Archwilydd Cyffredinol Cymru
Auditor General for Wales

Review of Clinical Coding

Hywel Dda University Health Board

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Hywel Dda University Health Board gives clinical coding a high profile, supporting it with a good level of investment, and is focused on improving the quality of management information although further improvements to local practices are required

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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 itself 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 Welsh Government were revised with immediate effect. These included:
    - a requirement for NHS bodies to meet the 95 per cent completion target (3 months post discharge) on a rolling basis, and not just at 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 Hywel Dda University Health Board (the health board) gives clinical coding a high profile, supporting it with a good level of investment, and is focused on improving the quality of management information although further improvements to local practices are required. The reason for our conclusion is that:

- The importance of clinical coding to support the effective operation of its business is recognised in the health board although more needs to be done to raise the profile of medical records and focus on accuracy

    Clinical coding is a corporate priority with a good awareness of the health board's arrangements at Board level but there is little awareness of the accuracy of coded data

    There is clear governance and accountability for clinical coding to the Board and coding is well integrated with wider informatics, however the inter-relationship between coding and medical records is weak

    There is sufficient resource allocated to clinical coding with an encouraging focus on training and development

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

- Many aspects of the clinical coding process are sound but clinical engagement is sometimes lacking, medical records are often poor and some records take a long time to be coded
  - Policies and procedures are up to date and in line with national standards , although there are some differences in local practices at Withybush
  - Access to information is generally good although it can take longer for some medical records to reach the coding departments and the quality of records is variable between sites with temporary notes posing risks
    - Coders are routinely accessing medical records quickly at Bronglais however there are issues with timeliness at other sites such as Withybush where it can take an average of three weeks for medical records to reach the coding department
    - The quality of medical records and issues with temporary notes need to be addressed
    - Coders have good access to a range of electronic information but do not have access to all speciality specific systems such as theatres
  - The approach to coding is generally sound however the additional responsibility of typing discharge summaries is impacting on the coding process in Withybush, and some records are taking a long time to code at Prince Philip and Glangwili
  - There is a stable workforce for clinical coding activities, with clear career progression and succession planning however there are discrepancies at band four level
  - Clinical engagement with the coding process is mixed
  - Processes for validation and audit are positive with opportunities to embed these further, however a consistent approach to feedback needs to be implemented
- Clinical coded data is used appropriately and meets the Welsh Government standards for timeliness and completeness but some coding is inaccurate and the Board are not aware of the inaccuracies or its implications
  - Clinical coded data meets the completeness, validity and timeliness standards with no backlogs to affect the data, but there are issues with the accuracy of coding which need to be addressed
    - 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 and performance targets continue to be met during the year to date
    - The review of clinical coding accuracy identified error rates ranging between 5 and 27 per cent

Clinical coded data is being used appropriately throughout the health board although the Board is not sufficiently aware of the accuracy of coding and its implication

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:

- improving engagement between the medical records and clinical coding teams;
- removing the use of temporary records, including poly-pockets and ensure files are merged into the master patient record;
- reinforcing the Royal College of Physican standards across the health board;
- providing training for ward clerks and other staff in relation to their responsibilities for medical records;
- improving compliance with the medical records tracker tool within the Myrddin Patient Administration System; and
- putting steps in place to ensure that coders have early access to medical records for patients transferring to South Pembrokeshire Hospital prior to transfer.

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:

- reviewing the supervisory arrangements for Prince Philip Hospital to ensure that staff do not feel isolated;
- extending the range of clinical information systems that coders have access to, including the operating theatres system;
- ensuring all staff receive consistent feedback on issues raised through validation and audit from all sites; and
- reconsidering the responsibility for typing discharge letters at Withybush to ensure that this duty does not impact on the clinical coding process and the use of coding resources.

Board engagement

R3 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 training for board members to raise their awareness of clinical coding and the extent to which it affects the quality of key performance information, other than mortality data; and
- improving information to board on the accuracy of clinical coding.

Engagement with medical staff

R4 Strengthen engagement with medical staff to ensure that the positive role that doctors have within the clinical coding process is recognised. This should include:

- embedding a consistent approach to clinical coding training for medical staff across the health board;
- reinforcing the importance of completing timely discharge summaries; and
- improving clinical engagement with the validation of clinical coded data.

Source: Wales Audit Office 2013

Detailed report

The importance of clinical coding to support the effective operation of its business is recognised in the health board although more needs to be done to raise the profile of medical records and focus on accuracy

Clinical coding is a corporate priority with a good awareness of the health board's arrangements at Board level but there is little awareness of the accuracy of coded data

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 Hywel Dda University Health Board. The full results from our survey of board members can be found in Appendix 2.

14. Overall, the results to the survey indicate that board members have a good awareness of the factors affecting the robustness of clinical coding, but only half are satisfied with the information they received on the robustness of clinical coding arrangements in the health board:

- 14 of the 16 board members (87 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 16 board members (63 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
- only eight out of 16 board members (50 per cent) were satisfied with the information they received on the robustness of clinical coding arrangements in the health board.

15. Clinical coding is a corporate priority, largely driven by the need for an accurate Risk Adjusted Mortality Index (RAMI) but there is a need to raise wider awareness of the implications of coding as a whole. A review of board papers shows that the board receives information relating to clinical coding. Performance Assurance Reports to board contain information on coding in respect of the quality and safety agenda. Supporting committee arrangements provide assurance to the board in respect of mortality figures which are underpinned by clinical coded data, for example reports to

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

the Quality and Safety Committee and a newly established subcommittee looking at Harm and Variability.

16. The Information Governance committee also reviews coding performance. Frequent monitoring of coding backlogs is undertaken and the information department ensures limitations of data are understood by the users of the information.

17. However, the focus on clinical coding is primarily in relation to reporting accurate mortality data, not necessarily on the importance of coding in the wider aspect of management information. The focus to date has also been on timeliness and completeness driven predominantly by the WG target. However, the health board has recognised the importance of assuring the quality of the information that it produces with an emphasis on accuracy checks featuring more prominently within this health board than others in Wales. With the exception of the high level data quality indicators provided by the benchmarking organisation CHKS, the accuracy of clinical coding is not reported to Board and its sub committees, and therefore the Board are currently unable to take full assurance on the robustness of its clinical coding.

There is clear governance and accountability for clinical coding to the Board and coding is well integrated with wider informatics, however the inter-relationship between coding and medical records is weak

18. In the health board, clinical coding is part of the Planning, Performance and Delivery directorate with overall responsibility resting with the Director of Operations and Delivery. Day-to-Day management is by the Clinical Coding Manager who reports directly to the interim Head of Information Services, who in turn reports to the Interim Associate Director of Informatics.

19. The Clinical Coding Manager oversees the clinical coding function. There are four main clinical coding teams; Bronglais General Hospital (Bronglais), Glangwili General Hospital (Glangwili), Prince Philip Hospital (Prince Philip) and Withybush General Hospital (Withybush). The Clinical Coding Manager is based at Withybush, so to provide day to day supervision at the other sites, a Clinical Coding Supervisor is in post at Bronglais and Glangwili. The Clinical Coding Supervisor at Glangwili is also responsible for the Prince Philip team, however these arrangements are not working well in practice and need to be revisited. Staff at Prince Philip felt that the supervisor was not visible and that they felt isolated away from the other teams.

20. There has been a positive focus from the Informatics Directorate on coding. The Interim Associate Director of Informatics has been keen to ensure that coding has the necessary focus and resources. His understanding of the importance of coding has played a significant part in raising the profile of clinical coding at the Board. The Clinical Coding Manager is also a strong advocate for coding, particularly given her previous experience at a national level working with the NHS Wales Informatics Services.

21. Clinical coding plays a key part in the informatics process. Within the health board, there is a good level of integration and participation between the clinical coding

function and the wider informatics agenda. Clinical coding features on the agendas of the relevant information forums, and the clinical coding manager is frequently represented on the groups. Arrangements to ensure data quality are in place including clinical coded data, which are being strengthened with more emphasis on assuring data quality arrangements are robust. The health board clearly recognises the importance of data quality arrangements, and the clinical coding manager is involved in this process. However these arrangements currently only focus on the information that is the responsibility of the Informatics Directorate. The Interim Associate Director of Informatics is keen to extend the remit of these arrangements to emphasise that data quality equally applies to information that is the responsibility of clinical services.

22. Historically there has been a lack of engagement between medical records and clinical coding. The responsibility of medical records had previously rested with the clinical services directorate, with no overarching framework or strategy. This arrangement had consequently resulted in differing approaches to medical records across each of the sites. Medical Records has since moved to form part of the Informatics Directorate, with early plans in place to create a Health Records Manager post to provide health board wide managerial oversight of medical records and to take forward the development of a medical records strategy. Medical staff opinion on medical records however is mixed. As part of our medical staff survey, we asked the opinion of staff of the overall quality of medical records. Half of the medical staff who responded to our survey reported that the overall quality of medical records was below average or poor, while four out of ten (40 per cent) reported they were good. The full results from our medical staff survey can be found in Appendix 3.

23. Our fieldwork also identified that the health board has adopted the Royal College of Physicians (RCP) standards[3] to improve the quality of its medical records. Past reviews of compliance by senior clinicians at Bronglais found junior doctors were mostly compliant with standards; however, there were issues with legibility as well as details such as time and name frequently missed. Our responses to the medical staff survey show that medical staff are aware of the standards although there was mixed views as to whether standards had been adopted:

- six out of ten medical staff (60 per cent) were aware of the RCP standards; and
- five out of ten medical staff (50 per cent) said that standards had been adopted by the health board.

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 does form part of the induction training for all staff, with a record keeping policy for junior doctors and this is identified as good practice. The health board are looking to develop this further by developing e-learning modules to cover all staff which is also positive as only 30 per cent of medical staff reported that they had received training on improving medical records over the last two years.

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[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 Royal College of Physicians Health Informatics Unit (HIU) and funded by NHS Connecting for Health

There is sufficient resource allocated to clinical coding with an encouraging focus on training and development

25. 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.

26. 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 WG 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.

27. The budget allocated for clinical coding in the health board has significantly increased since 2010-11. The annual budget for clinical coding in 2013-14 is in the region of £718,000, an uplift of 20 per cent since 2010-11. This is following significant investment of £130,000 in 2011-12 when concerns where raised internally in relation to the accuracy of mortality data. The budget has remained relatively stable since 2011-12. Expenditure over the last three years has been within budget, suggesting that the current budget allocation is sufficient to cover the costs of the clinical coding function.

28. Staffing accounts for 99 per cent of the budget. As at 30th September 2013, the health board's clinical coding department had a total funded establishment of 28.33 full time equivalents (FTEs). Budgeted staffing levels have seen a slight decline since March 2013, however this is as a direct result of a reduction of hours for the manager post.

29. The core coding team (i.e. those staff whose primary role is to undertake clinical coding) is 20.4 FTEs (consisting of 1.12 FTE at Band 5 which is the proportion of time spent coding by supervisors, 14.2 FTEs at Band 4 and 5.04 FTE Band 3) The clinical coding remit for the health board covers all the finished consultant episodes, plus outpatient procedures in accordance with national guidance. Emergency department attendances are coded if patents are subsequently admitted to a ward. A local decision has also been made for the coding team at Bronglais to code some outpatient diagnoses.

30. If demand from finished consultant episodes (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 19.8 FTE's[4]. This is based on a recognised standard workload level of 30 FCE's per day per full-time coder. This would indicate a minimal surplus in the current staffing establishment for the core clinical coding team of 0.6 FTEs. However, this surplus is utilised to undertake coding of outpatient diagnoses.

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

31. 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 staff within the health board have attended the foundation course training provided by NWIS. Places on the specialty focused training, run by NWIS, have been prioritised for trainees within the health board as places are limited. This has created some tension within the teams as the long standing members are unable to access the training. We will be considering the availability of training places as part of our review of clinical coding arrangements at a national level.

32. Funding has been allocated to ensure staff are being supported to achieve further coding qualifications. Twelve of the health board staff are accredited clinical coders, with three working towards the qualification. Changes to job descriptions mean that all staff appointed since 2009 are expected to acquire the accredited clinical coding qualification whilst in post. Staff are supported through training, mentoring and also the payment of the professional Institute of Health Records and Information Management (IHRIM) membership which is needed to undertake the exam. All this is positive as the achievement of qualifications will both improve the quality of coding but also support career progression.

33. The health board has also supported, and continuing to support, staff achieve the advanced modules of clinical coding auditor which allows the health board to develop its own programme of clinical coding accuracy reviews. Unlike many other health boards across Wales, there are three clinical coding auditors now in post, with one more awaiting training. The use of coding auditors ensures that internal work on reviewing the quality of data is in line with national clinical coding audit methodology.

Many aspects of the clinical coding process are sound but clinical engagement is sometimes lacking, medical records are often poor and some records take a long time to be coded

Policies and procedures are up to date and in line with national standards, although there are some differences in local practices at Withybush

34. The health board has a comprehensive clinical coding policy, which is up to date and reviewed regularly. The policy sets out the structure and process of coding across the health board. The document is easy to read and is a useful guide for staff.

35. Clinical coding staff are located across a number of sites, so it is important that the policy promotes consistency in coding practices. During our review, we found practices were consistent across three of the four sites. Although there are many consistent elements to the process, there are differences in the way in which the coding practice operates in Withybush. The coding clerks based in the Withybush team are responsible for producing discharge summaries. Although all of the clinical coders will

code from medical records, the clinical coders based at Withybush will not code episodes until the discharge summaries are completed. This can have an adverse impact on the coding process, which is discussed later in this report.

36. There is an internal Clinical Coding Assurance group (CCAG) in place which consists of the manager and supervisors, as well as senior coders from Withybush and Prince Philip. This group has helped shape the health board's approach to coding, with a drive over recent years to implement standard processes across all sites. The group is aware of the different practice in Withybush but without a formal health board decision to realign the responsibility of typing discharge summaries across all hospital sites, the inconsistency in practice will remain. The group is also a mechanism for sharing experience and knowledge across the teams which is positive.

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. National standards are generally based on the UK national standards for clinical coding set out by the NHS Classifications Service within NHS England. Where there are specific differences between NHS Wales and the rest of the UK, Welsh clinical coding standards will be applied through the NWIS Clinical Classifications Team. 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. This guidance is disseminated by the Clinical Coding Manager, through to the supervisors and the teams.

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 Clinical Coding Manager is actively involved in the Clinical Coding User group, 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 have recently reviewed their local procedures and many have been discarded as they were not compliant with national standards. One remains which is in relation to the coding of gynaecological procedures; Dilation and Curettage (D&C) and Hysteroscopy.

Access to information is generally good although it can take longer for some medical records to reach the coding departments and the quality of records is variable between sites with temporary notes posing risks

Coders are routinely accessing medical records quickly at Bronglais however there are issues with timeliness at other sites such as Withybush where it can take an average of three weeks for medical records to reach the coding department

40. To facilitate the achievement of the WG 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 patient's 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.

42. Within the health board there is a positive process of coders receiving medical records from the wards the morning immediately after discharge. This applies to Bronglais, Glangwili and Prince Philip. However there is no process for correlating that the medical records for all patients recently discharged have been received, which may mean that some records are taking longer to be made available to the coding department. Due to the requirement for the clinical coding clerks in Withybush to type discharge summaries, we found delays in releasing medical records to the coding team because of delays in doctors completing the necessary discharge pro-formas.

43. 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. We were only able to undertake this exercise at Withybush. We found that many of the wards in the other sites did not track the medical records to the clinical coding teams, as they were routinely returned back to the ward either the same day as they were collected from the ward or the next day.

44. Based on a sample of 120 medical records, across the three specialties reviewed, we identified that it took an average of three weeks for the patients' medical records to reach the clinical coding team at Withybush from the point of discharge or transfer. We also identified that six per cent of records took longer than three months to reach the clinical coding team, which makes meeting the Welsh Government target for timeliness of coding relating to these patients a challenge. Access to medical records of patients who are transferred to South Pembrokeshire hospital for rehabilitation following

[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 Hywel Dda Health Board, the tracking tool forms a specific module on the Myrddin PAS system.

orthopaedic surgery were identified as the most problematic. More detail is provided in the following exhibit.

Exhibit 1: Speed of access to medical records following discharge or transfer in Withybush (WGH)

		General Medicine	General Surgery	Trauma & Orthopaedics
Speed of accessing medical records (weeks)	Average	2.9	2.3	3.7
	Shortest	0	0.1	0.1
	Longest	14.3	14.7	28.3
Percentage of medical records received by the coding team…..	…within 4 weeks (one month) of discharge	74%	88%	67%
	…within 8 weeks (two months) of discharge	90%	88%	82%
	…within 12 weeks (three months) of discharge	95%	95%	92%

Source: Wales Audit Office 2013

45. 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 the health board had these staff in all sites with a total establishment of 6.86 FTEs. However the runners at Withybush (2.86 FTE) were also the coding clerks typing discharge summaries.

46. A diary exercise undertaken for a period of two weeks[6] indicated that the runners had a positive impact on the activity of the clinical coding teams, with coding staff spending less than two per cent of their time locating medical records. Visits to a sample of wards across the three specialties reviewed identified that the dedicated runners in post have built good working relationships at ward level, and no issues were identified with the collection process. This is positive.

The quality of medical records and issues with temporary notes need to be addressed

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

[6] A diary exercise was completed for two weeks for all staff.

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.

48. As part of our fieldwork, we reviewed a sample of 360 medical records across the specialties reviewed in the four main hospital sites. The review was based on sixteen of the Royal College of Physicians standards. Representatives from the NWIS Clinical Classifications Team used the same sample to complete the review of clinical coding accuracy. Of the 360 medical records in the sample, we found a compliance rate of 81 per cent. The standard of medical records at Withybush was marginally better than the other sites. More detail is provided in the following exhibit.

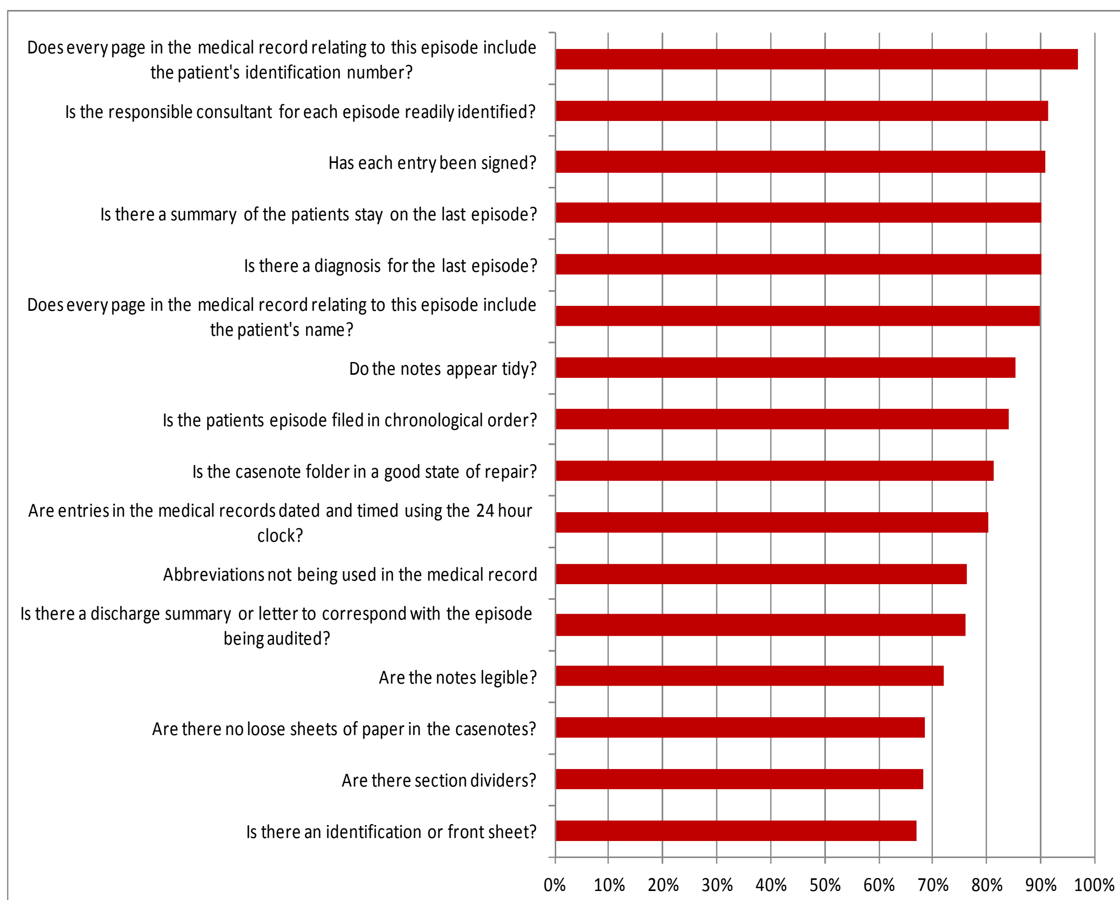
Exhibit 2: Overall percentage level of compliance with RCP standards by hospital site and specialty

	General Medicine	**General Surgery**	**Trauma & Orthopaedics**
Prince Philip Hospital	87%	83%	84%
Withybush General Hospital	88%	88%	89%
Bronglais General Hospital	78%	72%	81%
Glangwili General Hospital	72%	82%	77%

Source: Wales Audit Office 2013

49. 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 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 identification and front sheets are in place and updated, ensuring medical records have section dividers and all documents are secured, as well as writing legibly. 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. Our survey of medical staff would suggest that doctors are generally aware of their responsibilities. However, there are some concerns about the use of temporary records. If records are not available, staff collate information relating to the episode and place it in a 'poly-pocket' folder. These records are not bar-coded so are therefore not able to be tracked, which increases the risk of them being lost. Arrangements for merging these records back into a formal medical record are also unclear with examples provided to us of 'poly-pocket' folders being stored in cabinets on wards. This is a risk to the health board, as medical records may not contain a patients full medical history. As well as a clinical risk, this also has implications for the quality of clinical coding as relevant previous medical history may be omitted from the coding of a patients episode of care.

Coders have good access to a range of electronic information but do not have access to all speciality specific systems such as theatres

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 to 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 range of clinical information systems, although they do not have access to speciality specific systems, such as operating theatres. Providing coding staff access to speciality systems would allow them to check information required for coding patient episodes.

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

The approach to coding is generally sound however the additional responsibility of typing discharge summaries is impacting on the coding process in Withybush, and some records are taking a long time to code at Prince Philip and Glangwili

54. Staff are located in a specific district general hospital (DGH). The majority of their workload focuses solely on the activity within the base DGH site and its respective community hospitals. The clinical coding teams however do not code mental health episodes. These are currently the responsibility of the mental health directorate within the health board, which is common with a number of other health boards in Wales.

55. 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, the acquiring of experience and knowledge to obtain the ACC qualification, as well as ensuring 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, e.g. on annual or sick leave.

56. With the exception of one coder in Withybush who focuses solely on obstetrics, the rest of the coders are responsible for a number of specialties, which are rotated on a regularly basis. This allows them to build and maintain their knowledge in particular specialties but also maintain the wider knowledge of all other specialties across the whole hospital, which is positive. During our fieldwork, we identified that peer support was present in each of the teams, however the teams rarely met as a whole department.

57. The 'runners' will collect records from ward level and file them in month order in the respective coding departments. Coders then take the records in chronological order from their shelves for their respective specialties, with the exception of Withybush. Due to the requirement of the coding clerks to produce the discharge summaries, coders will only code the records once the summaries are completed. This can cause delays in the coding process, particularly if coders are having to wait for the discharge summaries to be completed. Our diary exercise however identified that staff at Withybush are spending some of their coding time working on and typing discharge summaries to ensure that medical records are not held up in the department. This accounted for 28 hours (2.4 per cent) over the 2 week period. This is equivalent to 0.37 FTE, in addition to the 2.86 FTE clerks already in post.

58. As well as date order, 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 (i.e. the total number of patients) by excluding live patients by the nature that they are not yet coded. Caution needs to be taken prioritising deceased patients if there are backlogs of workload building up.

59. 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 Withybush identified that once medical records were received in the department, on average the discharge summaries were typed and coding completed within three days, with:

- 64 per cent of records coded within three days;
- 84 per cent of records coded within a week; and
- 98 per cent of records coded within a fortnight.

60. Although we were unable to complete the tracker exercise at the other sites, we were able to understand the elapsed time between the end date of a patient episode to

coding being completed. We found that episodes were routinely coded within a week at Bronglais which is positive, however it can take up to 7 weeks for General Surgery episodes at Prince Philip. Staff are reporting issues with obtaining histology results which could be contributing to the delays. Exhibit 4 shows the length of time in weeks for each speciality.

Exhibit 4: Elapsed time between episode end and coding

		General Medicine (weeks)	General Surgery (weeks)	Trauma & Orthopaedics (weeks)
Glangwilli	Time taken to code (weeks)	3	5	5
Prince Philip		3	7	1
Withybush		4	3	4
Bronglais		Less than a week	Less than a week	1

Source: Wales Audit Office 2013

61. 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 patient administration system. The health board is using the current version of Medicode.

There is a stable workforce for clinical coding activities, with clear career progression and succession planning however there are discrepancies at band four level

62. Staffing levels have remained consistent over the last 12 months. All of the established posts in the clinical coding department are filled and there are currently no vacancies. In the past two years the health board have recruited three staff members while two have left the organisation to work in other coding departments in Wales.

63. There is a good level of clinical coding experience within the department with over 50 per cent of staff having clinical coding experience spanning more than 10 years. Only 16 per cent of the clinical coding workforce (four members of staff) are aged 56 and over, and likely to retire in the next five years, Within the staffing establishment, there has been a change in the skill mix across the teams with an increase in Band 2's, 3's and Band 4's. The development of the Band 3 posts is in line with the clinical coding policy to create clinical coding trainee posts to support succession planning which is positive.

64. New starters to the department are not classed as supernumerary and therefore given their own allocation of work early on in their appointment. Trainees are mentored by senior staff. However, this mentoring can place pressure on senior 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 less than one per cent of time was spent on mentoring and checking the work of others. The trainees within the health board have been in post over 2 years and have passed their internal assessments. They should therefore need minimal supervison, 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..

65. Since 2009, all new clinical coding staff are appointed at Band 3, with the need to acquire the Accredited Clinical Coding (ACC) qualification to progress to Band 4. This is positive as it ensures there is clear career progression for staff. All staff appointed to Band 4 prior to 2009 in Bronglais and Withybush have acquired the ACC qualification. However, staff in Glangwili and Prince Philip were awarded Band 4 status when Agenda for Change was first introduced without having gained ACC, resulting in discrepancies between the four sites. These coders are now being encouraged to gain the qualification.

Clinical engagement with the coding process is mixed

66. 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.

67. Within the health board, clinical engagement with clinical coding is mixed. Our survey of medical staff indicated that there was an awareness of clinical coding amongst clinicians, however much of this was associated with the mortality review process. Eight out of ten medical staff responding to our survey recognised the importance of clinical coding, however seven out of ten said they had no involvement with clinical coding within the heath board.

68. Our diary exercise completed as part of this review confirmed that clinical engagement is limited with a negligible level of time recorded for liaison with clinicians by coding staff during the period reviewed.

69. Where a clinical coding team is based within a hospital can play an important role in encouraging clinical engagement. All the four teams are based within the main hospital sites, although they are generally located away from the clinical areas. Six out of ten medical staff responding to our survey however said that they were aware of where the coders were based for their respective sites.

70. 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 within the clinical areas. Half of the medical staff responding to our survey said that coding staff had sought clarification from them on episodes of care or patients they had been responsible for. However six out of ten medical staff said that coders were rarely or never visible.

71. At the time of our fieldwork, clinical coding positively featured as part of the induction for junior doctors in the form of induction packs and leaflets. However, arrangements seemed to differ across the four sites with clinicians lacking knowledge of the training, and there was a perception that the focus on coding had declined over the past few years. Our medical staff survey found that none of the respondents had received training relating to clinical coding over the last two years although six out of ten medical staff identified that they would like to receive training to improve their knowledge on the process involved. Consistent arrangements for medical staff training need to be embedded by the health board.

Processes for validation and audit are positive with opportunities to embed these further, however a consistent approach to feedback needs to be implemented

72. 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.

73. Policies and procedures support the focus on quality within the health board. Both the Clinical Coding Policy and the Clinical Coding Audit Policy reinforce the importance of quality and set out the processes to support it. The encoder system Medicode provides some automated validation of coding as it is input onto the system. In the health board, the manager and supervisors will also make use of monthly coding timeliness reports, and validation issues identified through coding errors identified through PEDW and the benchmarking organisation CHKS. Issues are fed back to staff through direct one to one meetings with line managers as well as through the Clinical Coding Assurance Group (CCAG).

74. 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 some clinical engagement in the validation of coding which is positive, however this centres on mortality reviews and although medical staff are reporting that engagement from clinical coding at meetings these seem to be historical arrangements:
   - 40 per cent reported that they had been engaged in validation of clinical coding over the last two years; and
   - four medical staff 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.

75. As well as routine validation, one way of providing assurance of the quality of clinical coding is to undertake detailed audit reviews. The health board has been proactive in

implementing a programme of audit. This has included monthly internal audits of 15 – 20 case notes and weekly spot check auditing. In addition, the health board has recently commissioned Mersey Internal Audit Agency (MIAA) to undertake an external review of coding accuracy which was completed at the end of 2013. The increased capacity within the teams of the three recently qualified clinical coding auditors will help embed this programme of audit further.

76. The health board are supporting feedback to staff from audits and external reviews, and alterations are made to errors. This is positive, however more consistency in the approach needs to be taken as our fieldwork identified that some staff were getting feedback whereas others are not. This was particularly the case for the team in Prince Philip who identified that they had not received formal feedback from the external review undertaken by MIAA.

Clinical coded data is used appropriately and meets the Welsh Government standards for timeliness and completeness but some coding is inaccurate and the Board are not aware of the inaccuracies or its implications

Clinical coded data meets the completeness, validity and timeliness standards with limited backlogs to affect the data, but there are issues with the accuracy of coding which need to be addressed

The health board achieved the national validity and consistency standards for data derived by clinical coding

77. In 2008, Welsh Government set out the need for NHS bodies in Wales to adhere to 32 data validity standards relating to admitted patient care7. 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.

78. 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 e.g. a record that indicates a male patient has

[7] Admitted patient care is the dataset submitted to the Patient Episode Database for Wales which contains the data relating to finished consultant episodes.

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.

The health board achieved the Welsh Government target that activity should be coded within three months with performance continuing to be achieved during the year to date

79. To ensure that data is coded in a timely fashion, Welsh NHS bodies are required to meet the timeliness and completeness targets as set out by 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 is a positive focus on coding timeliness, with regular monitoring of targets.

80. Using the recognised standard workload of 30 FCE's per day, the health board has set out its productivity level for each member of staff. The clinical coding staff are routinely monitored on their productivity however they did not feel under undue pressure to achieve the targets which is positive. Productivity reports are circulated to staff via email which generate open and transparent discussions within the teams.

81. Recent information set out in the health board's Performance Assurance Report indicate that the clinical coding teams are consistently achieveing performance against the targets. In December 2013, performance was reported as:

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

82. As part of our fieldwork we requested the backlog position as at 30 September 2013. Backlog levels at the health board are less than 0.2 per cent of the total number of finished consultant episodes FCE's for the past three years. This is good practice.

The review of clinical coding accuracy identified error rates ranging between 5 and 27 per cent

83. 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 use of a non-specific diagnosis is problematic at Prince Philip, while the remainder of the indicators across all four sites are generally comparable with the All Wales average (Exhibit 5).

Exhibit 5: Comparison with the CHKS indicators for financial year 2012-13

	Bronglais (%)	Glangwili (%)	Prince Philip (%)	Withybush (%)	All Wales Acute (%)
Use of an invalid primary diagnosis code	0	0	0	0	0.5
Diagnosis code of 'non-specific' provided	11.0	14.5	18	12.8	14.5
Sign and symptom provided as primary diagnosis	9.8	14.0	11.7	12.0	11.5
Use of an invalid procedure code	1.0	0.98	0.4	1.5	0.2

Source: Hywel Dda University Health Board January 2014

84. 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 360 episodes across the four main sites. There were no records that were identified as being unsafe to audit (records that do not contain information relating to the episode being audited). This is positive.

85. 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.

86. The review indicated mixed rates of accuracy across the sites, with the highest level of accuracy recorded at the Bronglais site. There were a greater rate of errors recorded in diagnosis codes. 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 6: Results of the review of the accuracy of clinical coding undertaken by the NWIS Clinical Classifications Team

	Percentage of codes recorded correctly at Bronglais	Percentage of codes recorded correctly at Glangwili	Percentage of codes recorded correctly at Prince Philip	Percentage of codes recorded correctly at Withybush
Primary Diagnosis	92.2	82.2	74.4	84.6
Secondary Diagnosis	88.3	74.2	80.0	72.7
Primary Procedure	92.2	81.6	91.4	85.2
Secondary Procedure	95.4	84.0	91.2	85.7

Source: NWIS Clinical Classification Team

Clinical coded data is being used appropriately throughout the health board although the Board is not sufficiently aware of the accuracy of coding and its implication

87. 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.

88. Performance reports do contain information on the completeness of coded data, and reports on timeliness are well circulated amongst the health board. Detailed information is discussed through Quality and Safety arrangements, which are then reported to the board. Additionally, there is good control from the information department for ad hoc requests for data based on clinical coding, and where information is sourced from coding there is guidance on the reliability of the data due to completeness and any potential impact that needs to be taken into account.

89. Despite a range of processes in place to review the accuracy of clinical coding, the accuracy of data however is not reported. 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 361 episodes reviewed, a total of 146 secondary diagnosis codes were missing. Conversely 41 secondary diagnosis codes had been assigned to patients that were considered irrelevant to the episode of care being reviewed.

90. Our survey of Board members identified that 11 of the 15 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.

91. 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 all 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.

92. 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 clinical coded data is not being used inappropriately with seven out of 10 (70 per cent) medical staff reporting that they would never use clinical coded information when communicating with patients. Our review of medical records, 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 14 of the board members in Hywel Dda 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 GP's 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 medical staff in Hywel Dda 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 2nd December 2013 (Withybush General Hospital and Bronglais General Hospital) and 6th January 2014 (Glangwili General Hospital and Prince Philip 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 the four 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 in 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 weeks commencing 13th January 2014 for all sites.

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 Hywel Dda University Health Board was 1st April 2013 to 3rd 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 Hywel Dda University Health Board was 1st April 2013 to 3rd 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 WG 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 Hywel Dda 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?**	
	Hywel Dda University Health Board	**All Wales**	**Hywel Dda University Health Board**	**All Wales**
Completely satisfied	-	6	1	12
Satisfied	8	43	9	45
Neither satisfied nor dissatisfied	7	36	5	30
Dissatisfied	1	9	1	7
Completely dissatisfied	-	-	-	-
Total	16	94	16	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?	
	Hywel Dda University Health Board	**All Wales**
Full awareness	5	36
Some awareness	9	45
Limited awareness	2	12
No awareness	-	1
Total	16	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?**	
	Hywel Dda University Health Board	**All Wales**	**Hywel Dda University Health Board**	**All Wales**
Yes	-	15	11	74
No	15	75	4	23
Total	15	90	15	97

Exhibit A2d: Additional comments provided by respondents from Hywel Dda University Health Board

- There is a need for greater investment in IT to ensure that we have robust data.
- I am aware of the WAO report issued in August 2012 on Data Quality and the recommendations which I understand we are acting on and are being monitored by the Information Governance toolkit assurance report which reports to the Information Governance sub-committee which in turn reports to IGC which I serve on so I am able to read the minutes and note progress.
- Some of the work I am involved with gives me some insight into issues around clinical coding, however not sure if that is the case with IM colleagues.
- Problems with coding were identified several years ago and robust measures were put in place to remedy the problems. I have a great deal of faith in the quality of data now being produced.
- A lot of focus has been applied but being a system which relies in doctors notes and individuals interpretation it is challenging.
- Clinical coding is a specific element of a wider data quality agenda and a WAO report issued in Aug 12 highlighted some areas where improvement was potentially needed. The action plan for improvement is monitored through internal governance arrangements however there is some tension around the variety of data sources. Some are controlled nationally and cannot be changed by the Health Board in isolation whilst we can take the necessary action to ensure local data and information gathering arrangements are improved.
- I am continually learning about the implications of coding and additional learning is always welcome.

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 Hywel Dda 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?	
	Hywel Dda 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	2	10
I think it is important but it does not involve me	2	32
I think it is important and I am occasionally involved	4	64
I think it is important and I am regularly involved	2	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?	
	Hywel Dda University Health Board	**All Wales**
Completely satisfied	1	15
Satisfied	6	60
Neither satisfied nor dissatisfied	1	33
Dissatisfied	2	16
Completely dissatisfied	-	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

- Surgery
- From the basics
- The need for accurate descriptors on documentation, how the information is used to analyse what services are required what other information can be obtained from coding
- No idea what it is used for, hear it being talked about...
- Clinical coding for clinical audits for hospitals.

Exhibit A3d: Involvement with clinical coding staff

	Do you have any involvement with clinical coding staff within this organisation?	
	Hywel Dda University Health Board	**All Wales**
None	7	97
Occasional meetings	2	28
Monthly meetings	1	2
Weekly meetings		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 2 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?**	
	Hywel Dda University Health Board	**All Wales**	**Hywel Dda University Health Board**	**All Wales**
Yes	4	25	5	48
No	6	103	5	79
Total	10	128	10	127

Exhibit A3f: Availability of medical records

	Do medical records frequently go missing within this organisation?		Are temporary medical records used within this specialty?	
	Hywel Dda University Health Board	**All Wales**	**Hywel Dda University Health Board**	**All Wales**
Never	-	6	1	5
Rarely	2	29	1	15
Sometimes	3	44	2	38
Often	1	21	2	27
Frequently	4	31	4	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?	
	Hywel Dda University Health Board	**All Wales**
Very good	-	9
Good	4	24
Average	1	50
Below average	1	23
Poor	4	24
Total	10	130

Exhibit A3h: Additional comments provided by respondents from Hywel Dda University Health Board

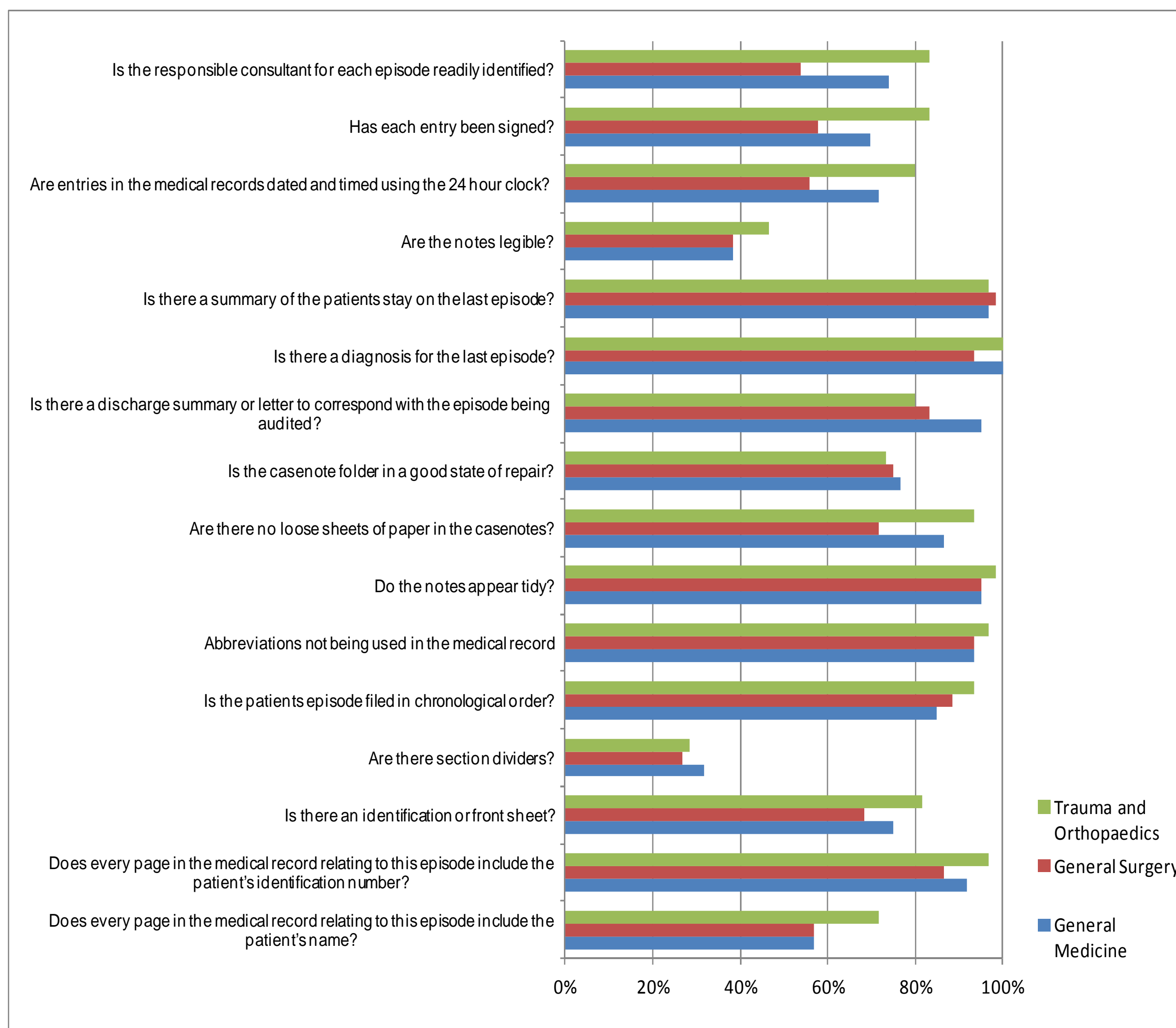
- I think coding is essential. I cannot see how an organisation can be managed without accurate knowledge of what is being admitted with what conditions and what is happening to them. I am troubled by the fact that I am almost never approached for clarification regarding coding, which in turn must mean there are errors in audit and management decisions in this LHB as I cannot believe that my writing and opinion is always clearly legible and understandable to a coder. Whenever I hear national leaders talking about Welsh hospital activity statistics I always doubt that the information is accurate as it is based on coded information and there is almost no interaction between coders and clinicians so how do we know any of the data is accurate?

- Urgent need for digitisation of health records as current practice overtly unsafe
- We use off -site records storage and it is usual for notes to be unavailable at the patient's bedside/OPD. This is a risk that needs addressing.
- Med Records was a more efficient and better quality Unit here pre HB merger on basis of staff loss through natural wastage and as well as reduced support for staff development and training...
- Poor access particularly out of hours - records inaccessible as stored off site - very important to be able to look at written documentation as well as scanned clinic letters and discharge summaries when assessing what might be a problem with an admitted patient
- Many times the original medical records are not available & temp notes are there. Also old big notes are rarely repaired by medical records which is unfortunate & may cause loss of valuable data from notes also the general condition of records keeping is very poor.

Appendix 4

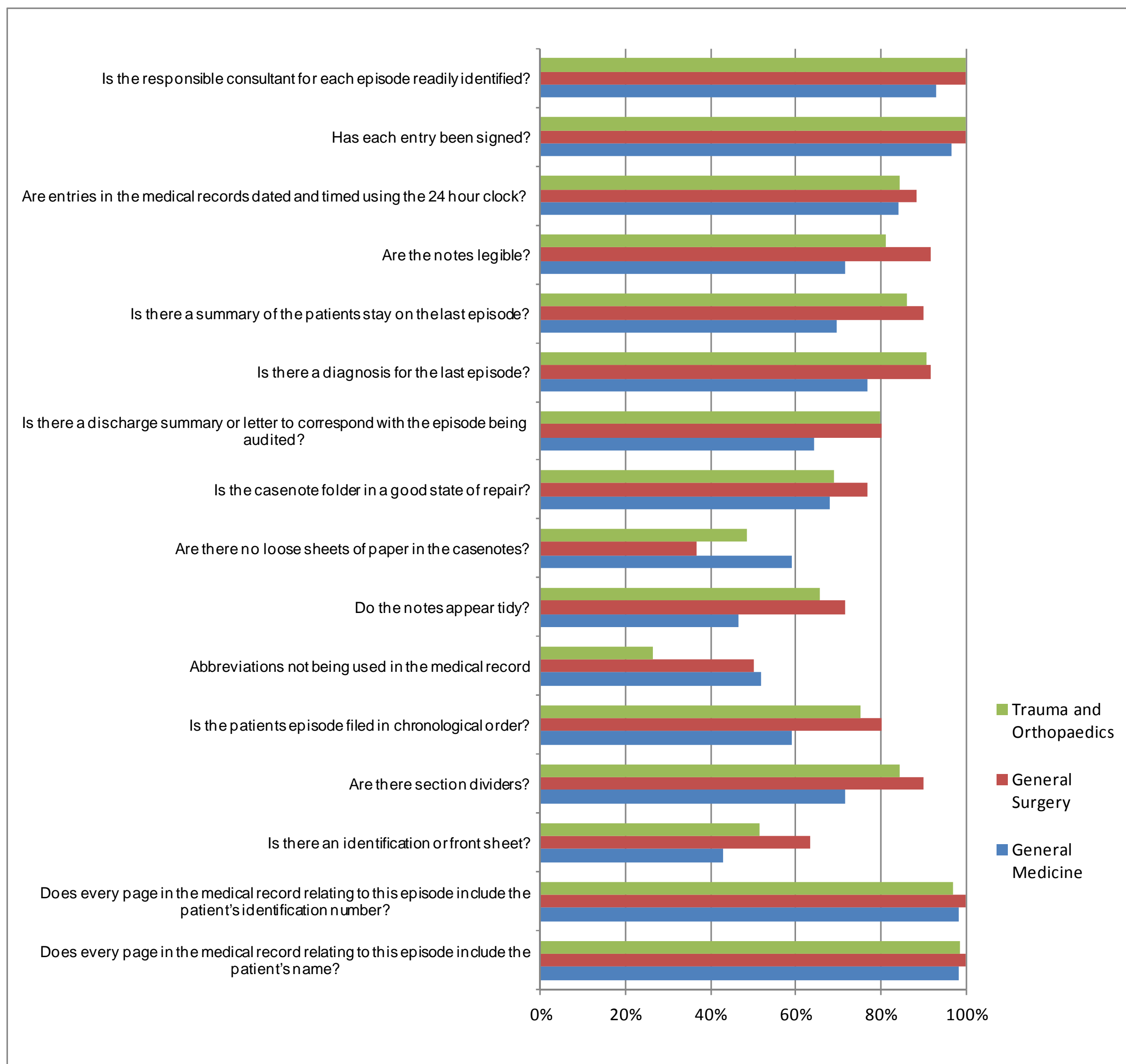
Compliance with Royal College of Physicians Standards for Medical Records by site and specialty

Exhibit A4a: Level of compliance with RCP standards by specialty at Bronglais



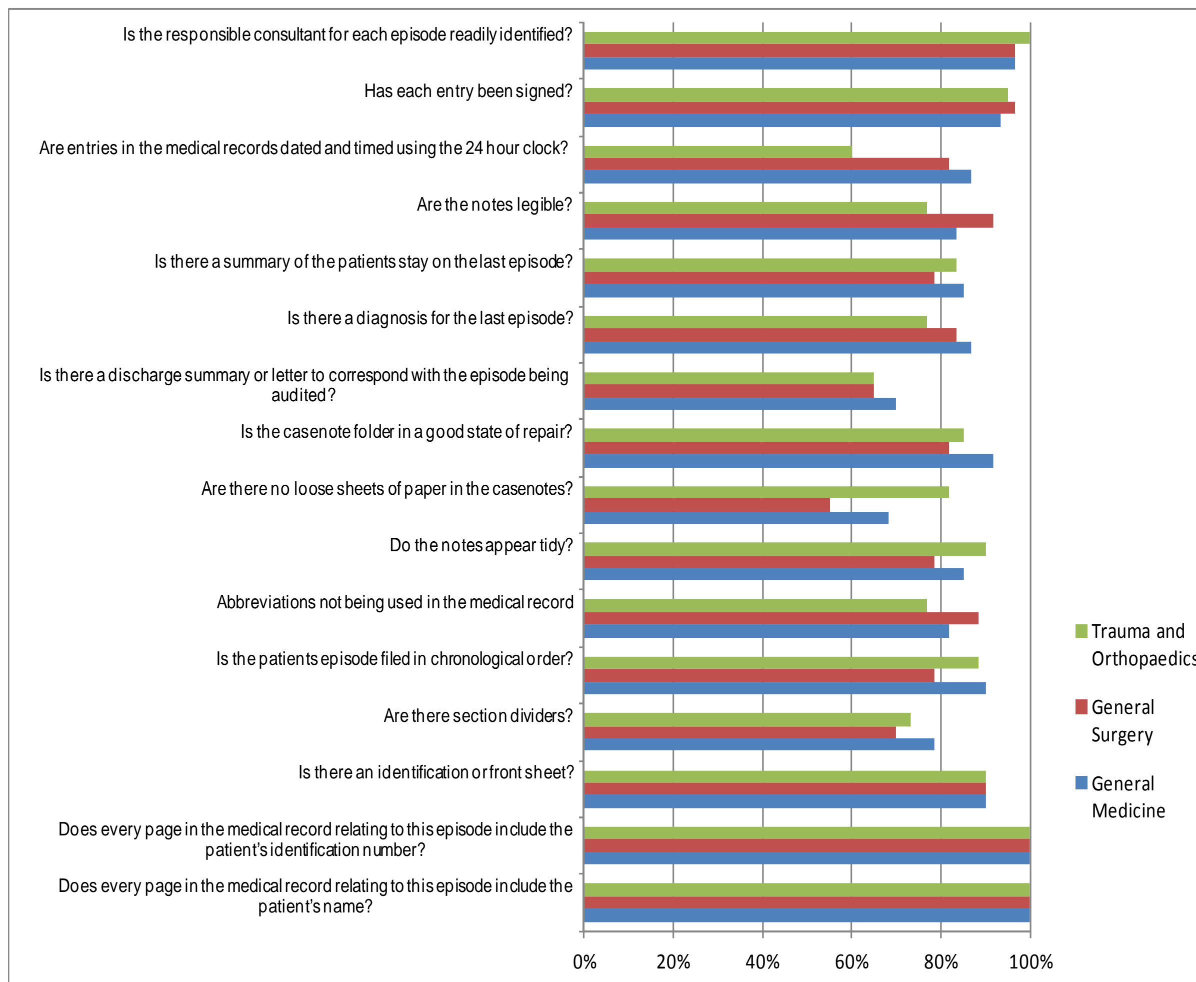
Source: Wales Audit Office

Exhibit A4b: Level of compliance with RCP standards by specialty at Glangwili



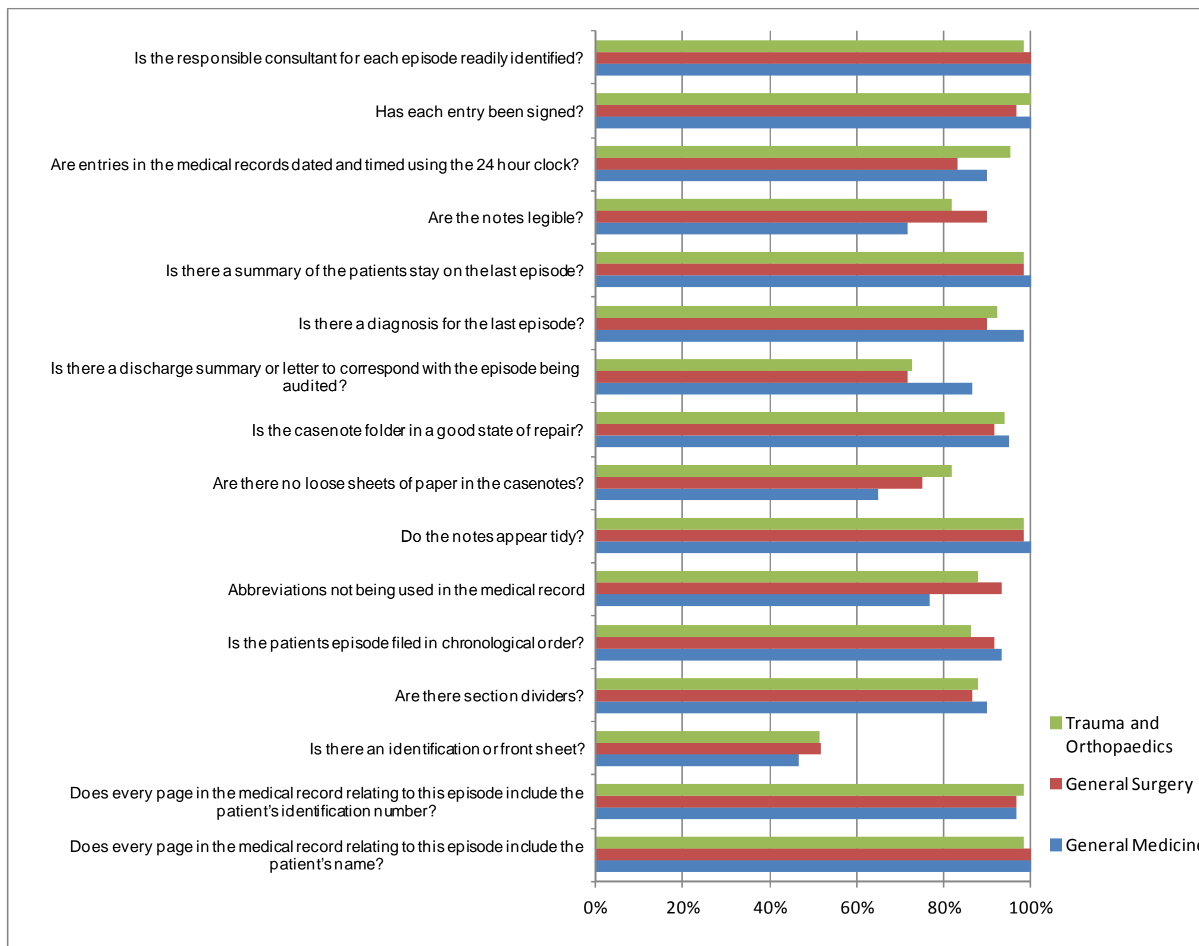
Source: Wales Audit Office

Exhibit A4c: Level of compliance with RCP standards by specialty at Prince Philip



Source: Wales Audit Office

Exhibit A4d: Level of compliance with RCP standards by specialty at Withybush



Source: Wales Audit Office

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