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Clinical coding follow-up review – **Velindre University NHS Trust**

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Contents

The Trust has exceeded all-Wales completeness and accuracy targets for clinical coding and has implemented actions to address most of our 2014 recommendations, but there remains scope to make more use of clinical coding data.

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 the 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 April 2014 we reported our findings for Velindre University NHS Trust (the Trust) and concluded that whilst the completion of clinical coding had been timely previously, weaknesses in the arrangements and process were impacting on the accuracy of clinical coded data in the Trust and limited resources meant that backlogs in uncoded episodes were increasing. We found that:

- clinical coding had a low profile in the Trust and needed more investment to support a greater focus on quality and accuracy;
- the quality of clinical coding was weakened by disorganised patient information, inadequate managerial and supervisory capacity, inadequate staffing capacity, and the absence of audit processes; and
- the Trust was starting to make greater use of clinical coded data which met the Welsh Government standards for 2012-13, but backlogs of uncoded episodes were increasing and although the overall accuracy was good,

[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).

inaccuracies were identified for inpatient episodes and the implications were not clearly explained across the organisation.

7 We made a number of recommendations, which focused on:

- ensuring the quality of medical records by re-establishing audit and improving the access to electronic and paper records;
- reviewing the establishment and structure of staff resources; and
- raising the profile and awareness of clinical coding across the Trust.

8 As part of the Auditor General's 2018 Audit Plan for the Trust, 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 Trust to self-assess its progress so far;
- analysed clinical coding data sent to the 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 Trust has exceeded all-Wales completeness and accuracy targets for clinical coding and has implemented actions to address most of our 2014 recommendations, but there remains scope to make more use of clinical coding data**.

The Trust's performance against completeness and accuracy performance measures exceeds Welsh Government targets

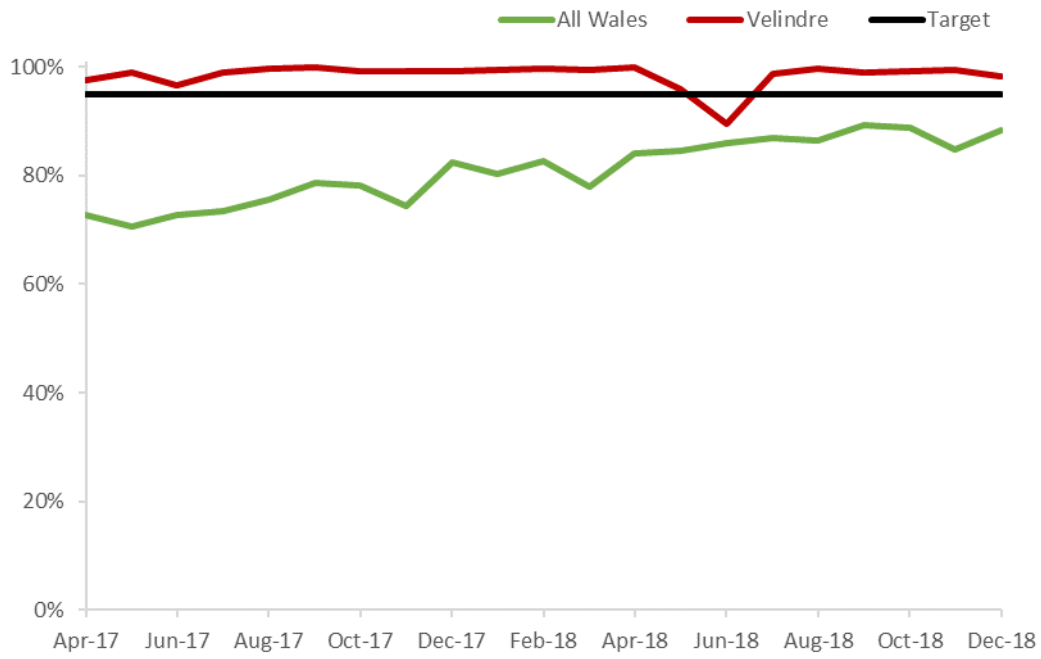
12 The Welsh Government has two coding-related Tier 1 targets which NHS bodies are required to meet, these relate to completeness and accuracy.

13 Each year, NHS bodies send data to the Welsh Government showing their performance against the Tier 1 target for coding **completeness**. The target is that 95% of hospital episodes should have been coded within one month of the episode end date. NHS bodies need to meet this target each month (rather than at the end of each financial year). Exhibit 1 shows the Trust's performance against the completeness measure between April 2017 and December 2018. In all but one

[2] Five questions relating to clinical coding were included in the board member survey which formed part of our 2018 Structured Assessment work. A total of seven responses out of a possible 12 responses were received. The results are provided in Appendix 2.

month in that period, performance exceeded the 95% target. In 13 out of 21 months, performance exceeded 99%.

Exhibit 1: percentage coded within one month of episode end date



Source: Wales Audit Office analysis of clinical coding data reported by health bodies to the Welsh Government.

14 A technical issue which prevented the automated feed of radiotherapy activity data into CaNISC[3] resulted in a reduction in coding performance in June 2018. It took the Trust's IM&T team approximately six weeks to investigate and resolve the issue. During this time the clinical coding team were unable to access information they needed to code radiotherapy activity. Once the issue was resolved, the Trust used overtime to clear the backlog of clinical coding that had built up, and the backlog was cleared by the end of 2018.

15 As part of our fieldwork, we requested the backlog position for each financial year between 2014-15 and 2017-18. The Trust told us that they reported only a small, negligible backlog each year. This is a positive position.

16 Each year, the NHS Wales Informatics Service (NWIS) Standards Team checks the **accuracy** of clinical coding. NWIS does this by reviewing a sample of coded

[3] CaNISC is an online computer system primarily holding information from a patient's interactions with health professionals in respect of cancer care.

episodes and checking the information against evidence within patients' medical records to assess accuracy. The Welsh Government's target is for NHS bodies to demonstrate improvements in clinical coding accuracy over time. Exhibit 2 shows the Trust's accuracy measure scores between 2014-15 and 2018-19; over that period performance improved by 10.2%. NWIS noted in its 2018-19 clinical coding report (July 2018) that the Trust once again exceeded the minimum standards recommended for NHS Wales and accuracy scores had improved since the previous audit carried out in 2017-18 (February 2018).

Exhibit 2: percentage of episodes coded accurately

Source: Results of NWIS clinical coding accuracy reviews 2014-2019.

* 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.

There remains scope for the Trust to make more use of clinical coded data to support improvement

17 In 2014, 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, clinical coding data can be used to:

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

18 During our interviews, we found that the Trust recognised that clinical coding data is used at a national level to identify disease prevalence and can inform improvements to clinical pathways such as the developing Single Cancer Pathway. There were differing views on the extent to which clinical coding data is being used by the Trust to support improvement. Clinical coded data could be used by the Trust to;

- identify cancer prevalence to help inform the work of other health bodies to prevent cancer and to support early diagnosis;
- compare actual demand with expected demand to ensure that the Trust has the required capacity;
- support medical revalidation by ensuring that patient outcomes are in line with expectations; and
- potentially inform research being undertaken by the Trust.

19 In our view, there is an opportunity for the Trust to review the extent to which it currently uses clinical coded data to identify whether it could make more use of the data. The Trust's clinical coding data scores highly in terms of accuracy and timeliness and is a rich source of information, which could potentially be used to inform demand and capacity planning and to improve outcomes for patients.

Most recommendations from our previous report have been implemented

20 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
16	12	3	1	0

Source: Wales Audit Office.

21 Our follow-up work has found that the Trust has made good progress against our 2014 recommendations.

22 The Trust has improved the management of paper and electronic records to ensure they improve the quality of, and access to medical records that support clinical coding. The Royal College of Physicians' (RCP) standards for medical records have been implemented, and an audit programme has been established by the Trust to monitor compliance with the standards. In addition, the Trust has increased the information held on electronic records to reduce the reliance on paper records, and consequently reduced the time spent by clinical coders tracking paper records. The Trust has enabled the clinical coding team to inform the planning of replacement electronic systems, with the aim of ensuring that once implemented, the new systems will continue to support clinical coding.

23 Since our previous review, the Trust's clinical coding staff establishment[4] has increased, and new clinical coding team leader posts have been created. The changes to the team structure and increase in capacity have enabled the management of the team to provide more support for clinical coders and led to improved and increased validation and audit of clinical coding. In addition, there is now a clear career pathway for clinical coding staff.

24 Engagement with medical staff has been strengthened by the provision of clinical coding awareness sessions and by providing induction training on clinical coding for medical staff.

25 The Trust has increased the profile of clinical coding by providing regular performance updates to a key Board committee. Whilst clinical coding at the Trust performance is exceeding Welsh Government targets, it would be beneficial for the Trust to address our recommendation to provide a briefing paper setting out what clinical coding is and the potential implications of poor clinical coding.

Recommendations still outstanding

26 In undertaking this work, we have made one additional recommendation, which is set out in Exhibit 4, and the Trust's management response to this recommendation is provided in Appendix 3. The Trust also needs to continue to make progress in addressing four previous recommendations. The outstanding recommendations are set out in Exhibit 5.

[4] Required staffing level.

Exhibit 4: new recommendation

2019 Recommendation	
Use of clinical coding data to support improvement	
R1	Review the extent to which clinical coded data is currently used to identify if the Trust could make more use of the data to support improvement.

Exhibit 5: recommendations still outstanding or overdue

2014 recommendations not yet complete	
Management of Medical Records	
Improve the management of both paper and electronic medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:	
R1d	Adopting a standardised approach to the recording of information in CaNISC to support the retrieval of information by, eg, introducing a standardised format for titles of scanned documents.
Board engagement	
Raise the profile of clinical coding at Trust Board level 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:	
R4a	Simplifying lines of accountability for clinical coding to Board to ensure that professional and operational issues are co-ordinated.
R4b	Providing short briefing material which clearly sets out what clinical coding is and the implications of poor clinical coding (reflecting timeliness, completeness and accuracy) on key performance indicators.
R4c	Ensuring that papers that are underpinned by clinical coding data include a statement which sets out the robustness of the data.

Appendix 1

Trust progress against our 2014 recommendations

Exhibit 6: assessment of progress

Recommendation	Target date for implementation	Status	Summary of progress
Management of medical records R1: Improve the management of both paper and electronic medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:			
a) Reviewing and exploring the adoption and implementation of the standards of the Royal College of Physicians (RCP) for medical records.	January 2015	Implemented	Our 2014 review suggested that medical staff working at the Trust have a limited understanding of the RCP standards and whether the Trust had adopted them. We also identified that there was limited understanding amongst medical staff of the Trust's internal standards for medical records. Since our review, the RCP standards have been adopted by the Trust. The current Records Management Policy (2018) states that 'the Health and Care Standard 3.5 on Record Keeping[5] helps the Trust … ensure good practice in record keeping'. Medical records training is provided in induction courses for medical staff.

[5] The Health and Care Standards came into force from 1 April 2015 and aim to provide a consistent framework for Welsh health bodies to improve the quality and safety of healthcare provision. Health and Care Standard 3.5 on Record Keeping states 'Paper and electronic clinical record quality is improved through adoption of the Academy of Medical Royal Colleges standards for the clinical structure and content of patient records'.

Recommendation	Target date for implementation	Status	Summary of progress
Management of medical records R1: Improve the management of both paper and electronic medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:			
b) Developing a programme of routine audits of medical records to provide assurance that the quality of medical records is improving.	July 2014	Implemented	Our 2014 work included a sample review of paper medical record case notes to assess compliance with the RCP standards, we concluded that there was a good level of compliance with the RCP standards. The Trust told us that since our 2014 review, an audit programme for medical records has been established and is undertaken on a quarterly basis. Audit findings are presented to the Medical Records Group. The Clinical Coding Manager (or in her absence one of the clinical coding team leaders) attends the Medical Records Group. This provides an opportunity for any clinical coding issues relating to the quality of medical records to be raised. The NWIS Clinical Coding 2017-18 report (February 2018) found that patients' case notes in the Trust are in good condition and well maintained.

Recommendation	Target date for implementation	Status	Summary of progress
Management of medical records R1: Improve the management of both paper and electronic medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:			
c) Reviewing the way that health records are tracked within the Cancer Centre to reduce the time spent on this by the clinical team.	May 2014	Implemented	In 2014, our sample review identified that nearly all paper case notes were obtained by the clinical coding team within two weeks of the episode of care ending. We asked the clinical coding team to record how much time was spent tracking and retrieving case notes over a two-week period; we found, on average, clinical coders spent just over seven per cent of their time on these activities. Approximately two years ago, following a trial period, the Trust implemented a paper-lite initiative to reduce the clinical coders' reliance on paper case notes. When coding day case and regular day attenders' admissions, the clinical coding team now extract all information required from the CaNISC and Chemocare electronic systems[6]. When coding inpatient episodes, most of the information required by the clinical coding team is contained in the same electronic systems, but some additional information is recorded in paper case notes. The Trust told us that since introducing the paper-lite initiative, approximately 90% of the clinical coding information required is held electronically (the remaining 10% comes from paper case notes relating to inpatient episodes). Once an inpatient is discharged or transferred from Velindre Cancer Centre, most paper records can be released straight to the clinical coding team, but some records may need to be retained longer, to allow further information to be added (such as a record of correspondence). Clinical coders are responsible for the retrieval of the case notes, and do not commence coding for a patient until they have obtained all case notes. In our recent review, we were told by the Trust that generally paper case notes are easy to retrieve (there are only two wards), although occasionally the paper case notes needed to be tracked and retrieved. However, the paper-lite initiative has significantly reduced the time spent by the clinical coding team tracking and retrieving case notes.

[6] Chemocare is computer system used for chemotherapy prescribing.

Recommendation	Target date for implementation	Status	Summary of progress
Management of medical records R1: Improve the management of both paper and electronic medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:			
d) Adopting a standardised approach to the recording of information in CaNISC to support the retrieval of information by, eg introducing a standardised format for titles of scanned documents.	January 2015	In progress	In respect of information held in the CaNISC system, our 2014 report found that; • there was no easy way to retrieve information from CaNISC and the clinical coding team has to search through all of the patient record to find the information they need to code a particular episode of care; • information was not always consistently recorded in the system, with staff recording the same information in differing areas of the system; and • there was no consistency in the naming of scanned and uploaded documents, meaning that clinical coders often had to open all scanned documents to see if they contained relevant information. The 2017-18 NWIS Clinical Coding report (February 2018) found that the clinical coding team still has trouble trying to extract relevant information from CaNISC. The NWIS report concluded that data continued to be recorded inconsistently (in respect of the patient's diagnosis and co-morbidities) due to the structure of the system, and the clinical coding team still had to review the whole record to find the necessary information.

Recommendation	Target date for implementation	Status	Summary of progress
Management of medical records R1: Improve the management of both paper and electronic medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:			
d) Adopting a standardised approach to the recording of information in CaNISC to support the retrieval of information by e.g. introducing a standardised format for titles of scanned documents.	January 2015	In progress	The need to address the structure of information recorded in CaNISC has been superseded by the commencement of a programme to replace CaNISC due to the system reaching the 'end of life'. The CaNISC system will be replaced with the Welsh Patient Administration System (WPAS), and supported by the introduction of a second system, the Welsh Clinical Portal (WCP)[7]. Implementing WPAS and WCP will require considerable planning and preparatory work, including scoping, data migration and testing. In its 2017-18 report, NWIS recommended that the Trust's clinical coding team should be included in all discussions in the replacement programme to ensure that the location of patients' data is standardised and to help identify how to address data extraction issues relating to patients' past medical history. The Trust told us that, the Velindre Cancer Centre Head of IM&T (whom the Clinical Coding Manager reports to) is a core team member of the WPAS implementation working groups. In addition, clinical coding team members also participate in the implementation working groups. A key workstream is a gap analysis to identify any functionality within CaNISC that is not currently provided in the two new systems. This work aims to identify required developments to ensure no functionality is lost. The Trust has told us that at the time of our fieldwork, requests made by the clinical coding team to address missing functionality have been agreed and have led to planned developments; this includes a clinical coding dashboard which will be beneficial to other health bodies in Wales using WPAS.

[7] There will be numerous benefits for migrating to national systems, which include consistency of data capture and data quality, better integration with other health bodies and primary care, efficiency when ordering tests, better access to test results, and the ability to capture data from a patient's referral through to discharge.

Recommendation	Target date for implementation	Status	Summary of progress
Management of medical records R1: Improve the management of both paper and electronic medical records to ensure that the quality of, and access to, medical records effectively supports the clinical coding process. This should include:			
d) Adopting a standardised approach to the recording of information in CaNISC to support the retrieval of information by e.g. introducing a standardised format for titles of scanned documents.	January 2015	In progress	A standardised naming convention for scanned documents uploaded to CaNISC was introduced after our 2014 review. However, we were told that whilst this development is useful, the clinical coding team still feels the need to open all scanned documents to ensure that no required information is missed. Sometimes scanned documents are not easy to read and issues with CaNISC's stability mean that often, when scanned documents are opened, the system shuts down. The latter issue should be resolved once CaNiSC is replaced. Clinical coders also have access to the WCP which holds patient documentation (such as correspondence discharge advice letters and assessments. Documents held in this system comply with a standardised naming convention and must be tagged with meta data which help ensure required information is provided.
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:			
a) Increasing the establishment of staff in the clinical coding team to address the quality issues identified in the 2014 report.	July 2014	Implemented	As at 30 September 2013, the Trust's total clinical coding team funded establishment FTE was 6.55 and comprised eight members of staff. Following our 2014 report, the Trust undertook a review of the clinical coding team structure and establishment. Subsequently, the clinical coding team establishment was increased, and two new Band 5 clinical coding team leader posts were created. As at 31 March 2018, the clinical coding team's funded establishment totalled 10.78 FTE. The actual FTE of staff in post was 10.44 FTE, which is slightly less than the funded establishment; the Band 4s in post are 0.34FTE less than the establishment. The team comprise 12 members of staff and there are no vacant posts.

Recommendation	Target date for implementation	Status	Summary of progress
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:			
b) Reviewing the structure of the team to provide an opportunity for developing a clear career pathway and implementation of the accredited clinical coder qualification.	July 2014	Implemented	At the time of our 2014 review, the Trust had recently appointed two Band 3 trainees because the Trust had been unable to recruit at Band 4 level. At that time, it was essential for new Band 4 recruits to already hold the National Clinical Coding Qualification (NCCQ). Since 2014, the Trust has removed the requirement for Band 4 recruits to hold the NCCQ, and it is now desirable rather than an essential requirement. Band 3 trainee clinical coders must meet the standards required in two successive audits (undertaken six months apart) to progress to a Band 4 post. The requirement to complete the NCCQ was removed because it requires training in types of episodes of care that the Trust does not provide (although the Trust still allows clinical coders to undertake the qualification should they wish to do so). This change has helped the Trust to successfully recruit Band 4 clinical coders. The creation of the Band 5 clinical coding team leader posts (Recommendation 2a) provides a clear and attractive career progression pathway for clinical coders. The Clinical Coding Manager, both team leaders and one Band 4 clinical coder hold the NCCQ. All clinical coders have achieved the minimum training requirements by completing the Clinical Coding Foundation Course.

Recommendation	Target date for implementation	Status	Summary of progress
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:			
c) Establishing a supervisor post to support the Clinical Coding Manager so that they can develop audits and provide other support to the coders to improve quality.	December 2014	Implemented	We reported in 2014 that there was a significant gap in managerial and supervisory capacity. We found that the demands on the Clinical Coding Manager's time meant that she had limited capacity to mentor and support clinical coding staff. The absence of a clinical coding team leader role meant that mentoring and providing support to new Band 3 trainees fell to the Band 4 clinical coders, and sometimes to a longer serving Band 3 trainee. Our 2014 review also found that that the capacity constraints of the Clinical Coding Manager meant she was unable to undertake regular clinical coding audits. The creation of two clinical coding team leader posts has provided additional supervisory capacity. The clinical coding team leaders are responsible for the day-to-day management of the clinical coding team, monitoring workloads and providing coaching, mentoring and training to team members. The clinical coding team leaders also undertake monthly audits of each clinical coder's coding accuracy and provide feedback on the audit results. The clinical coding team told us that support arrangements for team members are good, and that team members are able to access required training. The increase in supervisory capacity has enabled the Clinical Coding Manager to undertake regular audits. The Clinical Coding Manager is an Accredited Clinical Coding Auditor and undertakes audits using the NHS Classification Service Clinical Coding Audit Methodology. In additional to undertaking audits, the Clinical Coding Manager regularly runs validation reports to identify basic errors in the coded data; the audit results are reported on the clinical coding dashboard. Audit findings are used to improve and assure the quality of coded data, and the results are shared with team members and used to identify training needs.

Recommendation	Target date for implementation	Status	Summary of progress
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:			
d) Establishing and maintaining regular team meetings and individual appraisals to provide regular feedback to staff on issues raised through validation and audit.	January 2014	Implemented	The clinical coding team now meets on a quarterly basis. The meetings provide an opportunity to discuss audit findings and share learning. If audit work identifies issues that need addressing, immediate feedback is provided to the team member that coded the data, and, if appropriate, learning is shared with the wider team. Such feedback is provided on an ongoing basis, to ensure timely action. The clinical coding team leaders are responsible for undertaking team member appraisals, and training needs identified during audits are fed into personal development plans. Our review identified that all 12 members of the team received a performance appraisal and personal development review in 2017-18. The clinical coding team leaders also prepare clinical coding quizzes for the clinical coding team to share learning.
e) Monitoring and managing high levels of productivity to ensure that the need for timeliness does not impact on the accuracy of clinical coding.	March 2015	Implemented	Our 2014 sample review of clinical coding identified that 100% of the records were coded within one month, but our report also highlighted that the Trust's accuracy of clinical coding fell below recommended standards. At that time, the Trust identified that the drive to meet the completeness performance targets was impacting on the accuracy of clinical coding. Our recent work identified that the Trust's audit programme provides assurance that productivity levels do not impact on accuracy. Recent completeness and accuracy performance data (Exhibits 1 and 2) demonstrate clinical coding accuracy has improved since 2014.

Recommendation	Target date for implementation	Status	Summary of progress
Engagement with medical staff R3: Strengthen engagement with medical staff to ensure that the positive role that doctors have within the clinical coding process is recognised. This should include:			
a) Raising awareness of the clinical coding process adopted by the Cancer Centre through training sessions for medical staff, as well as attendance at appropriate meetings such as audit sessions.	May 2014	Implemented	In 2014, we found that there was scope to improve clinical engagement in clinical coding. We found that clinical coding had not featured in induction training for junior doctors, and that clinical coding training for medical staff was limited. Following our report, the Trust arranged clinical coding awareness raising sessions for medical staff. The clinical coding team leaders now provide clinical coding training during junior doctor induction training. In addition, bespoke formal and informal training is provided to medical staff to suit the needs of individuals or groups of staff on a regular basis.
b) Raising the awareness of all consultants so that they know where the clinical coding team is located.	May 2014	Implemented	As was the case in our earlier review, the clinical coding team is co-located on the same corridor as the majority of medical secretaries and some of the Trust's consultants. Medical staff were made aware of the clinical coding team office location as part of the clinical coding awareness training sessions (Recommendation 3a).
c) Encouraging clinical coding staff to engage clinicians in the validation process and to visit clinical areas.	May 2014	implemented	In 2017, the Trust developed guidance for the clinical coding of radiotherapy activity with input and advice provided by the Head of Radiotherapy Planning at Velindre Cancer Centre. The guidance was developed to help improve the accuracy of clinical coding of radiotherapy activity, due to its complexity. In its 2018-19 report, NWIS highlighted that the accuracy of chemotherapy and radiotherapy procedure code assignments had improved and that the review found no errors in either specialty. During our recent review, the Trust told us that if the clinical coding team has a query on an episode of care, it is either raised directly with the clinician or via a Validation Proforma. The Trust told us that should a pattern of queries be raised, the Clinical Coding Manager would step in to take appropriate action to address the issue.

Recommendation	Target date for implementation	Status	Summary of progress
Board engagement R4: Raise the profile of clinical coding at Trust Board level 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:			
a) Simplifying lines of accountability for clinical coding to Board to ensure that professional and operational issues are co-ordinated.	September 2014	In progress	The lines of accountability for clinical coding have not changed since our 2014 review. The Executive Director of Finance & Informatics has executive responsibility for clinical coding but is not responsible for the clinical coding team. Day-to-day management of the team is provided by the Clinical Coding Manager, who reports to the Velindre Cancer Centre Head of IM&T, who in turn reports to the Director of Velindre Cancer Centre. The Director of Velindre Cancer Centre attends Board meetings but is not part of the Executive Team. The Trust recognises that the lines of accountability for clinical coding are not as simple as they could be but told us that the arrangements work and that operational issues are raised to the Board level when required. The Trust is currently undertaking a review of the executive team members' portfolios of responsibilities. In addition, the Trust is also undertaking a separate review of the IM&T function. The IM&T review will consider the separate IM&T functions in the Trust's two divisions (Velindre Cancer Centre and the Welsh Blood Service) and identify whether to continue operating the two IM&T functions separately, or if there are advantages in pooling at least some of the IM&T resources. Until both reviews are completed, it is not clear how they will impact on the lines of accountability for clinical coding.

Recommendation	Target date for implementation	Status	Summary of progress
Board engagement R4: Raise the profile of clinical coding at Trust Board level 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:			
b) Providing short briefing material which clearly sets out what clinical coding is and the implications of poor clinical coding (reflecting timeliness, completeness and accuracy) on key performance indicators.	May 2015	Overdue	The Trust told us that a specific briefing paper has not been developed to address our 2014 recommendation. However, following our previous review, a successful case was made for additional clinical coding resources (Recommendation 2a) which was based on the need to improve the accuracy of clinical coding. Recent clinical coding performance has been exceeding Welsh Government targets, and thus the need to identify the implications of poor clinical coding is less so than at the time of our 2014 report. However, we still feel that a briefing paper would be beneficial. Our Board member survey identified that four out of seven Board members would find it helpful to have more information on clinical coding and the extent to which it affects the quality of information. In addition, the paper would provide an opportunity to highlight positive clinical coding performance and provide assurance of any information derived from clinical coding data.
c) Ensuring that papers that are underpinned by clinical coding data include a statement which sets out the robustness of the data.	Ongoing	In progress	During our recent work, the Trust told us that papers setting out clinical coding performance data include a supporting statement of the robustness of the data. The Trust should also ensure that any additional information underpinned by clinical coding data (not just the clinical coding performance data) should set out the robustness of the data, even if this it to confirm the positive performance and provide assurance that the clinical coding data is reliable.

Recommendation	Target date for implementation	Status	Summary of progress
Board engagement R4: Raise the profile of clinical coding at Trust Board level 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:			
d) Providing regular feedback on clinical coding performance against the Welsh Government targets.	September 2014	Implemented	Our 2014 review found that clinical coding had a low profile in the Trust, and clinical coding performance did not feature at the Board or its sub-committees. Since then, the profile of clinical coding has significantly increased. A Trust clinical coding report, which provides trend completeness and accuracy performance data, is reported to every Information Governance and Information Management and Technology Committee (IG&IM&T Committee). The report includes a brief summary of any relevant matters for consideration by the Committee, such as on any workforce and performance issues. Should the IG&IM&T Committee feel the need to raise any issues to the Trust Board, they are able to do so in the committee's highlight report for the Board. The clinical coding performance report is also a standing agenda item at the Velindre Cancer Centre Quality and Safety Committee. In addition, all NWIS clinical coding reports are reported to the Audit Committee. The clinical coding completeness performance measure is also reported on the Trust's performance report which is considered at each Board meeting, and at each meeting held by three of the Board's sub-committees.

Source: Wales Audit Office.

Appendix 2

Results of the board member survey

Responses were received from seven of the board members in the Trust. 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 Trust	All Wales	This Trust	All Wales
Completely satisfied	2	6	2	5
Satisfied	3	34	2	40
Neither satisfied nor dissatisfied	2	46	3	46
Dissatisfied	–	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 Trust	All Wales
Full awareness	2	26
Some awareness	4	50
Limited awareness	1	17
No awareness	–	3
Total	**7**	**96**

Exhibit 9: level of concern and helpfulness of clinical coding information

	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 Trust	All Wales	This Trust	All Wales
Yes	–	8	4	77
No	7	84	3	19
Total	**7**	**92**	**7**	**96**

Appendix 3

The Trust's response to our new recommendation

Exhibit 10: management response to the 2019 recommendation

Recommendation	Management response	Completion date	Responsible officer
Use of clinical coding data to support improvement R1 Review the extent to which clinical coded data is currently used to identify if the Trust could make more use of the data to support improvement.	Review of current usage of clinical coding data to be completed. Review to include an assessment as to the further use of data to support improvement.	December 2019	Clinical Coding Manager/ Head of Information

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