CAPITA

audit commission

Payment by results data assurance framework

Report on the local audit programme for Heart of England Foundation Trust

May 2013

For the 2012/13 PbR data assurance programme reporting on local work for Birmingham and Solihull PCT Cluster will comprise a single report covering all work undertaken on behalf of that cluster.

This document is an extract of that report and covers all audit work undertaken at Heart of England NHS Foundation Trust. It is being made available prior to the production of the cluster report to provide feedback to the Trust on the findings of the audit work.

An action plan has been included at the end of this report for the Trust to complete. The technical appendices and error examples have also provided separately.

Contact details:

Bevin Manoy

Email: bevin.manoy@capita.co.uk

Mobile: 07810 824761

Document details:

Authors:	Bevin Manoy
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Contents

INTRODUCTION

Background

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

2. In March 2012 the Audit Commission set out the framework's programme for 2012/13[1]. This year's work will focus on both local and national assurance by:

    a. providing a flexible audit resource to commissioners to deliver local audit programme focused on specific areas of local risk to PbR data quality; and

    b. Supporting tariff development and implementation by undertaking national data quality reviews of PbR in mental health and best practice tariffs.

3. The assurance framework's 2012/13 work programme has been developed and delivered by the Audit Commission's business partner, Capita Business Services Limited. The Commission's team responsible for developing and delivering the assurance framework for the past six years has transferred to Capita and all local audit work will be undertaken by Capita staff. The Audit Commission remains responsible and accountable for the overall assurance framework.

4. Details of the Audit Commission's work can be found at: www.audit-commission.gov.uk.

The local audit programme

5. This report describes the findings from the local audit programme for Heart Of England NHS Foundation Trust. The local audit work draws on audit approaches developed and applied under previous years of the framework.

6. Each PCT cluster has been allocated a resource to be managed at a cluster level. This audit resource has been targeted on areas of risk identified by the cluster. This could be at one or many providers, use a trust wide audit sample or focus on one specific area of treatment.

7. The options we gave to the PCT cluster were:

    a. admitted patient care - clinical coding audits and the data items that drive payment;

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[1] *Payment by Results Data Assurance Framework 2012/13: Improving the quality of contracting and commissioning data*, Audit Commission, March 2012

b. outpatients – attendance review including procedure coding and other data items that drive payment; and

c. accident and emergency – data items that drive payment.

8. Clusters have been provided with risk profiles to help inform the local programme – these profiles combine comparative analysis from the National Benchmarker[2] and previous audit results. SUS continues to be the source of data for all aspects of the local audit programme.

9. We will also report our findings to each PCT as they are the statutory body responsible for commissioning this work.

The Audit Commission

10. The Audit Commission is a public corporation set up in 1983 to protect the public purse.

11. The Commission appoints auditors to councils, NHS bodies (excluding NHS foundation trusts), local police bodies and other local public services in England, and oversees their work.

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

[2] The Audit Commission's national benchmarker is freely available to the NHS. To request a log-in go to www.audit-commission.gov.uk/pbrbenchmarking.

OVERALL FINDINGS FOR ADMITTED PATIENT CARE

13. The audit sample for admitted patient care consisted of five distinct areas that were requested to be audited by the commissioner. The Trust has requested that these are shown as a combined table to give a view on the overall performance of the Trust's clinical coding. The following admitted patient care areas were audited:

    a. emergency admissions;

    b. orthopaedic non-trauma procedures;

    c. major shoulder and upper arm procedures;

    d. vitreous retinal procedures; and

    e. catheters.

14. The table below summarises the findings from all these areas into a set of figures showing overall performance compared to the 2011/12 national average values.

	HEFT	2011/12 National
Spells tested	200	-
% spells changing payment	9.5	7.4
Pre audit payment	£429,219	-
Post audit payment	£433,504	-
Gross change	£13,063	-
% gross change	3.0	3.5
Net change	£4,285	-
% net change	1.0	0.3
% of spells unsafe to audit	0.0	-
% of diagnoses incorrect	16.6	8.7
% of procedures incorrect	19.0	6.8

15. The performance of the Trust, measured against the number of spells with an incorrect payment, would place the Trust worse than average, but not in the bottom 25 per cent of trusts compared to last year's national performance.

ACCIDENT AND EMERGENCY DATA

Audit approach

16. Accident and emergency (A&E) data from quarter one 2012/13 was audited at Heart of England NHS foundation Trust.

17. The audit covered the Trust's coding of investigation and treatment codes, the two data items that affect the price commissioners pay for an A&E attendance.

18. All errors have been agreed and signed off by the Trust.

Audit findings

19. In the sample audited, the Trust had 18.0 per cent of attendances with a coding error affecting the HRG. These errors resulted in the PCT being charged the incorrect price for that attendance. The commissioner was under charged by £906 for the errors in the audit sample. Table 1 below summarises the main findings.

Table 1: Audit results and their financial impact for A&E data

Attendances in audit sample	150
Attendances tested	150
% attendances changing payment	18.0
Pre audit payment[3]	£2,234
Post audit payment	£3,140
Gross change[4]	£906
% gross change	40.6
Net change[5]	£906
% net change	40.6
Attendances unsafe to audit	0.0

[3] 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) and any local agreements.

[4] The gross financial change is the total value of the spells that had PbR errors, whether in favour of the provider or the PCT.

[5] A negative figure represents an overcharge to the commissioner by the provider.

Breakdown of errors

20. Table 2 shows a breakdown of the audit results.

Table 2: Full audit results for A&E data

Attendances tested	% attendances changing payment	% investigation codes incorrect	% treatment codes incorrect
150	18.0	11.2	21.8

21. The majority (90.4 per cent) of the errors affecting payment were due to data entry errors. Staff are not entering all information recorded by the clinicians into the system. Clinicians record information on checklist before staff record codes onto the system. This means that treatment and investigations that impact on the HRG assignments are not being included so the wrong HRG for the attendance is being assigned.

22. Staff were consistently under-recording activity resulting in lower category HRGs being assigned to patients. All the HRG changes caused by codes not being entered when investigations and treatments were carried out resulted in a more complex HRG. These more complex HRGs will increase the amount the commissioner has to pay under a PbR (cost per case) contract. Failing to record the correct data about patients' results in poor data quality and information about care delivered in the A&E department. This information is important for both commissioners and the trust to understand what happens in A&E and to ensure payment is correct.

23. For example, a patient was correctly recorded on the system as receiving both verbal and written advice for a head injury. However the clinician also recorded in the motes and checklist that the patient had head injury observation but this information was not inputted into the system. The correctly assigning the treatment code for observation - head injury (A&E treatment code 21) changes the HRG from VB11Z (no investigation with no significant treatment) costing £54 to VB09Z (category 1 investigation with category 1-2 treatment) costing £81.

24. In another example a patient was treated with oral and intravenous drugs but these were not inputted into the system. If they had been, the correct HRG would be VB02Z (Category 1 investigation with category 1-2 treatment) costing £235 compared to the original HRG VB03Z (Category 3 investigation with category 1-3 treatment) costing £151. Not inputting data about the medication that was given to a patient and how this was given was a common error.

25. There was no standardised approach for inputting investigations and treatments carried out in A&E on the data collection system. When 'observation' for patients was recorded this was done in three different ways using national treatment codes 21 (observation/ electrocardiogram, pulse oximetry/ head injury/ trends), 30 (recording vital signs) and 99 (none (consider guidance/ advice option). Recoding treatment code 99 (none (consider guidance/ advice option) when observation is stated in the notes is incorrect. It is important that the Trust has consistent approach to recording data on forms so that the correct

information is entered on to the system and this is regularly checked to ensure compliance.

26. There were issues with mapping of local codes to national SUS codes. For example urinalysis mapped to biochemistry instead of the national code for urinalysis. It is important to correctly map local codes to national codes because:

    a. national codes to inform payment grouping and therefore payment; u

    b. commissioner use national codes for benchmarking and analysis; and

    c. national organisations set tariff and do national analysis using the data.

27. Patients transferred to the GP service were not allocated any codes for their attendance in A&E. The commissioner and Trust should ensure that they are in agreement that this is the correct way of recording this patient pathway.

Unsafe to audit - cases excluded from the audit

28. There were no attendances that were unsafe to audit in the audit sample.

Recommendations

29. Based on the audit completed we have made two recommendations to the Trust, which have been included in an action plan completed by the trust. The high priority recommendations are:

    a. review the approach and guidance to staff entering data onto the A&E system to ensure all treatments and investigations carried out in A&E are recorded in a standardised way; and

    b. update the system to allow correct mapping to national treatment and investigation codes.

30. The full action plan is included in the appendix.

EMERGENCY ADMISSIONS

Audit approach

31. Admitted patient care data in emergency admissions from April to July 2013 was audited at Heart of England NHS Foundation Trust. The sample comprised emergency admission with a zero Length of Stay (LoS) in the following three specialties:

    a. general medicine (300);

    b. gynaecology (502); and

    c. accident and emergency (180).

32. The audit covered the Trust's clinical coding using the Connecting for Health (CFH) Audit Methodology v6, as well as 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.

33. All errors have been agreed and signed off by the Trust.

Audit findings

34. In the sample audited, the Trust had 15.2 per cent of spells with an error that affected the price. This means that 15.2 per cent of spells had either a clinical coding error affecting the HRG or a data entry error (or both). Both types of error result in the PCT being charged the incorrect price for that spell. If all the errors are added together there is a gross financial error of £5,039[6]. The commissioner was under charged by £2,597 for the errors in the audit sample. Table 3 below summarises the main findings.

[6] The gross financial change is the total value of the spells that had errors, whether in favour of the provider or the PCT.

Table 3: Audit results and their financial impact for emergency admissions

Episodes in audit sample	100
Spells tested	92
% spells changing payment	15.2
Pre audit payment[7]	£62,948
Post audit payment	£65,545
Gross change	£5,039
% gross change	8.0
Net change[8]	£2,597
% net change	4.1
Episodes unsafe to audit	0.0

35. The performance of the Trust, measured against the number of spells with an incorrect payment, would place the Trust in the worst performing 25 per cent of trusts compared to last year's national performance. However it should be noted this is a targeted sample, concentrating on a specific area in the Trust.

Breakdown of errors

36. Table 4 shows a breakdown of the audit results.

[7] 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.

[8] A negative figure represents an overcharge to the commissioner by the provider.

Table 4: Full audit results for emergency admissions

Spells tested	% of spells changing payment	Clinical coding[9]						Other data items	
		% of spells changing HRG	*% clinical codes incorrect*	*% diagnoses incorrect*		*% procedures incorrect*		*% spells with other data items incorrect*	*% other data items incorrect*
				Primary	Secondary	Primary	Secondary		
92	15.2	15.2	25.8	16.8	33.3	10.0	11.1	0.0	0.3

37. Table 5 outlines the main causes of error identified at the Trust.

Table 5: Clinical coding causes of error for emergency admissions

Causes of error[10]	% of errors caused by	% of causes of error in spells changing payment
Coder error	38.9	50.0
Co morbidities and secondary codes	58.3	42.3
Other	0.0	0.0
Policy and procedures	0.0	0.0
Software	0.0	0.0
Source documentation	2.8	7.7

38. Coders normally use the case notes as the source document for coding before these are scanned. However the Trust coders are using the electronic system to locate scanned notes as the source document for emergency short stay

[9] These figures contain all error types. The CFH clinical coding audit methodology excludes errors that are the inclusion of codes which are not relevant to the episode of care from the final audit figures. These errors can occur in four main areas: secondary diagnosis (co morbidities), external causes of injury, primary procedures and secondary procedures. These errors can have a direct impact on the assignment of HRGs and therefore payment. From this year we are including these errors in the coding error rate. The technical appendices of this document also contain the coding error rate calculated using the current CFH methodology.

[10] Each error has been categorised into one of six areas: 1) coder error (a mistake by the coder relating to the process of clinical coding, such as not following the coding logic completely to identify the right code); 2) co morbidities and secondary codes (an error relating to the recording of co morbidities and other subsidiary codes, such as the inclusion of co morbidities that do not appear in the documentation for the episode being coded); 3) policy and procedures (local management or clinician specifications for coding that contravene national guidelines); 4) software (system constraints that impact on the codes that can be recorded, such as not being able to assign the 5th character of a procedure or diagnosis code); 5) source documentation (errors related to the source documentation used for coding, such as the discharge summaries being the only source used for coding when more information was available in the case notes); and 6) other. The table in the appendix for this section provide a full breakdown of the different causes of error within each of the six categories.

admissions. This provides the coders with good information to enable them to code short stay admissions accurately. However we found that coders were either not accessing all of the information, possibly due to time constraints to complete coding, or they may have considered information not relevant by mistake.

39. Over 90 percent of the errors were caused by poor coding. To assist the commissioner and Trust in understanding the cause of errors these are separated into two:

    a. coder errors; and

    b. co morbidities and secondary codes.

    Fifty per cent of the errors were caused by coders not extracting the information from the patient record accurately. Coders must follow the four step coding process and the coding manual instructions whenever they code.

40. For example in one spell the coders correctly assigned the right primary diagnosis mechanical complication of gastrointestinal prosthetic devices, implants and grafts (ICD-10 code T855). However, they did not include the secondary diagnosis surgical operation with implant of artificial internal device (ICD-10 code Y831). They also failed to correctly extract the procedure codes: maintenance of gastric band (OPCS-4 code G305) and adjustment to prosthesis (OPCS-4 code Y036). When the correct codes are used the HRG changes from FZ47C non-malignant general abdominal disorders with LoS 1 day costing £441 to FZ05B major stomach or duodenum procedures 2 years and over without complications costing £3445 - a difference of £3,004.

41. Coders not recording co morbidities or secondary codes caused 42.3 per cent of the errors in spells changing payment. In some cases this was caused by not assigning mandatory co morbidities such as asthma, hypertension, chronic ischemic heart disease and rheumatoid arthritis.

42. An example of this is where the coder correctly assigned the primary diagnosis malaise and fatigue (ICD-10 code R53X) resulting in WA18Y admission for unexplained symptoms without complications costing £549 (after the short stay adjustment was taken into account). However, the coders should also have included the mandatory co morbidities essential (primary) hypertension (ICD-10 code I10X) and asthma, unspecified (ICD-10 code J459). Correct coding resulted in WA18X admission for unexplained symptoms with intermediate complications. After the short stay adjustment and specialist top up is taken into account the Trust should have charged the commissioner £513.

43. There were two errors caused by source documentation. These were both where the diagnosis in documentation relating to diabetes could have been clearer to help the coders

44. In addition to reviewing clinical coding this year, we audited the accuracy of all data items that affect the price commissioners pay the Trust for a spell under PbR rules. We found one length of stay error however this did not affect the HRG.

Unsafe to audit - cases excluded from the audit

45. There were no episodes that were unsafe to audit in the audit sample.

Recommendations

46. Based on the audit completed we have made two recommendations to the Trust, which have been included in an action plan completed by the trust. The high priority recommendations are:

    a. introduce a regular audit programme to check that training has been effective and promote consistency in coding across the department; and

    b. train coders to access all information either on the electronic system or in the case notes to ensure the coding is as accurate and complete as possible.

47. The full action plan is included in the appendix

ORTHOPAEDIC NON-TRAUMA PROCEDURES IN ADMITTED PATIENT CARE

Audit approach

48. Admitted patient care data in HRG sub chapter HB orthopaedic non-trauma procedures from April to July 2013 was audited at Heart of England NHS Foundation Trust. The audit focused on elective admissions only.

49. The audit covered the Trust's clinical coding using the Connecting for Health (CFH) Audit Methodology v6, as well as 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.

50. All errors have been agreed and signed off by the Trust.

Audit findings

51. In the sample audited, the Trust had 7.5 per cent of spells with an error that affected the price. This means that 7.5 per cent of spells had either a clinical coding error affecting the HRG or a data entry error (or both). Both types of error result in the PCT being charged the incorrect price for that spell. If all the errors are added together there is a gross financial error of £5,286[11]. The commissioner was under charged by £4,426 for the errors in the audit sample. Table 6 below summarises the main findings.

[11] The gross financial change is the total value of the spells that had errors, whether in favour of the provider or the PCT.

Table 6: Audit results and their financial impact for orthopaedic non-trauma procedures in admitted patient care

Episodes in audit sample	55
Spells tested	53
% spells changing payment	7.5
Pre audit payment[12]	£211,382
Post audit payment	£215,808
Gross change	£5,286
% gross change	2.5
Net change[13]	£4,426
% net change	2.1
Episodes unsafe to audit	0

52. The performance of the Trust, measured against the number of spells with an incorrect payment, would place the Trust worse than average but not in the worst 25 per cent of trusts compared to last year's national performance.

Breakdown of errors

53. Table 7 shows a breakdown of the audit results.

Table 7: Full audit results for orthopaedic non-trauma procedures in admitted patient care

Spells tested	% of spells changing payment	Clinical coding[14]						Other data items	
		% of spells changing HRG	*% clinical codes incorrect*	*% diagnoses incorrect*		*% procedures incorrect*		*% spells with other data items incorrect*	*% other data items incorrect*
				Primary	Secondary	Primary	Secondary		
53	7.5	7.5	19.5	16.4	14.9	17.0	47.2	1.9	0.5

54. Table 8 outlines the main causes of error identified at the trust.

[12] 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.

[13] A negative figure represents an overcharge to the commissioner by the provider.

[14] These figures contain all error types. The CFH clinical coding audit methodology excludes errors that are the inclusion of codes which are not relevant to the episode of care from the final audit figures. These errors can occur in four main areas: secondary diagnosis (co morbidities), external causes of injury, primary procedures and secondary procedures. These errors can have a direct impact on the assignment of HRGs and therefore payment. From this year we are including these errors in the coding error rate. The technical appendices of this document also contain the coding error rate calculated using the current CFH methodology.

55. Table 8: Clinical coding causes of error for orthopaedic non-trauma procedures in admitted patient care

Causes of error[15]	% of errors caused by	% of causes of error in spells changing payment
Coder error	68.4	85.7
Co morbidities and secondary codes	29.8	14.3
Other	0.0	0.0
Policy and procedures	0.0	0.0
Software	0.0	0.0
Source documentation	1.8	0.0

56. The majority of the errors in spells changing payment (85.7 per cent) were caused by coders making mistakes in extracting information, not following coding rules coorrectly, and in one case not coding to national standards.

57. In one example the case note stated that the patient had a decompression of tendon not a repair and the histology revealed tissue with no inflammation. However the coder had recorded the primary procedure as primary repair of tendon – unspecified (OPCS-4 code T679) instead of excision of lesion of tendon (OPCS-4 code T652). The correct coding resulted in HB35C minor foot procedure for non – trauma category 1 costing £942 instead of the original charge of £1372 from HB34E minor foot procedure for non –trauma category 2.

58. The secondary procedure error rate was high. In one example the coder either incorrectly extracted six secondary procedures or did not follow coding rules, as well as making an error in the diagnosis and the primary procedure. This had a significant effect on the HRG. The HRG moved from HB36Z minor shoulder and upper arm procedures for non trauma costing £1,401 to HB61C major shoulder and upper arm procedures for non trauma without complications costing £5,153.

59. In addition the coders missed one mandatory co-morbidity, however this did not affect the HRG because in this episode the coder had incorrectly assigned the primary procedure code as primary total prosthetic replacement of hip joint

[15] Each error has been categorised into one of six areas: 1) coder error (a mistake by the coder relating to the process of clinical coding, such as not following the coding logic completely to identify the right code); 2) co morbidities and secondary codes (an error relating to the recording of co morbidities and other subsidiary codes, such as the inclusion of co morbidities that do not appear in the documentation for the episode being coded); 3) policy and procedures (local management or clinician specifications for coding that contravene national guidelines); 4) software (system constraints that impact on the codes that can be recorded, such as not being able to assign the 5th character of a procedure or diagnosis code); 5) source documentation (errors related to the source documentation used for coding, such as the discharge summaries being the only source used for coding when more information was available in the case notes); and 6) other. The table in the appendix for this section provide a full breakdown of the different causes of error within each of the six categories.

using cement (OPCS-4 code W371) instead of primary total prosthetic replacement of knee joint using cement (OPCS-4 code W401).

60. In addition to reviewing clinical coding this year, we audited the accuracy of all data items that affect the price commissioners pay the Trust for a spell under PbR rules. We found one length of spell error however this did not affect the price paid for the spell.

Unsafe to audit - cases excluded from the audit

61. There were no episodes that were unsafe to audit in the audit sample.

Recommendations

62. Based on the audit completed we have made two recommendation to the Trust, which have been included in an action plan completed by the Trust. The high priority recommendations are:

    a. introduce a regular audit programme to check that training has been effective and promote consistency in coding across the department; and

    b. train coders to access all information either on the electronic system or in the case notes to ensure the coding is as accurate and complete as possible.

63. The full action plan is included in the appendix.

MAJOR SHOULDER AND UPPER ARM PROCEDURES IN ADMITTED PATIENT CARE

Audit approach

64. Admitted patient care data in major shoulder and upper arm procedures from April to July 2013 was audited at Heart of England NHS Foundation Trust. The sample comprised day case admissions for the HRG HB61C major shoulder and upper arm procedures for non trauma without complications.

65. The audit covered the Trust's clinical coding using the Connecting for Health (CFH) Audit Methodology v6, as well as 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.

66. All errors have been agreed and signed off by the Trust.

Audit findings

67. In the sample audited, the Trust had one spell or 5.0 per cent of spells with an error that affected the price. This means that 5.0 per cent of spells had either a clinical coding error affecting the HRG or a data entry error (or both). Both types of error result in the PCT being charged the incorrect price for that spell. The commissioner was over charged by £2,738 for the errors in the audit sample. Table 9 below summarises the main findings.

Table 9: Audit results and their financial impact for major shoulder and upper arm procedures in admitted patient care

Episodes in audit sample	20
Spells tested	20
% spells changing payment	5.0
Pre audit payment[16]	£103,060
Post audit payment	£100,322
Gross change[17]	£2,738
% gross change	2.7
Net change[18]	-£2,738
% net change	-2.7
Episodes unsafe to audit	0.0

68. The performance of the Trust, measured against the number of spells with an incorrect payment, would place the Trust better than average, but not in the top 25 per cent of trusts compared to last year's national performance.

Breakdown of errors

69. Table 10 shows a breakdown of the audit results.

[16] 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.

[17] The gross financial change is the total value of the spells that had errors, whether in favour of the provider or the PCT.

[18] A negative figure represents an overcharge to the commissioner by the provider.

Table 10: Full audit results for major shoulder and upper arm procedures in admitted patient care

Spells tested	% of spells changing payment	Clinical coding[19]						Other data items	
		% of spells changing HRG	*% clinical codes incorrect*	*% diagnoses incorrect*		*% procedures incorrect*		*% spells with other data items incorrect*	*% other data items incorrect*
				Primary	Secondary	Primary	Secondary		
20	5.0	5.0	10.7	10.0	6.5	5.0	16.0	0.0	1.3

70. In the single episode spell with the error we found no evidence in the patient record of the primary procedure therapeutic endoscopic operations on cavity of other joint – unspecified (OPCS-4 code W869) that the coder had recorded. The remaining procedures that the coder had recorded were correct. When the incorrect procedure was removed the HRG changed to HB62C intermediate shoulder and upper arm procedures for non trauma without complications costing £2,415. The reduced the amount the commissioner should have been charged by £2,738.

71. In addition to reviewing clinical coding this year, we audited the accuracy of all data items that affect the price commissioners pay the Trust for a spell under PbR rules. There was one error in the recorded length of stay for a patient however this did not impact on the HRG or price paid.

Unsafe to audit - cases excluded from the audit

72. There were no episodes that were unsafe to audit in the audit sample.

Recommendations

73. Based on the audit completed we have made two recommendation to the Trust, which have been included in an action plan completed by the Trust. There are no high priority recommendations for this areas.

74. The full action plan is included in the appendix.

[19] These figures contain all error types. The CFH clinical coding audit methodology excludes errors that are the inclusion of codes which are not relevant to the episode of care from the final audit figures. These errors can occur in four main areas: secondary diagnosis (co morbidities), external causes of injury, primary procedures and secondary procedures. These errors can have a direct impact on the assignment of HRGs and therefore payment. From this year we are including these errors in the coding error rate. The technical appendices of this document also contain the coding error rate calculated using the current CFH methodology.

VITREOUS RETINAL PROCEDURES IN ADMITTED PATIENT CARE

Audit approach

75. Admitted patient care data in vitreous retinal procedures from April to July 2013 was audited at Heart of England NHS Foundation Trust. The sample comprised day case admissions with the HRG BZ23Z vitreous retinal procedures – category 1.

76. The audit covered the Trust's clinical coding using the Connecting for Health (CFH) Audit Methodology v6, as well as 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.

77. All errors have been agreed and signed off by the Trust.

Audit findings

78. In the sample audited, the Trust had no spells with an error that affected the price. This means that none of the spells had either a clinical coding error affecting the HRG or a data entry error (or both).

Table 11: Audit results and their financial impact for vitreous retinal procedures in admitted patient care

Episodes in audit sample	20
Spells tested	20
% spells changing payment	0.0
Pre audit payment[20]	£10,060
Post audit payment	£10,060
Gross change	£0
% gross change	0.0
Net change[21]	£0
% net change	0.0
Episodes unsafe to audit	0.0

79. The performance of the Trust, measured against the number of spells with an incorrect payment, would place the Trust in the best performing 25 per cent of trusts compared to last year's national performance.

[20] 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.

[21] A negative figure represents an overcharge to the commissioner by the provider.

Breakdown of errors

80. Table 12 shows a breakdown of the audit results.

Table 12: Full audit results for vitreous retinal procedures in admitted patient care

Spells tested	% of spells changing payment	Clinical coding[22]						Other data items	
		% of spells changing HRG	*% clinical codes incorrect*	*% diagnoses incorrect*		*% procedures incorrect*		*% spells with other data items incorrect*	*% other data items incorrect*
				Primary	Secondary	Primary	Secondary		
20	0.0	0.0	4.9	0.0	9.1	4.8	5.6	0.0	1.3

81. Whilst there were no errors affecting payment coders made a small number of extraction errors and failed to code all co morbidities accurately.

82. In addition to reviewing clinical coding this year, we audited the accuracy of all data items that affect the price commissioners pay the Trust for a spell under PbR rules. There were no errors in the other data items.

Unsafe to audit - cases excluded from the audit

83. There were no episodes that were unsafe to audit in the audit sample.

Recommendations

84. Based on the audit completed we have made no recommendations to the Trust in this area.

[22] These figures contain all error types. The CFH clinical coding audit methodology excludes errors that are the inclusion of codes which are not relevant to the episode of care from the final audit figures. These errors can occur in four main areas: secondary diagnosis (co morbidities), external causes of injury, primary procedures and secondary procedures. These errors can have a direct impact on the assignment of HRGs and therefore payment. From this year we are including these errors in the coding error rate. The technical appendices of this document also contain the coding error rate calculated using the current CFH methodology.

CATHETERS IN ADMITTED PATIENT CARE

Audit approach

85. Admitted patient care data in catheters from April to July 2013 was audited at heart of England NHS Foundation Trust. The sample comprised elective spells for the HRG EA36A catheter 19 years and over.

86. The audit covered the Trust's clinical coding using the Connecting for Health (CFH) Audit Methodology v6, as well as 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.

87. All errors have been agreed and signed off by the Trust.

Audit findings

88. In the sample audited, the Trust had no spells with an error that affected the price. This means that none of the spells had either a clinical coding error affecting the HRG or a data entry error (or both). Table 13 below summarises the main findings.

Table 13: Audit results and their financial impact for catheters in admitted patient care

Episodes in audit sample	30
Spells tested	15
% spells changing payment	0.0
Pre audit payment[23]	£41,769
Post audit payment	£41,769
Gross change	£0
% gross change	0.0
Net change[24]	£0
% net change	0.0
Episodes unsafe to audit	0.0

89. The performance of the Trust, measured against the number of spells with an incorrect payment, would place the Trust in the best performing 25 per cent of trusts compared to last year's national performance.

[23] 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.

[24] A negative figure represents an overcharge to the commissioner by the provider.

Breakdown of errors

90. Table 14 shows a breakdown of the audit results.

Table 14: Full audit results for catheters in admitted patient care

Spells tested	% of spells changing payment	Clinical coding[25]						Other data items	
		% of spells changing HRG	*% clinical codes incorrect*	*% diagnoses incorrect*		*% procedures incorrect*		*% spells with other data items incorrect*	*% other data items incorrect*
				Primary	Secondary	Primary	Secondary		
15	0.0	0.0	20.5	10.0	12.8	73.3	29.6	0.0	1.0

91. Whilst there were no errors affecting payment coders made extraction errors and failed to code all co morbidities including four mandatory co morbidities accurately.

92. In addition to reviewing clinical coding this year, we audited the accuracy of all data items that affect the price commissioners pay the Trust for a spell under PbR rules. There was one length of stay error although this did not impact on payment.

Unsafe to audit - cases excluded from the audit

93. There were no episodes that were unsafe to audit in the audit sample.

Recommendations

94. Based on the audit completed we have made no recommendations specific to this area.

95. The full action plan is included in the appendix.

[25] These figures contain all error types. The CFH clinical coding audit methodology excludes errors that are the inclusion of codes which are not relevant to the episode of care from the final audit figures. These errors can occur in four main areas: secondary diagnosis (co morbidities), external causes of injury, primary procedures and secondary procedures. These errors can have a direct impact on the assignment of HRGs and therefore payment. From this year we are including these errors in the coding error rate. The technical appendices of this document also contain the coding error rate calculated using the current CFH methodology.

CARDIOLOGY OUTPATIENT ATTENDANCES

Audit approach

96. Outpatient data in cardiology (320) from April to July 2013 was audited at Heart of England NHS Foundation Trust.

97. The audit covered the Trust's coding of outpatient procedures and the accuracy of other data items that affect the price commissioners pay for an outpatient attendance without a procedure. These other data items are: treatment function code, first/ follow up flag, age, and whether the attendance met the criteria of a PbR outpatient attendance.

98. This is the first year we have reviewed coding in outpatients. Outpatient procedure coding is not nationally mandated however procedure driven HRGs are now routinely used for payment under PbR. There are now 84 HRGs with a mandated outpatient tariff, and this covers approximately 75 per cent of procedures coded in outpatients.

99. To maintain consistency within the audit programme we have used the existing CFH audit methodology to review coding in outpatients. This approach provides two measures of data quality:

    a. HRGs changing – tests whether a trust's coding is fit for purpose for payment; and

    b. procedure codes incorrect – tests whether a trust is capturing all relevant procedure codes to accurately reflect the care that is delivered[26].

100. All errors have been agreed and signed off by the Trust.

Audit findings

101. In the sample audited, the Trust had 8.7 per cent of attendances with an error that affected the price. This means that 8.7 per cent of attendances had either a coding error affecting the HRG of the outpatient procedure or a data entry error affecting the attendance details (or both). Both types of error result in the PCT being the incorrect price for that attendance. If all the errors are added together there is a gross financial error of £860[27]. The commissioner was over charged by £730 for the errors in the audit sample. Table 14 below summarises the main findings.

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[26] Procedures incorrect includes secondary codes that provide additional information, such as the site (position on the body), laterality (side of the body), or the method of the operation (Y codes), which are required for complete and accurate coding but may not be routinely collected in an outpatient setting. This error rate also includes errors that reflect the inclusion of codes which are not relevant to the episode of care, which are excluded from the current CFH methodology but which can have a direct impact on the assignment of HRGs and therefore payment.

[27] The gross financial change is the total value of the spells that had PbR errors, whether in favour of the provider or the PCT.

Table 14: Audit results and their financial impact for cardiology outpatient attendances

Attendances in audit sample	150
Attendances tested	150
% attendances changing payment	8.7
Pre audit payment[28]	£20,422
Post audit payment	£19,692
Gross change	£860
% gross change	4.2
Net change[29]	-£730
% net change	-3.6
Attendances unsafe to audit	0.0

Breakdown of errors

102. Table 15 shows a breakdown of the audit results.

Table 15: Full audit results for cardiology outpatient attendances

Attend-ances tested	% attend-ances changing payment	Procedure coding			Other data items			
		Attend-ances with tariffed HRGs[30]	% HRGs changing	% procedure codes incorrect[31]	% attended flag incorrect	% first / follow incorrect	% TFCs incorrect	% age incorrect
150	8.7	30	15.3	38.3	0.0	3.3	0.0	0.0

103. The performance of the Trust, measured against the number of attendances changing payment due to errors in attendance details (excluding the coding of procedures), would place the Trust better than average, but not in the top 25 per cent of trusts compared to the last time we undertook a national audit outpatient data (2008-2010).

104. The errors impacting on payment in outpatient care split into two types:

    a. Procedure coding errors; and

[28] 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) and any local agreements.

[29] A negative figure represents an overcharge to the commissioner by the provider.

[30] Outpatient attendances with a procedure that group to a HRG without a nationally mandated tariff are treated as an attendance without a procedure by the grouper.

[31] If a trust is not recording procedures then the denominator for this figure will be low (number of procedure codes recorded). Where this is the case there is a possibility the % procedure codes incorrect could exceed 100%.

b. first attendances that should have been follow-up.

105. In 66.6 per cent (8 out of 12) of the attendances with errors the Trust had recorded the outpatient attendance as a first appointment costing the commissioner £210. However there was evidence in the patient records that the procedures were carried out that should have been recorded. When these cases were recorded correctly they generated two different outpatient procedure HRGs. The majority (6 out of 8) were EA47Z electrocardiogram monitoring and stress testing costing the commissioner £145. In these cases there was evidence of ECGs or other cardiac tests being carried out which should have been coded. There were two cases were lung function tests were carried out which generate the HRG DZ31Z complex lung function exercise testing costing the commissioner £185.

106. These errors were caused because:

a. incorrect codes printed on the outcome forms for some investigations were used when inputting data; and

b. some ECGs were omitted from outcome form but were recorded on the electronic system – because they were not on the outcome form these were then not coded.

107. 25 per cent (3 of 12) of attendances with errors were due first attendances that should have been follow-up attendances.

Unsafe to audit - cases excluded from the audit

108. There were no attendances that were unsafe to audit in the audit sample.

Recommendations

109. Based on the audit completed we have made one recommendation to the Trust, which have been included in an action plan completed by the trust. The high priority recommendation is:

- accurately record procedures and ensure that they charged for appropriately.

110. The full action plan is included in the appendix

VITREOUS RETINAL PROCEDURES OUTPATIENT ATTENDANCES

Audit approach

111. Outpatient data in vitreous retinal procedures from April to July 2013 was audited at Heart of England NHS Foundation Trust.

112. The audit covered the Trust's coding of outpatient procedures and the accuracy of other data items that affect the price commissioners pay for an outpatient attendance without a procedure. These other data items are: treatment function code, first/ follow up flag, age, and whether the attendance met the criteria of a PbR outpatient attendance.

113. This is the first year we have reviewed coding in outpatients. Outpatient procedure coding is not nationally mandated however procedure driven HRGs are now routinely used for payment under PbR. There are now 84 HRGs with a mandated outpatient tariff, and this covers approximately 75 per cent of procedures coded in outpatients.

114. To maintain consistency within the audit programme we have used the existing CFH audit methodology to review coding in outpatients. This approach provides two measures of data quality:

    c. HRGs changing – tests whether a trust's coding is fit for purpose for payment; and

    d. procedure codes incorrect – tests whether a trust is capturing all relevant procedure codes to accurately reflect the care that is delivered[32].

115. All errors have been agreed and signed off by the Trust.

Audit findings

116. In the sample audited, the Trust had 3.3 per cent of attendances with an error that affected the price. This means that 3.3 per cent of attendances had either a coding error affecting the HRG of the outpatient procedure or a data entry error affecting the attendance details (or both). Both types of error result in the PCT being the incorrect price for that attendance. The commissioner was under charged by £107 for the errors in the audit sample. Table 15 below summarises the main findings.

[32] Procedures incorrect includes secondary codes that provide additional information, such as the site (position on the body), laterality (side of the body), or the method of the operation (Y codes), which are required for complete and accurate coding but may not be routinely collected in an outpatient setting. This error rate also includes errors that reflect the inclusion of codes which are not relevant to the episode of care, which are excluded from the current CFH methodology but which can have a direct impact on the assignment of HRGs and therefore payment.

Table 15: Audit results and their financial impact for vitreous retinal procedures outpatient attendances

Attendances in audit sample	30
Attendances tested	30
% attendances changing payment	3.3
Pre audit payment[33]	£4,380
Post audit payment	£4,487
Gross change[34]	£107
% gross change	2.4
Net change[35]	£107
% net change	2.4
Attendances unsafe to audit	0.0

Breakdown of errors

117. Table 16 shows a breakdown of the audit results.

Table 16: Full audit results for vitreous retinal procedures outpatient attendances

Attend-ances tested	% attend-ances changing payment	Procedure coding			Other data items			
		Attend-ances with tariffed HRGs[36]	% HRGs changing	% procedure codes incorrect[37]	% attended flag incorrect	% first / follow incorrect	% TFCs incorrect	% age incorrect
30	3.3	30	3.3	42.3	0.0	0.0	0.0	0.0

118. The performance of the Trust, measured against the number of attendances changing payment due to errors in attendance details (excluding the coding of procedures), would place the Trust in the best performing 25 per cent of trusts compared to the last time we undertook a national audit outpatient data (2008-2010).

[33] 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) and any local agreements.

[34] The gross financial change is the total value of the spells that had PbR errors, whether in favour of the provider or the PCT.

[35] A negative figure represents an overcharge to the commissioner by the provider.

[36] Outpatient attendances with a procedure that group to a HRG without a nationally mandated tariff are treated as an attendance without a procedure by the grouper.

[37] If a trust is not recording procedures then the denominator for this figure will be low (number of procedure codes recorded). Where this is the case there is a possibility the % procedure codes incorrect could exceed 100%.

119. There was one procedure which was not fully recorded. Information on the Medisoft system indicated that the patient had tomogography evaluation of retina (OPCS-4 code C873) as well as the correctly recorded digital imaging of retina (OPCS-4 code C871). The information was not recorded on the clinic letter and no case notes were available. The correct coding changed the HRG to BZ22Z vitreous retinal procedures – category 2 increasing the price charged to the commissioner to £253.

120. The high percentage of procedure code errors (42.3 per cent) were caused by the Trust not correctly recording subsidiary procedure codes. Whilst these codes may not impact on payment the Trust should seek to accurately record all the procedure codes relevant to the attendance.

Unsafe to audit - cases excluded from the audit

121. There were no attendances that were unsafe to audit in the audit sample.

Recommendations

122. Based on the audit completed we have made one recommendation to the Trust, which have been included in an action plan completed by the trust. The high priority recommendation is:

- ensure outpatient procedures are recorded in the case notes and accurately recorded on the data collection system.

123. The full action plan is included in the appendix.

APPENDIX 1: PBR DATA ASSURANCE PROGRAMME ACTION PLAN 2012/13

Area 1 A&E attendances

Recommendation 1	Review the approach and guidance to staff entering data onto the A&E system to ensure all treatments and investigations carried out in A&E are recorded in a standardised way.
Responsibility	Emma Talla – General Manager Unplanned Care
Priority	High
Date	Target date for completion: month year - June 2013
Comments	**Action needed:** A review of current process for data entry in A&E departments to take place to understand who is currently entering investigation and treatment details into the MSS system.

Recommendation 2	Update the system to allow correct mapping to national treatment and investigation codes.
Responsibility	Emma Talla – General Manager Unplanned Care
Priority	High
Date	Target date for completion: End of May
Comments	**Update:** Since the audit the Finance Systems team have reviewed the mapping of both treatment and investigation codes and their findings are detailed below along with any outstanding actions required. **Investigation Codes:** We have confirmed that all of the investigation codes are being correctly mapped to a 'local' code on the A&E MSS system. The MSS system uses local codes which the Finance systems team import into a data warehouse for contractual reporting purposes. The Finance systems team have confirmed that when this import is done the local codes ***are*** being correctly mapped to the national codes. **Treatment Codes:** The Finance systems team have identified ***9*** local codes which do not have a national code mapped. These are 1) Intubation 2) IV drugs 3) Med admin

	– inhaler 4) Nebulisers 5) Oral fluids/Food 6) Play specialist 7) Refused analgesia 8) MRSA swab 9) Ventilation. To date some of these blank treatment codes have been updated. Outstanding actions are to: 1) Review remainder of blank treatment codes with Clinical Director and update

Area 2 – Admitted patient care clinical coding recommendations

Recommendation 3	Introduce a regular audit programme to check that training has been effective and promote consistency in coding across the department.
Responsibility	Steven Cross, Head of Clinical Coding
Priority	High
Date	Target date for completion: April 2013
Comments	Update: The HEFT Clinical Coding audit cycle commenced March 2012 and the 2013/2014 audit programme has been finalised. The audit programme involves 'real' time Coder audits which take place on each Coder quarterly. Information Governance Audits are also timetabled and our Auditors also complete audits of Coder manuals to see if any issues that arise are due to 4 step process not being followed or books not up to date. An Advert for the vacant Auditor position within the team is currently out to advert (April 2013). We anticipate the second full time Auditor will be in post in August 2013. In addition to the mandatory assessments at the end of foundation courses our Auditors also complete a real time audit 1 month post Foundation course. We have also introduced a Coding newsletter which details any new standards and includes references to coding clinics. This newsletter also identifies any common errors which have been identified during audit process.

Recommendation 4	Train coders to access all information either on the electronic system or in the case notes to ensure the coding is as accurate and complete as possible.
Responsibility	Steven Cross, Head of Clinical Coding
Priority	High
Date	Target date for completion: September 2013
Comments	We currently have 7 trainees Clinical Coders at the Trust.

	Plans are in place for them to all be fully trained by June 2013. Experienced coders at the Trust will also be re-trained in extraction techniques. Part of the ongoing audit programme involves 'real' time audit which covers the extraction of information and review of information sources. An extraction training session will be put on for experienced clinical coders.

Area 3 – Cardiology outpatient attendances

Recommendation 5	Accurately record procedures and ensure that they charged for appropriately.
Responsibility	Name and job title – Helen Evans – Operations Manager – Outpatients
Priority	High
Date	Target date for completion: month year - *September 2013*
Comments	**Update:** Since the audit the outpatient department have introduced a process for ensuring that outcome forms from Cardiology outpatient's attendances are kept in order that we can complete audits of the procedures performed and ensure they are being documented and recorded correctly. Clinical Coders to review outcome forms to check all relevant codes are present on the forms. This process is being managed through the outpatient's procedural coding group.

Area 4 – Vitreous retinal procedures outpatient attendances

Recommendation 6	Ensure outpatient procedures are recorded in the case notes and accurately recorded on the data collection system
Responsibility	Sue Wintle – Operational Manager
Priority	High
Date	Target date for completion: month year - *September 2013*
Comments	**Update:** Outcome forms have been kept for Ophthalmology outpatient attendances since 1st January 2013. This means that audits of the procedural information documented on the outcome forms against those in the notes / on Clinical letter can now be audited. All outcome

	forms will be filed in patients notes and there is a roll out programme across the Trust for this to happen in all outpatient areas in next 3 months. Clinical Coding auditor is currently reviewing the procedural codes documented on the outcome forms and updating forms to ensure there is also a place to record the site of the procedure. i.e left/right/both eyes. This is being managed through the outpatient procedural coding group.