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Clinical coding follow-up review – **Cardiff and Vale University Health Board**

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Contents

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Summary Report

Introduction

1 Clinical coding involves the translation of written clinical information (such as a patient's diagnosis and treatment) into a code format. A clinical coder will analyse information about an episode of patient care and assign internationally recognised standardised codes[1].

2 Good quality clinically coded data plays a fundamental role in the management of hospitals and services. Coded data underpins much of the day to day management information used within the NHS and is used in many different systems and presented in different formats. It can be used to support healthcare planning, resource allocation, cost analysis, assessments of treatment effectiveness and can be an invaluable starting point for many clinical audits.

3 Coding departments within Welsh NHS bodies are required to satisfy standards set by the Welsh Government on completeness and accuracy of coded data. Performance against these standards form part of NHS bodies' annual data quality and information governance reporting.

4 During 2014-15 the Auditor General reviewed the clinical coding arrangements in all relevant NHS bodies in Wales. That work pointed to several areas for improvement such as the accuracy of coding, the quality of medical records and engagement between coders, clinicians and medical records staff.

5 We also found that NHS bodies routinely saw clinical coding as a back-office role, often with little recognition of the specialist staff knowledge and understanding needed. In addition, not all health bodies understood the importance of clinical coding to their day to day business.

6 In October 2014 we reported our findings for Cardiff and Vale University Health Board (the Health Board) and concluded that 'whilst there had been a strong focus on clinical coding, there were a number of weaknesses in arrangements and processes, which were affecting the generation of timely, accurate and robust management information. The current level of investment provided opportunities to make the necessary improvements'. More specifically, we found that:

- clinical coding had a high profile at Board level supported by a good level of investment and there were opportunities to strengthen the coding team's management structure and improve integration with medical records and the wider informatics agenda;
- the effectiveness and sustainability of the clinical coding process was undermined by the quality and availability of information, a lack of clinical engagement, limited validation and audit processes and an unsustainable management structure; and

[1] For diagnoses, the International Classification of Diseases 10th edition (ICD-10), and for treatment, the OPCS Classification of Interventions and Procedures version 4 (OPCS)

- clinical coding data was used appropriately but despite positive progress in clearing the backlog of uncoded episodes, the Health Board had failed to achieve timeliness targets, some coding was inaccurate and there were concerns that problems with coding were distracting attention away from poor performance

7 We made several recommendations, which focused on the need to:

- strengthen the management of the clinical coding team;
- improve the management of medical records;
- further build Board engagement; and
- strengthen engagement with medical staff.

8 As part of the Auditor General's 2018 audit plan for Cardiff and Vale University Health Board, we have examined the progress made in addressing the recommendations set out in the 2014 Review of Clinical Coding and any resulting improvement in clinical coding performance.

9 In undertaking this work, we have:

- reviewed documentation, including reports to the board and committees;
- asked the Health Board to self-assess its progress;
- analysed clinical coding data sent to Welsh Government;
- sought board member views[2] on their understanding of clinical coding; and
- interviewed staff to discuss progress, current issues and future challenges.

10 We summarise our findings in the following section. Appendix 1 provides specific commentary on progress against each of our previous recommendations.

Our findings

11 We conclude that the Health Board is generally producing good quality coded data, which is being used to support service improvement. However, more work is needed to fully address many of our recommendations.

Clinical coding performance is generally good, albeit that accuracy has deteriorated slightly

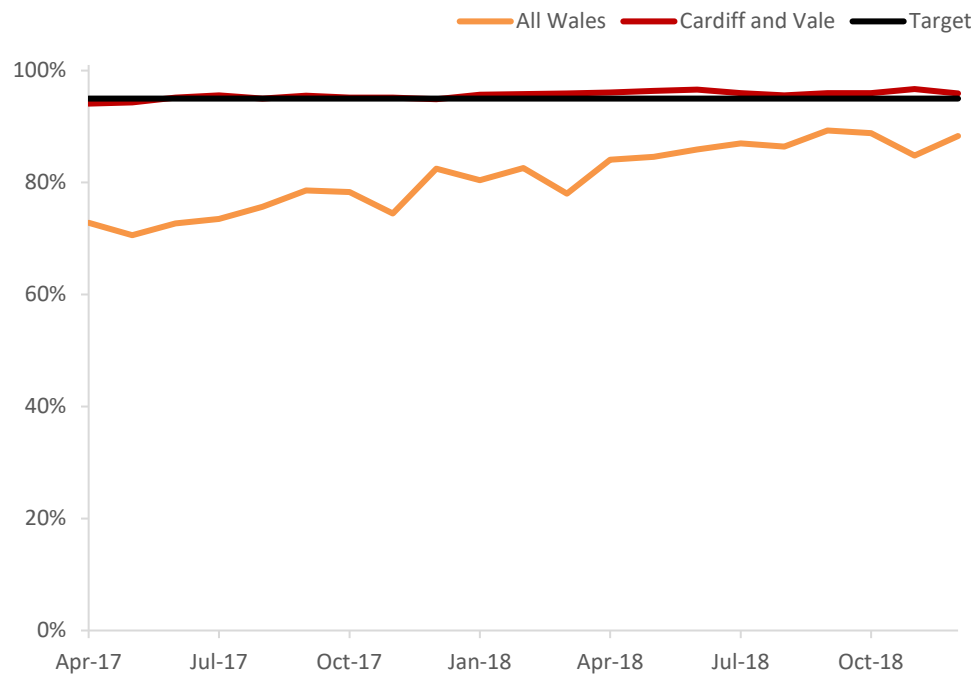
12 The Welsh Government has two coding related Tier 1 targets which NHS bodies are required to meet. These relate to completeness and accuracy.

13 Each year, NHS bodies send data to the Welsh Government showing their performance against the Tier 1 target for **completeness**. The target is that 95% end date. NHS bodies need to meet this target monthly rather than at the end of

[2] A number of questions relating to clinical coding were included in the board member survey which formed part of our 2018 Structured Assessment work. A total of 7 responses out of a possible 25 responses were received.

each financial year which was previously the case. Based on this data, Exhibit 1 shows that the Health Board has been consistently meeting the completeness target since 2017, with performance well above the all-Wales average.

Exhibit 1: percentage of all episodes coded within one month of the episode end date.



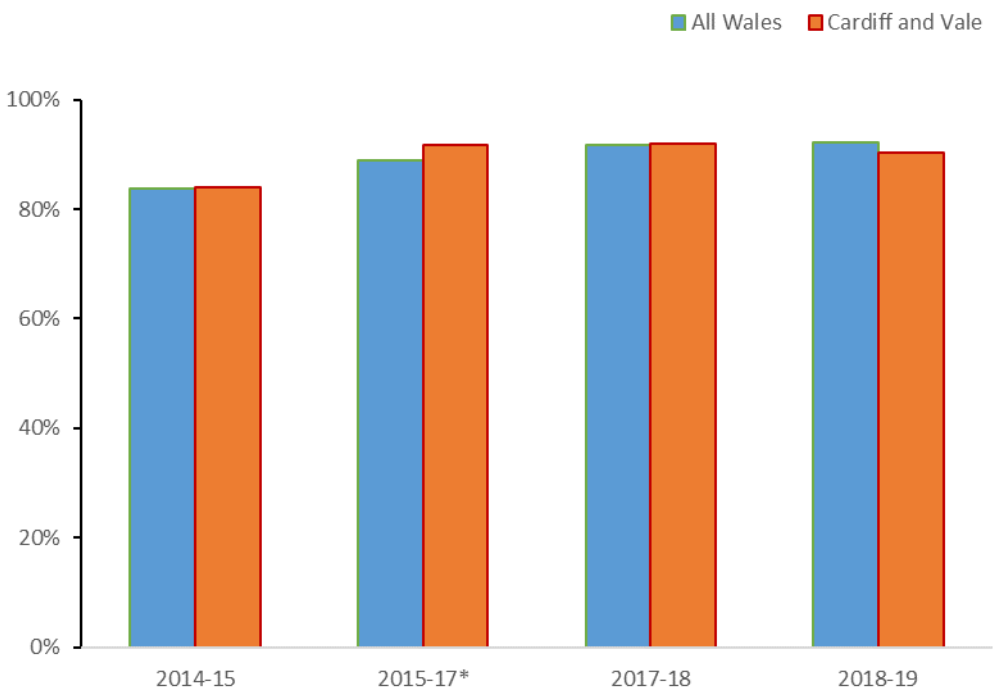
Source: Wales Audit Office analysis of data sent to Welsh Government

14 As part of our 2014 review we requested the backlog position as at 30 September 2013, this was 16,700 finished consultant episodes. We requested the backlog position as at year end March 2018 which shows the Health Board reported a small backlog of 2,145. This is a positive position and shows the backlog has been decreasing year on year.

15 Each year, the NHS Wales Informatics Service (NWIS) Standards Team check the **accuracy** of clinical coding. They do this by reviewing a sample of coded episodes and checking the information against evidence within the patients' medical record to assess accuracy. NHS bodies are expected to show an annual improvement in their accuracy. Based on this review, Exhibit 2 shows that the Health Board's accuracy has slightly deteriorated over the last 12 months. NWIS note in their report for the Health Board that there has been a drop in the overall accuracy figure from 91.85% to 89.54%, which can be directly attributed to a rise in the

number of secondary diagnosis omissions in a specific specialty where NWIS have recommended staff receive additional training.

Exhibit 2: percentage of episodes coded accurately



Source: Wale Audit Office analysis of data sent to Welsh Government
* Note that due to capacity within the NWIS clinical coding team, a single accuracy review was undertaken during the period 2015-16 and 2016-17.

The value of coded data is recognised and used by the Health Board to support service improvement

16 Previously we found that not all NHS bodies understood the wider importance of clinical coding to their business and they were missing opportunities to use this information more extensively. For example, to plan and monitor services, where coding can be used to:

- assess volumes of patients following particular clinical pathways; and
- provide comparative activity data to evaluate productivity, quality and performance.

17 The Health Board has been using coded data to support service improvement. For example, using data to inform the winter plan and capacity plan, and looking at

variance in medical and nursing practice compared to outcomes. This is positive, with recognition by the Health Board of the importance of this data in day-to-day business.

The Health Board has made some progress implementing our recommendations but more needs to be done to implement them fully

18 Exhibit 3 summarises the status of our 2014 recommendations.

Exhibit 3: Progress status of our 2014 recommendations

Total number of recommendations	Implemented	In progress	Overdue	Superseded
25	7	12	4	2

Source: Wales Audit Office

19 Our follow-up work has found that the Health Board has made some progress against our 2014 recommendations, although there is significant work remaining to full address all the recommendations.

20 Our previous review highlighted concerns around the management of the clinical coding team, as well as the lack of stability and supervisory support. Since our review, the acting clinical coding manager was made permanent. However, recent changes to the directorate structure have resulted in some interim appointments being made. The clinical coding manager has subsequently been appointed to a new role in respect of information governance. This has meant temporary appointments have been made into the head of coding and clinical coding manager positions. Currently, the Health Board has no band 5 supervisors in place. These arrangements are interim until the new structure is finalised which is due imminently.

21 There has been mixed progress on other areas of focus on coding resources. Positively staff now have regular performance appraisals and development reviews and difficulties accessing some clinical systems and the internet has been addressed. Staff are being supported to obtain the accredited clinical coder qualifications and routine validation is undertaken with results fed back to coders. However, little has been done to rotate coders across specialities so opportunities to improve knowledge and succession planning have not been realised. Additionally, although there are induction arrangements for new starters and training plans there seems to be little awareness of these amongst teams. The coding teams also still do not have the opportunity to meet regularly, and communication of important messages has been raised as a concern.

22 Issues remain with medical records which may impact on the coding departments ability to code quickly and accurately. There are still temporary records in circulation and tracking of casenotes is still problematic. We are not aware of any training or checks on medical records to improve quality, although it is positive that coding is now represented on the Medical Records Operational Group. We are unable to confirm whether coders have access to digital records from the Teenage Cancer Unit, to address the previous concerns that coders had difficulties access the paper-based records for patients admitted into the unit.

23 Board engagement with coding is good, and there is good visibility of coding performance and accuracy within the Health Board. Coding has also now been linked to the work of the Information Governance Group and board members are reporting positive levels of awareness of clinical coding, although more work is needed to raise awareness of the potential use of coded data with Independent Members. The full board survey results are available in Appendix 2.

24 However, there is still work to do to improve clinical engagement with the coding process. Clinical engagement has been described as the single most valuable resource to a coding department. This gap is recognised by the coding team, however visibility of coders is affected by their distance from the wards. The coding team have attempted to engage with clinical staff by delivering presentations to directorates on the importance of the coding function and feeding back inaccurate discharge summaries to clinicians. However, more needs to be done to ensure clinical staff receive ongoing training on the importance of coding, and the role they play in ensuring good quality data.

Recommendations still outstanding

25 In undertaking this work, we have made one additional recommendation. This is set out in Exhibit 4. The Health Board also needs to continue to make progress in addressing our previous recommendations. The outstanding recommendations are set out in Exhibit 5.

Exhibit 4: new recommendation

2019 Recommendation	
Clinical Coding Resources	
R1	Resolve the current interim arrangements by agreeing the coding management structure following the directorate reconfiguration, ensuring there is sufficient management and supervisory capacity.

Exhibit 5: recommendations still outstanding

2014 recommendations not yet complete
Clinical Coding Resources R1 Strengthen the management of the clinical coding team to ensure that good quality clinical coding data is produced. This should include: c) ensuring that there is capacity to allow band 4 coders to undertake mentoring and checking of coding of band 3 staff in line with job descriptions; d) revisiting the allocation of specialities across staff to ensure that there is sufficient flexibility within the existing capacity to cover periods of absence and succession planning is in place for staff who are due to retire in the next five to ten years; g) increasing levels of engagement between the different teams within the Health Board, to provide opportunities to raise issues, develop peer support arrangements and share knowledge; h) updating the clinical coding policy to reflect the current operational management arrangements; and k) increasing the range of validation and audit processes, including the consideration of the appointment of an accredited clinical coding auditor.
Medical Records R2 Improve the arrangements surrounding medical records, to ensure that accurate and timely clinical coding can take place. This should include: a) reinforcing the Royal College of Physician (RCP) standards across the Health Board and developing a programme of audits which monitors compliance with the RCP standards; b) improving compliance with the medical records tracker tool within the Health Board Patient Administration system (PAS); c) putting steps in place to ensure that notes that require coding are clearly identified at ward level and that clinical coding staff have early access to medical records, particularly at UHW; e) reducing the level of temporary medical records in circulation; f) considering the roll out of the digitalisation of health records to the Teenage Cancer Unit to allow easier access to clinical information for clinical coders; and g) revisiting the availability of training on the importance of good quality medical records to all staff.
Board Engagement R3 Build on the good level of awareness of clinical coding at Board to ensure members are fully informed of the Health Board's clinical coding performance. This should include: c) raising the awareness amongst Board members of the wider business uses of clinically coded data.

2014 recommendations not yet complete	
Clinical Engagement	
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:
a)	re-enforcing the importance of completing discharge summaries to aid the coding process;
b)	ensuring that clinical staff receive an appropriate level of on-going training with regards to the process and purposes of clinical coding, outside of initial junior inductions;
c)	establishing validation processes that involve clinical staff, which will act to both improve clinical engagement and act as a form of accuracy review; and
d)	improving the 'visibility' of coding staff, to ensure that clinical engagement operates as a two-way process.

Source: Wales Audit Office

Appendix 1

Health Board progress against our 2014 recommendations

Exhibit 6: assessment of progress

Recommendation	Target date for implementation	Status	Summary of progress
Clinical Coding Resources R1 Strengthen the management of the clinical coding team to ensure that good quality clinical coding data is produced. This should include;			
a) ensuring a permanent arrangement is put in place for the Clinical Coding Manager post;	June 2014	Superseded	During our original review there was an acting clinical coding manager overseeing the operation of the clinical coding function. We recommended that a permanent appointment was made. This was because the short-term nature of the interim arrangements had the risk of making the clinical coding team unstable and it was unsettling for staff. Following our review, the Health Board produced an action plan and noted that on the 1 June 2014 a permanent Clinical Coding Manager was appointed. Following a merger of Information Technology and Information Governance there has been a temporary change in the management arrangements. Subsequently the substantive coding manager was promoted, and temporary appointments were made to the head of coding and the clinical coding manager roles. At the time of current fieldwork, there was lack of clarity about what would happen to this position post February 2019.
b) establishing the role of clinical coding supervisors within the existing structure	July 2014	Superseded	At the time of our previous review there was a surplus within the core clinical coding team which raised the potential for the Health

Recommendation	Target date for implementation	Status	Summary of progress
to support the day-to-day management of the clinical coding teams across the Health Board and provide opportunities for career progression;			Board to consider the creation of supervisor posts within its existing establishment. This would reduce pressure on the acting clinical coding manager. Following our review two clinical coding supervisors were appointed in July 2014. However, following the moves within the team there are now no Band 5 clinical coding supervisors in place despite the roles being offered internally to the teams. Due to the uncertainty with the manager positions, the Health Board made a decision to pause recruitment to these roles until there was further clarity with the manager positions. The Health Board needs to make a longer-term plan for band 5 and band 6 positions going forward.
c) ensuring that there is capacity to allow band 4 coders to undertake mentoring and checking of coding of band 3 staff in line with job descriptions;	No target date specified	In progress	In our 2014 review we found that there was no formal mentoring programme in place for new starters within the team. However, this has now been addressed and there is a detailed induction process for all new clinical coding staff that is set out in the department's 'Trainee Clinical Coder Induction Programme'. Experienced ACC qualified staff are expected to undertake mentoring within their own speciality. However, awareness of this training seems low and staff have reported however that the support for new staff is not always consistent.
d) revisiting the allocation of specialities across staff to ensure that there is sufficient flexibility within the existing capacity to cover periods of absence and succession planning is in place for staff who are due to retire in the next five to ten years;	December 2014	In progress	Our last review found there was a good level of clinical coding experience in the department. At that time, clinical coding workload was managed through a speciality allocation. All coders were allocated a speciality except the recently appointed coders who covered all specialities. Coders did not routinely rotate specialities and therefore remain coding a specific speciality for a considerable period. Arrangements have remained the same and staff code in specialities, but they do support each other in all areas which helps keep their knowledge up to date. The most recent NWIS report

Recommendation	Target date for implementation	Status	Summary of progress
			notes that the coding management should look into the possibility of rotating staff who are requesting or require a change of speciality for their own personal development. NWIS recommend that this would allow the coding staff to gain a comprehensive understanding and experience in all areas of coding applicable to the Health Board. There is no evidence of succession planning.
e) considering the implementation of the accredited clinical coding qualification;	August 2014	Implemented	We found in 2014 that the Health Board did not require any of its clinical coding staff to be accredited at appointment or to gain accreditation whilst in post. Subsequently the Health Board has introduced the clinical coding qualification and all trainees are currently working towards this, with a requirement to obtain the qualification to progress to Band 4. However, some staff expressed concern about the level of support they receive during their training and the Health Board may wish to consider its approach.
f) putting arrangements in place to ensure that all staff receive an annual performance appraisal and development review;	December 2014	Implemented	In 2014 many staff had not received an annual performance appraisal and development review (PADR), with some not having an appraisal for some years. This is now resolved, and the department is 100% compliant with PADRs with staff all now having annual appraisals.
g) increasing levels of engagement between the different teams within the Health Board, to provide opportunities to raise issues, develop peer support arrangements and share knowledge;	October 2014	In progress	We previously found that coding teams within the Health Board have not had the opportunity to meet as whole team, nor did they have routine meetings at site level. This lack of engagement has remained and there is no engagement between the two sites. There are no formal team meetings in place, and staff we spoke to felt that team meetings would be a more positive way of communicating major announces of changes than via email which is currently the preferred method of communication.
h) updating the clinical coding policy to reflect the current operational management arrangements;	September 2014	In progress	The Health Board has always had a comprehensive coding policy, and this is supported by the recent NWIS review. The policy covers standard coding procedures as well as validation practices within

Recommendation	Target date for implementation	Status	Summary of progress
			the organisation, the structure of the department as well as local policies. Unfortunately, due to the recent staff changes and interim arrangements the structure set out in the policy is not reflective of the current operational management of the coding team and could be updated.
i) working with colleagues within the Informatics Directorate to look at the potential to move Medicode to a central server arrangement;	September 2014	Implemented	Medicode is a specific system used by coders to produce the coding output. Our previous review found that there were several issues with the system. It was held on individual machines within the Health Board and therefore when an update was required it was necessary to update each machine individually. This was time consuming and resource intensive compared to hosting Medicode on a central server. This has now been resolved and Medicode is held centrally which has addressed this issue.
j) allowing all clinical coding staff access to the appropriate clinical information systems and the internet; and	September 2014	Implemented	Previously coding staff had limited access to systems and had no access to the Internet, which impacting on the ability of coding staff to be efficient in finding out relevant information. Staff now have access to the internet, and other clinical systems which has had a positive impact. It has made their job easier, as they are not clinically trained, they can look terms up for clarification.
k) increasing the range of validation and audit processes, including the consideration of the appointment of an accredited clinical coding auditor.	November 2014	In progress	To ensure that clinical coded data submitted centrally is of good quality it is important that Health Boards have appropriate mechanisms to verify and validate the data as it is processed. Previously there was little validation work undertaken, however there is now evidence of an improved validation and audit process whereby managers pick one to two sets of case notes per coder every week to validate at random. Errors are fed back to the individual and a spreadsheet is kept of all validations completed. A report is produced every quarter to show coders how they are performing. However, there has been no formal appointment of a clinical auditor and no plans currently to do this.

Recommendation	Target date for implementation	Status	Summary of progress
Medical Records			
R2 Improve the arrangements surrounding medical records, to ensure that accurate and timely clinical coding can take place. This should include;			
a) reinforcing the Royal College of Physician (RCP) standards across the Health Board and developing a programme of audits which monitors compliance with the RCP standards;	No date specified by the Health Board	Overdue	The quality of medical records can have a direct impact on the quality of coding. The quality of the information recorded in medical records however rests with the clinical staff. We have not seen evidence that the RCP standards are being enforced but the coding team do continually return case notes that fall below a standard making them unable to code. The most recent NWIS report highlights that the patients case notes continued to be an issue for the Health Board with regards to their poor physical condition and the quality of the documentation.
b) improving compliance with the medical records tracker tool within the Health Board Patient Administration system (PAS);	No date specified by the Health Board	In progress	To facilitate the achievement of the Welsh Government target that 95% of coding activity should be completed within one month of the end of the hospital episode, it is important that clinical coders get timely access to the patient's medical records. From our last review we found that tracking of records was an issue. If records are not tracked effectively this means it can take longer for coders to access them. Coders are reporting that they are tracking records, however practices across the Health Board are not consistent and still cause issues.
c) putting steps in place to ensure that notes that require coding are clearly identified at ward level and that clinical coding staff have early access to medical records, particularly at UHW;	No date specified by the Health Board	In progress	This was an area of focus to enable coders quick access to records that needed to be coded, as it affects the ability of coders to meet the deadlines. Coders felt that they had efficient access to notes from the wards, but problem arose when wards took them back without telling them or tracking them on the system. Tracking of case notes is a standing item on the Medical Records Operational Group however there has been little impact in dealing with this.

Recommendation	Target date for implementation	Status	Summary of progress
d) improving engagement between the clinical coding department and medical records, including the establishment of a Health Records Committee with representation from the clinical coding team;	No date specified by the Health Board	Implemented	In 2014 the Health Board did not have a Health Records Group, which meant there was little opportunity for escalating issues relating to the quality of medical records. Subsequently the Health Board has improved engagement between the coding department and medical records by having coding representation on the Medical Records Operational Group.
e) reducing the level of temporary medical records in circulation;	No date specified by the Health Board	In progress	Our review in 2014 found a considerable number of temporary folders. As well as a clinical risk, this has implications for the quality of clinical coding as relevant previous medical history may be omitted from the coding of a patient's episode of care. Coders and the recent NWIS report are highlighting that temporary folders are still an area of concern, and it has been raised in the Medical Records Operational Group as a concern.
f) considering the roll out of the digitalisation of health records to the Teenage Cancer Unit to allow easier access to clinical information for clinical coders; and	No date specified by the Health Board	Overdue	We do not have an update on the position in respect of this action. In 2014 we made the recommendation as accessing the records on the Teenage Cancer Unit was problematic to coders and meant they were having to attend the wards in person to code on site. Access to digital records would have resolved this issue but we are not aware whether digital records have been rolled out to include the Unit.
g) revisiting the availability of training on the importance of good quality medical records to all staff.	No date specified by the Health Board	In progress	The quality of medical records has a direct impact on the quality of coded data. Our 2014 report highlighted that when looking at the standards of medical records the areas which were most problematic fell under the responsibility of clinical staff. Various activities have been held by the Health Board such as presentations to clinical staff groups, however it is difficult to gauge how effective these have been. This will need to be an ongoing area of focus for the Health Board.

Recommendation	Target date for implementation	Status	Summary of progress
Board Engagement R3 Build on the good level of awareness of clinical coding at Board to ensure members are fully informed of the Health Board's clinical coding performance. This should include:			
a) ensuring that information that gets reported to the Board and through its sub-committees reports the accuracy of clinical coding;	No date specified by the Health Board	Implemented	Previously clinical coding had received significant attention at the Board with a primary focus on the Risk Adjusted Mortality Index (RAMI). There had also been dedicated coding updates. This focus has remained and improved as the Health Board has taken steps towards addressing this recommendation by including coding completeness and accuracy figures in monthly performance papers. Coding completeness figures are also included as a data quality indicator on the mortality dashboard circulated to the board.
b) considering the potential to link clinical coding performance and the wider implications for data quality into the business of the Information Governance Group; and	August 2014	Implemented	Clinical coding forms part of the Informatics Directorates with direct links with the data quality agenda and the wider Information Governance arrangements. Coding has been linked to the business of the Information, Technology and Governance Sub-Committee. Positively the previous coding manager now has an Information governance role which also improves the links between coding and information governance. Coding and functionality have been developed on DATIX to ensure that all incidents that could potentially relate to Information Governance breaches can be identified by coding or deliberately flagged by reporters or managers. These arrangements commenced in January 2017 and are being progressively refined.
c) raising the awareness amongst Board members of the wider business uses of clinically coded data.	No date specified by the Health Board	In progress	Positively the board member survey in 2018 shows that members have some or full awareness of the factors which can affect the robustness of clinical coding and most were satisfied that the organisation is doing enough to make sure that clinical coding arrangements are robust. However, some said they would find it helpful to have more information on clinical coding and the extent to which it affects the quality of key performance information.

Recommendation	Target date for implementation	Status	Summary of progress
Clinical Engagement 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;			
a) re-enforcing the importance of completing discharge summaries to aid the coding process;	No date specified by the Health Board	In progress	Our previous review found issues with the lack of completed discharge summaries which can cause problems for coders as it becomes difficult to identify and code the diagnoses and procedures undertaken. Steps have been taken by the team with inaccurate discharge summaries sent back to clinicians for clarification but there are still issues with discharge summaries within the Health Board.
b) ensuring that clinical staff receive an appropriate level of on-going training with regards to the process and purposes of clinical coding, outside of initial junior inductions;	No date specified by the Health Board	Overdue	Clinical engagement has been described as the single most valuable resource to a coding department. Our previous review found limited clinical engagement. Although positively clinical coding training was included within the induction training for junior doctors, there was little other training around the benefits and uses of coded data which may have in turn improved the quality of information being coded. There is no evidence to suggest that clinical staff receive on-going training with regards to the process and purposes of clinical coding.
c) establishing validation processes that involve clinical staff, which will act to both improve clinical engagement and act as a form of accuracy review; and	No date specified by the Health Board	Overdue	One of the identified models of good practice is to engage clinicians in the validation process. Our previous fieldwork found limited engagement of clinicians in validation of data. This position remains, and although the coding team recognise the importance of clinical engagement, there are barriers such as being based far from wards and finding the time to access clinicians.
d) improving the 'visibility' of coding staff, to ensure that clinical engagement operates as a two-way process.	No date specified by the Health Board	In progress	There is a recognition that to improve engagement with clinicians, staff must be more visible. The coding team recognise this and have been trying to improve their visibility. For example, a coding manager gave a presentation to the Child Health Directorate in November 2018 to show them how important coding is. However, assessing the impact of these activities is challenging. They

Recommendation	Target date for implementation	Status	Summary of progress
			recognise that more could be done to engage clinicians, although the physical location some way from the clinical areas is not helpful.

Source: Wales Audit Office

Appendix 2

Results of the board member survey

Responses were received from 7 of the board members in the Health Board.
The breakdown of responses is set out below.

Exhibit 7: rate of satisfaction with aspects of coding

	How satisfied are you with the information you receive on the robustness of clinical coding arrangements in your organisation?		How satisfied are you that your organisation is doing enough to make sure that clinical coding arrangements are robust?	
	This Health Board	**All Wales**	**This Health Board**	**All Wales**
Completely satisfied	2	6	-	5
Satisfied	2	34	5	40
Neither satisfied nor dissatisfied	2	46	2	46
Dissatisfied	1	10	-	4
Completely dissatisfied	-	-	-	1
Total	7	96	7	96

Exhibit 8: rate of awareness of factors affecting the robustness of clinical coding

	How aware are you of the factors which can affect the robustness of clinical coding arrangements in your organisation?	
	This Health Board	**All Wales**
Full awareness	3	26
Some awareness	4	50
Limited awareness	-	17
No awareness	-	3
Total	7	96

Exhibit 9: Level of concern and helpfulness of training

	Are you concerned that your organisation too readily attributes under performance against key indicators to problems with clinical coding?		Would you find it helpful to have more information on clinical coding and the extent to which it affects the quality of key performance information?	
	This Health Board	**All Wales**	**This Health Board**	**All Wales**
Yes	-	8	3	77
No	7	84	4	19
Total	7	92	7	96

Exhibit 10: additional comments provided by respondents from the Health Board

- Moving to SNOWMED will make a huge difference, we are leading the way in Wales with this work.
- Robust work on clinical coding has been done and it is well understood.
- Clinical coding is regularly considered as part of the performance discussions and there is awareness of the pressures on the service and the important of accurate and timely coding. There are areas where improvements are being made to improve the resilience of the service considering the key role it plays.

Appendix 3

Management response

Exhibit 11: management response

Ref	Recommendation	Intended outcome/ benefit	High priority (yes/no)	Accepted (yes/no)	Management response	Completion date	Responsible officer
R1	**Clinical Coding Resources** Resolve the current interim arrangements by agreeing the coding management structure following the directorate reconfiguration, ensuring there is sufficient management and supervisory capacity.	To improve clarity around management structure	Yes	Yes	The clinical coding teams are included in the restructure of the directorate, with the launch taking place on 4/6/19. The new structure will provide adequate management and supervisory capacity.	New structure in place by September 2019	Director of Digital

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