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Review of Clinical Coding

Aneurin Bevan Health Board

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Whilst there has been a good level of investment in clinical coding at Aneurin Bevan University Health Board, a range of weaknesses in the clinical coding arrangements and processes are significantly reducing the accuracy of clinical coded data.

Summary report

Introduction

1. Clinical coding is defined by the NHS Classifications Service as 'the translation of medical terminology, as written by the consultant, to describe a patient's complaint, problem, diagnosis, treatment or reason for seeking medical attention into a coded format which is nationally and internationally recognised'.

2. Clinical coded data is core to the information used by NHS organisations to govern the business and ensure that resources are used efficiently and effectively. Coded data informs decision making and strategic plans. It is also fundamental in reporting quality and performance, including mortality rates.

3. In England, coded data is also used in Payment by Results, the system by which trusts are paid for services they provide. Although NHS organisations in Wales are not paid in relation to activity, all health boards have now adopted patient level costing as a way of allocating costs to activity, based on coded data. This patient level costing is becoming increasingly important in informing discussions about the transfer of monies between health boards. The linkage between coding and income has meant that many hospitals in England have invested in the clinical coding department. In Wales this has not been the case.

4. Clinical coding featured in the recent Francis Report into the failings at Mid Staffordshire NHS Foundation Trust. Evidence presented to the second inquiry into the Mid Staffordshire care failings pointed to the fact that the Board had convinced themselves that the reported high mortality rate was due to the poor quality of the coded data that underpinned it, rather than any failings in the care provided to patients. The readiness to explain away the high mortality rates as being down to coding and data quality ultimately had tragic consequences for many patients at the Trust.
The report concluded that executives and independent members needed to be more aware of issues relating to coding, and their relationship to management information that is used to measure performance and outcomes.

5. The focus on clinical coding in Wales has been mainly in respect of the timing to complete the coding process. The Welsh Government had set a target that, by the end of each financial year, 95 per cent of hospital episodes should have been coded within three months of the episode end date. Many health boards have struggled to meet the completeness target with significant numbers of cases waiting to be coded. The main reason for backlogs appears to be staff capacity.

6. In response to the need for accurate and timely clinical coding, the Director of Delivery and Deputy Chief Executive NHS Wales wrote to all Chief Executives in January 2013. He raised the need for a renewed and sustained commitment to coding quality and to seek assurance that required standards for timeliness and completeness would be met

and maintained. The targets set by the Welsh Government were revised with immediate effect. These included:

- a requirement for NHS bodies to meet the 95 per cent completion target on an ongoing monthly basis, and not just at the year-end; and
- a new target that for any given 12-month period, 98 per cent of all hospital episodes should be coded within three months of the episode end date.

7. In setting these targets, the Welsh Government recognised that there was no mechanism in place to continually assess the accuracy of clinical coded data in Wales. Plans were subsequently put in place to develop a national programme of clinical coding audit and a new National Clinical Coding Audit lead was appointed in July 2013 to take forward this work from within the NHS Wales Informatics Service (NWIS).

8. Given the concerns about the timeliness and accuracy of clinical coding across Wales, the increasing application of patient level costing, and the importance of accurate management information, the Auditor General for Wales has decided to undertake a review of clinical coding across all health boards in Wales, as well as Velindre NHS Trust.

9. The review sought to answer the question: 'Do clinical coding arrangements support the generation of timely, accurate and robust management information?' The work was undertaken in partnership with the NWIS Clinical Classifications Team[1] and is being used by NWIS to provide a baseline position on clinical coding accuracy and management arrangements across Wales. The approach included a particular focus on three main specialties which account for a significant proportion of hospital activity. These specialties were general surgery, general medicine, and trauma and orthopaedics. The approach taken to delivering the review is set out in more detail in Appendix 1.

Our main findings

10. Our review has concluded that whilst there has been a good level of investment in clinical coding at Aneurin Bevan Health Board (the Health Board), a range of weaknesses in the clinical coding arrangements and processes are significantly reducing the accuracy of clinical coded data. The reason for our conclusion is that:

- The Health Board recognises the importance of clinical coding but resources may be insufficient, stronger links with health records are needed and the Board needs to focus more on complying with national targets:
  - There is a good level of awareness of clinical coding at the Board, but information reported is out of date and does not report current performance against national targets.

[1] The Clinical Classifications Team provides support and guidance to clinical coders in NHS bodies and forms part of the NHS Wales Informatics Service.

- Clinical coding has a clear line of accountability, and has good integration with the wider informatics agenda but there need to be stronger links between clinical coding and health records.
- There is a clear commitment to invest in clinical coding with a positive focus on training and development, although the level of resource allocated to coding may not be sufficient and the budget is overspent.

- The effectiveness of the clinical coding process is undermined by a low level of clinical engagement, slow access to, and poor quality of, medical records and a lack of routine validation:
  - The clinical coding policy is up to date and in line with national standards.
  - Access to electronic information is good, however, there are delays in coding staff accessing medical records, the quality of which needs to be addressed:
    - many medical records are not tracked and there are delays in coding staff accessing medical records, with access being more problematic at Nevill Hall, despite retrieval officers being in place at both sites;
    - the quality of records needs to be addressed, particularly in relation to the clerical aspects of medical records such as loose sheets and section dividers; and
    - coders have good access to electronic information.
  - There is a consistent approach to clinical coding across the sites, although coding takes longer at Royal Gwent Hospital.
  - There are some positive aspects to the workforce, however, there is high turnover within the department and discrepancies at Band 5 level are causing some tension.
  - There is limited clinical engagement in the clinical coding process.
  - There are some validation and audit processes in place, with opportunities to embed these further.
- Clinical coded data is used appropriately and meets national standards for validity and consistency but some coding is inaccurate, timeliness has deteriorated and the Board is unaware of the inaccuracies or their implications:
  - Clinical coded data meets the targets for validity and consistency, and in the past has also been completed within the timescale, however, compliance with the timeliness target is deteriorating and there are some significant issues with the accuracy of the data:
    - the Health Board met the national validity and consistency standards for data derived by clinical coding for 2012-13;
    - the Health Board achieved the Welsh Government target that activity should be coded within three months for 2012-13, although performance has not been maintained during the year and it is unclear as to whether the Health Board will meet the targets for 2013-14; and

- the review of accuracy identified error rates ranging between three and 36 per cent, with most errors relating to the coding of diagnoses.

– Clinical coded data is being used appropriately, although the implications of coding could be made more explicit to the Board.

Recommendations

11. We make the following recommendations to the Health Board.

Management of medical records

R1 Improve the management of medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:

- raising the importance of good quality records throughout the Health Board;
- reinforcing the Royal College of Physician standards across the Health Board;
- putting steps in place to ensure that coders have early access to medical records;
- improving compliance with the medical records tracker tool within the Myrddin Patient Administration System;
- strengthening the links between medical records and coding by inviting coding representation on the Health Records Committee; and
- ensuring that the experience of coders in using the digitalised health record is considered as part of the digitalisation pilot.

Clinical coding resources

R2 Strengthen the management of the clinical coding team to ensure that good quality clinical coding data is produced. This should include:

- ensuring an appropriate level of time is allocated for mentoring and checking the work of others, particularly amongst the Band 4 staff;
- revisiting staffing levels across the teams, with a particular focus on the hours allocated to retrieval officers;
- using the additional auditor capacity to develop a rolling programme of clinical coding audit across the Health Board;
- revisiting the role of the clinical coding co-ordinator to ensure that responsibilities are comparable across the four members of staff; and
- working with NWIS to ensure that the Health Board is using the latest version of Medicode.

Engagement with medical staff

R3 Strengthen engagement with medical staff to ensure that the positive role that doctors have within the clinical coding process is recognised. This should include:

- raising awareness of the clinical coding process adopted by the Health Board through training sessions for medical staff, as well as attendance at appropriate meetings;
- encouraging clinical coders to be more visible to consultants, for example, by seeking clarification from them on episodes of care of patients; and
- engaging medical staff in the validation process.

Board engagement

R4 Build on the good level of awareness of clinical coding at the Board to ensure members are fully informed of the Health Board's clinical coding performance. At a minimum, this should include the Health Board's compliance with the Welsh Government targets.

Source: Wales Audit Office 2014

Detailed report

The Health Board recognises the importance of clinical coding but resources may be insufficient, stronger links with health records are needed and the Board needs to focus more on complying with national targets

There is a good level of awareness of clinical coding at the Board, but information reported is out of date and does not report current performance against national targets

12. Our observation of boards as part of our Structured Assessment[2] in 2012 suggested that not all boards in Wales were aware of clinical coding issues, or the fact that poor clinical coding performance can adversely affect the robustness of information for strategic decision-making and service monitoring.

13. As part of our Structured Assessment in 2013, we surveyed board members across Wales to gauge their understanding of clinical coding within their organisations, and their level of assurance that clinical coding arrangements are robust. We received responses from 17 of the Board members in the Health Board. The full results from our survey of Board members can be found in Appendix 2.

14. The responses to the survey indicate that Board members have a good awareness of the factors which affect the robustness of clinical coding, but less than half are satisfied with the information they received on the robustness of clinical coding arrangements in the Health Board:

- 14 of the 17 Board members (82 per cent) who responded to the survey reported that they had full or some awareness of the factors affecting the robustness of clinical coding;
- 10 out of the 17 Board members (59 per cent) reported that they were satisfied or completely satisfied that the Health Board was doing enough to make sure that clinical coding arrangements were robust; and
- seven out of 17 (41 per cent) were satisfied with the information that they received on the robustness of clinical coding arrangements in the Health Board.

[2] The Structured Assessment work examines the arrangements in place to secure efficiency, effectiveness and economy in the use of NHS resources.

15. The focus on clinical coding in the Board papers is through the Integrated Performance Reports, with reference also through the minutes of the Information Governance Committee (IGC), and the Finance, Performance and Sustainability Committee. The only reporting, however, is the achievement of the timeliness and completeness target at the year-end, in relation to the Risk Adjusted Mortality Index (RAMI). There is no reference to the accuracy of the coding, nor is there ongoing reporting throughout the year in relation to compliance with the Welsh Government target.

Clinical coding has a clear line of accountability, and has good integration with the wider Informatics agenda but there need to be stronger links between clinical coding and health records

16. In the Health Board, clinical coding sits within the Informatics Department. The Clinical Coding Manager reports to the Head of Informatics, who in turn reports to the Executive Director of Performance Improvement. The Clinical Coding Manager oversees the clinical coding functions. There are two main clinical coding teams; Royal Gwent Hospital (Royal Gwent) and Nevill Hall Hospital (Nevill Hall). Each has Clinical Coding Co-ordinators who oversee the day-to-day running of the coding service, and who report to the Clinical Coding Manager.

17. Clinical coding is represented on the Data Quality Group, which feeds to the IGC. Minutes from the IGC would indicate that there has been a positive focus on improving the quality of clinical coding with reference to the 'Improving Clinical Coding Performance' paper that was discussed in November as a good example. This also recognised the importance of good quality medical records in the clinical coding process.

18. As part of our medical staff survey, we asked the opinion of staff of the overall quality of medical records. Two out of the nine[3] respondents reported that the quality of medical records was good or very good, with a further four reporting that the quality was average. Three out of nine respondents reported that the quality of medical records was poor. The main results from our medical staff survey can be found in Appendix 3.

[3] Responses to our medical staff survey were considerably low, however, the findings of the survey correlate with the wider views of medical staff identified through interviews.

19. Our fieldwork identified that there were mixed views as to whether the Health Board has adopted the Royal College of Physicians (RCP) standards[4], or any local standards, to improve the quality of its medical records, as shown by the results of the medical staff survey:

- six out of 10 medical staff (60 per cent) were aware of the RCP standards; but
- only two out of 10 medical staff (20 per cent) said that standards had been adopted by the Health Board.

20. One way of improving the quality of medical records is by embedding the importance of medical records in the training of staff. In the responses to the medical staff survey, seven out of the 10 respondents stated that they had not received any training to improve record keeping in the last two years. There had previously been an awareness session run jointly by the clinical coding and health records departments, but this was stopped after zero attendance.

21. The Health Board has a Health Records Committee (HRC) in place which is positive. However, there is no representation from the clinical coding department on the committee. There were monthly meetings taking place between clinical coding and medical records to address any operational issues arising, however, these were also stopped due to poor attendance. Despite this, there does appear to be a good working relationship between coding and medical records at an operational level, with the two departments working together on the Digitised Health Records programme, which the Health Board is piloting.

There is a clear commitment to invest in clinical coding with a positive focus on training and development although the level of resource allocated to coding may not be sufficient and the budget is overspent

22. The extent to which hospital activity is coded to a good quality is partly dependent on the level of resources that an organisation is prepared to invest in its clinical coding function. This is in terms of both staffing levels, but also the arrangements to ensure that staff have access to training and development opportunities which would enhance the quality of clinical coding.

23. Currently, only information relating to hospital admissions (in the form of finished consultant episodes (FCEs)), and more recently procedures undertaken in an outpatient setting, are required by the Welsh Government to be coded. With additional resources, clinical coding has the potential to respond to a significant gap in intelligence by extending the range of activity that is coded. This could include the coding of GP referrals, all outpatient visits or attendances to emergency departments which are not admitted.

[4] In 2008, the Academy of Medical Royal Colleges approved new standards for the structure and content of medical records, developed in a project led by the Royal College of Physicians Health Informatics Unit (HIU) and funded by NHS Connecting for Health.

24. The budget allocated for clinical coding in the Health Board has increased. The annual budget for 2013-14 is in the region of £810,000, an increase of eight per cent on the budget set for the previous year. Spending has been within budget for previous years. However, at the time of the review there was a predicted overspend of around £100,000 for the financial year 2013-14. This was because of the need to clear the backlog of coding activity, which resulted in expenditure of £80,000 on contract coders in order to hit the Welsh Government target. There were plans to extend this spending by a further £40,000 to £50,000 by the end of the financial year.

25. Staffing accounts for 99 per cent of the budget. As at 30 September 2013, the Health Board had a total funded establishment of 35.68 full-time equivalents (FTEs). Staffing levels have increased by 26 per cent since March 2012, when the funded establishment was 28.43 FTEs.

26. The core clinical coding team (ie, those staff whose primary role is to undertake clinical coding) is 29.13 FTEs (consisting of 17.35 at Band 4, 11.73 at Band 3, and 0.05 of the Band 5 Supervisors/Co-ordinators). If demand from FCE continues in line with 2012-13, the required level of core clinical coding staff needed to meet FCE demand would be in the region of 30.88 FTEs[5]. This is based on a recognised standard workload level of 30 FCEs per day per full-time coder. This would indicate a small shortfall in the current staffing establishment for the core clinical coding team of 1.75 FTE.

27. The NWIS currently provides free access to the foundation training course for clinical coders, along with refresher training and specific training on new versions of the coding classification structures. However, places are limited, and it can take staff a long time to recoup travel expenses, which can deter staff from attending.

28. Funding has been allocated to ensure staff are being supported to achieve further coding qualifications. Fourteen of the Health Board are accredited clinical coders (ACC), with a further 17 either working towards it, or waiting to attend training. The Health Board expects Band 4 and above to be ACC qualified at appointment, or work towards this whilst in their post. All this is positive as the achievement of qualifications will both improve the quality of coding but also support career progression. Staff are supported through training and mentoring, however, unlike other health boards across Wales who have ACC qualified staff, the payment of the professional Institute of Health Records and Information Management (IHRIM) membership, which is needed to undertake the exam, falls to the individual member of staff to pay.

[5] Calculation based on FCE activity for 2012-13, divided by workload assumption of 30 FCEs per day, divided by a standard availability of 200 working days per year per FTE (excluding bank holidays, leave entitlements and commitments to training and development (including mandatory training and personal development reviews)).

29. The Health Board has also supported, and is continuing to support, staff to achieve the advanced modules of clinical coding auditors, which allows the Health Board to develop its own programme of clinical coding accuracy reviews. There is currently one qualified ACC Auditor, and a further three members of staff are working towards this qualification. The use of coding auditors ensures that internal work on reviewing the quality of data is in line with national clinical coding audit methodology.

The effectiveness of the clinical coding process is undermined by a low level of clinical engagement, slow access to, and poor quality of, medical records and a lack of routine validation and audit

The clinical coding policy is up to date and in line with national standards

30. The Health Board has an up-to-date clinical coding policy which was reviewed in April 2013. It is easy to read, includes references to the monitoring and audit of the clinical coding service, responsibilities for training and development, and details of departmental processes. As such, it is a useful guide for staff.

31. When coding activity, it is vital that coders adhere to national standards to ensure that clinically coded data is comparable across Wales and is of the highest quality. To support guidance and clarification of national standards, the NWIS Clinical Classifications Team will provide a range of additional documentation such as communications and access to a clinical coding helpline.

32. Implementation of national standards is routinely supported through the central mechanisms such as the NWIS Clinical Coding User Group. These groups provide opportunities to challenge the standards, raise queries and share experiences across Wales. The Health Board's Coding Manager is represented on the national groups and plays an active role in national discussion.

33. On occasions, it may be necessary for organisations to develop supplementary procedures to clarify the allocation of codes where local circumstances may make it difficult for coders to identify a diagnosis or procedure, for example, where there is differing or new clinical intervention than elsewhere in Wales. These procedures must conform to national standards and are generally developed in conjunction with clinicians. The Health Board currently has two supplementary local policies on Arteriography and Fluoroscopy. These policies need to be reviewed annually, with the last review completed in December 2013.

Access to electronic information is good, however, there are problems with coding staff accessing medical records, the quality of which needs to be addressed

Many medical records are not tracked and there are delays in coding staff accessing medical records, with access being more problematic at Nevill Hall, despite retrieval officers being in place at both sites

34. To facilitate the achievement of the Welsh Government target that 95 per cent of coding activity should be completed within three months of the end of the hospital episode, it is important that clinical coders get timely access to patients' medical records.

35. Once a patient is discharged or transferred, the majority of medical records can be released directly to the clinical coding teams. However, some medical records can find their way to many different departments before reaching the clinical coding department, for example, to medical secretaries for correspondence to be filed or to bereavement officers to complete the necessary paperwork to register a death.

36. As part of our fieldwork, we undertook a tracking exercise, using the medical records tracking tool[6], to track medical records from the ward through to the clinical coding department to see how quickly clinical coders are able to access medical records. This exercise was undertaken at Royal Gwent and Nevill Hall. Of the 120 records that we reviewed at each of the sites, we were unable to track 42 per cent at Royal Gwent and 33 per cent at Nevill Hall. This was due to records not being tracked on the Myrddin PAS system, and in the majority related to trauma and orthopaedics. Untracked records can make locating a patient's records very difficult and creates risks to both administrative processes, but more importantly the provision of patient care should the patient be admitted.

37. Of those records that we were able to track, the average speed of access to records by coders was approximately 2.5 weeks at Royal Gwent, and almost four weeks at Nevill Hall. In addition, only 92 per cent of records tracked were received by the coding team within three months, giving the team no opportunity to meet the Welsh Government timeliness target for the remainder. More detail is provided in Exhibits 1a and 1b below.

[6] To be able to locate medical records at any given time, NHS bodies use a tracking tool. These can take the form of an electronic module on the patient administration system (PAS) or a paper format. In Aneurin Bevan University Health Board, the tracking tool forms a specific module on the Myrddin PAS system.

Exhibit 1a: Speed of access to medical records following discharge or transfer in Royal Gwent Hospital

		General Medicine	General Surgery	Trauma and Orthopaedics
Speed of accessing medical records (weeks)	Average	14	24	21
	Shortest	0	2	1
	Longest	97	174	140
Percentage of medical records received by the coding team…..	…within four weeks (one month) of discharge	86%	81%	84%
	…within eight weeks (two months) of discharge	91%	89%	89%
	…within 12 weeks (three months) of discharge	97%	93%	89%

Exhibit 1b: Speed of access to medical records following discharge or transfer in Nevill Hall Hospital

		General Medicine	General Surgery	Trauma and Orthopaedics
Speed of accessing medical records (weeks)	Average	23	17	47
	Shortest	2	1	1
	Longest	196	163	283
Percentage of medical records received by the coding team…..	…within four weeks (one month) of discharge	84%	88%	60%
	…within eight weeks (two months) of discharge	90%	92%	80%
	…within 12 weeks (three months) of discharge	90%	92%	87%

Source: Wales Audit Office 2014

38. To support timely access to medical records, and to reduce the time spent by clinical coding staff tracking down medical records, many clinical coding departments across Wales have appointed support staff who specifically collate, source and locate medical records. These staff are often referred to as ‘runners’. At the time of our work, there were 2.16 FTE runners in Royal Gwent, and 0.8 FTE in Nevill Hall.

39. A diary exercise undertaken for a period of two weeks indicated that four per cent, and seven per cent of the coders' time was spent tracking records at both Nevill Hall and Royal Gwent respectively. This indicates that the presence of runners has a positive impact on the time that clinical coders have to code medical records. However, this still accounts for 33 hours per week spent by coders on tracking records, with 23 hours of these (equivalent of a 0.6 FTE) at Royal Gwent.

40. The main causes for delays in receiving records were identified by the coding staff as being a lack of ward clerks and delays in junior doctors ensuring that test results are signed off before records are released.

41. The Health Board is currently going through a process of digitalising health records, which is aimed to be completed within the next three or four years. This process will provide the coding team with electronic access to a scanned copy of the patients' paper-based medical record. Whilst this process should speed up access to medical records, the quality of the information remains the same as that in the paper-based medical records (discussed later in this report). In addition, the coding staff identified a number of problems with the digital record. These included:

- difficulties navigating through records as there is no ability to move between sections as there is with the paper-based records;
- problems with computers crashing if the notes are long; and
- poor quality scanning which made reading medical records difficult and caused eyestrain over long periods.

The quality of records needs to be addressed, particularly in relation to the clerical aspects of medical records such as loose sheets and section dividers

42. The quality of medical records can have a direct impact on the quality of coding. Clinical coders rely on the inclusion of key information within the medical record to enable them to effectively capture all that has happened to the patient.
Medical records therefore need to be of a high quality, in terms of the way the medical record is ordered and the completeness of the information that it contains.

43. As part of our fieldwork, we reviewed a sample of 180 medical records across three specialities (General Medicine, General Surgery, and Trauma and Orthopaedics). The review was based on 16 of the RCP standards. Representatives from the NWIS Clinical Classifications Team used the same sample to complete the review of clinical coding accuracy. Of the 180 medical records reviewed, we identified a compliance rate of 84 per cent. The standard of medical records was marginally better at Nevill Hall than Royal Gwent. More detail is provided in the following exhibit.

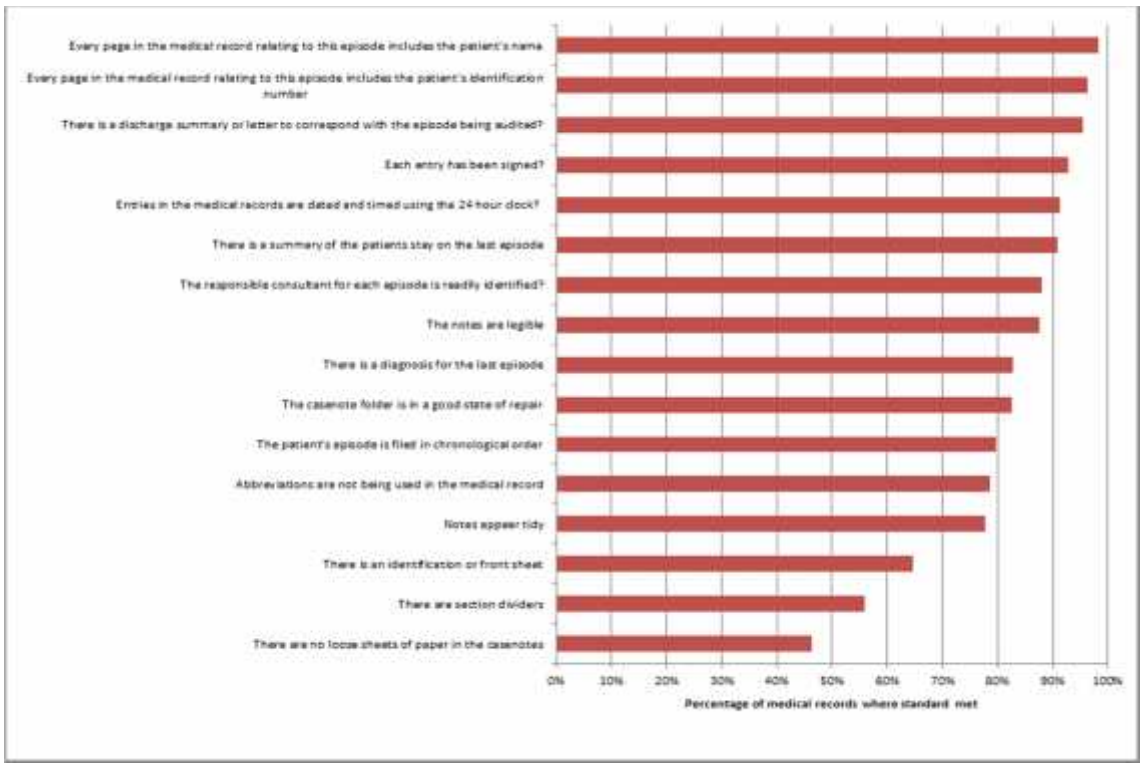
Exhibit 2: Overall percentage level of compliance with RCP standards by hospital site and specialty

	General Medicine	General Surgery	Trauma and Orthopaedics
Royal Gwent Hospital	79%	80%	82%
Nevill Hall Hospital	86%	84%	80%

Source: Wales Audit Office 2014

44. The medical records team have responsibility for setting up the record and ensuring that it is stored appropriately. However, the responsibility for filing information and the quality of the information recorded in the medical records rest with other staff, particularly ward clerks, secretaries and clinical staff. Particular standards that were identified as being problematic (Exhibit 3) in the review of medical records fall under the responsibility of clerical staff. Such standards include ensuring that there are no loose sheets of paper in the case notes, that there are section dividers, and that there is an identification or cover sheet. A breakdown of the compliance rate against the RCP standards by site and specialty is included in Appendix 4.

Exhibit 3: Overall level of compliance against the RCP standards



Source: Wales Audit Office 2014

45. Based on discussions with a number of staff, a decline in the number of ward clerks may be partially responsible for a lower quality of medical records, as those that remain are more pressured, and therefore have less time to spend as much time on notes as previously. When ward clerks are absent, clear lines of responsibility regarding note collation and condition are missing.

Coders have good access to electronic information

46. Given the increasing move towards electronic reporting, some information that coders require for clinical coding is available through clinical information systems, such as the Radiology Information System (RadIs2) and the pathology system (LIMS). In some instances, it can also be deemed appropriate that coders code using only the information contained on the electronic system, for example, attendances at a diagnostic unit such as endoscopy, thereby reducing the need for them to access patient records. It is therefore important that coding departments have appropriate levels of access to all relevant clinical information systems that are in operation.

47. All coding staff in the Health Board have access to a range of clinical information systems, including a range of speciality specific systems, such as Radiology, Pathology and Endoscopy. This is identified as good practice.

48. It is also important that clinical coders have access to the internet and intranet to allow staff to access the necessary training and resources available, in addition to carrying out any online research where appropriate. All coding staff have access to internet, intranet and email, which is also identified as good practice.

There is a consistent approach to clinical coding across the sites, although coding takes longer at Royal Gwent Hospital

49. The clinical coding service is split into two regions; North and South. North covers services provided at Nevill Hall Hospital, and South covers services based at Royal Gwent Hospital, St Woolos Hospital, and Ysbyty Ystrad Fawr.

50. The coding teams cover all specialties with the exception of mental health episodes, even though this activity does affect the completeness figures for the Health Board. This is in common with a number of other health boards across Wales, although we are aware through our work that the coding team in Powys the Health Board are coding some of the Health Board's mental health episodes. These are specifically relating to Powys residents under the management of the Health Board. The clinical coding service is currently reviewing its responsibility for collecting data for mental health sites within the Health Board.

51. Clinical coding workload can be managed in two ways, either by adopting a general approach so that staff code all specialties, or by allocating coders to specific specialties. Both approaches have benefits:

- A general allocation of work supports an even workload across the staff, as well as a balanced approach to meeting the demand across all of the specialties. However, this approach requires staff to have a full understanding of the coding relating to all specialties, some of which may have particular procedures or diagnoses that are complex to code. This approach can dilute skills and experience and therefore it is important that there is opportunity from within the team for peer support to share experience.
- A specialty allocation of work supports the development of skills and experience in a number of specialties, which in turn can enhance the quality of coding. However, some specialties can be more complex to code than others due to the case mix of patients, and consequently can take longer to process. If these are all processed by only one or two members of staff, backlogs can quickly build in these specialties, particularly if staff are also away from the office for a period of time, eg, on annual or sick leave.

52. Clinical coders in the Health Board have responsibility for coding information for a number of specific specialties or Consultants, dependent on site. During our work, we observed the coders working and identified that peer support was in place as coders work together in smaller teams focused on individual groups of specialties.

53. When notes are available, the runners will collect them from the wards and bring them to the coding department. These records are then stored in date order by specialty. The clinical coding teams will prioritise which activity is coded based on clinical priority (eg, cancer) and deceased patients. The latter of these is to ensure that mortality data, which informs RAMI, is available. Prioritisation of deceased patients, however, can distort RAMI data if there are problems with backlogs. In effect, it can decrease the denominator used for the RAMI data (ie, the total number of patients) by not taking account of the live patients not yet coded in the time period in question. Whilst we recognise the reasons for prioritising deceased patients, this prioritisation should not supersede the need to code all patients in a timely manner.

54. As part of our review to understand the speed with which coders have access to medical records, we also reviewed the length of time between medical records becoming available to the department and the coding process being completed. Due to issues with the completion of tracking, we were only able to assess 119 records. Of those records, our review at Royal Gwent and Nevill Hall identified that once medical records were received in the department, cases were coded relatively quickly:

- Sixty-seven per cent of records coded within three days.
- Eighty-five per cent of records coded within a week.
- Ninety-two per cent of records coded within a fortnight. Medical records for general medicine generally took longer to code, due to the complexity of the case mix within that specialty, with 80 per cent of general medicine notes coded within a week and 91 per cent within a fortnight.

55. The time taken to code from receiving the records is quicker in Nevill Hall, averaging 4.2 days compared to 6.3 in Royal Gwent. In addition, a greater percentage (77 per cent) of records are coded within three days at Nevill Hall, compared to only 59 per cent at Royal Gwent.

56. Clinical coding across the Health Board is carried out using an electronic encoder system called Medicode. The Health Board is currently using an old version of Medicode (version 5.0.06), which does present some problems. However, there is consistency across the sites, with all staff having access to the same version.

There are some positive aspects to the workforce, however, there is high turnover within the department and discrepancies at Band 5 level are causing some tension

57. Staff turnover has been fairly high within the clinical coding team. In the last two years seven members of staff (4.67 FTE) have left and 12 (10.6 FTE) have been recruited. Higher salaries for similar jobs in England can make retaining staff in this Health Board particularly difficult given the close proximity to the border. There are currently no vacancies.

58. There is a good level of clinical coding experience in the department, with 62 per cent of the team having five or more years' experience. Only three members of the department (seven per cent) are aged 56 or over and therefore likely to retire within the next five years, although a further five are over 50. To provide succession planning and career progression, the Health Board has looked to increase the number of trainees in the team. Between March 2012 and September 2013, the number of staff working at a Band 3 pay grade has more than doubled (from 3.43 FTE to 11.78 FTE). This represents good succession planning.

59. New starters are not classed as supernumerary and are therefore given their own allocation of work. Trainees are mentored by Band 4 staff. However, this mentoring can place pressure on staff in terms of time commitments with the potential to be missed if there are demands on the team from backlogs. The diary exercise undertaken as part of this review indicated that 13 out of the 17 Band 4 respondents (76 per cent) stated that they undertook some form of mentoring and checking of others' work, amounting to around 4.5 per cent of their overall time. A number of the trainees will have been in post for some time and therefore should need minimal supervision; however, it is important that the mentoring and checking of work is in place to ensure that these individuals continue to develop their knowledge and experience.

60. There are four clinical coders at Band 5 level, although only two of these have line management responsibilities. This has caused some tension amongst these staff as it is felt that the staff are paid the same despite differing degrees of responsibility. The diary exercise for these staff identified that with the exception of line management, the majority of the rest of the time was spent undertaking audits or validation.

There is limited clinical engagement in the clinical coding process

61. Clinical engagement has been described as the single most valuable resource to a coding department. The main source of information for clinical coders is that derived from the medical record, and it is clinicians that act as the local resource in helping coders understand the clinical information relating to diagnoses and treatment. It is therefore important that clinicians and coders engage to improve record keeping, confirm codes and provide clinical leadership in identifying and coding co-morbidities.

62. Within the Health Board there is limited clinical engagement with clinical coding. Our survey of medical staff indicated there was an awareness of clinical coding amongst clinicians, with seven of the 10 respondents stating that they were satisfied that they had a clear understanding of the purpose of clinical coding. However, only three said that they had any engagement with clinical coding staff. Our diary exercise confirmed that engagement with clinicians is limited with a negligible level of time recorded for liaison with clinicians by coding staff during the period reviewed.

63. Where a clinical coding team is based within a hospital can be an important factor for clinical engagement. The coding teams at both sites are located away from the main clinical areas. This may be the reason for seven out of the 10 medical staff responding to the survey stating that they had no idea where the clinical coders were based. The remaining three stated that they did know where coders were at the site in which they were based.

64. Engagement with clinicians however plays both ways, with responsibility also resting with the clinical coding staff to seek clarification from medical staff on episodes of care of patients, where necessary, and to generally be visible with the clinical areas. Only one respondent to the medical staff survey reported that clinical coding staff had sought clarification on episodes of care of patients that they had been responsible for.

65. At the time of our fieldwork, clinical coding featured as part of the induction for junior doctors. However, it was the last slot of the day and attendance has not been particularly good. In addition, there appears to be limited training subsequent to the induction, with only two out of the 10 medical staff surveyed stating that they had received any training relating to clinical coding within the last two years, although six said that they would like to receive training.

There are some validation and audit processes in place, with opportunities to embed these further

66. To ensure that the clinical coded data submitted centrally is of good quality, it is important that health boards have appropriate mechanisms in place to verify and validate the data as it is processed.

67. The clinical coding policy and procedure reinforce the importance of quality and set out the processes to support it. The four clinical coding co-ordinators (Band 5s) undertake weekly validation checks to pick up errors, although this is reported to be at a high level. The encoder system Medicode provides some automated validation of coding as it is input onto the system, however, at the time of the fieldwork, the Health Board was running an out-of-date version of Medicode, which means that they are missing a validation report that they need. Positively, all staff reported receiving their appraisal in 2012-13, which staff believed gave them a useful method of two-way feedback of issues around validation.

68. One of the identified models of good practice is to engage clinicians in the validation process. This provides an opportunity for clinicians to support the clinical coding process, but also allows them to be reassured about the validity of the clinical coding data which is often used to inform their own appraisals. This process can involve individual clinicians but can also be facilitated through attendance at specialty meetings such as grand rounds or specialty audit sessions where individual cases may be discussed. Our fieldwork identified that there was limited clinical involvement in validation, and what there was centred around mortality reviews:

- Only two out of 10 reported that they had been engaged in validation of clinical coding over the last two years.
- Four reported that a representative from clinical coding attended a meeting that they had been present at to provide input into the discussions. A further two said that they were unsure. One of these meetings was described as being a discussion on the accuracy of the coding process and how it reflects practice, another was the Department of Surgery weekly teaching meeting, and a third was a meeting in which the coding manager delivered a talk to doctors.

69. As well as routine validation, one way of providing assurance of the quality of clinical coding is to undertake detailed audit reviews. There is one auditor in post within the Health Board. She undertakes one audit per year in order to maintain her qualification, with the last audit completed in 2013, supported by a number of smaller audits throughout the year. The development of a further three clinical coding auditors will provide additional capacity to ensure that a more regular programme of coding audit is in place.

Clinical coded data is used appropriately and meets national standards for validity and consistency but coding is inaccurate, timeliness has deteriorated and the Board is unaware of the inaccuracies or their implications

Clinical coded data meets the targets for validity and consistency, and in the past has also been completed within the timescale, however, compliance with the timeliness target is deteriorating and there are some significant issues with the accuracy of the data

The Health Board met the national validity and consistency standards for data derived by clinical coding for 2012-13

70. In 2008, the Welsh Government set out the need for NHS bodies in Wales to adhere to 32 data validity standards relating to admitted patient care[7]. The validity of all admitted patient care data submitted to the Patient Episode Database for Wales (PEDW) is now routinely monitored against these standards on a monthly and annual basis. These data validity standards were the first phase of a series of updated monitoring mechanisms aimed at improving the quality of data in NHS Wales. A number of the data validity standards relate to data derived through the clinical coding process. For the financial year 2012-13, the Health Board met all of the data validity standards which relate specifically to clinical coded data.

71. Further data quality indicators relating to data consistency have also since been introduced. Data consistency refers to whether related data items within the same dataset are consistent with one another eg, a record that indicates a male patient has given birth would be considered inconsistent. There are 27 data consistency indicators which are applied to admitted patient care, a number of which similarly relate to data derived through the clinical coding process. For the financial year 2012-13, the Health Board met all of the data consistency standards which relate specifically to clinical coded data.

[7] Admitted patient care is the dataset submitted to the Patient Episode Database for Wales which contains the data relating to Finished Consultant Episodes (FCEs).

The Health Board achieved the Welsh Government target that activity should be coded within three months for 2012-13, although performance has not been maintained during the year and it is unclear as to whether the Health Board is likely to meet the targets for 2013-14

72. To ensure that data is coded in a timely fashion, Welsh NHS bodies are required to meet the timeliness and completeness targets set out by the Welsh Government. These targets form part of the Annual Quality Framework and are routinely reported within the performance management frameworks across NHS Wales. In the Health Board, there has been a positive focus on coding timeliness, demonstrated by the additional investment in both permanent and temporary staff to improve clinical coding quality and timeliness. However, Integrated Performance Reports to the Board do not routinely provide up-to-date compliance with the Welsh Government targets, with the only reporting over the last 12 months reflecting compliance with the Welsh Government target for 2012-13. This is demonstrated by the latest Integrated Performance Report (May 2014) which makes no reference to current coding performance but merely states the need to improve accuracy.

73. The Health Board uses a standard workload of 40 FCEs per day, which is significantly higher than the recognised workload of 30 FCEs per day which is used across the rest of Wales. Using 30 FCEs per day, we identified that current staffing levels would not be enough to meet the Welsh Government's 98 per cent completeness target, however, 40 FCEs per day would. This places additional pressure on staff to get through more episodes per day than elsewhere in Wales, which may have consequences on the accuracy of the coding.

74. Despite the higher workload targets, information provided to us by NWIS relating to performance against the Welsh Government targets would, however, indicate that as at the end of February 2014:

- 87 per cent of activity for November 2013 had been coded within the three-month window, compared with the target of 95 per cent; and
- 94 per cent of all activity had been coded within the three-month window within a rolling 12-month period, compared with the target of 98 per cent.

75. As part of our fieldwork, we requested the backlog position as at 30 September 2013. No backlog was reported, however, the information provided by NWIS would indicate that at the end of February 2014, the number of uncoded episodes which had not been coded within the required timeframe was in the region of 12,500.

The review of accuracy identified error rates ranging between three and 36 per cent, with most errors relating to the coding of diagnoses

76. All health boards in Wales, with the exception of Powys, submit data to the benchmarking organisation CHKS. A number of indicators reported by CHKS provide a high level indication of the accuracy of clinical coding. Performance against these indicators would suggest that there are issues with the accuracy of clinical coding in the Health Board (Exhibit 4).

Exhibit 4: Comparison with the CHKS indicators as at June 2013

	Health Board Acute (%)	All Wales Acute (%)
Diagnosis code of 'non-specific' provided	21.2	14.5
Sign and symptom provided as primary diagnosis	11.9	11.5
Use of an invalid procedure code	1.38	0.2

Source: Aneurin Bevan University Health Board June 2013

77. As part of our review, we worked alongside the NWIS Clinical Classifications Team to undertake a review of the accuracy of clinical coding across the Health Board. The review was based on a sample of 180 episodes across the two main sites. There were no episodes identified by NWIS that were considered unsafe to audit. This refers to medical records which do not contain information relating to the episode being audited.

78. The methodology used to undertake the review was based on audit methodology used in NHS England. The nationally recognised standard used to measure the accuracy of coding is set at 90 per cent. This relates specifically to four coding groups: primary diagnosis, secondary diagnosis, primary procedure, and secondary procedure.

79. The review indicated some high rates of inaccuracy across both sites, particularly in relation to the primary and secondary diagnoses. The high-level results of the review are set out in the following exhibit, with further detail set out in the separate reports issued directly to the Health Board from the NWIS Clinical Classifications Team.

Exhibit 5: Results of the review of the accuracy of clinical coding undertaken by the NWIS Clinical Classifications Team

	Percentage of codes recorded correctly at Royal Gwent Hospital	Percentage of codes recorded correctly at Nevill Hall Hospital
Primary Diagnosis	74.2%	72.2%
Secondary Diagnosis	64.1%	75.7%
Primary Procedure	81.2%	91.1%
Secondary Procedure	97.2%	89.5%

Source: NWIS Clinical Classification Team

Clinical coded data is being used appropriately although the implications of coding could be made more explicit to the Board

80. Clinical coded data should typically be used for statistical purposes only and to underpin a number of management processes within the NHS such as health needs assessment and performance management. With key patient outcome measures such as the RAMI coming increasingly into the public domain, it is important that the status of the clinical coded data that underpins these measures is visible to the reader or user.

81. Performance reports to the Board and its sub-committees have clearly referred to the impact that incomplete clinical coded data can have on mortality data. However, no reports to date have included the implications of inaccurate clinical coding. The RAMI, for example, takes into account co-morbidities that should be recorded using secondary diagnoses codes. If these codes are inaccurate, or co-morbidities are not picked up through the coding process, the extent to which a death is expected or unexpected can differ. The accuracy review undertaken by the NWIS Clinical Classifications Team identified that of the 180 episodes reviewed, a total of 137 secondary diagnosis codes were missing. Conversely, 26 secondary diagnosis codes had been assigned to patients that were considered irrelevant to the episode of care.

82. Our survey of Board members identified that 12 of the 17 Board members who responded to our survey would find it helpful to have more information on clinical coding and the extent to which it affects the quality of key performance information.

83. It is important, however, that the provision of a statement which sets out the condition of clinical coded data does not distract the focus of the reader or user away from the purpose for which the data is being used, for example, backlogs can be used as a reason for under performance against a key performance target. This was the case in Mid Staffordshire Hospital when high mortality rates were too readily attributed to problems with the clinical coding of the data that underpinned the figures. The findings of our survey of Board members would suggest that this is probably not the case in the Health Board, with 13 out of 17 Board members reporting that they were not concerned that under performance against key indicators is too readily attributed to problems with clinical coding.

84. Clinical coded data has many purposes but it is not intended to support the clinical management of an individual patient as the coding classification structure can be misleading to a patient. As such, clinical coded data should not be used for that purpose. As part of our medical staff survey, we asked if they would routinely use clinical coded data when communicating with patients. The results of the medical staff survey would suggest that there is potentially a problem here, as five out of the 10 respondents stated that they use coded data to communicate with patients. Our review of medical records, however, did not find any evidence that this was taking place.

Appendix 1

Methodology

Our review of clinical coding took place across Wales between July 2013 and April 2014. Cwm Taf Health Board acted as a pilot site to enable the Wales Audit Office to test, and where necessary, refine the audit methodology. Details of the audit approach are set out below.

Document review

In advance of our fieldwork, we requested and analysed a range of Health Board documents. These documents included clinical coding policies and procedures, organisational structures, internal and external clinical coding audits, papers to senior management forums, workforce plans, minutes of meetings and training material.

Board member survey

A survey of Board members was included in our Structured Assessment work for 2013 across Wales. The survey included a number of questions specifically focused on clinical coding, and was issued in August 2013 for a period of one month. Responses were received from 17 of the Board members in the Health Board.

Medical staff survey

A survey covering a broad range of issues relating to clinical coding and medical records was issued to all medical staff in the specialties of general medicine, general surgery, and trauma and orthopaedics across Wales. In Powys teaching Health Board, this included all visiting consultants for general surgery, and trauma and orthopaedics, and GPs with responsibility for community inpatient beds which are recorded as general medicine for the purposes of PEDW. In Velindre NHS Trust, the survey was issued to all medical staff in the specialty of oncology. The survey was issued electronically in November 2013 for a period of three weeks. Responses were received from 10 out of 252 medical staff in Aneurin Bevan Health Board.

Interviews and focus groups

Our review team carried out detailed interviews and focus groups at the Health Board during the weeks commencing 10 February 2014.

Interviewees included executive and operational leads for clinical coding, head of information, medical records manager, clinicians for general surgery, general medicine, and trauma and orthopaedics, ward clerks, and the clinical coding manager and co-ordinators. Focus groups were held with clinical coding staff at both sites.

Health board survey

We asked health boards to complete a survey providing details of their clinical coding arrangements. This included data relating to budgets and expenditure, staffing levels, the IT infrastructure supporting the clinical coding teams, as well as supplementary information relating to medical records. The completed health board survey was submitted on 8 November 2013.

Clinical coding diary

Clinical coding staff were required to complete a diary for a period of two weeks. The diaries were completed during the two weeks commencing 24 March 2014.

Case note review

Random samples of 30 coded episodes (per speciality and per coding team) were identified from PEDW for the three-month period ending four months (allowing for the three-month window to complete coding) immediately prior to the date of on-site fieldwork.
These samples were then reviewed, using medical records, by the NWIS Clinical Classification Team for accuracy of coding, and by our review team for compliance with the Royal College of Physicians standards for medical records. The sample period reviewed for the Health Board covered medical records containing episodes completed between 1 April 2013 and 31 July 2013 inclusive.

Medical records tracker

Random samples of 30 coded and uncoded episodes (per speciality and per coding team) were identified from PEDW for the three-month period ending four months (allowing for the three-month window to complete coding) immediately prior to the date of on-site fieldwork. These samples were then reviewed using the Health Board's medical records tracking tool. The sample period reviewed for the Health Board were episodes completed between 1 April 2013 and 31 July 2013 inclusive.

Centrally collected data

Data relating to compliance with the data validity and data consistency standards were provided by the Information Standards Manager in NWIS. Data relating to compliance with Welsh Government targets for completeness and timeliness of clinical coding, along with backlog positions were also provided by the NHS Clinical Classifications Team.

Appendix 2

Results of the Board member survey

Responses were received from 17 of the Board members in the Health Board.
The breakdown of responses is set out below.

Exhibit A2a: Rate of satisfaction with aspects of coding

	How satisfied are you with the information you receive on the robustness of clinical coding arrangements in your organisation?		How satisfied are you that your organisation is doing enough to make sure that clinical coding arrangements are robust?	
	This Health Board	**All Wales**	**This Health Board**	**All Wales**
Completely satisfied	–	6	1	12
Satisfied	7	43	9	45
Neither satisfied nor dissatisfied	8	36	6	30
Dissatisfied	2	9	1	7
Completely dissatisfied	–	–	–	–
Total	17	94	17	94

Exhibit A2b: Rate of awareness of factors affecting the robustness of clinical coding

	How aware are you of the factors which can affect the robustness of clinical coding arrangements in your organisation?	
	This Health Board	**All Wales**
Full awareness	5	36
Some awareness	9	45
Limited awareness	3	12
No awareness	–	1
Total	17	94

Exhibit A2c: Level of concern and helpfulness of training

	Are you concerned that your organisation too readily attributes under performance against key indicators to problems with clinical coding?		Would you find it helpful to have more information on clinical coding and the extent to which it affects the quality of key performance information?	
	This Health Board	**All Wales**	**This Health Board**	**All Wales**
Yes	4	15	12	74
No	13	75	5	23
Total	17	90	17	97

Exhibit A2d: Additional comments provided by respondents from the Health Board

- This is an area that we are going to probe further via the IGC.
- I have answered yes to 'Are you concerned that your organisation too readily attributes under performance against key indicators to problems with clinical coding?' because I am concerned when I hear that our coding isn't as accurate as England NHS, and that is why we may appear to be underperforming against Non-Wales' NHS. However I am sure that our organisation is not over-recording things such as palliative care (which would result in a falsely positive picture). The more accurate our data is, the more we can use it for decision making, and so we need to have accurate coding but the current methods seem cumbersome and labour intensive. Perhaps other measures would be better?
- With regards to the question 'Would you find it helpful to have more information on clinical coding and the extent to which it affects the quality of key performance information?', more information is generally appreciated and whilst I have said yes this reflects ongoing development not a deficit. This issue is very much a subject area at Patient and Quality Safety.
- I think I have a good understanding of clinical coding, having spent time talking to our clinical coders. Our Board has been aware of clinical coding and its implications for performance data from its earliest meetings given the emphasis placed on this by our medical director.
- The issues around clinical coding are clearly explained and it is made clear which issues may be due to this and why and which are not. Board members regularly question and probe clinical coding issues and do not accept information on face value.

Appendix 3

Results of the medical staff survey

Responses were received from 10 of the medical staff for General Medicine, General Surgery, and Trauma and Orthopaedics in the Health Board. The breakdown of responses is set out below.

Exhibit A3a: Views of clinical coding

	Please choose the response which best describes your views of clinical coding?	
	This Health Board	**All Wales**
I have never heard of it	–	3
I am aware of it but it does not have direct relevance to me	–	10
I think it is important but it does not involve me	3	32
I think it is important and I am occasionally involved	4	64
I think it is important and I am regularly involved	3	21
Total	10	130

Exhibit A3b: Rate of satisfaction with aspects of coding

	How satisfied are you that you have a clear understanding of the purpose of clinical coding?	
	This Health Board	**All Wales**
Completely satisfied	1	15
Satisfied	5	60
Neither satisfied nor dissatisfied	3	33
Dissatisfied	–	16
Completely dissatisfied	1	4
Don’t know	–	–
Total	10	128

Exhibit A3c: A brief description of the areas that medical staff identified that they would like training to cover

- What does it mean, how is it done, and who does it?
- An understanding of the expectations for different seniority of coder.
- Involvement related to general surgery.
- What uses the data is put to. How we can improve its utility at the front door.
- Review the current understanding of procedures and the codes applied thereto.

Exhibit A3d: Involvement with clinical coding staff

	Do you have any involvement with clinical coding staff within this organisation?	
	This Health Board	**All Wales**
None	7	97
Occasional meetings	2	28
Monthly meetings	–	2
Weekly meetings	1	1
Total	10	128

Exhibit A3e: Engagement with validation and clarification of issues

	Have you been engaged in any clinical coding validation within the past two years, for example, checking that clinical coders have interpreted information in medical records correctly?		Have clinical coding staff sought clarification from you on episodes of care or patients you have been responsible for?	
	This Health Board	**All Wales**	**This Health Board**	**All Wales**
Yes	2	25	1	48
No	8	103	8	79
Total	10	128	9	127

Exhibit A3f: Availability of medical records

	Do medical records frequently go missing within this organisation?		Are temporary medical records used within this specialty?	
	This Health Board	All Wales	This Health Board	All Wales
Never	–	6	–	5
Rarely	3	29	1	15
Sometimes	3	44	2	38
Often	–	21	4	27
Frequently	4	31	3	45
Total	10	131	10	130

Exhibit A3g: Quality of medical records

	Overall, what is your opinion of the quality of medical records in this organisation?	
	This Health Board	All Wales
Very good	1	9
Good	1	24
Average	4	50
Below average	–	23
Poor	3	24
Total	9	130

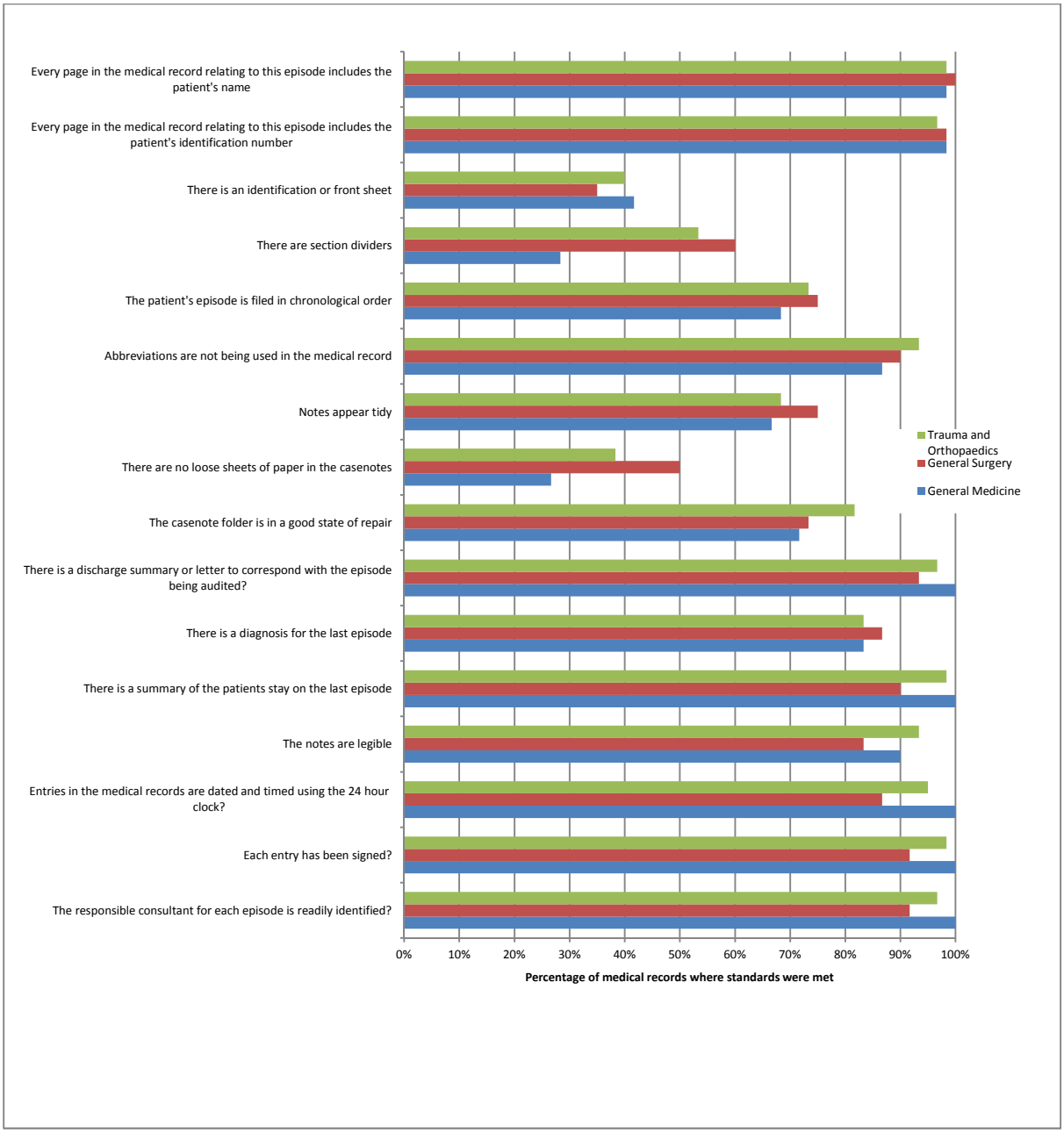
Exhibit A3h: Additional comments provided by respondents from the Health Board

- I am not sure that the staff who file medical records had training about these as case notes are frequently lost, not filed in the correct order and important pieces of information go missing. Clerical staff should have someone monitoring their work to make sure it is up to the standard.
- More attention needs to be paid to coding. Its importance is vital for risk adjusting/accuracy of results. The Welsh Government needs to resource it properly (as England does).
- The Health Board appears to rely heavily on electronic information for patient notes and thus lacks the impetus to obtain actual medical records. Although discharge summaries are readily available electronically this is no replacement for inpatient notes especially following recent discharges from hospital and subsequent re-admission. Patient notes can take several days to arrive on an acute ward.

Appendix 4

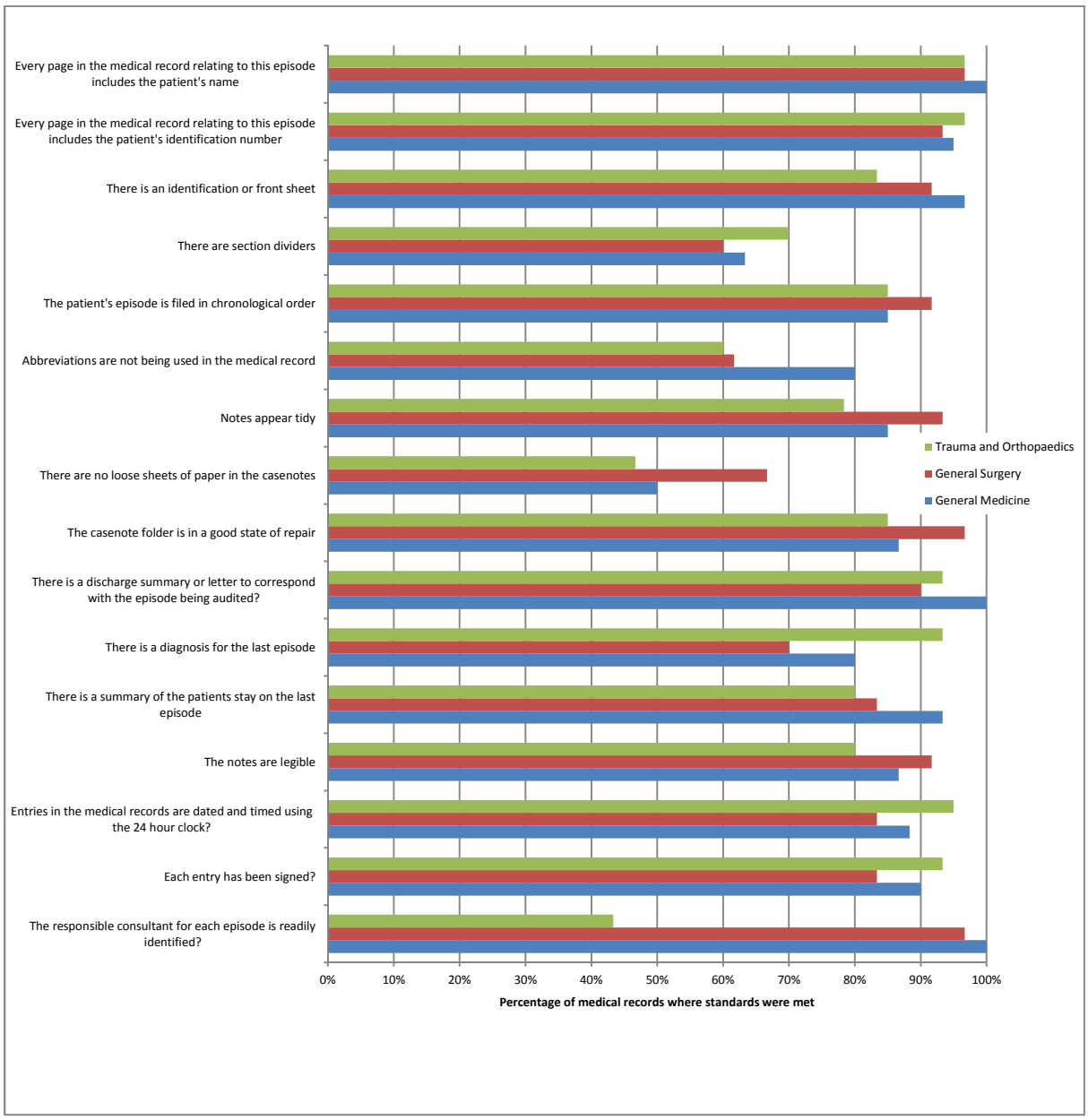
Compliance with the Royal College of Physicians' Standards for Medical Records by site and specialty

Exhibit A4a: Level of compliance with RCP standards by specialty at Royal Gwent Hospital



Source: Wales Audit Office

Exhibit A4b: Level of compliance with RCP standards by specialty at Nevill Hall Hospital



Source: Wales Audit Office

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