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Review of Clinical Coding

Cwm Taf University Health Board

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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.

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

Our main findings

10. Our review has concluded that while there had been a strong focus on improving the timeliness of management information, a range of weaknesses in the clinical coding arrangements and process are significantly reducing the accuracy of clinical coded data in Cwm Taf University Health Board (the Health Board) and backlogs in uncoded episodes are now increasing. The reason for our conclusion is that:

- Clinical coding has a high profile at Board level but coding needs more investment and there needs to be a greater focus on quality and accuracy:
  - whilst clinical coding has a high profile at board level and there is good awareness of the factors affecting its timeliness, there is little awareness of the accuracy of coding;
  - there is a clear line of accountability for clinical coding direct to Board level, and it features within the wider informatics arrangements, but there has been limited focus on ensuring good quality medical records to support clinical coding; and
  - despite an increase, financial resources for clinical coding do not appear to be sufficient and a greater investment in training and development of clinical coders is needed to help enhance the quality of clinical coding.
- The quality of clinical coding is weakened by poor quality medical records, aspects of staff management and a lack of clinical engagement and audit processes:
  - Policies and procedures are up to date and in line with national standards.
  - Access to, and the quality of, medical records is problematic although the clinical coders have good access to electronic information:
    - on average, clinical coders are getting access to medical records within six weeks of discharge although some can take longer than three months to reach the department;
    - the quality of medical records across the Health Board is not of a good standard, with key information required for accurate clinical coding often missing or inappropriately filed; and
    - clinical coding staff have full access to the relevant electronic information which is considered good practice.
  - The approach to clinical coding is now consistent across sites although the time it takes to code an episode can take longer at Royal Glamorgan Hospital (RGH).
  - There is little turnover within the clinical coding team, however, a lack of accredited clinical coding staff, mentoring for junior staff and succession planning presents risks.
  - There is limited clinical engagement in the clinical coding process.
  - Validation processes need to be improved and there are no routine audit arrangements.

- Clinical coded data is used appropriately and met the Welsh Government standards for 2012-13 but backlogs of uncoded episodes are increasing and there are significant problems with the accuracy of coding, the implications of which need to be clearly identified to the Board:
  - Clinical coded data met the validity and consistency standards for 2012-13, and was completed within the three month window but backlogs are starting to increase and the review of accuracy identified some significant error rates:
    - the Health Board achieved the national validity and consistency standards for data derived by clinical coding;
    - the Health Board achieved the Welsh Government target that activity should be coded within three months, however, this may have come at a cost to the accuracy of coding and performance is now not being sustained with backlogs in workload starting to increase; and
    - although the Health Board performs comparatively well against CHKS indicators, the review of clinical coding accuracy identified error rates ranging between 6 and 39 per cent.
  - Clinical coded data is being used appropriately throughout the health board although the implications of poor clinical coding on management information need to 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 medical records throughout the Health Board;
- clarifying roles and responsibilities for medical records amongst clinical support staff, such as ward clerks and medical secretaries, including filing and general record maintenance;
- adopting and implementing the standards of the Royal College of Physicians (RCP) for medical records;
- developing a programme of routine audits of medical records to provide assurance that the quality of medical records is improving;
- reviewing the arrangements for filing result slips in medical records, taking into consideration the electronic reporting function of clinical systems; and
- putting steps in place to ensure that medical records are released to clinical coding teams as soon as possible after discharge.

Clinical coding resources

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

- setting out a clear plan for succession planning of staff over the next five years, which will provide an opportunity for developing a clear career pathway and implementation of the accredited clinical coder qualification;
- providing support for members of the team to achieve the clinical coding auditor qualification, and the implementation of a local programme of clinical coding audits;
- reviewing the allocation of workload across the teams to ensure that clinical coding demand is evenly distributed;
- encouraging whole team meetings which bring together all clinical coding staff from across the sites;
- using opportunities presented by team meetings and individual appraisals to provide regular feedback to staff on issues raised through validation and audit; and
- monitor and manage high levels of productivity to ensure that the need for timeliness does not impact on the accuracy of clinical coding.

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 such as audit sessions;
- raising the awareness of the location of the clinical coding teams across the sites; and
- encouraging clinical coding staff to engage clinicians in the validation process and to visit clinical areas.

Board engagement

R4 Build on the good engagement that already exists with the Board to ensure that the implications of clinical coding on performance management, and the wider management processes in the NHS, are fully understood. This should include:

- providing short briefing material which clearly sets out the implications of poor clinical coding (reflecting timeliness, completeness and accuracy) on key performance indicators;
- ensuring that papers that are underpinned by clinical coding data, such as the performance management report, planning documents include a statement which sets out the robustness of the data; and
- alongside the clinical coding performance for the rolling 12-month period, providing the total level of uncoded activity which is outstanding from previous periods.

Source: Wales Audit Office 2013

Detailed report

Clinical coding has a high profile at Board level but coding needs more investment and there needs to be a greater focus on quality and accuracy

Whilst clinical coding has a high profile at Board level and there is good awareness of the factors affecting its timeliness, there is little awareness of the accuracy of coding

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 16 of the Board members in Cwm Taf University 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 in the Health Board appear to be aware of clinical coding, and have a high degree of assurance that clinical coding arrangements are robust with:

- all board members who responded to the survey reporting that they had full or some awareness of the factors affecting the robustness of clinical coding;
- fifteen out of 16 board members (94 per cent) reporting that they were satisfied or completely satisfied that the Health Board was doing enough to make sure that clinical coding arrangements were robust; and
- fifteen out of 16 board members (94 per cent) reporting that they were satisfied with the information they received on the robustness of clinical coding arrangements in the Health Board.

15. A review of board papers shows that information related to clinical coding and the key issues facing the Health Board in respect of clinical coding performance have routinely been raised with the Board, and its sub-committee responsible for finance and performance since 2012. The profile of clinical coding at Board level was further enhanced following the publication of mortality rates in March 2013, where there was clear recognition by board members of the associated link between mortality data and the underpinning clinical coding.

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

16. During the financial year 2012-13, the regular performance reports to the Board were reporting significant backlogs in coding activity (ie, activity still waiting to be coded outside the three month window and therefore not available for reporting purposes). The risks to other reported performance data as a result of clinical coding backlogs have been clearly identified by the Board. Consequently clinical coding has featured as an 'extreme' risk in the Health Board's Corporate Risk Register. In response to this risk, a detailed business case was presented to the Board in October 2012 for additional resources. This was in the form of overtime from current staff to help reduce the reported backlog. This business case was supported, and the Health Board met the WG target for clinical coding to be completed within three months by March 2013.

17. The focus to date at Board level, however, has been on timeliness and completeness, which is driven predominantly by the Welsh Government target and the internal need to focus on coding deceased patients quickly to support the reporting of mortality performance. In common with much of Wales, there has been no focus on the accuracy of clinical coding. While the Board can be assured as to whether hospital activity is being coded in time, there is currently no mechanism for providing assurance that the resultant clinical coded data is accurate.

There is a clear line of accountability for clinical coding direct to Board level, and it features within the wider informatics arrangements, but there has been limited focus on ensuring good quality medical records to support clinical coding

18. In the Health Board, the Director of Planning and Performance has executive responsibility for clinical coding. Below this, the responsibilities for day-to-day management are through the Assistant Director of Performance and Information, the Head of Performance and Information, and subsequently the Clinical Coding Manager who oversees the clinical coding function. There are two main clinical coding teams, based at Prince Charles Hospital (PCH) and RGH respectively; with an outreach service at Ysbyty Cwm Cynon to support the clinical coding of episodes undertaken in the community setting. The Clinical Coding Manager is based at RGH, so to provide day-to-day supervision at PCH, a Clinical Coding Supervisor was appointed in January 2013. These arrangements provide a clear line of accountability for clinical coding from Board level through to operational coding staff.

19. The Director of Planning and Performance has had direct involvement in the clinical coding function, and consequently has a very strong understanding of the coding function and the importance that clinical coding has. This is positive for the Health Board and is demonstrated through the high level of awareness of Board members as a consequence of the Director's keenness to raise issues to the Board and act as a champion for clinical coding.

20. A data quality steering group was established in January 2013 with one of its core objectives 'supporting timely and complete clinical coding'. However, there has been little reference to clinical coding in the business of the group to date, with the focus predominantly on clinical data recorded at source. We recognise that it is important that the Health Board focuses on ensuring the source data used to inform the clinical coding process is of good quality. However, the Health Board also needs to be assured that the resultant clinical coded data is also of good quality, as it is this data that is used for reporting purposes. A data quality audit programme has been established which has the potential to look at the quality of clinical coding, however, to date clinical coding does not form part of the audit programme.

21. Although the focus of the steering group is about data quality relating to both paper and electronic records, discussions to date have also appeared to be predominantly focused on electronic sources. Although a proportion of information is available electronically, a patient's medical record is a vital source of information to enable clinical coders to accurately record the diagnoses and procedures relating to a hospital stay. Consequently, it is recommended that clinical coders code directly from medical records. What is written in the medical records, and how it is written, therefore has an effect on the accuracy of clinical coding.

22. Medical records had previously formed part of the Clinical Support Division, but a vacancy at the directorate level for two years has resulted in the focus on medical records being lost in the Health Board. As part of our medical staff survey, we asked the opinion of staff of the overall quality of medical records. Four out of 13 medical staff (15 per cent) reported that the overall quality of medical records was good or very good. A further seven reported them as average, and two reported them as being below average or poor. The full results from our medical staff survey can be found in Appendix 3.

23. Our fieldwork identified that there were mixed views as to whether the Health Board had adopted the RCP standards[3], or any local standards, to improve the quality of its medical records. This was confirmed in the responses from the medical staff survey undertaken as part of this review, which indicated:

- 10 out of 13 medical staff (77 per cent) were aware of the RCP standards; and
- 5 out of 13 medical staff (38 per cent) said that standards had been adopted by the Health Board.

[3] 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 RCP's Health Informatics Unit (HIU) and funded by NHS Connecting for Health.

24. One way of improving the quality of medical records is by embedding the importance of medical records in the training of staff. Medical records have not featured in training for medical staff in the Health Board for some time, with only two out of 13 medical staff (15 per cent) reporting that they have received training on improving medical records over the last two years. There is also no medical records training for support staff including ward clerks and medical secretaries. We understand that medical records are now part of the induction training programme for junior doctors.

25. Management of medical records now sits within the Anaesthetics, Critical Care and Theatres Division and a Health Records Committee has recently been re-established, with the Clinical Coding Manager a member of the group. The Health Records Committee now needs to give the necessary focus to medical records to ensure that the quality of the record is sufficient to enable coders to code accurately.

Despite an increase, financial resources for clinical coding do not appear to be sufficient and lack any commitment for training and development which would enhance the quality of clinical coding

26. 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 both in terms of 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.

27. Currently, only information relating to hospital admissions (in the form of finished consultant episodes), 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 who are not admitted.

28. The budget allocated for clinical coding in the Health Board has increased. The annual budget for clinical coding for 2013-14 is in the region of £475,000, an uplift of three per cent on the budget set for the previous financial year. However, expenditure for the financial year 2012-13 was in the region of £520,000 which would suggest that the uplift in the budget may not be sufficient going forward. Approximately £60,000 of the expenditure during 2012-13 was on overtime, part of which was approved by the Board in order to meet the Welsh Government target by the end of March 2013.

29. Staffing accounts for the entire budget. As at 30 June 2013, the Health Board's clinical coding department had a total funded establishment of 19.7 full-time equivalents (FTEs). Staffing levels have increased since March 2012 when the funded establishment was 17.1 FTEs.

30. The core clinical coding team (ie, those staff whose primary role is to undertake clinical coding) is 16.1 FTEs (consisting of 15.6 FTEs at Band 4, plus 0.5 of the clinical coding supervisor role). In accordance with national guidance, the remit of the clinical coding team in the Health Board covers all finished consultant episodes, plus procedures undertaken in outpatient clinics. Emergency department attendances are also coded if patients are subsequently admitted to a ward.

31. If demand from finished consultant episodes (FCEs) 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 16.8 FTEs[4]. This is based on a recognised standard workload level of 30 FCEs per day per full-time coder. This would indicate a shortfall in the current staffing establishment for the core clinical coding team of 0.7 FTE. Coding of outpatient procedures is currently completed by administration staff within the coding team through the use of standard data collection proforma.

32. 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. All coding staff in the Health Board have attended these courses.

33. There is currently, however, no Health Board budget for training and development over and above the training provided centrally. This would include training to support staff to complete the nationally recognised accredited clinical coding qualification which is acknowledged would enhance the quality of clinical coding, as well as the advanced modules of clinical coding auditor and clinical coding trainer which would support the Health Board to develop its own programme of clinical coding accuracy reviews.

34. The Health Board does not require any of its clinical coding staff, including the manager and supervisor to be accredited at appointment, or to gain accreditation whilst in post. All of the clinical coders are currently at Band 4, and none of them are accredited clinical coders. In other health boards, staff must achieve the accredited clinical coding qualification to fulfil a Band 4 role.

35. The newly appointed supervisor, however, is an accredited clinical coder.
The supervisor had also been an accredited clinical coding trainer in the past, but due to an inability to maintain her competences, the trainer qualification has since lapsed. There has been no support offered to maintain and extend her qualifications since her appointment to Cwm Taf University Health Board. There are no clinical coding auditors in the Health Board.

[4] 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)).

The quality of clinical coding is weakened by poor quality medical records, aspects of staff management and a lack of clinical engagement and audit processes

Policies and procedures are up to date and in line with national standards

36. The Health Board has an up-to-date clinical coding policy, which is reviewed on an annual basis. It sets out the clinical coding structure across the Health Board and the processes that should be followed by all clinical coding staff when coding activity. The document is easy to read, and is a useful guide for staff, particularly newly appointed staff, as reference material.

37. When coding activity, it is vital that coders adhere to national standards so as 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.

38. 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 is proactively involved in these groups through the Coding Manager, with open channels of communication between the coding teams and the Clinical Classifications Team in NWIS.

39. 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 one supplementary procedure in place for Abdominal Aortic Aneurysms which complies with national standards.

Access to, and the quality of, medical records is problematic although the clinical coders have a good level of access to electronic information

On average, clinical coders are getting access to medical records within six weeks of discharge although some can take longer than three months to reach the department

40. 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.

41. 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. As part of our fieldwork, we undertook a tracking exercise, using the medical records tracking tool[5], 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.

42. We did not undertake the tracking review in RGH. For the period that we reviewed, clinical coders in RGH accessed medical records directly on the ward as soon as the patient was discharged. Unless there was a specific need, clinical coders did not routinely access those medical records again. This approach stopped in March 2013 and the coders adopted the approach taken in PCH, whereby medical records were routed through to the clinical coding department.

43. Based on a sample of 47 patients across the three specialties reviewed, we identified that it took an average of six weeks for the patients' medical records to reach the clinical coding team at PCH from the point of discharge or transfer. We also identified that just over 10 per cent of records took longer than three months to reach the clinical coding team, giving the coding team no opportunity to meet the Welsh Government target for timeliness of coding relating to these patients. More detail is provided in the following exhibit:

[5] 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 Cwm Taf University Health Board, the tracking tool forms a specific module on the Myrddin PAS system.

Exhibit 1: Speed of access to medical records following discharge or transfer in Prince Charles Hospital

		General Medicine	General Surgery	Trauma and Orthopaedics
Speed of accessing medical records (weeks)	Average	6.2	5.6	6.1
	Shortest	0.6	0.1	0.3
	Longest	19.1	13.3	11.4
Percentage of medical records received by the coding team…..	…within four weeks (one month) of discharge	40%	31%	27%
	…within eight weeks (two months) of discharge	75%	81%	55%
	…within 12 weeks (three months) of discharge	85%	88%	100%

Source: Wales Audit Office 2013

44. 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 fieldwork, there was one established FTE runner based at PCH, and a part-time runner (0.6 FTE) based at RGH who had recently been appointed on a trial basis.

45. A diary exercise undertaken for a period of one week[6] indicated that the runner had a positive impact on the activity of the clinical coding department at PCH, with coding staff spending less than two per cent of the working week locating medical records. The proportion of time spent on locating medical records was greater at RGH at seven per cent. At the time of the diary, the part-time runner only covered a small number of specialties, thereby resulting in coding staff having to source medical records for other specialties.

[6] A diary exercise was completed for one week for full-time staff, and two weeks for part-time staff. Following the pilot, the diary exercise undertaken across other NHS bodies was extended to two weeks for all staff.

46. The dedicated runners in post identified problems accessing medical records on the wards with reluctance from ward clerks to release them. This often meant that runners were returning to the clinical coding department with only small numbers of medical records. One of the main reasons for this reluctance was the need for ward clerks to file discharge summaries and result slips into the records prior to their release. Workloads on wards and access to medical staff to sign the result slips were identified as problematic, causing medical records to be held up on the wards. On one ward, we were shown a number of boxes full of result slips waiting to be filed. This issue needs to be resolved to ensure that medical records are freed up in a timely manner.

The quality of medical records across the Health Board is not of a good standard, with key information required for accurate clinical coding often missing or inappropriately filed

47. 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 high quality, in terms of the way the medical record is ordered and the completeness of the information that it contains.

48. As part of our fieldwork, we reviewed a sample of 167 medical records across the three specialties reviewed in both hospitals. The review was based on 16 of the RCP standards. Of the 167 medical records in the sample, we were unable to review 10 per cent as they contained no record relating to the specific episode of care that we were reviewing. Of the remaining medical records, the standard of medical records was marginally better at PCH than at RGH. More detail is provided in the following exhibit.

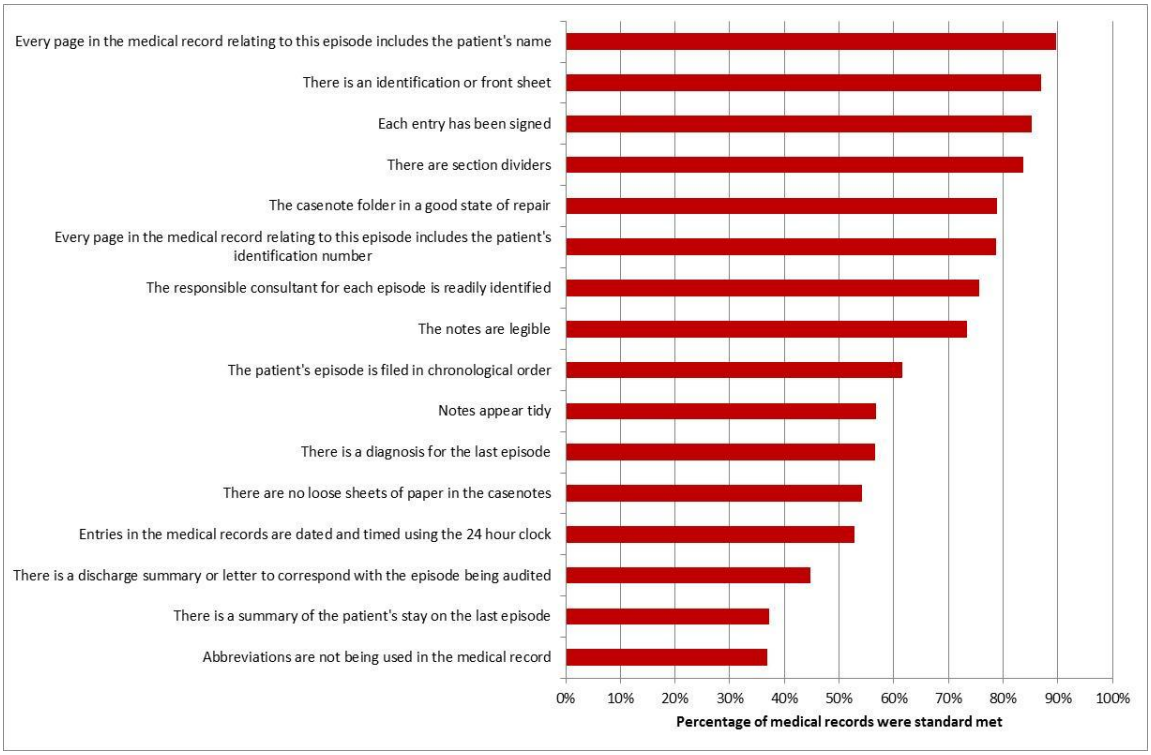
Exhibit 2: Overall percentage level of compliance with RCP standards by hospital site and specialty

	General Medicine	General Surgery	Trauma and Orthopaedics
Prince Charles Hospital	66%	66%	70%
Royal Glamorgan Hospital	62%	67%	64%

Source: Wales Audit Office 2013

49. The medical records team has 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 rests 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 these staff. This includes ensuring that abbreviations are not being used, ensuring that records relating to episodes are filed in chronological order with no loose sheets, and ensuring that the medical record contains a discharge summary. 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 2013

50. Although our survey of medical staff would suggest that doctors are generally aware of their responsibilities in relation to medical records, our fieldwork identified that many of the support staff did not recognise that medical records are also their responsibility. Awareness of the responsibilities associated with medical records and the importance of having good record keeping therefore need to be raised across the Health Board as a matter of priority.

Clinical coding staff have full access to the relevant electronic information, which is considered good practice

51. 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 (Telepath). 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.

52. All clinical coding staff across the Health Board have access to a full range of clinical information systems, including a number of specialty specific systems, such as maternity and operating theatres. This is identified as good practice.

53. It is also important that clinical coders have access to the internet and intranet to allow the staff to access the necessary training and resources available. Clinical Coding Communications from NWIS are also issued by email so having access to an NHS email account is of equal importance. All clinical coding staff in the Health Board have full access to internet, intranet and email. This is also identified as good practice.

The approach to clinical coding is now consistent across sites although the time it takes to code an episode can take longer at Royal Glamorgan Hospital

54. Staff are located across a number of sites, so it is important that the clinical coding policy promotes consistency in coding practices. During our review, we found that clinical coding practices were consistent, although this had only been in recent times.

55. With the exception of the member of staff based at Ysbyty Cwm Cynon, staff are located in a specific District General Hospital (DGH) site, either PCH or RGH. The majority of their workload focuses solely on the activity within the base DGH site and its respective community hospitals, although when workload is under pressure, staff will work across sites.

56. 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.

57. The Health Board has adopted a general approach across the clinical coding teams at the two DGH sites. The 'runners' will locate records and file them in the clinical coding department in month order. Coders will then take the records in chronological order to code, regardless of the specialty to which the episode relates. During our fieldwork, we identified that there was support within each of the teams to raise and discuss specialty queries, however, the teams rarely met as a whole department.

58. Coding from medical records in the department is now common practice across the two main teams, however, up until March 2013, coders in the RGH coded from hand written notes created after reviewing the medical records whilst they were still on the ward. These written notes would then be filed in chronological order in the department to await processing. Given the general allocation of workload in the teams, this could mean that the member of staff who actually completed the coding was not the same member of staff who created the notes at the ward. This poses risks to the quality of coded data during the period that this approach was in place because of the inability to read someone else's writing. We are also aware that when the coders were on the ward, they were placed under time pressure by ward staff to review the notes. This poses a risk that key information may have been overlooked. Although this approach has now stopped, the coded data from that period is still being used for management purposes.

59. The clinical coding teams will also prioritise deceased patients to ensure that mortality data, to inform the Risk Adjusted Mortality Index (RAMI), is available. Prioritisation of deceased patients can, however, distort the 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 full account of the live patients not yet coded in the time periods in question. We recognise the reasons for prioritising deceased patients, however, this prioritisation should not overlook the need to code all patients in a timely manner.

60. As part of our review to understand the speed in 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. Our review at PCH identified that once medical records were received in the department, cases were coded relatively quickly, with:

- 47 per cent of records coded within three days.
- 72 per cent of records coded within a week.

- 84 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 76 per cent of general medicine notes coded within a fortnight.

61. Although we were unable to complete the tracking review at RGH, we were able to ascertain the time it took episodes to be coded. Bearing in mind that the relevant information was extracted from the medical records on the ward, very few were coded while the information was still fresh. On average, it took 10 weeks for the information to be coded, with only 57 per cent coded within the three month Welsh Government target. This poses further risk to the quality of coding undertaken during the time when medical records were accessed at the point of discharge, as the ability to interpret the information extracted from the hand written notes becomes more difficult over a longer period of time.

62. Given the consistent approach to coding, the variations in the time it takes to code episodes could suggest that there is an imbalance in staffing levels to meet demand.

63. The establishment of a clinical coder at Ysbyty Cwm Cynon is positive. Patients receiving rehabilitation will be transferred from the main DGH sites and, unless coders access the notes prior to transfer, it can become difficult to access the medical records for these patients in a timely manner in order to code the acute inpatient episode. The clinical coder at Ysbyty Cwm Cynon provides the opportunity to access the notes and complete the necessary coding whilst the patient is receiving rehabilitation on the ward.

64. Clinical coding across the Health Board is currently carried out using an electronic encoder system called Medicode which is linked to the Health Board's PAS. The version of Medicode used across the teams is consistent and the most recent version of the software is being used.

There is little turnover in the clinical coding teams however a lack of accredited clinical coding staff, mentoring for junior staff and succession planning present risks

65. There have been a number of appointments in the last 12 months following the recognition of the need to invest in the service as discussed earlier in paragraph 29. The department is also currently supported by a student on a government scheme at limited cost to the Health Board. As at 30 June 2013, the vacancy rate within the department was low at two per cent. All of the established posts in the Health Board's clinical coding department were filled, with the exception of 15 hours at Band 2 level. However, one member of staff at Band 4 level has been on a substantive period of leave for some time and this post has not been backfilled, causing pressure on the core clinical coding team which we have identified is already under resourced in paragraph 31. Despite this, the workforce is stable with no staff leaving the department in the last two years.

66. The level of clinical coding experience within the department is significant, with 74 per cent of the staff having experience spanning more than 10 years. However, 32 per cent of the clinical coding staff (six members of staff) are aged 56 and over, and are likely to retire in the next five years. The recent appointments to the department support succession planning to some extent; however, it can take up to 18 months for a new member of staff to achieve the required level of competence to code. Further consideration needs to be given to succession planning for potential retirements in 2017 and beyond.

67. New starters to the department are not classed as supernumerary and are therefore given their own allocation of work early on in their appointment. The Health Board's policy indicates that junior coders should be mentored by senior staff, with coding checked and amended before being entered on to the system. However, this mentoring can place pressure on senior staff in terms of time commitments, with the potential that these checks are missed if there are demands on the team from backlogs. Our diary exercise indicated that just one per cent of the time was spent on mentoring and checking the work of others. We recognise that some mentoring of junior staff rests with the supervisor and manager, however, mentoring and checking of work also sits with the Band 4 role. It is important to ensure that resources are in place to train and support these individuals to ensure that they have solid foundations to code accurately.

68. Despite the intention to recruit new staff at Band 3, all of the clinical coding staff are currently employed at Band 4 regardless of their level of experience. In other health boards, new clinical coding staff would be appointed at Band 3, with the need to acquire the Accredited Clinical Coding (ACC) qualification to progress to Band 4. Only supervisor and manager posts are paid at higher bands, with the exception of clinical coding staff in English NHS trusts where there is a clear expectation that staff are ACC qualified. If the Health Board is to improve the quality of its clinical coding, it needs to consider introducing the ACC qualification, and requiring staff at Band 4 level to be working towards the qualification.

There is limited clinical engagement in the clinical coding process

69. 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.

70. Within the Health Board, there is limited clinical engagement with clinical coding. Ten of the 13 medical staff responding to our survey reported that they were generally satisfied with their understanding of clinical coding. The survey identified that although all of the medical staff recognised the importance of clinical coding, 10 out of the 13 said that they had no involvement with clinical coding within the Health Board.

71. Our diary exercise confirmed that clinical engagement is limited with no time recorded for liaison with clinicians by coding staff during the period reviewed.

72. Where a clinical coding team is based within a hospital can be an important factor for clinical engagement. The team at RGH is co-located with the medical records department and is based at the front of the hospital in the vicinity of many of the wards, which should encourage clinical engagement.

73. The location of the clinical coding team at PCH does not encourage clinical engagement as it is located away from the main clinical areas. The team is based next to the catering department with plans in place to move the team to temporary accommodation in the car park. This is part of the Health Board's response to managing its asbestos problem. This has the potential to reduce the ability to engage with clinical staff further as well as create morale issues with the clinical coding staff who were concerned about the move to the car park.

74. Despite having mixed locations for the clinical coding teams, with the team at RGH more prominent than counterparts in PCH, nine out of the 13 medical staff responding to our survey said that they did not know where the clinical coding staff were based.

75. 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 or patients, where necessary and to generally be visible with the clinical areas. Only four out of the 13 said that clinical coding staff had sought clarification from them on episodes of care or patients they had been responsible for. All medical staff responding to the survey said that the clinical coding staff were rarely or never visible.

76. As is the case with medical records, up until August 2013 clinical coding has not formally featured in induction training for junior doctors, nor has it featured as part of general training for medical staff through forums such as specialty audit meetings. Only two of the 13 of medical staff said that they had received any form of training on clinical coding in the last two years although seven identified that they would like to receive training to improve their knowledge on the process involved.

Validation processes need to be improved and there are no routine audit arrangements

77. 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. The encoder system Medicode provides some automated validation of coding as it is input onto the system. In the Health Board, the Clinical Coding Manager will also run a validation report to identify any basic errors in codes that have been assigned. However we were told that there is currently no process for feeding back the errors to the clinical coding staff to ensure that the same errors are not made again in the future. The clinical coding staff hold regular meetings at each of the sites and all staff are reported to have received an annual performance appraisal and development review. Both of these mechanisms provide opportunities to feed back issues with the validity of clinical coding to staff.

78. 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 no reference to clinical coding in any of the meetings undertaken over the last 12 months for the specialties that we reviewed. The findings of the medical staff survey support this case with only:

- Only three out of the 13 reported that they had been engaged in validation of clinical coding over the last two years.
- Four out of 13 reported that a representative from clinical coding attended a meeting that they had been present at to provide input into the discussions. A further one said that they were unsure.

79. The Clinical Coding Manager, however, is involved in mortality reviews which do provide an opportunity to identify issues with the validity of clinical coding and opportunities to strengthen clinical engagement.

80. As well as routine validation, one way of providing assurance of the quality of clinical coding is to undertake detailed audit reviews. There has been no local programme of clinical coding audit in the Health Board, nor has there been any audit reviews undertaken in the last two years. A lack of a qualified clinical coding auditor within the Health Board means that a local programme of clinical coding audit cannot be put in place. In light of the previous lack of national programme of clinical coding audit, other health boards have commissioned external bodies who have the necessary skills to audit clinical coding. No external reviews have been commissioned by the Health Board. We understand that since our fieldwork a programme of departmental internal audits have now been established.

Clinical coded data is used appropriately and met the Welsh Government standards for 2012-13 but backlogs of uncoded episodes are increasing and there are significant problems with the accuracy of coding, the implications of which need to be clearly identified to the Board

Clinical coded data met the validity and consistency standards for 2012-13, and was completed within the three month window but backlogs are starting to increase and the review of accuracy identified some significant error rates

The Health Board achieved the national validity and consistency standards for data derived by clinical coding

81. In 2008, 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.

82. 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.

The Health Board achieved the Welsh Government target that activity should be coded within three months, however, this may have come at a cost to the accuracy of coding, and performance is now not being sustained with backlogs in workload starting to increase

83. In Cwm Taf University Health Board, there has been considerable focus on the timeliness and completeness targets with additional resources invested in the service in October 2012 through the payment of overtime for existing staff. The Health Board had failed to meet the three month target for completion which had been applied in 2011-12, but went on to exceed the revised target in 2012-13 for completion at 96.6 per cent.

84. Using the recognised standard workload of 30 FCEs per day, the Health Board has set out its expected productivity level for each member of staff. The clinical coding staff are routinely monitored on their productivity to the extent that the staff informed us during the fieldwork that they felt that they had been placed under significant pressure to code quickly to meet the target. Productivity reports indicated that some staff were not meeting their expected productivity levels whilst one member of staff was significantly exceeding their expected productivity levels, which poses questions over the accuracy of their coding.

85. The overtime to support the timeliness target has now ended although the new appointments to the teams have replaced that extra capacity that overtime payments had provided. Recent information set out in the Health Board's Integrated Performance Dashboard indicate that the clinical coding teams are not quite sustaining performance against the targets. In November 2013, performance was reported as:

- 81.8 per cent of activity for May 2013 coded within the three-month window, compared with the target of 95 per cent; and
- 96.0 per cent of activity coded within the three month window within a rolling 12-month period, compared with the target of 98 per cent.

86. As part of our fieldwork we requested the backlog position as at 30 June 2013. This was reported as being 1,833 FCEs, which represents 1.8 per cent of uncoded episodes and correlates with the Health Board's achievement against the target. The level of backlog reported in the November 2013 Integrated Performance Dashboard was in the region of 3,620 FCEs (3.9 per cent of uncoded episodes). However, this only related to the episodes completed within the twelve month period 1 June 2012 to 31 May 2013. The Health Board also has a backlog from previous periods which is not reported in the Integrated Performance Dashboard. The total backlog for the Health Board is estimated to be in the region of 27,199 FCEs.

Although the Health Board performs comparatively well against CHKS indicators, the review of clinical coding accuracy identified error rates ranging between 6 and 39 per cent

87. 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 the accuracy of coding, as measured by CHKS is better than the all-Wales comparison for some areas, although the use of a 'non-specific' diagnosis code was greater (Exhibit 4).

Exhibit 4: Comparison with the CHKS indicators for the financial year 2012-13

	Health Board Acute (%)	All Wales Acute (%)	Health Board Community (%)	All Wales Community (%)
Use of an invalid primary diagnosis code	0.3	0.5	0.2	0.2
Unacceptable primary diagnosis	0.3	0.6	0.2	0.3
Diagnosis code of 'non-specific' provided	16.9	14.5	22.1	14.8
Sign and symptom provided as primary diagnosis	11.1	11.5	2.5	12.1
Use of an invalid procedure code	–	0.2	–	0.3

Source: Cwm Taf University Health Board 2012-13

88. 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 173 episodes across the two main sites. A total of 12 episodes were unable to be reviewed as the medical records did not contain information relating to the episode being audited.

89. 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.

90. The review indicated some significant 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 Prince Charles Hospital	Percentage of codes recorded correctly at Royal Glamorgan Hospital
Primary Diagnosis	60.6	71.0
Secondary Diagnosis	65.7	64.6
Primary Procedure	71.4	85.4
Secondary Procedure	94.1	77.1

Source: NWIS Clinical Classification Team

Clinical coded data is being used appropriately throughout the Health Board although the implications of poor clinical coding on management information need to be made more explicit to the Board

91. 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 outcomes measures such as the Risk Adjusted Mortality Index (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.

92. Performance reports to the Board and its sub-committees have clearly stated the condition of the clinical coding data in terms of timeliness and completeness, and the implications that backlogs can have on reported performance indicators, for example. However, no reports to date have included the implications of inaccurate clinical coding. The RAMI for example takes into account co-morbidities which should be recorded through the use of 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 173 episodes reviewed, a total of 150 secondary diagnosis codes were missing. Conversely, 29 secondary diagnosis codes had been assigned to patients that were considered irrelevant to the episode of care being reviewed.

93. Our survey of Board members identified that 14 of the 16 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.

94. 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 in 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 not the case in the Health Board, with 12 out of 13 board members reporting that they were not concerned that the Health Board too readily attributes under performance against key indicators to problems with clinical coding.

95. 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 the majority of medical staff are not using clinical coded data inappropriately, although two out of the 13 medical staff reported that they would use clinical coded data sometimes 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 is scheduled to take place across Wales between July 2013 and March 2014. Cwm Taf University Health Board acted as a pilot site to enable the Wales Audit Office 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 16 of the Board members in Cwm Taf University 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 13 out of 171 medical staff in Cwm Taf University Health Board.

Interviews and focus groups

Our review team carried out detailed interviews and focus groups in the Health Board during the weeks commencing 15 July 2013 (Prince Charles Hospital) and 19 August 2013 (Royal Glamorgan Hospital).

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 supervisor. 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 28 October 2013.

Clinical coding diary

Clinical coding staff were required to complete a diary for a period of two weeks. As the pilot site, full-time clinical coding staff in Cwm Taf University Health Board only completed the diary for one week. The diaries were completed during July 2013 (PCH) and September 2013 (RGH).

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 RCP standards for medical records. The sample period reviewed for Cwm Taf University Health Board was 1 January 2013 to 31 March 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 Cwm Taf University Health Board covered episodes completed between 1 January 2013 and 31 March 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 16 of the Board members in Cwm Taf University 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?	
	Cwm Taf University Health Board	All Wales	Cwm Taf University Health Board	All Wales
Completely satisfied	3	6	5	12
Satisfied	12	45	10	47
Neither satisfied nor dissatisfied	1	38	1	32
Dissatisfied	–	10	–	9
Completely dissatisfied	–	1	–	–
Total	**16**	**100**	**16**	**100**

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?	
	Cwm Taf University Health Board	All Wales
Full awareness	9	37
Some awareness	7	49
Limited awareness	–	13
No awareness	–	1
Total	**16**	**100**

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?	
	Cwm Taf University Health Board	All Wales	Cwm Taf University Health Board	All Wales
Yes	1	16	14	75
No	12	79	2	24
Total	**13**	**95**	**16**	**99**

Exhibit A2d: Additional comments provided by respondents from Cwm Taf University Health Board

- Issues related to Clinical Coding arose in 2012. This prompted discussions and increased focus on improving clinical coding and providing greater assurance. I feel confident that the Board will keep Clinical Coding on its 'radar'.
- I am aware that coding has been an issue and that significant resource has recently been allocated to this. I await confirmation in due course that robust coding processes are embedded in the organisation.
- I see clinical coding data monthly at the Finance and Performance Committee and I have ensured that the committee is fully briefed on the steps taken to maximise performance. The next step is to improve the quality of coding, now that the coding performance has been addressed. I am aware of measures being taken to improve the quality of coding.
- Probably an area I would benefit from further understanding but I'm sure if I asked the Execs would provide this willingly. I accept it's my responsibility to be proactive in areas where I may feel less knowledgeable.
- We have had a lot of discussion at board level regarding coding and have agreed an improvement programme. Where we were concerned about the relationship between RAMI and coding we took a paper to the Board exploring other proxy measures that could increase the confidence interval to provide assurance. That said, there is always more we can do to improve both timeliness and quality of coding. Until we have a live coding system that is undertaken by clinicians there will always be weaknesses in the system that require further scrutiny and improvement.

Appendix 3

Results of the medical staff survey

Responses were received from 13 of the medical staff for general medicine, general surgery and trauma and orthopaedics in Cwm Taf University 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?	
	Cwm Taf University 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	7	64
I think it is important and I am regularly involved	2	21
Total	**13**	**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?	
	Cwm Taf University Health Board	All Wales
Completely satisfied	3	15
Satisfied	7	60
Neither satisfied nor dissatisfied	2	33
Dissatisfied	–	16
Completely dissatisfied	1	4
Don't know	–	–
Total	**13**	**128**

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

- How to find out if specific conditions coded, how to be able to retrieve info myself.
- I'd like to know – who does it, who checks it, and why aren't clinicians fed back any data relating to their own practice (so that at least we could verify it).
- To ensure we are giving correct information to ensure accurate coding.
- How best to select operations from list when they do not seem to fit.
- Generic session giving the overview of clinical coding and then it would be useful to supplement this with something specialty specific ie, meeting with someone from coding to look at common codes applicable to our department and how they are being used.
- Single teaching session on coding in relation to patients.
- I would like to see a simple coding for surgical procedures.

Exhibit A3d: Involvement with clinical coding staff

	Do you have any involvement with clinical coding staff within this organisation?	
	Cwm Taf University Health Board	All Wales
None	10	97
Occasional meetings	3	28
Monthly meetings	–	2
Weekly meetings	–	1
Total	**13**	**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?	
	Cwm Taf University Health Board	All Wales	Cwm Taf University Health Board	All Wales
Yes	3	25	4	48
No	10	103	9	79
Total	**13**	**128**	**13**	**127**

Exhibit A3f: Availability of medical records

	Do medical records frequently go missing within this organisation?		Are temporary medical records used within this specialty?	
	Cwm Taf University Health Board	All Wales	Cwm Taf University Health Board	All Wales
Never	1	6	1	5
Rarely	3	29	1	15
Sometimes	4	44	5	38
Often	4	21	3	27
Frequently	1	31	3	45
Total	**13**	**131**	**13**	**130**

Exhibit A3g: Quality of medical records

	Overall, what is your opinion of the quality of medical records in this organisation?	
	Cwm Taf University Health Board	All Wales
Very good	2	9
Good	2	24
Average	7	50
Below average	1	23
Poor	1	24
Total	**13**	**130**

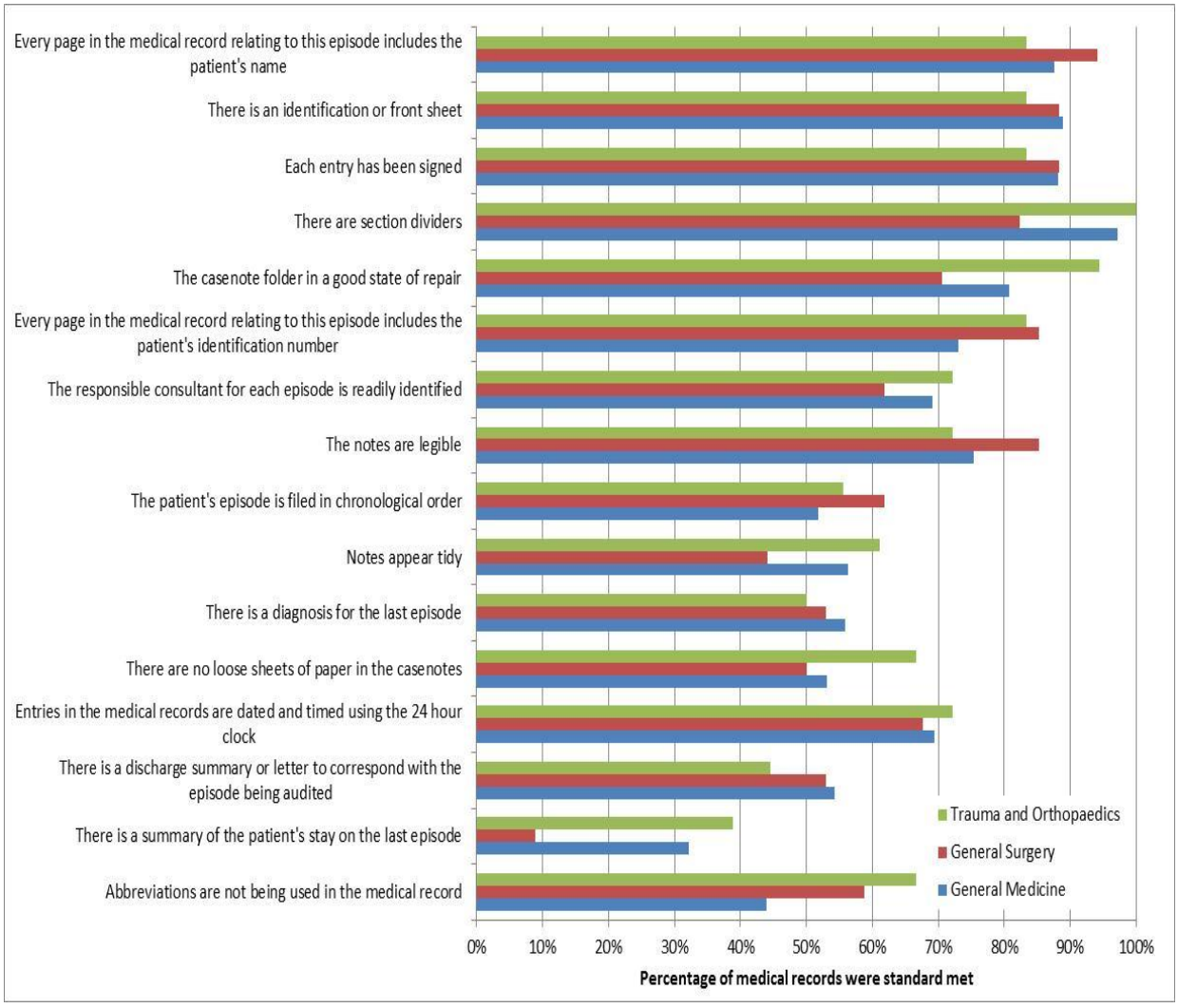
Exhibit A3h: Additional comments provided by respondents from Cwm Taf University Health Board

- Problems with filing related to lack of support staff on wards.
- Enormous backlog in coding which makes up-to-date analysis difficult as well as compliance with data entry in to national database.
- Within the medical directorate we have enforced the importance of record keeping with junior members of staff and introduced a form to be completed following a death to ensure that all co-morbidities are captured and to help with mortality reviews. It would be helpful if clinical coders could interact with junior medical staff more to ensure that they recognise the importance of coding and to ensure accurate coding occurs.

Appendix 4

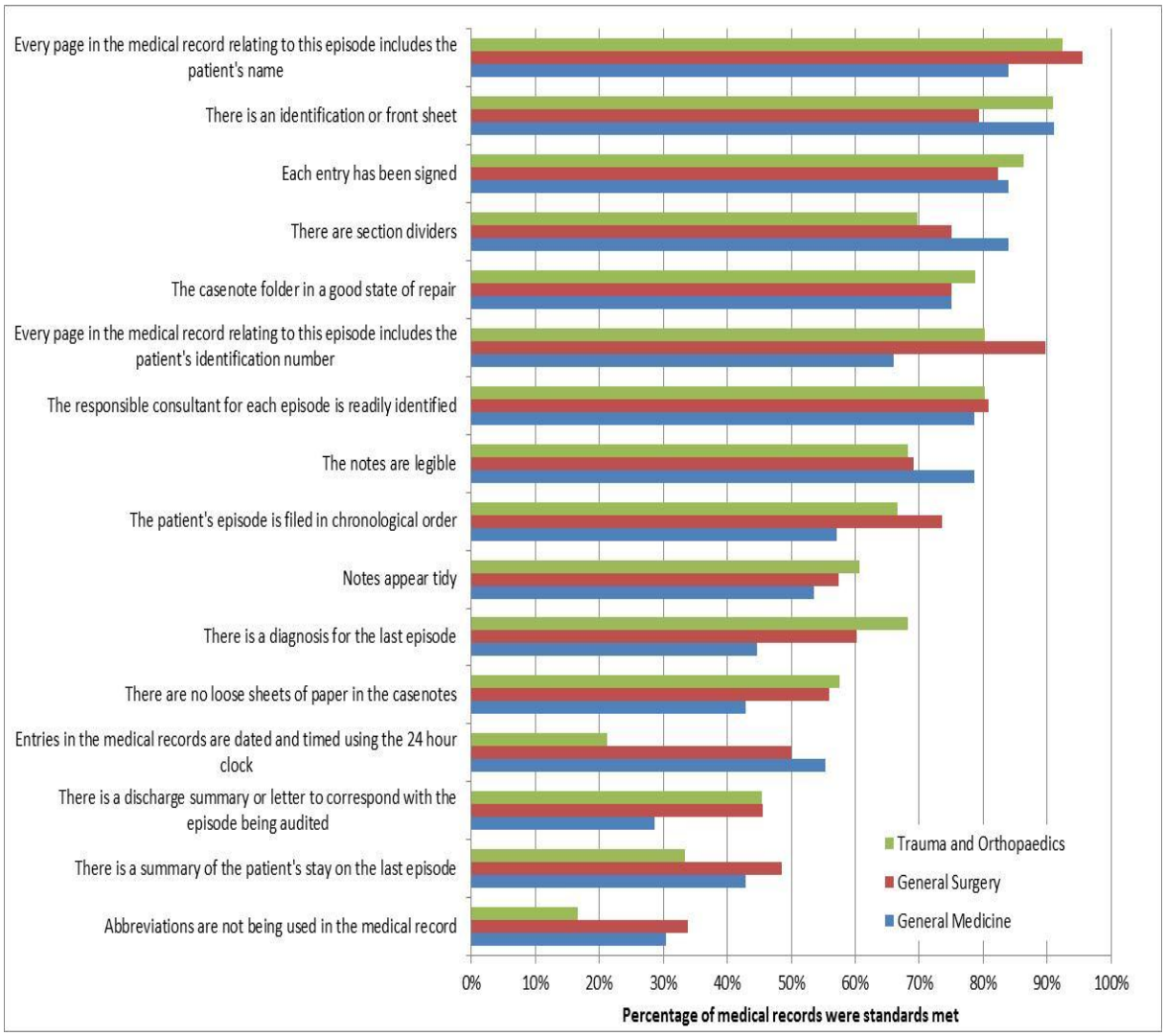
Compliance with the Royal College of Physicians' Standards for Medical Records by site and specialty

Exhibit A4a: Level of compliance with RCP standards by specialty at Prince Charles Hospital



Source: Wales Audit Office

Exhibit A4b: Level of compliance with RCP standards by specialty at Royal Glamorgan Hospital



Source: Wales Audit Office

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