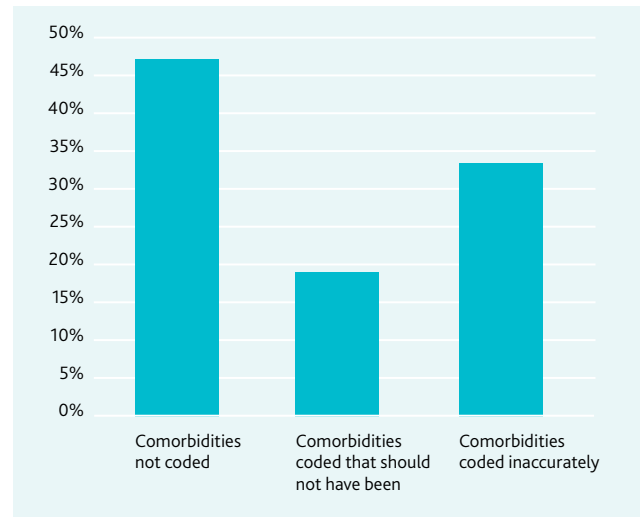
# Comorbidities continued

Whilst overall the results of the comorbidity audit sample reflected a slight under-charge by providers, there was no consistent theme to the HRG errors. **Figure 7** shows the movement in the levels of complications for the 368 spells changing payment in the comorbidities audit sample. 32 per cent of spells changed the level of complications within the same HRG root.

Despite being an area of concern for commissioners, our audits found that providers were consistently under recording comorbidities. In particular, lesser known mandatory comorbidities (such as personal use of anticoagulant therapy) were often omitted by coders.

**Figure 6** shows that across the whole audit sample just 19 per cent of comorbidities audited were coded in error. Instead, nearly half of the comorbidity errors identified were caused by trusts not identifying legitimate secondary diagnoses.

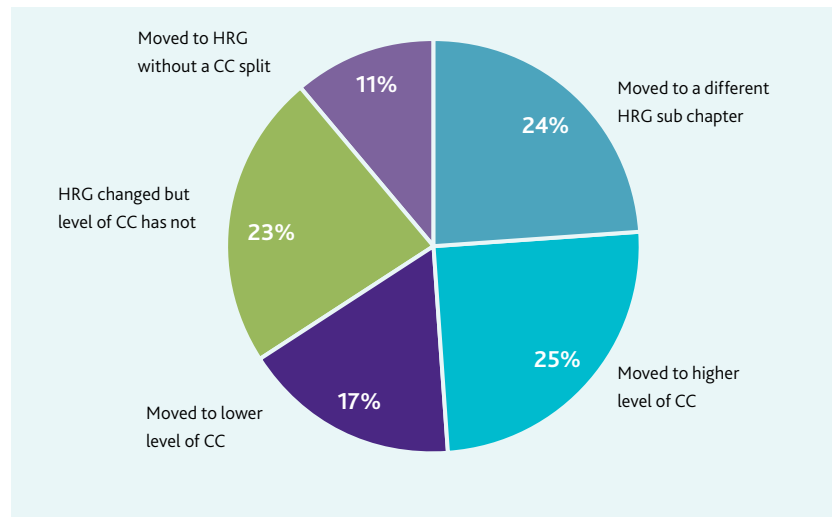
**Figure 6: Types of comorbidity coding errors**



These findings point to an under-recording of comorbidities, which may be caused by the quality of source documentation and tight deadlines highlighted in the next section. However, auditors reported issues around the relevancy of comorbidities.

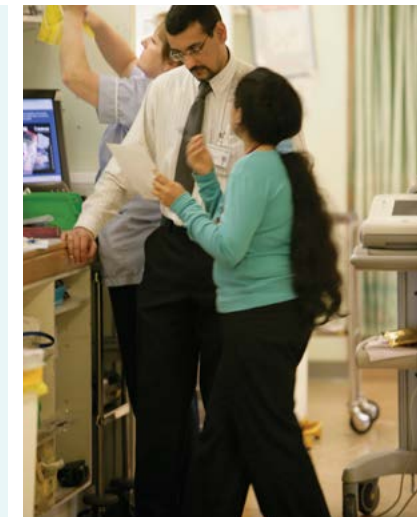
Guidance stipulates that non-mandatory comorbidities should only be coded where identified as clinically relevant and 46 per cent of the comorbidities not coded were non-mandatory. However, no distinction is being made by clinicians between relevant and not relevant when comorbidities are recorded in source documentation. As such, any comorbidities written in the notes will be included by the clinical coder, and will be viewed as relevant for the purposes of our audit. More work needs to be done nationally and locally to ensure only clinically relevant comorbidities are included in coding.

**Figure 7: Levels of complications for spells changing payment in the comorbidities audit sample**



Our audits therefore point to three issues that need to be improved in order so that comorbidity information is fit for payment purposes:

- coding the comorbidities – coders need to fully understand the rules around comorbidities, and be coding them accurately;
- capturing the comorbidities – adequate information must be captured consistently in source documentation, and this information should be made fully available for the purposes of clinical coding; and
- ensuring the comorbidities are relevant – which only clinicians can decide.



# Causes of error

Over the last eight years the PbR assurance programme has identified the main causes of inaccurate clinical coding. As the programme has progressed some of these issues have improved, such as clinical engagement. However, one key issue persists: the quality of the source documentation used as the basis for coding.

Source Documentation was highlighted as a problem in our very first briefing in 2007/08<sup>14</sup>, and the same issues have impacted on data quality in this year's audits. Auditors commented on the quality of the case notes at 46 per cent of trusts audited. Case notes were often:

- big and cumbersome;
- in a poor physical condition and were held together with elastic bands;
- replaced by temporary plastic folders; and
- disorderly, with information on individual episodes spread throughout a volume, individual specialties not filed in separate sections, and loose sheets not filed at all.

When paper case notes are in a poor condition, it slows the coders work and makes it difficult for coders to extract the right information from them. To hit deadlines coders often rely on discharge summaries to clarify diagnoses and treatments that are difficult to find in the notes. 48 per cent of the trusts audited used the discharge summary as the only or main source for coding.

However the information in the discharge summaries at trusts is often poor and incomplete, resulting in the comorbidities errors highlighted in the previous section. The fact that many comorbidity spells changed the HRG root, or HRG subchapter, shows that the poor quality of source documentation is impacting on more than just comorbidity recording. This is particularly important for multi-episode spells where a discharge summary will only reflect the care of the discharging consultant and not the details of care provided by other consultants.

The condition of the notes is impacting on data quality and the accuracy of payments made. It also poses a risk to patient safety. Medical records are a legal document and trusts must ensure they are fit for their many purposes.

Auditors also noted the pressure coding departments are under. Areas of concern were:

- tighter deadlines – the deadline for coding varied considerably, with some trusts still working to the freeze date (70 days after month end); however 58 per cent of trusts had deadlines under 10 days after month end, with 12 trusts fully coded in 2–3 days;
- vacant posts – 54 per cent of trusts audited had vacancies at the time of audit, with one Trust having 11 posts unfilled;
- inexperienced staff – even if posts are filled, the skill mix of staff can still be an issue; 42 per cent of trusts had at least one unqualified coder;
- coding manager involved in coding duties – 42 per cent of coding managers were also coding as well, although only seven coding managers spent longer than 25 per cent of their time coding;
- auditors and trainers – regular reviews and support to coders are necessary to achieve and maintain accurate coding, however 40 per cent of trusts did not employ a

qualified coding auditor, and 58 per cent of trusts did not have their own approved trainer<sup>15</sup>; and

- coding system issues – 24 per cent of trusts had errors caused by the limitations of their systems, such as not accepting the 5th digit on diagnosis codes, limiting the number of diagnoses and procedure codes that can be recorded or submitted, and problems with the use of dagger and asterisk fields.

The NHS is facing unprecedented financial challenges. Trusts should beware of cutting costs on recruitment, training and IT system for coding in an attempt to make savings. The increased pressure on staff is resulting in inaccurate data and as the quality of coding goes down, so will the accuracy of payments based on it.

## Recurring coding errors

The Clinical Classifications Service at the HSCIC is the definitive source of clinical coding guidance and sets the national standards used by the NHS in coding clinical data. Some errors were caused by coders not following national standards or not using correctly following the four-step process for coding.

The HSCIC have released updated clinical coding guidance in 2013/14 which coding teams must follow to ensure that they are maintaining their coding levels to the national standards.

<sup>14</sup> Payment by results data assurance framework, Findings from the first year of the national clinical coding audit programme, August 2008 have a direct impact on the assignment of HRGs and therefore payment.

<sup>15</sup> Trusts can buy in training and audit from external companies to fulfil this requirement.

# Causes of error continued

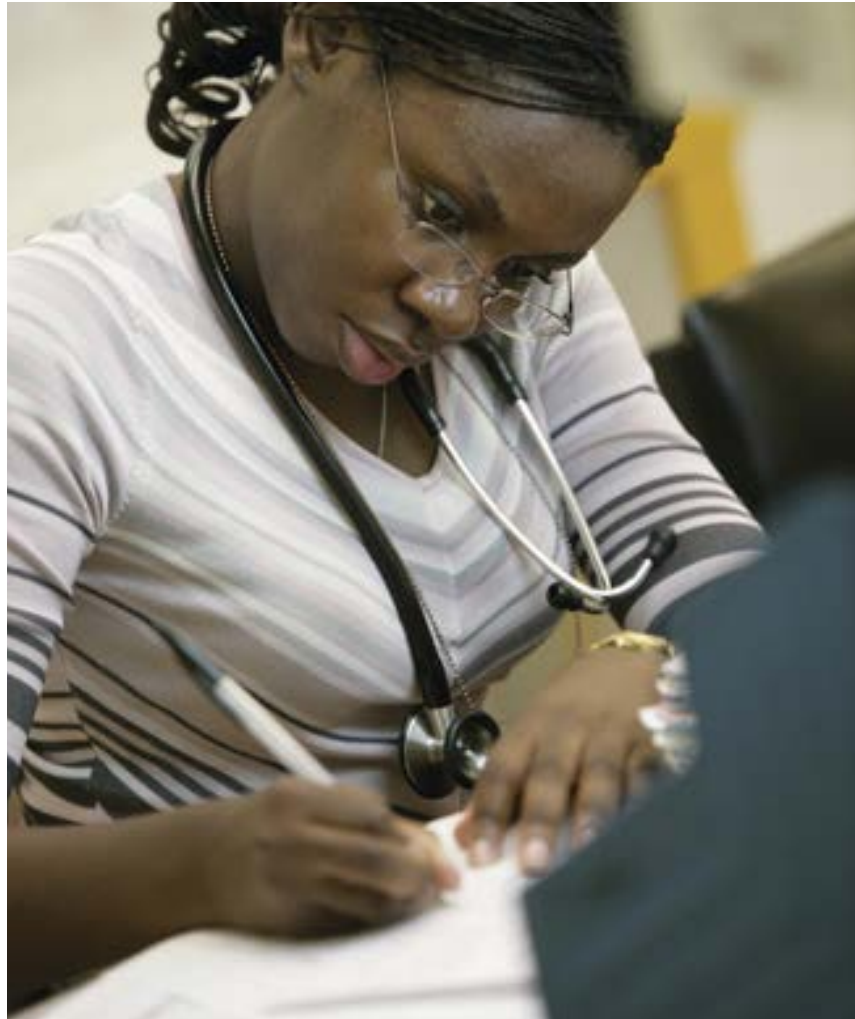
This updated guidance contained an addendum which detailed three main changes to coding. During the audits we found that some coding departments had either not read and applied the new guidance or had misinterpreted it, which resulted in errors. These main changes in the coding addendum were:

- previously if a patient had ischaemic heart disease and had an old myocardial infarction then coders were directed to code this as “other forms of chronic ischaemic heart disease” (ICD-10 diagnosis code I258) – the new guidance states that these conditions should now be coded separately (using diagnosis codes I259 and I252 respectively);
- in post-operative complications external cause codes should no longer be used if they add no more information to the primary complication code assigned; and
- guidance on the coding of complications and terminations of pregnancy has also changed, and the new guidance contains a flow chart to help coders.

In addition we identified some other persisting issues.

- Where an excision or biopsy is taken, it is best practice to code a provisional diagnosis and then review this coding once the histology has been returned. It was identified that this process varied considerably across trusts, with some trusts not reviewing histology at all. This resulted in inaccurate diagnosis coding.
- At many trusts subacromial decompressions were always being coded in the primary position, irrespective of the main condition being treated.
- There was a consistent lack of understanding on what constituted a primary or secondary reduction of a fracture.

Guidance has been changed for 2014 to help the NHS identify new and updated standards.



# Implications for the development of the payment system

Data quality continues to challenge the NHS. Our findings show that there are many issues that need to be addressed before coded data is consistently accurate across the country.

Whilst poor data quality will impact on payment, the broader uses of coded information go much further than just finance. Accurate clinical coding is critical to many areas of health provision, both within a local health economy and nationally. The key uses are listed in the appendices, and includes areas such as mortality indicators, RTT monitoring, clinical revalidation and the redesign of healthcare pathways.

Monitor and NHS England have signalled a move to a payment system that is more patient focused and outcome based<sup>17</sup>. These developments encompass the broader uses of coded data, focusing on changing the patterns of care, matching patient care to patient need, improving the quality of that care, and basing a transparent and consistent payment system on accurate data.

The effectiveness of these new developments will depend on the accuracy of the treatments and conditions recorded. This is not just for the purposes of setting accurate tariffs, or for ensuring payment appropriately reflects the care delivered, but also for making sure that improvements in quality can be measured, and that patient need is correctly identified.



In the short term the current payment system relies on the quality of clinical coding to ensure accurate payments. However, it is important that the NHS continues to improve the quality of its data to support the intended changes, and that this improvement is enforced by national organisations. This will ensure the payment system is developed based on accurate and representative data, and that it is implemented effectively, in a way that benefits patients and improves patient care.

<sup>17</sup> Monitor and NHS England, *How Monitor and NHS England are working to make the payment system do more for patients from 2015/16*, February 2014

# Appendix The importance of clinical coded data

## The importance of clinical coded data

Area	Examples	How Coding Is Utilised	Consequence of Error
<b>Mortality Indicators</b>	<ul style="list-style-type: none"> <li>Summary Hospital-Level Mortality Indicator (SHMI)</li> <li>Hospital standardised mortality ratio (HSMR)</li> <li>Risk Adjusted Mortality Indicator (RAMI)</li> </ul>	Diagnosis coding is key to accurate mortality indicators. All comorbidities must be coded to ensure that the appropriate level of risk is applied to each patient	<ul style="list-style-type: none"> <li>Falsely indicates poor patient care and outcomes</li> <li>Results in resources being wasted trying to resolve issues that do not exist</li> <li>Reports an incorrect position on mortality indicators to national bodies and regulators, resulting in financial and other penalties</li> </ul>
<b>Standards Monitoring</b>	<ul style="list-style-type: none"> <li>Referral to treatment (RTT)</li> <li>Diagnostic waiting times (DM01)</li> <li>Cancelled operations (QMCO)</li> <li>Venous thromboembolism (VTE)</li> </ul>	Coded data feeds into a number of the standards that are routinely monitored. For example, procedure coding will trigger an RTT clock stop, a diagnostic wait time and also identify whether an admission is eligible for VTE assessment	<ul style="list-style-type: none"> <li>Trusts' positions against key indicators will be misreported</li> <li>Results in resources being wasted trying to resolve issues that do not exist</li> <li>Can result in financial losses, for example, if linked to a CQUIN</li> </ul>
<b>Planning and monitoring healthcare provision</b>	<ul style="list-style-type: none"> <li>Commissioning</li> <li>Costing and efficiency plans</li> <li>Epidemiology and Research</li> <li>Consultant job planning</li> <li>Appraisal and revalidation</li> </ul>	<ul style="list-style-type: none"> <li>Diagnosis and procedure coding are used to assess volumes of patients following particular pathways.</li> <li>Patient level costs and reference costs information allocate costs to treatments and patients using coded data.</li> <li>Comparative activity data (mainly procedure based) across consultants within the same specialty used to assess productivity.</li> <li>Comparative activity used across consultants in same specialty for mortality, quality and performance</li> </ul>	<ul style="list-style-type: none"> <li>Local data does not provide a clear understanding of the needs of the community.</li> <li>Managing and delivering care is more difficult</li> <li>Savings and investment plans are based on inconsistent data</li> <li>National cost information is incorrect for tariff setting</li> <li>Inconsistencies in national data affects analysis which can give an inaccurate picture of public health</li> <li>Poor decision making for public funding based on inaccurate data</li> </ul>
<b>Clinical audit</b>	Internal clinical audits for local assurance, and national audits such as: <ul style="list-style-type: none"> <li>Sentinel stroke national audit programme</li> <li>Myocardial Ischaemia National Audit Project (MINAP)</li> </ul>	Diagnosis and procedure coding used to provide audit samples	<ul style="list-style-type: none"> <li>Gives a misleading picture of what has actually happened to patients with certain conditions/ pathways, which is particularly important where cases have been missed as these could highlight an area of clinical safety or concern that is being ignored</li> </ul>
<b>Patient Choice</b>	<ul style="list-style-type: none"> <li>NHS Choices website</li> <li>Good Hospital Guide</li> </ul>	Diagnosis and procedure coding is used to identify the cohorts of patients contained within each indicator	<ul style="list-style-type: none"> <li>Patients comparing services based on inaccurate information</li> </ul>

# CAPITA



CHKS (part of Capita plc)  
1 Arden Court, Arden Road, Alcester,  
Warwickshire, B49 6HN

01789 761 600

[www.chks.co.uk](http://www.chks.co.uk)



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Registered Office: 71 Victoria Street, Westminster, LONDON, SW1H 0XA, United Kingdom.  
[www.capita.co.uk/healthandwellbeing](http://www.capita.co.uk/healthandwellbeing)

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