# Bundle Audit & Risk Assurance Committee 20 October 2020

7.1 Audit Wales Clinical Coding Follow-up Update

*Presenter: Karen Miles*

Audit Wales Clinical Coding Follow-up Update ARAC October 2020

Appendix 1 Outstanding Actions & Appendix 1a Completed Actions

Appendix 2 Audit Wales: Cracking the Code - Management of Clinical Coding across Wales

Appendix 3 Audit Wales: Clinical Coding Follow-up Review - Hywel Dda University Health Board

Bwrdd Iechyd Prifysgol Hywel Dda University Health Board

**PWYLLGOR ARCHWILIO A SICRWYDD RISG**
**AUDIT AND RISK ASSURANCE COMMITTEE**

| | |
|---|---|
| **DYDDIAD Y CYFARFOD: DATE OF MEETING:** | 20 October 2020 |
| **TEITL YR ADRODDIAD: TITLE OF REPORT:** | Audit Wales Clinical Coding Follow-up Update |
| **CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:** | Huw Thomas, Director of Finance |
| **SWYDDOG ADRODD: REPORTING OFFICER:** | Anthony Tracey, Assistant Director of Digital Services |

| **Pwrpas yr Adroddiad** (dewiswch fel yn addas) **Purpose of the Report** (select as appropriate) |
|---|
| Er Sicrwydd/For Assurance |

**ADRODDIAD SCAA**
**SBAR REPORT**

## Sefyllfa / Situation

The purpose of this paper is to provide an update to the Audit & Risk Assurance Committee (ARAC) on progress in implementing the Audit Wales (formerly Wales Audit Office) follow-up review of Clinical Coding within Hywel Dda (1175A2019-20) and the Internal Audit Reporting into health records (HDUHB-1819-33).

## Cefndir / Background

In April 2014, Audit Wales reported their findings for Hywel Dda and concluded that 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. More specifically, they found that:

- the importance of clinical coding to support the effective operation of its business was recognised in the Health Board although more needed to be done to raise the profile of medical records and focus on accuracy.
- many aspects of the clinical coding process were sound however clinical engagement was sometimes lacking, medical records were often poor, and some records took a long time to be coded.
- clinical coded data was used appropriately and met the Welsh Government standards for timeliness and completeness, however some coding was inaccurate, and the Board were not aware of the inaccuracies or its implications.

As a result, Audit Wales made several recommendations, which focused on the need to:

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

As part of the Auditor General's 2018 Audit Plan for the Health Board, Audit Wales have examined the progress made in addressing the recommendations set out in the 2014 Review of Clinical Coding and any resulting improvement in performance. They concluded that across NHS Wales coding continues to be a low priority for some of the Health Board(s) and non-

compliance with the completeness target is impacting on overall improvement in accuracy and staff morale. The use of coding data as business intelligence remains underdeveloped and there is still considerable room for progress against their previous recommendations.

## Asesiad / Assessment

In order to provide a composite view of all the recommendations, Appendix 1 (Outstanding Actions) and Appendix 1a (Completed Actions) bring together the recommendations of Audit Wales and the Internal Audit reports, and then these have been further sub-divided into specific proposed Director leads, to ensure ownership. The Health Records Group, which is a group of the Information Governance Sub-Committee (IGSC) was tasked to action the Health Records elements, and the IGSC will consider the clinical coding elements within the already established standing agenda item. A summary of the actions and their RAG status is included below:

Previously Reported

| Audit Report | Complete | In Progress | Overdue | Total Recommendations |
|---|---|---|---|---|
| **Wales Audit Office Report - 1175A2019-20** | 4 | 6 | 5 | 15 |
| **Internal Audit Report (HDUHB-1819-33)** | - | - | - | - |
| **Total** | 4 | 6 | 5 | 15 |

Updated as at September 2019

| Audit Report | Complete | In Progress | Overdue | Total Recommendations |
|---|---|---|---|---|
| **Wales Audit Office Report - 1175A2019-20** | 8 | 7 | 0 | 15 |
| **Internal Audit Report (HDUHB-1819-33)** | 7 | 2 | 0 | 9 |
| **Total** | 15 | 9 | 0 | 24 |

Updated as at April 2020

| Audit Report | Complete | In Progress | Overdue | Total Recommendations |
|---|---|---|---|---|
| **Wales Audit Office Report - 1175A2019-20** | 10 | 3 | 2 | 15 |
| **Internal Audit Report (HDUHB-1819-33)** | 7 | 1 | 1 | 9 |
| **Total** | 17 | 4 | 3 | 24 |

Updated as at October 2020

| Audit Report | Complete | In Progress | Overdue | Total Recommendations |
|---|---|---|---|---|
| **Wales Audit Office Report - 1175A2019-20** | 12 | 3 | 0 | 15 |
| **Internal Audit Report (HDUHB-1819-33)** | 7 | 2 | 0 | 9 |
| **Total** | 17 | 5 | 0 | 24 |

The pandemic continues to affect the progress of some of the recommendations, in particular those that require staff to enter the wards, and further delays have been noted. However, work has progressed such that the overdue recommendations have either been completed or considerable action has been taken to move them into “In Progress”.

**Cracking the Code**

In September 2020, Audit Wales released an update to their previous reports surrounding clinical coding (Appendix 2). In 2013-14 and again in 2018-19, they examined clinical coding arrangements in the seven Welsh Health Boards and Velindre NHS Trust. Audit Wales published reports on their findings in each of the NHS bodies (HDdUHB report attached at Appendix 3), and where relevant, drew on the findings from work undertaken by the NHS Clinical Classifications Team in the NHS Wales Digital Services Service (NWIS).

The report draws on the local audit work to highlight the current challenges and opportunities for clinical coding, including the potential to use COVID-19 related changes to working practices to secure new and more sustainable ways of delivering coding work. In particular they noted that over the last six years, there have been improvements in the timeliness and accuracy of clinical coding data. However, there are backlogs of uncoded activity in some parts of Wales which can date back several years. The current target of a one-month turnaround time does not support the availability of clinical coded data on a close to real-time basis, something which has been shown to bring significant benefits in helping to understand patterns of demand on hospital services during the current pandemic.

Their audit work indicated that clinical coding continues to have a low profile at Board level across NHS Wales and that current arrangements could be enhanced by critically examining the level of investment in coding resources, by ensuring the availability of good quality source information for coders and by increasing the extent to which medical staff are engaged in the coding process.

Most notably, Audit Wales noted that there should be fresh attention to the significant step-change in the use of digital platforms during the pandemic, which creates an opportunity for NHS bodies to increase the extent to which digital records are utilised, increasing with it the scope to reduce the time it takes to code activity, and support smarter and more flexible working by clinical coding staff.

The following is the key facts drawn from the report:

Clinical coding applies to all health boards and Velindre NHS Trust, and applies to hospital admissions (episodes) and procedures undertaken in outpatient settings.

The clinical coding process requires the use of the International Classification of Diseases (ICD) and the Office of Population Censuses and Surveys (OPCS) Classification of Interventions and Procedures manual.

95% of all episodes have to be coded within one month of the episode end date and NHS bodies are expected to improve the accuracy of coding year on year.

It takes on average **18 months** to train as a clinical coder.

Approximately **£5.9 million per annum** is spent on the NHS clinical coding process across Wales. The majority of which is pay costs, with 180 whole time equivalent clinical coding staff employed across NHS bodies in Wales, with a further six employed in the NHS Clinical Classifications Team.

On average, there are about **1.1 million consultant episodes of care** each year that need to be coded, with an expectation of approximately **30 consultant episodes of care** to be coded each day per coder.

At the end of April 2020, **83% of consultant episodes of care had been coded within one-month** compared to the 95% target set by the Welsh Government. A total of **181,000 consultant episodes of care** were identified as backlog, of which **55% related to care provided between April 2017 and March 2019**.

The 2019-20 annual clinical coding audits undertaken by the NHS Clinical Classifications Team identified an **accuracy level of 94%**, against a nationally recognised standard of 90%[3].

With particular reference to Hywel Dda the following was specifically noted:

Page 16 – Sections 3.3
*Performance against the timeliness target varies across Wales. Some NHS bodies code episodes much quicker than others and have been able to maintain timeliness of coding in line with the Welsh Government target. However, others including Aneurin Bevan, Cwm Taf Morgannwg and Hywel Dda University Health Boards have struggled to meet the target. Performance at Cwm Taf Morgannwg and Hywel Dda University Health Boards significantly dipped to below 50% at the start of the pandemic, with performance in Cwm Taf Morgannwg University Health Board for March 2020 at just 25% completion.*

As ARAC would be aware, the Health Board has struggled to meet the targets for a number of months due to the lacking of coding staff. However, since the last update to the Committee additional funding has been made available, and 4.5 new trainee clinical coders, and 2 clinical coding clerks have been appointed. At the end of an 18 month training period each Clinical Coder will contribute 2% to the overall completeness compliance. The resource will also allow for internal quality audits to take place, which will improve the quality of clinical coding within Hywel Dda UHB This will form part of a wider improvement project, which will in turn form part of a Clinical Coding Strategy for the Health Board.

Page 17 - Exhibit 5 : backlogs of uncoded FCEs (thousands) at 31 May 2020, highlighting number of uncoded FCEs relating specifically to 2019-20

This illustration provides an overview of the backlog as at 31st May 2020. By way of additional context, the current backlog is 13,174 which equates to 90.13% of records that have been

clinical coded. The coders are continue to target the backlog along with the current workload. A decision has been made to concentrate upon the current plus 1 year backlog, rather than attaining 100% in every year. All clinical critical cases have been coded, the remaining backlog are those that have incomplete notes or we are unable to locate readily.

The report also explores the use of digital solutions, such as automation, moving paper records to a digital solution, and the possible development of software to use natural language processing which will be overlaid across the unstructured information to provide a coded set of terms. The new "Clinical Coding Plan" is due to be presented to the Information Governance Sub-Committee in November 2020 for review.

The previous work in 2013-14 raised a number of recommendations for NHS bodies to address. These broadly focused on:

- improving the management of medical records by raising the importance of good quality record-keeping, providing clarity on roles and responsibilities, implementing a programme of medical record audits, strengthening the relationship between medical records and clinical coding teams, and providing training for staff;
- strengthening the management of clinical coding teams to ensure succession planning, providing opportunities for staff to undertake the accredited clinical coder qualification, reviewing workloads, improving cross-site working between internal clinical coding teams, providing regular staff feedback from validation checks and implementing clinical coding audits;
- strengthening engagement with medical staff by raising awareness of the coding process through training sessions and attendance at meetings, improving lines of communication, and encouraging active engagement between clinical coders and clinical staff in the coding process; and
- raising the profile of clinical coding at board level by providing briefing materials, identifying when management information is supported by clinical coded data, and alongside the timeliness of clinical coding, reporting on the accuracy of clinical coding and the level of uncoded activity.

Their 2018-19 work did identify that NHS bodies were making progress against recommendations, but the pace of progress has been slow on some key areas – a likely reflection of the relatively low profile that coding continues to have.

Audit Wales provided no new recommendations, but provided a way forward for organisations and four specific areas for attention:

| | |
|---|---|
| **National leadership and capacity** | Ensuring that there is sufficient leadership and capacity at a national level to give clinical coding the profile it needs, including having a named national lead for clinical coding.<br><br>Ensuring clinical coding is a key feature in relevant national NHS forums. |
| **Training and awareness raising** | Inclusion of clinical coding in the core training for junior doctors and the all-Wales induction material for new Independent Members. |

| | |
|---|---|
| **Adopting recognised good practice** | Embedding clinical coding and the quality of good record-keeping into the performance framework for NHS bodies.<br><br>Formally identifying a mechanism to measure and identify clinical coding workloads which NHS bodies should adopt. |
| **Using technology to drive improvements** | Faster progress with digitisation of patient's records and using IT systems to support code identification at point of entry and smarter, more flexible working by coding staff. |

All of the above will feature within the new "Clinical Coding Plan".

**Argymhelliad / Recommendation**

The Audit & Risk Assurance Committee is asked to take assurance regarding progress made in relation to the original audit report recommendations, and subsequent actions outlined within Appendix 1, following the delayed progress previously noted due to the pandemic response.

| **Amcanion: (rhaid cwblhau)<br>Objectives: (must be completed)** | |
|---|---|
| Committee ToR Reference<br>Cyfeirnod Cylch Gorchwyl y Pwyllgor | 5.3 In carrying out this work, the Committee will primarily utilise the work of Internal Audit, Clinical Audit, External Audit and other assurance functions, but will not be limited to these audit functions. It will also seek reports and assurances from directors and managers as appropriate, concentrating on the overarching systems of good governance, risk management and internal control, together with indicators of their effectiveness. |
| Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol:<br>Datix Risk Register Reference and Score: | No specific risk are contained within the document, the projects outlined are reflected within the Digital Services and Corporate Risk Register. Risk Register Reference 371, with a risk score of 20 |
| Safon(au) Gofal ac Iechyd:<br>Health and Care Standard(s): | 3.4 Information Governance and Communications Technology<br>5. Timely Care<br>3.5 Record Keeping |
| Amcanion Strategol y BIP:<br>UHB Strategic Objectives: | 4. Improve the productivity and quality of our services using the principles of prudent health care and the opportunities to innovate and work with partners.<br>5. Deliver, as a minimum requirement, outcome and delivery framework work targets and specifically eliminate the need for unnecessary travel & waiting times, as well as return the organisation to a sound financial footing over the lifetime of this plan |

| | |
|---|---|
| Amcanion Llesiant BIP:<br>UHB Well-being Objectives:<br>Hyperlink to HDdUHB Well-being Statement | Improve efficiency and quality of services through collaboration with people, communities and partners<br>Develop a sustainable skilled workforce |

| **Gwybodaeth Ychwanegol:<br>Further Information:** | |
|---|---|
| Ar sail tystiolaeth:<br>Evidence Base: | Not applicable |
| Rhestr Termau:<br>Glossary of Terms: | Included within the report |
| Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Archwilio a Sicrwydd Risg:<br>Parties / Committees consulted prior to Audit and Risk Assurance Committee: | People Planning and Performance Assurance Committee (PPAC)<br>Information Governance Sub-Committee (IGSC) |

| **Effaith: (rhaid cwblhau)<br>Impact: (must be completed)** | |
|---|---|
| **Ariannol / Gwerth am Arian:<br>Financial / Service:** | The lack of clinical coding information impacts the statutory costing returns |
| **Ansawdd / Gofal Claf:<br>Quality / Patient Care:** | Poor quality data could result in misidentification of patients together with service changes without a full and accurate picture<br><br>The lack of clinical coding records affects the use of data for secondary uses, such as audit, mortality reviews |
| **Gweithlu:<br>Workforce:** | Not Applicable |
| **Risg:<br>Risk:** | Not Applicable |
| **Cyfreithiol:<br>Legal:** | Not Applicable |
| **Enw Da:<br>Reputational:** | Not Applicable |
| **Gyfrinachedd:<br>Privacy:** | Not Applicable |
| **Cydraddoldeb:<br>Equality:** | Not Applicable |

**Appendix 1 (Outstanding Actions) – Composite table of the WAO (1175A2019-20) and Internal Audit (HDUHB-1819-33) Recommendations**

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| **Wales Audit Office Report - 1175A2019-20** | | | | | |
| **Management of Medical Records**<br>**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:** | | | | | |
| b) removing the use of temporary records, including poly-pockets and ensure files are merged into the master patient record. | Overdue | Temporary notes and poly-pockets are still in use across the organisation. The Health Board's self-assessment response indicated that the numbers received into coding offices are not high. However, clinical coders across the Health Board told us that the situation had deteriorated over the period since our last review. There has been a decline in the organisation, maintenance and condition of individual patient case note folders because of greater movement of patients around the Health Board and shorter lengths of stay. Both factors add to the challenge of ensuring the notes are maintained in line with standards, and available when needed by clinical coding teams as well as clinicians. A note is entered in Medicode whenever a poly-pocket is used as the source for coding. If an audit of the full case note is subsequently carried out, there will then be a flag to indicate that it was not available at the time of coding. | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and Commissioning<br><br>Deputy Chief Executive/ Director of Operations<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services / Deputy Director of Operations | Included in a wider action plan for Health Records to be agreed by September 2019, with an implementation plan for completing the engagement and enforcement work to be completed within 8 months from agreement of policy | In Progress<br><br>The Health Records Group has agreed to focus on the correct Tracking of Patient Records, with Temporary notes and poly-pockets looking to be addressed following this work<br><br>Progress has been delayed significantly due to the COVID pandemic (6-9 months).<br><br>The Health Records Group have only recently began to meet since the pandemic (September 2020). Monthly meetings have now been arranged to progress the work at pace.<br><br>**Newly revised completion date of April 2021**. |
| e) improving compliance with the medical records tracker tool within the Myrddin Patient Administration System. | Overdue | All the clinical coding teams are asked to track case notes correctly using the Myrddin Patient Administration System. The Health Board's self-assessment indicated | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and | Included in a wider action plan for Health Records to be agreed by August 2019, with an implementation plan for | In Progress<br><br>An action plan has been developed via the Health Records Group (please see Appendix 2) |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | that this always happens, except for when case notes are collected from a ward in the morning and returned that afternoon. However, coding staff indicated that case note tracking is generally poor, except at Withybush Hospital. | Commissioning<br><br>Deputy Chief Executive/ Director of Operations<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services<br><br>Deputy Director of Operations | completing the engagement within 12 months from agreement of plan | The Tracking of Records will be the focus of the Health Records Group for the next 6 months with a review at the end of this period along with lessons learned. The work plan suggests a number of phases to the work, ensuring that there are feedback loops and reviews.<br><br>Timescale – 16 months, based around 4 x 4 month PDSA cycles<br><br>The first PDSA cycle was undertaken and lessons learned have been feed into the next PDSA cycle, which unfortunately was paused due to the COVID outbreak.<br><br>Progress has been delayed significantly due to the COVID pandemic (6-9 months). **The audits are now programmed to begin November 2020.** |
| **Board Engagement/Resources**<br>**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:** | | | | | |
| a) 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. | Overdue | There is no evidence of training for board members to raise their awareness of the importance of clinical coding. | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and Commissioning<br><br>Board Secretary | The Director of Planning, Performance, Digital Services and Commissioning will request a slot on a Board OD session to provide an update on clinical coding and some basic understanding the | In progress<br><br>Awaiting confirmation from the Board Secretary for a possible date for the Board OD Session<br><br>An OD Session was booked in for February 2020, however |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | | **Lead Officer(s)**<br>Assistant Director of Digital Services | current process, and the impact on secondary uses.<br><br>Awaiting confirmation of Board OD session | was postponed. The proposed presentation has been sent to all Executives and Independent Members for information |
| **Internal Audit Report (HDUHB-1819-33)** | | | | | |
| **Finding 1 (O) - Corporate Records Management Strategy & Policy - Management should ensure the Corporate Records Management Strategy and Policy are submitted to the Business Planning & Performance Assurance Committee for approval.** | | | | | |
| We can confirm that the *Health Records Management Strategy* and *Policy*, and *Retention & Destruction Policy* had been submitted for approval at the Business Planning & Performance Assurance Committee meeting in June 2018. However, the *Corporate Records Management Strategy* and *Policy* had not been submitted or approved at the time of fieldwork. | Medium | Following internal discussions, the Corporate Office is leading the review and updating of the Corporate Records Management Strategy and Policy. This will require contributions and input from a number of teams across the UHB. Once reviewed, these will be submitted to the Business Planning & Performance Assurance Committee at the earliest opportunity. | **Lead Director(s)**<br><br>**Lead Officer(s)**<br>Head of Corporate Office | September 2019 | In progress<br><br>A revised policy will be considered at IGSC in **January 2021** following clarification of roles and responsibilities. |
| **Finding 2 (O) - Health Records Inventory - Identified Service and Departmental Managers should ensure a Paper Health Records Inventory Form is completed, regularly reviewed and forwarded to the Head of Health Records as set out in the Health Records Management Policy.** | | | | | |
| The *Health Records Management Policy* states that an up-to-date records inventory will be maintained by the Head of Health Records, whilst Service/ Departmental Managers are required to ensure inventories are completed, regularly reviewed and forwarded to the Head of Health Records. However, | High | (a) All Information Asset Owners (IAO's) have been identified via the Information Asset Owners Group which is organised by the Health Boards Information Governance Team. The IAO's have clear responsibility for completing an Information Audit Template. Some of the information requested on the template includes: | **Lead Director(s)**<br>All Directors<br><br>**Lead Officer(s)**<br>All Information Asset Owners. | The work of the Information Asset Group is on-going. The Group aim to complete a new service within 3 months on being identified. This work incorporates a full review of the information asset, the | Section (a) - In progress<br><br>In order to better track and monitor progress with the individual IARs and put more responsibility on the IAOs to drive this work, a template IAO Work Plan was circulated. Based on the most recent RAG |

| | | | | | |
|---|---|---|---|---|---|
| there is currently no health record inventory in place with the last 'Paper Health Records Inventory Form' was received back in 2015. | | • Type of information held<br>• Where the information is held<br>• Legal requirements and classification of the information<br>• How is the information shared<br>• How is the information distributed<br><br>Effectively over time the information gathered will support or potentially replace the inventory form as the list will be a Health Board wide database containing all IAO's and the relevant information. The Information Governance Manager is working directly with Directorates and lead IAO's to ensure the information is completed as quickly as possible. To date approximately 50% of responses have been received and the IG Manager will continue to work with individual leads to ensure those currently outstanding are completed as soon as possible.<br><br>(b) This work is being supported by the Electronic Records Group which is being led by the Deputy Director of Operations. This group is looking at the potential to implement a scanned patient record within the Health Board and as part of the remit is developing a questionnaire which will again be completed by all relevant IAO's and will again cover records management | Managed via the Information Governance Sub-Committee<br><br>Health Records Manager | flow of the data / information and a full information audit as per the requirements of the General Data Protection Regulation (GDPR). This work has just been audited and received a "substantial assurance", and commended for the approach.<br><br>The Health Records elements, will be included in a wider action plan for Health Records to be agreed by August 2019<br><br>Section (b) of the management response is completed | update, 100% (previously 70%) of IAOs have engaged in the process and are working towards compliance.<br><br>As a result all IAO's have undertaken the training (previously 65%).<br><br>In order to finalise and gain approval of the remaining Information Asset Registers (10), an additional contracting resource has been brought into the IG Team to complete the work by **March 2021** |

| | | | | | |
|---|---|---|---|---|---|
| | | arrangements within department and services but in addition will also identify any use of private storage companies and the costs. The questionnaire will be circulated to IAO's in January. | | | |

**Appendix 1a (Completed Actions) – Composite table of the WAO (1175A2019-20) and Internal Audit (HDUHB-1819-33) Recommendations**

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| **Wales Audit Office Report - 1175A2019-20** | | | | | |
| **Management of Medical Records**<br>**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:** | | | | | |
| a) improving engagement between the medical records and clinical coding teams. | In progress | Clinical coding staff reported good relationships with health records staff across the Health Board. The Clinical Coding Manager recently met with the Health Records Manager for Carmarthenshire to discuss the processes in place between health records and clinical coding. They were satisfied that they were working well. Clinical coding staff pull the majority of case notes from the filing libraries at Glangwili Hospital, Prince Philip Hospital, and Bronglais Hospital. Coding staff at Withybush Hospital can ask health records staff at Prince Philip Hospital to pull notes to be sent to the relevant site for coding. Access to the health records library at Withybush Hospital has been restricted through the introduction of locks. Clinical coders do have access although they must ring to gain entry. This slows down retrieval of case notes. The Director of Planning, Performance, Digital Services and Commissioning intends to strengthen the Health Records | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and Commissioning<br><br>Deputy Chief Executive/ Director of Operations<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services / Deputy Director of Operations | Included in a wider action plan for Health Records to be developed by August 2019 | Complete. |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | Group to provide a focus for issues associated with effective health records management. | | | |
| c) reinforcing the Royal College of Physician standards across the health board. | In progress | A clinical coding PowerPoint presentation was due to be emailed to all consultants at the time of our fieldwork. This was to include the 'Royal College of Physicians Top ten tips for coding – a guide for clinical staff'. It is a one-off occurrence. We are not aware of ongoing activities to ensure that the standards are promoted. | Lead Director(s) Medical Director<br><br>**Lead Officer(s)** Assistant Director, Medical Directorate | This action is subject to a follow-up internal audit report, where a full action plan will need to be developed | Complete |
| d) providing training for ward clerks and other staff in relation to their responsibilities for medical records. | Overdue | There is no ongoing programme of training to ensure that ward clerks maintain records in line with professional standards. Coding staff said that the standard of practice amongst ward clerks is highly variable, and there is no real ownership of the notes in some wards. Ward clerks are managed by individual specialties and wards. This increases the need for ongoing communication (with ward staff in general as well as with ward clerks) about the importance of maintaining standards of practice and for the provision of training. | **Lead Director(s)** Director of Planning, Performance, Digital Services and Commissioning<br><br>Deputy Chief Executive/ Director of Operations<br><br>**Lead Officer(s)** Assistant Director of Digital Services / Deputy Director of Operations | Included in a wider action plan for Health Records to be agreed by September 2019, with an implementation plan for completing the engagement within 8 months from agreement of plan | Complete<br><br>Due to the pandemic virtual training has been provided and will continue to be provided to staff. Videos and webinars have also been developed to assist with on-line learning. |
| f) putting steps in place to ensure that coders | Implemented | An internal process has been established to inform the coding | **Lead Director(s)** | Complete | Complete |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| have early access to medical records for patients transferring to South Pembrokeshire Hospital prior to transfer. | | department about patients who are to be transferred to South Pembrokeshire Hospital (SPH). The relevant case notes are then coded before the patient leaves the site. A coder visits SPH once a month to code any episodes which have been missed. | Director of Planning, Performance, Digital Services and Commissioning<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services | | |
| **Clinical Coding Resources**<br>**R2 Strengthen the management of the clinical coding teams to ensure that good quality clinical coding data is produced. This should include:** | | | | | |
| a) reviewing the supervisory arrangements for Prince Philip Hospital to ensure that staff do not feel isolated. | Implemented | Clinical coding management team arrangements have been strengthened since our previous audit. This includes the appointment of a Clinical Coding Manager with responsibility for all coding teams and two coding team supervisors, one at Withybush Hospital and the other who supervises at Bronglais, Glangwili and Prince Philip hospital.<br>However, arrangements have been significantly compromised by prolonged sickness absence of the supervisor covering three sites, and despite the introduction of mitigating interim arrangements.<br>While staff at Prince Philip Hospital commended the Clinical Coding Manager for the cover he has personally provided, the | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and Commissioning<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services | Complete | Complete |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | situation has affected their morale. In addition, consultants do not appear to be interested in the work that they do. | | | |
| b) extending the range of clinical information systems that coders have access to, including the operating theatres system. | In progress | The clinical coding team have access to the operating theatres module of the National Patient Administration System. However, there is inconsistent clinical practice in the use of the theatres module, NPAS functions in general, and other key systems that support the coding process like ChemoCare3 and the Welsh Clinical Portal. Work had recently commenced to examine whether there are additional systems which could be utilised by the coding team to assist in the coding process. It was too early for any findings to be made available. Second computer screens are gradually being made available to individual clinical coders to assist and expedite the coding process. | **Lead Director(s)** Director of Planning, Performance, Digital Services and Commissioning<br><br>**Lead Officer(s)** Assistant Director of Digital Services | Complete | Complete |
| c) ensuring all staff receive consistent feedback on issues raised through validation and audit from all sites. | In progress | None of the coders are currently qualified to audit coding work. In 2017-18 it was decided to have a supervisor and a coder carry out an audit of 30 case notes each month and to feedback the results directly to individual coders. The arrangement was suspended so that all coding team resources could be directed towards clearing the coding backlog. At the time of our fieldwork the situation had not changed. The Coding Manager carries out data | **Lead Director(s)** Director of Planning, Performance, Digital Services and Commissioning<br><br>**Lead Officer(s)** Assistant Director of Digital Services | Until additional resources are made available this recommendation will be placed on hold.<br><br>If the Executive Team wish this to be progressed, there will be effect on the coding completeness. As an estimate, in total each day a coding supervisor | Complete.<br><br>The Clinical Coding Team are undertaking audits in line with NWIS, and these are being fedback to coders when available. |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | quality checks when time allows. However, his time has been heavily committed to providing a presence on each site to mitigate for the long-term sickness absence of one of the two coding team supervisors. | | and a coder undertake audit work would account for 12,000 cases not being coded. Based on each coder having feedback and partaking in 1 audit day per month. This equates to a 1-2% effect on the completeness | |
| d) 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. | Implemented | Discharge letters are no longer typed by the clinical coding team at Withybush Hospital. Coders time is now entirely spent on coding episodes. | **Lead Director(s)** Director of Planning, Performance, Digital Services and Commissioning<br><br>**Lead Officer(s)** Assistant Director of Digital Services | Complete | Complete |
| **Board Engagement/Resources**<br>**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:** | | | | | |
| b) improving information to board on the accuracy of clinical coding. | Implemented | The Board regularly receives information about coding performance (see also paragraph 21) as part of the Integrated Performance Assurance Report. It has previously received a copy of the NWIS clinical coding accuracy report. Information on coding accuracy is also provided on a regular basis to the | **Lead Director(s)** Director of Planning, Performance, Digital Services and Commissioning<br><br>**Lead Officer(s)** Assistant | Complete – included within the Integrated Performance Assurance Report provided to every Board | Complete |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | Information Governance Sub-Committee. | Director of Digital Services | | |
| **Engagement with medical staff**<br>**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) embedding a consistent approach to clinical coding training for medical staff across the health board; | Overdue | Medical staff do not receive training in relation to clinical coding. An introduction to clinical coding was previously included in the induction process for new junior medical staff, but it is unclear whether this is still the case. In the months prior to our review the Clinical Coding Manager had sent a PowerPoint presentation on clinical coding to the Medical Director and the four hospital clinical leads with a request for feedback, with varying responses. The presentation is to be emailed to all consultants and service delivery managers for information and further feedback. A Chief Clinical Information Officer (a respiratory consultant) had been in post for eight months and has two sessions per week to devote to clinical information issues. He would like to establish sufficient resource amongst clinicians across the Health Board to advocate and promote good practice in relation to clinical coding. His intention is to strengthen clinical representation on the Clinical Digital Services Group to help focus on | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and Commissioning<br><br>Medical Director<br><br>Director of Workforce and OD<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services<br><br>Assistant Director Medical Directorate<br><br>Chief Clinical Information Officer | Further work is required to provide a detailed plan to ensure achievement of this recommendation.<br><br>A scoping exercise to be undertaken to fully understand to actions required<br><br>October 2019 | Complete |

| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | problematic areas. One example is endoscopy, where there is a high volume of patients and low quality of notes. The Health Board recently approved a post of Chief Nurse Information Officer and planned to make an appointment to the post later in 2018. This will help to focus on note taking which will in turn support better coding. | | | |
| b) reinforcing the importance of completing timely discharge summaries | In progress | The Health Board has been slowly rolling out electronic patient discharge arrangements, although it is still only available in a limited number of areas. Coding teams said that where this is in place, the quality of information entered in to the system is generally poor. There is a cyclical issue which arises because of junior doctor intakes, which means that expected standards must be learned each time. Coding staff also indicated that electronic system updates can be problematic. Coding staff said that the timeliness and quality of written discharges is variable and has deteriorated over time. For example, they are often illegible or blank. | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and Commissioning<br><br>Medical Director<br><br>Deputy Chief Executive/ Director of Operations<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services<br><br>Pharmacy Lead<br><br>Chief Clinical | A high level targeted improvement plan has been developed in response to the need to improve the usage of National Systems within the Health Board.<br><br>For those ward areas that have access to Medical, Transcribing and eDischarge (MTeD), it has been agreed that the Health Board will look to achieve 90% of all discharges as electronic. | Complete |

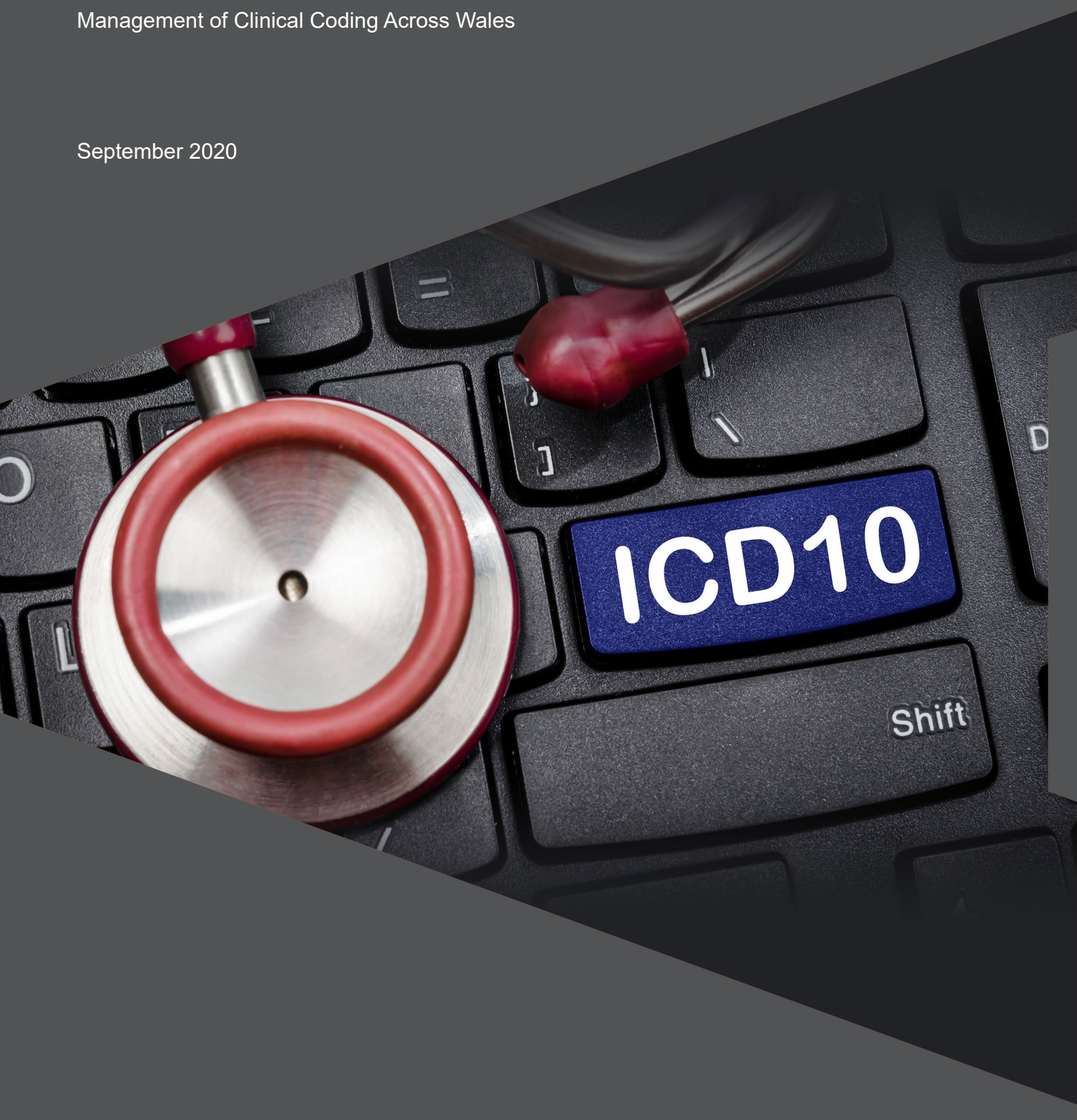
| Recommendation / Finding | Original Reporting Status | Summary of progress / Management Response | Lead Director and Officer | Target date for implementation | October 2020 update |
|---|---|---|---|---|---|
| | | | Information Officer | | |
| c) improving clinical engagement with the validation of clinical coded data | In progress | There was little specific evidence of clinical engagement with the validation of clinical coded data. | **Lead Director(s)**<br>Director of Planning, Performance, Digital Services and Commissioning<br><br>Medical Director<br><br>**Lead Officer(s)**<br>Assistant Director of Digital Services<br><br>Assistant Director Medical Directorate<br><br>Chief Clinical Information Officer | As outlined in Recommendation 2 (c) | Complete |

Archwilio Cymru
Audit Wales

# Cracking the Code

Management of Clinical Coding Across Wales

September 2020



This report has been prepared for presentation to the Senedd under section 145A of the Government of Wales Act 1998 and section 61(3) (b) of the Public Audit Wales Act 2004.

Adrian Crompton
Auditor General for Wales
Audit Wales
24 Cathedral Road
Cardiff
CF11 9LJ

The Auditor General is independent of the Senedd and government. He examines and certifies the accounts of the Welsh Government and its sponsored and related public bodies, including NHS bodies. He also has the power to report to the Senedd on the economy, efficiency and effectiveness with which those organisations have used, and may improve the use of, their resources in discharging their functions.

The Auditor General also audits local government bodies in Wales, conducts local government value for money studies and inspects for compliance with the requirements of the Local Government (Wales) Measure 2009.

The Auditor General undertakes his work using staff and other resources provided by the Wales Audit Office, which is a statutory board established for that purpose and to monitor and advise the Auditor General.



For further information, or if you require any of our publications in an alternative format and/ or language, please contact us by telephone on 029 2032 0500, or email info@audit.wales. We welcome telephone calls in Welsh and English. You can also write to us in either Welsh or English and we will respond in the language you have used. Corresponding in Welsh will not lead to a delay.

Mae'r ddogfen hon hefyd ar gael yn Gymraeg.

# Contents

# Summary report

## Key messages

1 Clinical coding is the process of translating medical information relating to a patient's hospital admission into standardised codes which can be used for a range of statistical, clinical and management purposes.

2 Timely and accurate clinical coding is essential given the role the data plays in the planning, management and oversight of NHS services. This has been especially true during the current pandemic, where clinical coding has played a key role in helping to understand COVID-19 related demand on healthcare services, and in informing decisions on which patients need to shield. Problems with either the timeliness or accuracy of coded data could result in shielding decisions being made on incomplete information, with potentially significant consequences for the patients involved.

3 In 2013-14 and again in 2018-19, we examined clinical coding arrangements in the seven Welsh health boards and Velindre NHS Trust. We published reports on our findings in each of the NHS bodies[1], and where relevant, drew on the findings from work undertaken by the NHS Clinical Classifications Team[2] in the NHS Wales Informatics Service (NWIS).

4 This report draws on our local audit work to highlight the current challenges and opportunities for clinical coding, including the potential to use COVID-19 related changes to working practices to secure new and more sustainable ways of delivering coding work.

5 Over the last six years, there have been improvements in the timeliness and accuracy of clinical coding data. However, there are backlogs of uncoded activity in some parts of Wales which can date back several years. The current target of a one-month turnaround time does not support the availability of clinical coded data on a close to real-time basis, something which has been shown to bring significant benefits in helping to understand patterns of demand on hospital services during the current pandemic.

1 Reports for each of the NHS bodies can be viewed on our website.

2 The NHS Clinical Classifications team develop policy and clinical classifications standards and guidance for clinical coding services in NHS Wales. The team maintain and organise the national clinical coding training schedule and provide a national clinical coding helpdesk function on behalf of NHS Wales. The team also maintain the NHS Wales Clinical Classifications Standards Dictionary and deliver the annual National Clinical Coding Audit Programme.

6 Our audit work has shown that clinical coding continues to have a low profile at board level and that current arrangements could be enhanced by critically examining the level of investment in coding resources, by ensuring the availability of good quality source information for coders and by increasing the extent to which medical staff are engaged in the coding process.

7 These challenges are not new but would benefit from some fresh attention, informed by changes to working practices that occurred during the current pandemic. Most notably, the significant step-change in the use of digital platforms during the pandemic creates an opportunity for NHS bodies to increase the extent to which digital records are utilised, increasing with it the scope to reduce the time it takes to code activity, and support smarter and more flexible working by clinical coding staff.

**Adrian Crompton**
Auditor General for Wales

> “Clinical coding is an important but often overlooked function of the NHS, providing the backbone to much of the information used to govern services, but its profile in NHS bodies is not yet where it needs to be. The importance of good quality information has come to the forefront during the coronavirus pandemic and with new ways of working being put to the test during the crisis, now is the ideal opportunity to ensure that clinical coding has the attention that it needs as services start to be reinstated.”

# Key facts

Clinical coding applies to all health boards and Velindre NHS Trust, and applies to hospital admissions (episodes) and procedures undertaken in outpatient settings.

The clinical coding process requires the use of the International Classification of Diseases (ICD) and the Office of Population Censuses and Surveys (OPCS) Classification of Interventions and Procedures manual.

**95%** of all episodes have to be coded within one month of the episode end date and NHS bodies are expected to improve the accuracy of coding year on year.

It takes on average **18 months** to train as a clinical coder.

Approximately **£5.9 million per annum** is spent on the NHS clinical coding process across Wales. The majority of which is pay costs, with 180 whole time equivalent clinical coding staff employed across NHS bodies in Wales, with a further six employed in the NHS Clinical Classifications Team.

On average, there are about **1.1 million consultant episodes of care** each year that need to be coded, with an expectation of approximately **30 consultant episodes of care** to be coded each day per coder.

At the end of April 2020, **83% of consultant episodes of care had been coded within one-month** compared to the 95% target set by the Welsh Government. A total of **181,000 consultant episodes of care** were identified as backlog, of which **55% related to care provided between April 2017 and March 2019**.

The 2019-20 annual clinical coding audits undertaken by the NHS Clinical Classifications Team identified an **accuracy level of 94%**, against a nationally recognised standard of 90%[3].

3 The 90% standard relates specifically to primary diagnosis and procedure. A standard of 80% is set for secondary diagnoses and procedures.

# An introduction to clinical coding

01

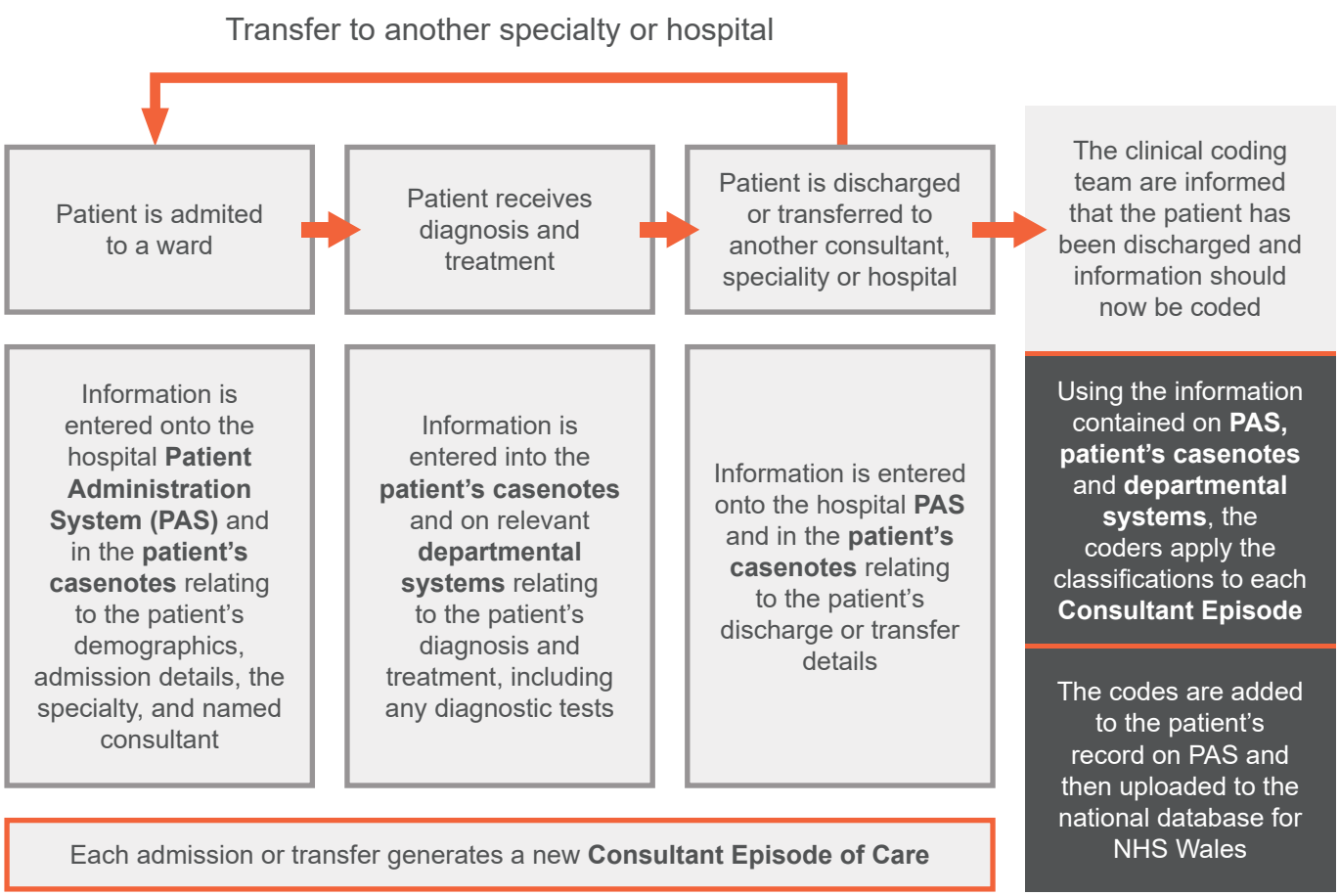
# What is clinical coding?

1.1 Clinical coding is the process of translating medical information which describes a patient's symptoms, diagnosis and treatment into internationally and nationally recognised code which can then be used for statistical and clinical purposes.

1.2 Information relating to the patient's symptoms, diagnosis (both the main (primary) diagnosis and any secondary diagnoses) and treatment (both the main treatment (procedures) and any secondary treatments) are coded.

1.3 The clinical coding process applies to hospital admission activity (**Exhibit 1**) and procedures undertaken in an outpatient setting.

**Exhibit 1: what does the clinical coding process involve?**




Source: Audit Wales

1.4 Codes consist of a combination of numbers and letters and are set out in the International Classification of Diseases (ICD), and Office of Population Censuses and Surveys (OPCS) Classification of Interventions and Procedures manuals. For example, a diagnosis of acute appendicitis is represented by the code 'K35.8'.

1.5 Following the outbreak of COVID-19 in March 2020, a number of new ICD-10 codes of 'U07.1'and 'U07.2' for a diagnosis of COVID-19 and 'B97.2' to identify when coronavirus has resulted in other diagnoses[4] were introduced under emergency powers. An example of a coded consultant episode of care is shown in **Exhibit 2**.

## Exhibit 2: example of coded data relating to a patient

### Example extract from a patient's case-notes

Mrs A has known COPD and presented with cough and severe dyspnoea due to a suspected infection by COVID-19. Testing was positive for presence for COVID-19 and she was admitted to isolation ward C8. Unfortunately, while on the ward, she developed bilateral severe pneumonia leading to respiratory failure due to the COVID-19 which required invasive ventilation to support her breathing. After 5 days, her condition had improved to the point ventilation was no longer required. She was placed on a CPAP machine and after a further 17 days on ward C8, she was considered medically fit for discharge and able to return home. Her comorbidities include Hypertension, CCF and type 2 diabetes with retinopathy.

### Diagnosis (ICD) codes:

| | |
|---|---|
| U07.1 | COVID-19 virus identified |
| J12.8 | Other viral pneumonia |
| B97.2 | Coronavirus as the cause of diseases classified to other chapters [viral pneumonia] |
| J44.0 | Chronic obstructive pulmonary disease with acute lower respiratory infection |
| B97.2 | Coronavirus as the cause of diseases classified to other chapters [chronic obstructive pulmonary disease] |
| J96.99 | Respiratory failure NEC, type unspecified |
| B97.2 | Coronavirus as the cause of diseases classified to other chapters [respiratory failure NEC] |
| I10.X | Primary (essential) hypertension |
| I50.0 | Congestive heart failure |
| E11.3† | Type 2 diabetes mellitus with ophthalmic complications |
| H36.0* | Diabetic retinopathy |

### Procedure (OPCS) codes:

| | |
|---|---|
| E85,1 | Invasive ventilation |
| E85.6 | Continuous positive airway pressure |

Source: NHS Clinical Classifications Team

4 U07.1 COVID-19, virus identified, U07.2 COVID-19, virus not identified and B97.2 Coronavirus as the cause of diseases classified to other chapters. The coding of a single patient may include multiple references to B97.2 as the code is applied to reflect each diagnosis that has resulted as a direct impact of COVID-19.

# What is required to undertake clinical coding?

1.6 NHS bodies in Wales are required to code 95% of all finished consultant episodes (FCE) of care within one month of the episode end date. On average, there are 1.1 million finished consultant episodes of care each year across Wales.

1.7 To undertake the clinical coding process, NHS bodies have a clinical coding team which is made up of a combination of trainees and clinical coders. To become a clinical coder, staff undertake a combination of classroom and on-the-job training provided by the NHS Clinical Classifications Team. It is estimated that it can take up to 18 months to become a clinical coder.

1.8 As well as the training provided by the NHS Clinical Classifications Team, it is recommended good practice that staff are supported to gain the National Clinical Coding Qualification from the Institute of Health Records and Information Management (IHRIM) to become an accredited clinical coder. It is also recommended good practice that teams should have access to clinical coding auditors and clinical coding trainers.

1.9 The main source of information to support the coding process is patient case-notes. To enable teams to code within the required timescales, it is important therefore that clinical coders have timely access to case-notes once patients are discharged or transferred. This requires a good working relationship with medical record departments and hospital ward staff.

1.10 It is also important that coders work closely with medical staff to ensure coders understand the clinical information relating to diagnoses and treatment contained in case-notes. The liaison between coders and medical staff also helps raise awareness of what information is needed from case-notes and the importance of good quality record keeping.

1.11 To support a focus on accuracy of coding, NHS bodies in Wales are also required to improve the accuracy of coding year-on-year. Accuracy is examined through annual coding audits undertaken by the NHS Clinical Classifications Team in NWIS.

# Why is clinical coding important?

02

# Why is clinical coding important?

2.1 Coded data is used for a variety of reasons to support effective governance arrangements in NHS bodies but is more commonly associated with Payment by Results[5] in England, and the Risk Adjusted Mortality Index (RAMI)[6] which provides a measure to highlight unexpected death rates.

2.2 In 2013, clinical coding featured in the Francis Report into the failings at Mid Staffordshire NHS Foundation Trust. Evidence presented to the second inquiry in to Mid Staffordshire care failings pointed to the fact that…'the Board had convinced themselves that the reported high mortality rate was due to 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.

2.3 The Francis 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. The report also recognised the importance that clinical coding has in management information and the need to understand the implications of good quality coded data.

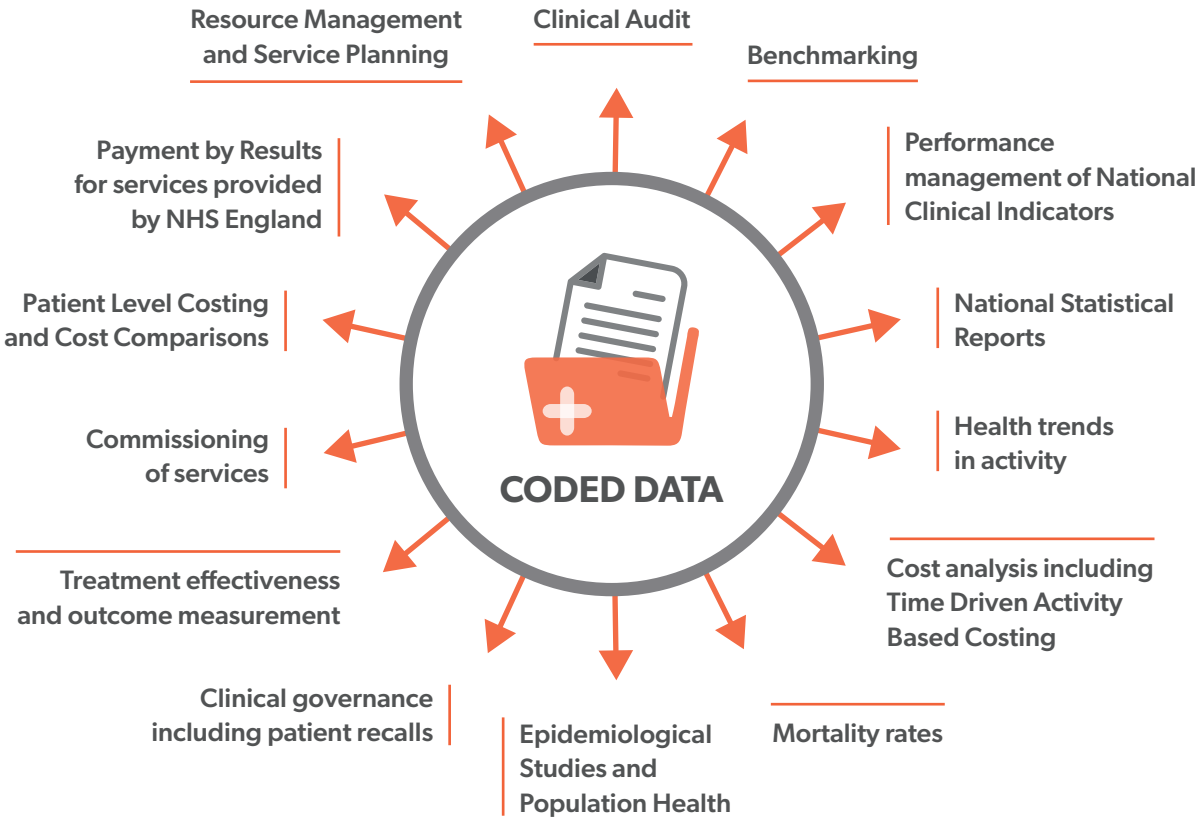
2.4 Clinical coded data is core to the information used by NHS organisations to govern the business and to ensure that resources are used efficiently and effectively. It is therefore important that clinical coding is timely and accurate. Although Payment by Results is not relevant to Wales, with the exception of where NHS England provides services to health boards on the English-Welsh border, coded data supports the monitoring of mortality rates for specific conditions (such as heart attacks, strokes and hip fractures), as well as a range of other performance and outcomes measures, and planning and management decisions. **Exhibit 3** details the range of uses of this data, and its importance to the NHS.

2.5 More recently, clinical coded data has been used to identify patients who have been required to shield during the COVID-19 pandemic. As the NHS starts to move into the recovery phase of the pandemic, the use of clinical coded data to understand the ongoing demand on services from patients diagnosed with the virus, as well as a reflection on how treatments have impacted on patient outcomes, will become the norm.

5 Payment By Results was introduced to the NHS in England in 2004 and is based around tariffs for different NHS treatments. Accurate and timely clinical coding is required to support quantification of activity by providers and hence payment.

6 RAMI was discontinued in Wales in July 2014 following recommendations made in a report by Professor Stephen Palmer.

## Exhibit 3: uses of clinical coded data in Wales




Source: Audit Wales

The exhibit contains more information about the uses of clinical coded data in Wales which is displayed when hovering over each element.

# Clinical coding performance

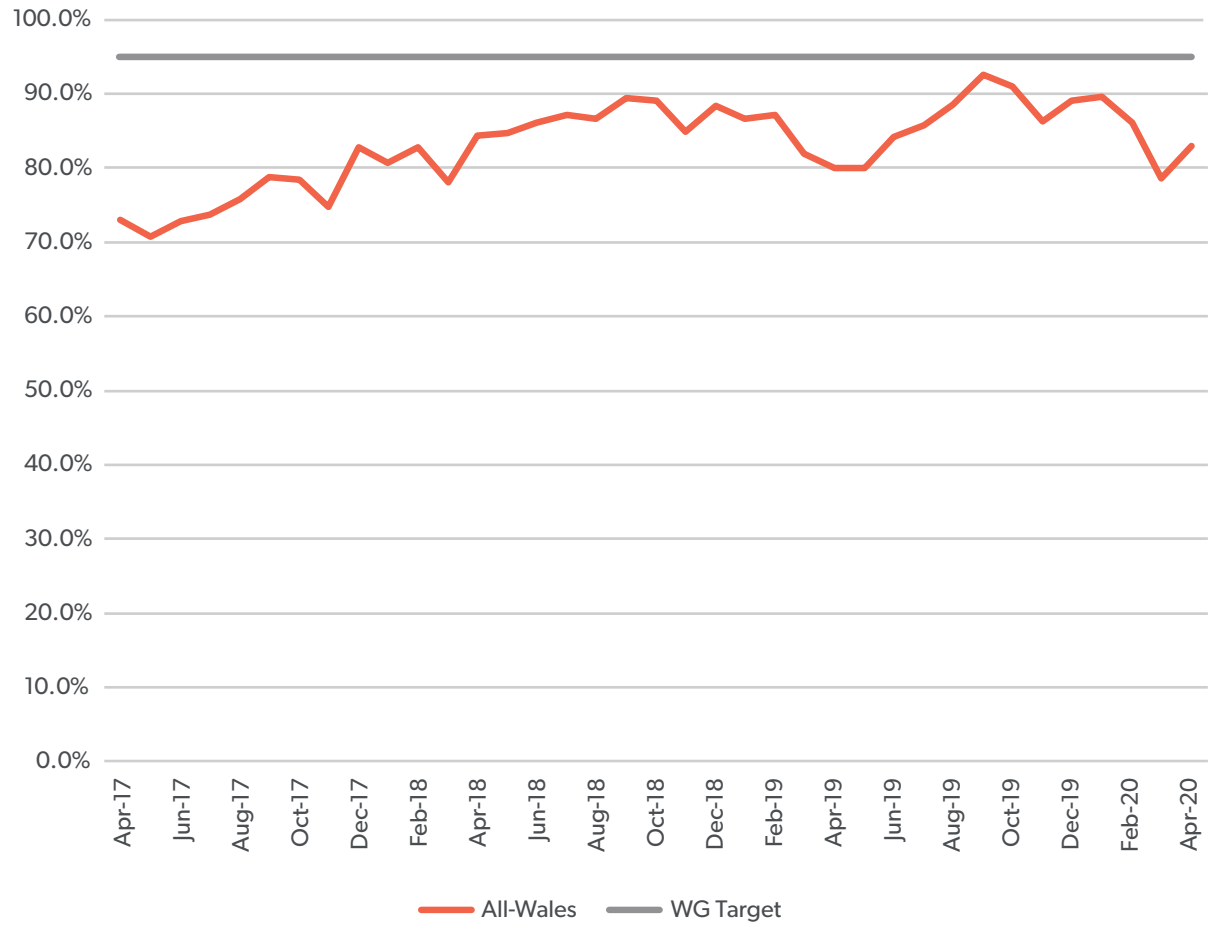
03

# Timeliness of coded data

3.1 When we first reviewed clinical coding in 2013-14, NHS bodies had a three-month window to code. Since 2017, the window for coding has reduced to encourage timelier access to coded data. The current Welsh Government target is for NHS bodies to ensure that 95% of all FCEs are coded within one month of the episode end date. The 5% tolerance on the target recognises that there are sometimes legitimate reasons why an episode of care cannot be coded, for example, because the case-notes are needed to undertake a clinical investigation.

3.2 The all-Wales performance is set out in **Exhibit 4**. This indicates a steady increase in the timeliness of coding since the introduction of the revised Welsh Government target in 2017, with 92% of data coded within the recommended timescales by August 2019. However, this remained short of the Welsh Government target of 95%, and performance has since declined, dipping to 79% at the start of the COVID-19 pandemic in March 2020.

**Exhibit 4: all-Wales compliance with the Welsh Government timeliness target**




Source: NHS Clinical Classifications Team

3.3 Performance against the timeliness target varies across Wales. Some NHS bodies code episodes much quicker than others and have been able to maintain timeliness of coding in line with the Welsh Government target. However, others including Aneurin Bevan, Cwm Taf Morgannwg and Hywel Dda University Health Boards have struggled to meet the target. Performance at Cwm Taf Morgannwg and Hywel Dda University Health Boards significantly dipped to below 50% at the start of the pandemic, with performance in Cwm Taf Morgannwg University Health Board for March 2020 at just 25% completion.

3.4 Arguably, the timeliness target should be even stricter given that the daily reporting of COVID-19 admissions during the current pandemic would be significantly enhanced by clinical coding that was as close to real time as possible.

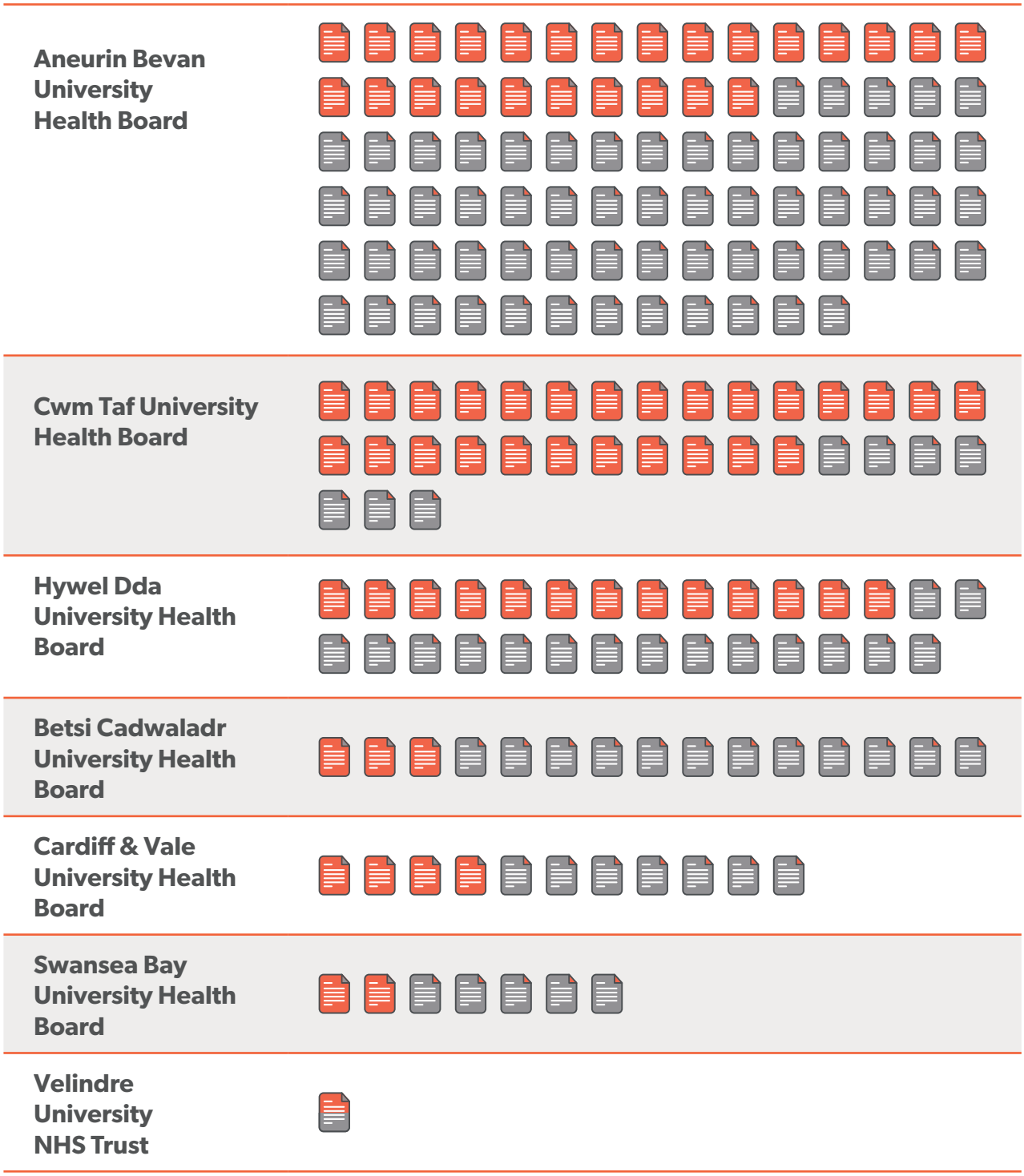
## Backlogs of coded data

3.5 Episodes not coded within a month are classed as ‘backlog’. Having a large backlog of uncoded episodes affects the robustness of the data and its usefulness, and it is therefore important to clear backlog quickly.

3.6 Extended gaps between the episode end date and when the information is coded also increases risks that medical staff are unable to respond to queries. This is either because of the elapsed time since they provided care for the patient in question impacting on their ability to recollect, or because staff may have moved on to new roles, particularly junior doctors.

3.7 At the end of May 2020, 181,294 FCE’s were identified as backlog dating back to April 2017. Just under half of these were from Aneurin Bevan University Health Board (**Exhibit 5**).

**Exhibit 5: backlogs of uncoded FCEs (thousands) at 31 May 2020, highlighting number of uncoded FCEs relating specifically to 2019-20 ( )***




Source: NWIS Clinical Classifications Team

* Powys Teaching Health Board reported no backlog at 31 May 2020

The exhibit contains more information about each health board's backlog which is displayed when hovering over each element.

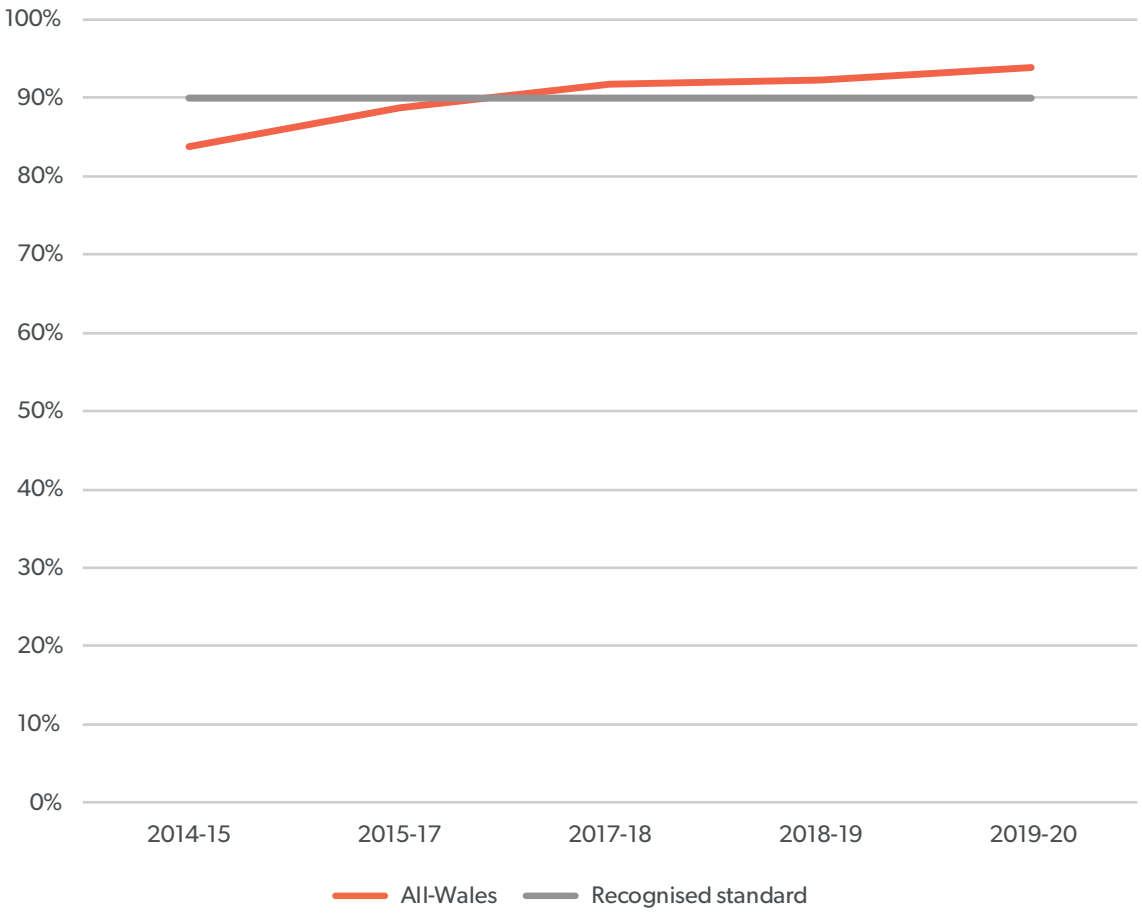
# Accuracy of coded data

3.8 Each year, the NHS Clinical Classifications Team assess the accuracy of clinical coding by reviewing a sample of coded episodes against a patient's case-notes.

3.9 The nationally recognised standard for the accuracy of coding is 90%. NHS bodies are required to strive towards meeting the national standard, by demonstrating year-on-year improvement.

3.10 Over the last six years, there has been an improvement in the accuracy of clinical coding across Wales (**Exhibit 6**) with all NHS bodies now achieving the standard.

**Exhibit 6: all-Wales accuracy of clinical coding**[7]




Source: NHS Clinical Classifications Team

7 Due to capacity within the NHS Clinical Classifications Team, a single accuracy review at each NHS body was undertaken during the period 2015-16 and 2016-17.

3.11 The accuracy of clinical coding is based on a review of codes applied to primary and secondary diagnoses and procedures for a sample of patients. These are then summarised to provide an overall accuracy score for each NHS body.

3.12 The review of accuracy is complex in nature and considers three specific dimensions which are:

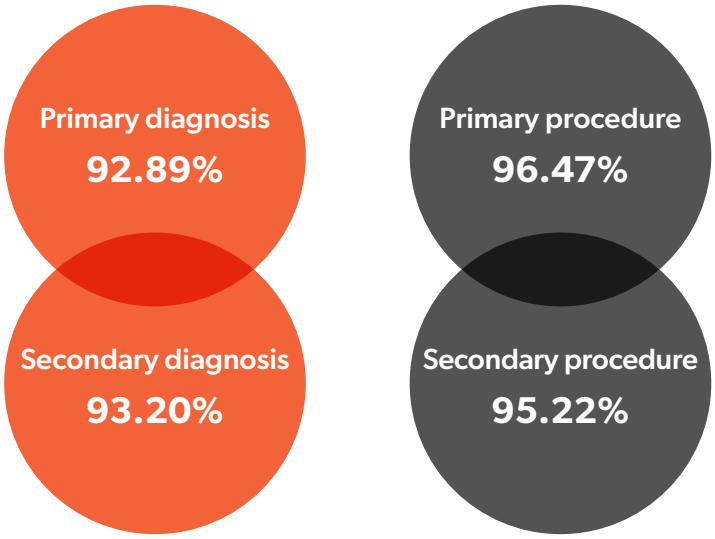
a the accuracy of the individual codes applied to each patient to ensure that they correctly reflect the relevant diagnoses and procedures set out in the patient's records;

b the accuracy of the totality or overall combination of codes applied to each patient to ensure that rules are being consistently applied, and that codes are not contradictory of each other; and

c the accuracy of the sequencing of codes to ensure that the most relevant code is applied to the primary diagnosis and procedure.

3.13 Across Wales, accuracy levels are generally higher for procedures than diagnoses (**Exhibit 7**), reflecting that procedures are generally more easily identifiable in patients' records through formal test results and theatre records. These are also more accessible through electronic systems whereby information relating to diagnoses is more commonly handwritten information.

**Exhibit 7: all-Wales accuracy of diagnosis and procedure coding in 2019-20**




Source: Audit Wales

3.14 Accuracy levels also vary depending on the type of activity being coded. More straightforward admissions, for example, elective day cases are invariably simpler to code as patients generally have less co-morbidities and the information needed to code is less. More complex admissions, for example, emergency admissions involving patients with multiple co-morbidities, are reliant much more on a greater degree of information contained in case notes and become more complex and time-consuming to code.

# Key challenges for clinical coding

04

# Awareness of clinical coding at board level

4.1 In England, clinical coding forms an important enabling function as part of Payment by Results funding regime. Consequently, clinical coding has a higher profile in the business of both NHS providers and commissioners within the NHS in England. The NHS in Wales does not use Payment by Results with the consequence that clinical coding has less profile, despite its contribution to a number of wider governance arrangements as set out in **Exhibit 3**.

4.2 In our more recent work, we found little reference to clinical coding in board business and a survey of board members identified that there was scope to raise awareness around the role that clinical coding has and the factors that are affecting the accuracy and timeliness of clinical coded data (**Exhibit 8**).

**Exhibit 8: findings from our 2018 board member survey**[8]

**42%** of board members were satisfied or completely satisfied with the information received on the robustness of clinical coding arrangements in their organisation.

Only **27%** of board members identified that they had full awareness of the factors that affect the robustness of clinical coding arrangements in their organisation.

**47%** of board members were satisfied or completely satisfied that their organisation was doing enough to make sure that clinical coding arrangements were robust.


**80%** of board members identified that 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.

Source: Audit Wales

8 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 96 responses out of a possible 172 responses were received.

# Level of clinical coding resources

4.3 Over the last six years, NHS bodies across Wales have demonstrated a commitment to invest in their clinical coding teams. Staffing levels have gradually increased although many NHS bodies have struggled to get trained coding staff.

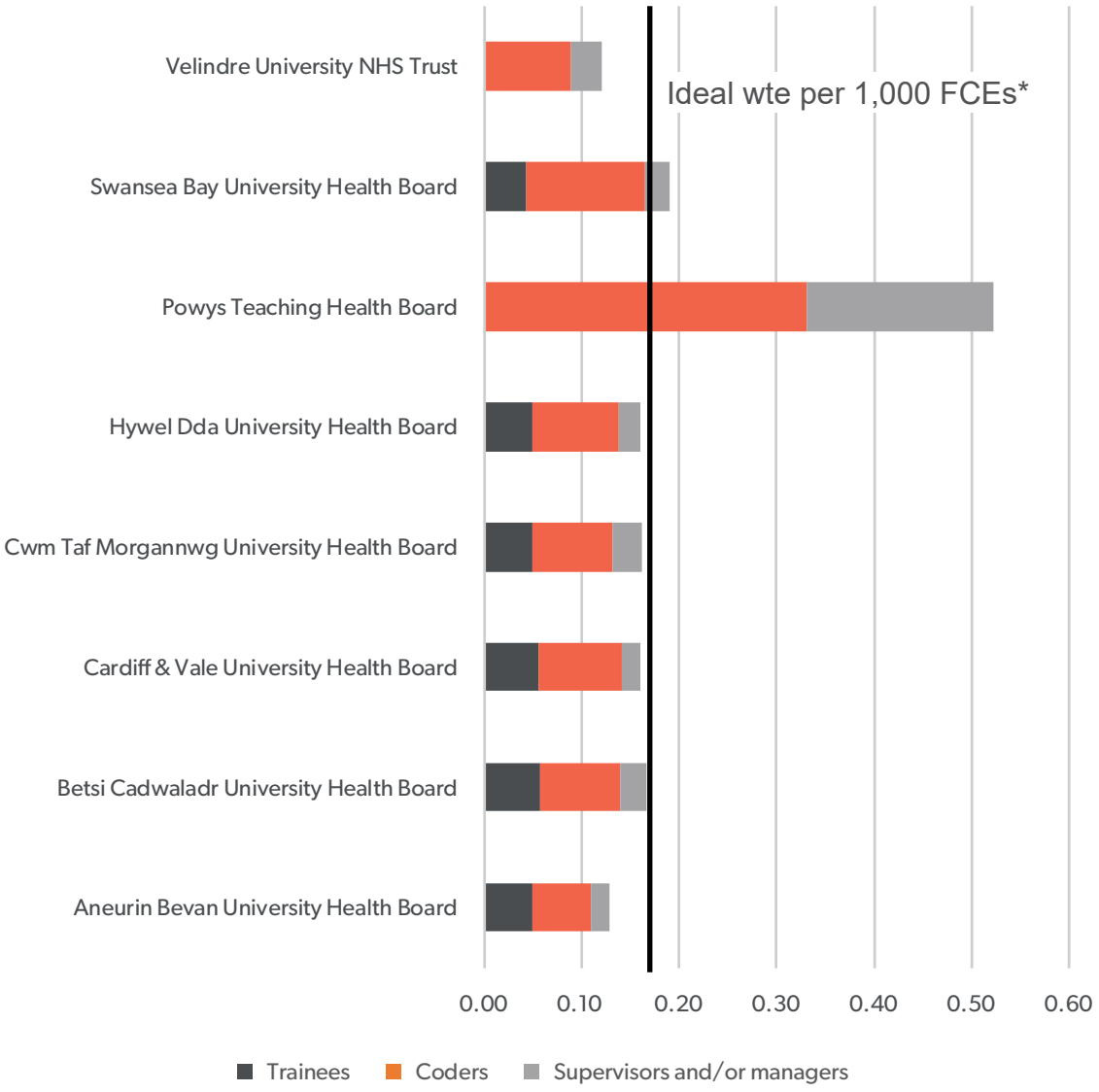
4.4 The 2019 annual report by NWIS on clinical coding across Wales highlighted the continued difficulties recruiting staff into coding roles. The higher profile of clinical coding across the NHS England brings with it a more attractive salary, and Welsh NHS bodies close to the England border in particular suffer as a result. In the absence of trained staff, many NHS bodies have recruited trainees which is positive as it develops staff into the coding role longer term. However, although this adds additional capacity into the system, the long lead in time to become a coder means that experienced staff have to support and mentor trainees for a considerable period of time before allowing them to work independently.

4.5 Across the Welsh NHS bodies, there is a total of 180 Whole Time Equivalent staff[9]. The majority are trained coders. In planning and managing their workforce, many NHS bodies work on the recognised expectation that coders will code on average 30 episodes of care per working day. This level of activity can be used to calculate an 'ideal' staffing level for benchmarking purposes[10]. Most NHS bodies in Wales are currently unable to achieve that benchmark (**Exhibit 9**). In three health boards we observed a heavy reliance on contract coders and the use of overtime to help meet workload demands.

9 Staffing figures exclude Band 2 support staff.

10 For the purposes of providing a comparison, a figure of 200 working days per full-time WTE has been used, allowing for leave and training commitments.

**Exhibit 9: actual whole time equivalent clinical coding staff per 1,000 FCEs as at March 2020 by NHS body compared with the ideal level based on 30 FCEs per day per WTE**



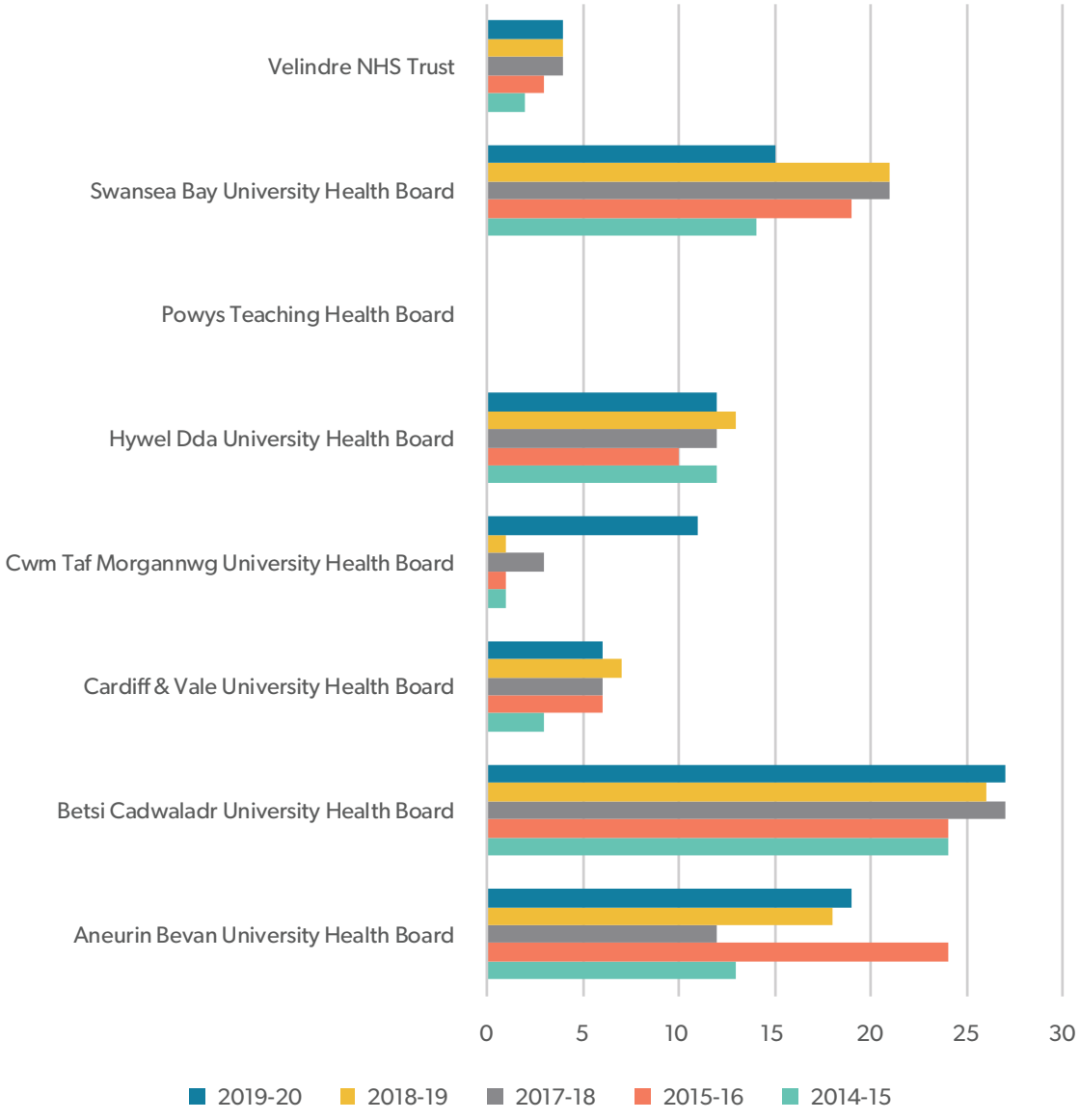

Source: NHS Clinical Classifications Team and Audit Wales

* Ideal levels based on an average of 30 FCEs coded per day for 200 working days per 1.0 WTE

4.6 As mentioned in **paragraph 1.8**, it is recommended practice for coders to gain the National Clinical Coding Qualification to become an accredited coder. This requires additional investment by NHS bodies for the initial training as well as ongoing membership subscriptions, although a number of NHS bodies require staff to cover the cost of annual subscriptions themselves. For some NHS bodies, the completion of the qualification has no impact on salary progression which means that there is no incentive for staff to undertake the qualification despite the positive impact it can have on the quality of clinical coding.

4.7 Positively, the number of accredited coders has increased over the last six years to 64% of all trained coders, but there are significant variations across NHS bodies with very few in place in Cardiff & Vale University Health Board, Velindre NHS Trust and the former Cwm Taf University Health Board areas of the now Cwm Taf Morgannwg University Health Board (**Exhibit 10**). There are no accredited clinical coders in Powys Teaching Health Board.

**Exhibit 10: number of accredited coders by NHS body between 2014 and 2020**




Source: NHS Clinical Classifications Team

4.8 The development of clinical coding trainers and auditors within local teams offers the potential to provide more ongoing and focused support to coding teams than the current central resource available through NWIS allows for. To date, only one qualified clinical coding trainer and five clinical coding auditors are in post across Wales, covering just two health boards – Aneurin Bevan and Swansea Bay University Health Boards, and Velindre NHS Trust. The staff fulfilling these roles are also managers or supervisors and are therefore unable to provide support to other NHS bodies due to workload commitments. This is with the exception of the clinical coding auditor in Velindre NHS Trust who does assist with the annual accuracy audits undertaken by the NHS Clinical Classifications Team.

4.9 Although significant reliance is placed on the accuracy reviews undertaken by the NHS Clinical Classifications Team, audit sample sizes equate to just 0.3% of total annual activity. An increase in clinical coding auditor capacity across NHS bodies would allow a significantly increased focus on the accuracy of clinical coding.

## Quality of, and access to, clinical information

4.10 Patient case-notes are the main source of information for clinical coders and as legal documents, should be maintained to a high-standard.

4.11 Our work in 2013-14 identified poor quality record keeping with a direct correlation between the way in which information was recorded and stored in patient case-notes and the accuracy and timeliness of clinical coding. Our work found that:

a 14% of folders were not in a good state of repair;

b the handwriting in 18% of case-notes was illegible;

c 32% of case-notes had loose papers containing clinical information which could easily be misplaced;

d a discharge summary or letter corresponding to the episode reviewed was missing in 24% of case-notes; and

e there was no clear diagnosis for the episode reviewed recorded in 14% of case-notes.

4.12 The awareness and adoption of the Royal College of Physicians (RCP) standards for medical records[11] was also found to be variable across Wales, with little evidence of NHS bodies undertaking quality checks of their case-notes.

11 First approved in 2007, the standards set out expectations for general medical record keeping by physicians in hospital practice which have subsequently been adopted as good practice across all medical specialties.

4.13 Issues with availability and training of ward clerks to compile patient case-notes were found to be impacting on the quality of record keeping, and the use of temporary records in many NHS bodies also affected the integrity of case-notes, as key information was not always merged into master records. Despite high levels of clinical coding accuracy as identified in **Exhibit 6**, these issues are impacting on the ability of coders to meet the timeliness targets, as coders are having to spend time chasing, collating and cross-checking information.

4.14 We did not review case-notes in our 2018-19 review but our interviews with staff and reviews of documents including any local reviews of medical records identified that the quality of record keeping remained an issue.

4.15 Medical records training, particularly for junior doctors, can help promote an understanding of the importance of good record keeping, and awareness and adoption of the RCP standards. However, many NHS bodies have struggled to provide formal training for medical staff, and specifically to include as part of induction training for junior doctors.

4.16 Formal medical records groups in NHS bodies were limited during our earlier review of arrangements in 2013-14, reducing the opportunity for quality issues to be identified and addressed. These forums have started to be reinstated over recent years but involvement of clinical coding staff in discussions is variable, limiting the ability for coders to formally escalate any issues that they may identify during the course of their work.

4.17 Many NHS bodies are increasingly providing coders access to clinical information systems that enable them to complete their work using digital platforms, such as the Radiology Information System (RadIS) or relevant departmental systems such as those used within operating theatres. In addition, some NHS bodies are also moving to digitalising the contents of paper case-notes. Our 2013-14 and 2018-19 work found that usability of digitalised case-notes had both negative and positive aspects. Although coders are able to gain access to digitalised case-notes more quickly than physical case-notes, they are currently no more than a scanned version of the paper records which means that issues such as the ability to read handwriting remain.

4.18 During the COVID-19 pandemic, a shift to home working for many clinical coders, particularly for those who have been required to shield themselves, has meant that coders have become increasingly reliant on electronic systems. The limited extent to which digitalised case-notes has been rolled out across Wales, as well as the quality of them has, however, impacted on the coders ability to undertake their role from home with staff, where able to do so, having to return to the office within social distancing constraints to access case-notes.

## Clinical engagement with coding

4.19 A report by Capita in 2014 considered the quality of clinical coding in the NHS. The report highlighted ten checklist areas that managers needed to look at to improve the quality of clinical coded data. One of these was regular clinical engagement as this would help clarify issues for both clinicians and coders on how care delivered should be described in source documentation to aid the coding process. The report also highlighted that routine validation of coding with clinicians helped to ensure accuracy.

4.20 Our original reviews in 2013-14 found that engagement of clinicians in the coding process was limited across NHS bodies. There were some examples of individual clinicians who took an active interest, but it was not widespread. A consistent theme identified was the lack of visibility and profile of clinical coders with clinical teams. The physical location of coding teams was a key factor with most teams located away from clinical areas, often in a separate location away from the main hospital building. The volume of workload for coders was also limiting their capacity to engage with clinical teams.

4.21 Our more recent work has identified an increase in engagement between coders and clinical staff, but this is largely through attendance at clinical meetings by the supervisor or manager, rather than on a case-by-case basis with coding staff which is where you would expect conversations about the care provided to individual patients to happen. Even with the potential benefits of using information based on clinical coded data to feed into the medical revalidation process[12] which allows clinical outcomes to be considered across clinical treatments, there has been little progress in this area.

12 Medical revalidation was introduced in 2012 as an evaluation of a doctor's fitness to practice. The process supports doctors in regularly reflecting on how they can develop or improve their practice. It gives patients confidence doctors are up to date with their practice and promotes improved quality of care by driving improvements in clinical governance.

# The opportunities for clinical coding

05

# Digital solutions

5.1 The COVID-19 pandemic has seen a significant shift in the availability of, and access to, electronic systems to enable NHS staff, both clinical and non-clinical, to work from home. This has included clinical coders but as mentioned in **paragraph 4.18**, there have been limitations on what coders have been able to do, because of the lack and quality of digitalised records. The increasing move to a digital platform however has provided a much-needed momentum to do things differently – both in terms of making increased use of electronic solutions and the location from which staff work.

5.2 The current need for clinical coders to access physical case-notes impacts on the ability for them to meet the current target to code FCE's within one month of the episode end date. Our 2013-14 work tracked the length of time it took for case-notes to reach the clinical coding teams, and whilst the target for coding completeness was longer at that time, it was clear that getting case-notes to the coding team was not a priority, with case-notes taking on average three weeks to arrive in the coding department. Once in the department however, the coding process was often completed within 24 hours and the case-notes returned to the medical records department.

5.3 Moving paper case-notes onto a digital platform, which is easily accessed by coders, would therefore create significant opportunities to shorten the elapsed time between the finished episode of care and completion of coding. Digital platforms also support the ability for coders to work from home. This introduces flexibility and smarter ways of working into the coding process, particularly in the context of social distancing requirements and supporting staff who continue to have to shield or self-isolate, although this does need to be balanced with the ability to engage with clinicians on a regular basis.

5.4 Digital solutions also provide the opportunity for clinical coding to be inbuilt into the system and to facilitate real-time clinical coding at the point of entry of information relating to the patient's care, rather than a process that is applied after the event. This would require clinical staff to be much more engaged in the coding process as it would be them who apply terminology codes[13] which identify diagnoses and procedures, which in turn, could support a more automated clinical coding process. This would reduce the need for coders to be manually applying the process to clinical information after the event, but instead would focus their role on the validation of codes to ensure that the process is being applied correctly.

13 Terminology codes are a set of standardised clinical terms applied using a system referred to as SNOWMED-CT (Systematized Nomenclature of Medicine – Clinical Terms)

# Expanding the scope of clinical coding

5.5 Clinical coding currently only applies to hospital admission activity and procedures undertaken in some outpatient settings. But there is scope to apply the principles of clinical coding to other hospital activity, including GP referrals and more general outpatient attendances. The commitment to code outpatient procedures is variable but our previous work did identify that some NHS bodies are also coding more general outpatient activity. But this is only at a high-level in terms of broad condition groupings and does not go into the level of detail that clinical coding allows.

5.6 As NHS bodies start to put arrangements in place to recover from the COVID-19 pandemic, limited capacity due to the increased sterilisation procedures that need to be in place, will mean that NHS bodies will need to prioritise patients who have been referred into secondary care and are waiting to be seen based on clinical need.

5.7 Currently, the only information available to identify clinical need however is a priority categorisation of ‘urgent’ or ‘routine’ which is applied to the GP referral once it has been assessed following receipt in the hospital. Very little information is easily available identifying the patient’s diagnosis and symptoms without the need to trawl through case-notes. The application of clinical coding to GP referrals and outpatients would be a key enabler in identifying high risk symptoms and conditions that require timely access to clinical care. The information gained from clinical coding would also help to identify cohorts of patients that could safely and appropriately be managed through alternative provision such as physiotherapy for orthopaedic conditions.

# A way forward

06

# A way forward

6.1 Our work in 2013-14 raised a number of recommendations for NHS bodies to address. These broadly focused on:

a improving the management of medical records by raising the importance of good quality record-keeping, providing clarity on roles and responsibilities, implementing a programme of medical record audits, strengthening the relationship between medical records and clinical coding teams, and providing training for staff;

b strengthening the management of clinical coding teams to ensure succession planning, providing opportunities for staff to undertake the accredited clinical coder qualification, reviewing workloads, improving cross-site working between internal clinical coding teams, providing regular staff feedback from validation checks and implementing clinical coding audits;

c strengthening engagement with medical staff by raising awareness of the coding process through training sessions and attendance at meetings, improving lines of communication, and encouraging active engagement between clinical coders and clinical staff in the coding process; and

d raising the profile of clinical coding at board level by providing briefing materials, identifying when management information is supported by clinical coded data, and alongside the timeliness of clinical coding, reporting on the accuracy of clinical coding and the level of uncoded activity.

6.2 Our 2018-19 work did identify that NHS bodies were making progress against recommendations, but the pace of progress has been slow on some key areas – a likely reflection of the relatively low profile that coding continues to have.

6.3 The activity and thinking on ‘re-setting’ the NHS that is taking place in the wake of the pandemic creates an opportunity to consider what national actions are needed to help raise the profile of clinical coding and drive the improvements required. From the work we have done, we would identify four specific areas for attention:

| | |
|---|---|
| **National leadership and capacity** | Ensuring that there is sufficient leadership and capacity at a national level to give clinical coding the profile it needs, including having a named national lead for clinical coding.<br>Ensuring clinical coding is a key feature in relevant national NHS forums. |
| **Training and awareness raising** | Inclusion of clinical coding in the core training for junior doctors and the all-Wales induction material for new Independent Members. |
| **Adopting recognised good practice** | Embedding clinical coding and the quality of good record-keeping into the performance framework for NHS bodies.<br>Formally identifying a mechanism to measure and identify clinical coding workloads which NHS bodies should adopt. |
| **Using technology to drive improvements** | Faster progress with digitisation of patients records and using IT systems to support code identification at point of entry and smarter, more flexible working by coding staff. |

# Appendix

## Audit approach and methods

# Audit approach and methods

## Document review

For both our 2013-14 and 2018-19 work, we reviewed a range of 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 and again in 2018 across Wales. The survey included a number of questions specifically focused on clinical coding.

## Interviews and focus groups

We carried out detailed interviews for both our reviewed. Interviewees included executive and operational leads for clinical coding, head of information, medical records manager, clinical leads, and the clinical coding managers and supervisors. Our 2013-14 work also included focus groups with clinical coding staff.

## Data analysis

For our 2013-14 work, we analysed data relating to compliance with the data validity and data consistency standards submitted to NWIS. For both our 2013-14 and 2018-19, we also analysed data relating to compliance with the Welsh Government targets for completeness and timeliness of clinical coding, along with backlog positions provided by the NHS Clinical Classifications Team.

## Case-note review

For our 2013-14 work, we reviewed a sample of case-notes for compliance with the RCP standards for medical records. Using the same sample, the NHS Clinical Classifications Team undertook a clinical coding audit to check the accuracy of coding. This work formed the basis for the now annual clinical coding audits. We also reviewed the medical records tracking system within each NHS body to assess the length of time case-notes took to arrive in the clinical coding department.

Archwilio Cymru
Audit Wales

Audit Wales

24 Cathedral Road

Cardiff

CF11 9LJ

Tel: 029 2032 0500

Textphone: 029 2032 0660

We welcome telephone calls in
Welsh and English.

E-mail: info@audit.wales

Website: www.audit.wales

WALES AUDIT OFFICE
SWYDDFA ARCHWILIO CYMRU

Archwilydd Cyffredinol Cymru
Auditor General for Wales

# Clinical coding follow-up review – **Hywel Dda University Health Board**

Audit year: 2018

Date issued: July 2019

Document reference: 1175A2019-20

The person who delivered the work was Philip Jones.

# Contents

Coding continues to be a low priority for the Health Board and non-compliance with the completeness target is impacting on overall improvement in accuracy and staff morale. The use of coding data as business intelligence remains underdeveloped and there is still considerable room for progress against our previous recommendations.

# 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 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 April 2014 we reported our findings for Hywel Dda University Health Board (the Health Board) and concluded that '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'. More specifically, we found that:

- the importance of clinical coding to support the effective operation of its business was recognised in the health board although more needed to be done to raise the profile of medical records and focus on accuracy;
- many aspects of the clinical coding process were sound but clinical engagement was sometimes lacking, medical records were often poor, and some records took a long time to be coded; and
- clinical coded data was used appropriately and met the Welsh Government standards for timeliness and completeness, but some coding was inaccurate, and the Board were not aware of the inaccuracies or its implications.

[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)

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

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

8 As part of the Auditor General's 2018 Audit Plan for the 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 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 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 coding continues to be a low priority for the Health Board and non-compliance with the completeness target is impacting on overall improvement in accuracy and staff morale. The use of coding data as business intelligence remains underdeveloped and there is still considerable room for progress against our previous recommendations.

## The proportion of episodes coded within a month of completion is below target and there is evidence that pressure to clear the backlog is affecting overall improvement in accuracy and reducing staff morale

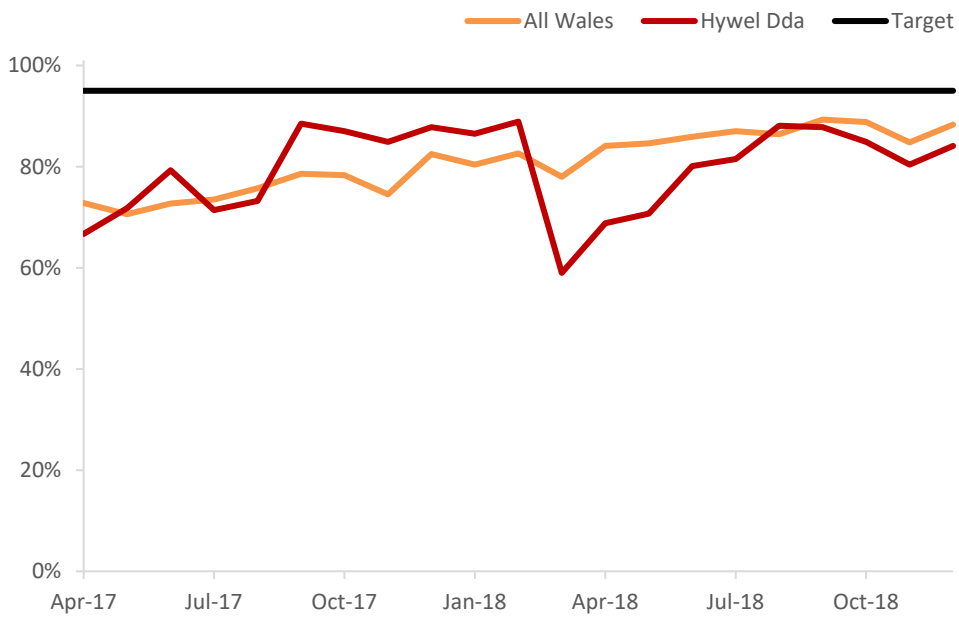
12 The Welsh Government has two coding related Tier 1 targets which NHS bodies are required to meet. These relate to completeness and accuracy.

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% of hospital episodes should have been coded within one month of the episode end date. NHS bodies need to meet this target monthly rather than at the end of each

[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 20 responses out of a possible 30 responses were received.

financial year which was previously the case. Based on this data, Exhibit 1 shows that the Health Board's performance has been consistently below the 95% completeness target and has been highly variable (ranging between 66.7% in February 2017 to 84.1% in December 2018). The main cause of variability is linked to a reduction in the number of whole-time-equivalent Band 3 and 4 coders and a predominantly year-on-year increase in finished consultant episodes (FCEs).

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



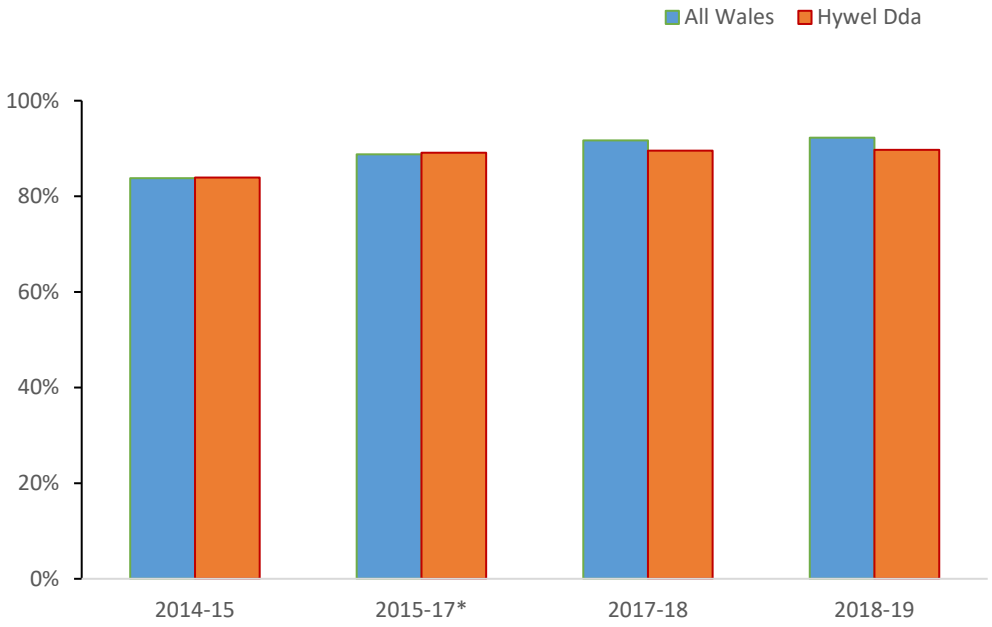

Source: Wales Audit Office analysis of data sent to Welsh Government

14 As part of our fieldwork, we requested the backlog position as at March 2018. The Health Board reported a significant backlog of 6.25% (8,469) of the FCEs. The backlog has continued to grow over the last three years. The Health Board is currently third highest in terms of coding backlog amongst Welsh health bodies (behind Betsi Cadwaladr University Health Board and Aneurin Bevan University Health Board).

15 Each year, the NHS Wales Informatics Service (NWIS) Standards Team checks 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 improvement in their accuracy year-on-year. Exhibit 2 shows that accuracy has improved (89.7% of episodes samples were coded correctly in 2018-19 compared to 83.7% in 2014-15). However, the improvement at the Health Board has not been

as great as in Wales as a whole: in 2017-18 (92.3% of episodes sampled were coded correctly in 2018-19). NWIS note that the 'overall results of the audit confirm that the clinical coding staff at the Health Board achieved above the recommended accuracy for secondary diagnosis, primary procedure and secondary procedure coding, but failed to achieve the recommended accuracy for primary diagnosis coding.'

Exhibit 2: percentage of episodes coded accurately




Source: Results of NWIS clinical coding accuracy reviews 2014-19
* 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.

16 NWIS also notes that 'to achieve Welsh Government completion targets there continues to be a drive to assign classification codes as soon as possible post discharge', and 'without reference to the full medical record and /or without a complete accurate discharge summary'. Furthermore 'the number and type of errors identified in [the] audit indicates that the clinical coders at Hywel Dda are rushing the clinical coding process', which leads to errors despite the correct information being available in the medical record.

17 Coding staff told us that the ongoing pressure to clear the backlog and the negative impact this has on other aspects of coding, is having a significant effect on staff morale.

## Despite widespread awareness of the issues associated with clinical coding performance, it is still a low priority and the use of coded data for business intelligence remains under-developed

18 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.

19 We found that while clinical coding in the Health Board now has a significantly higher profile in terms of awareness, it is still a low priority. Several board members said that while they recognise that it needs more investment, clinical coding is in heavy competition with other priorities.

20 Clinical coding issues are raised regularly and in a comprehensive way at senior level forums, including:

- Executive Team meetings, for example, an update report on clinical coding was presented in January 2018;
- Board meetings, with performance reports including the percentage of clinical coding accuracy attained in the NWIS national clinical coding accuracy audit programme;
- Business, Planning & Performance Assurance Committee (BP&PAC) meetings, with the Tier 1 target for clinical coding completion included in the Integrated Performance Assurance Report (IPAR) alongside an explanation of the current situation and challenges; what is being done; when and how much improvement can be expected; and how this will impact on patients and finances; and
- Information Governance Sub-Committee (IGSC) meetings, with this bi-monthly sub-committee a key forum for assurance around coding issues through regular clinical coding reports and updates.

21 The management structure and professional accountability for clinical coding has been strengthened since our previous review. The Director of Planning, Performance and Commissioning is responsible for the coding function and has highlighted that one of the fundamental challenges for clinical coding at the Health Board is the level of under-staffing in relation to activity. The Health Board estimates that it is short of between five and six clinical coders. This is based on its existing staff compliment, activity levels which have increased by approximately 36,000 FCEs since previous estimates were made, and professional norms for clinical coder productivity. The Health Board has opted not to invest in the function because of financial constraints and other competing priorities. In addition, supervisory capacity is diminished due to long term sickness. Managers and

clinical coding teams have considered and implemented more efficient ways of working. However, the backlog has continued to grow over time and the resulting pressure to address it is affecting the quality of coding.

22 While awareness of issues associated with clinical coding is much higher, the use of coded data for business intelligence remains under–developed. There is ongoing debate in the Health Board about the nature and extent of investment in digital solutions for clinical coding but no clear consensus about how this can be progressed. Nonetheless, several board members recognise that there needs to be investment in technological solutions in this area.

23 Digital solutions for clinical coding can provide significant benefits in a number of areas. For example, as part of their digital strategy, Abertawe Bro Morgannwg University Health Board has secured investment for the modernisation of case note tracking with Radio-Frequency Identification (RFID). The project will implement a RFID solution with the objective of improving the clinical and logistical problems of a paper-based health record whilst also modernising and improving the service the Health Records department provides. The solution will provide RFID tagging of acute records and Location Based Filing using barcode scanning and identification of a records location via fixed sensors. This will enable records to be easily tracked, located and made available when required.

24 Hywel Dda University Health Board is at the very early stages of adopting value-based healthcare. A paper submitted to the Welsh Government to develop a joint infrastructure with Abertawe Bro Morgannwg University Health Board and Swansea University has been agreed and will be funded for two-years. The Health Board is already leading value-based healthcare in relation to the lung pathway but recognises that it currently lacks both outcome and cost data, the latter being linked to clinical coding. This information is needed to take value-based healthcare forward across other specialties and pathways.

## The Health Board has made limited progress against previous audit recommendations and several issues require considerable attention

25 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 |
|---|---|---|---|---|
| 15 | 4 | 6 | 5 | - |

Source: Wales Audit Office

26 Our follow-up work has found that the Health Board has made some progress against our 2014 recommendations, but many recommendations remain outstanding or are overdue.

27 The relationship between the clinical coding teams and medical records staff has improved. However, the standard of case notes has deteriorated since our previous work. The clinical coding team play an essential role in highlighting this issue. There is little ownership of medical records and folders at ward level and tracking of medical records remains an issue. There is greater movement of patients around the Health Board because of increased clinical specialisation, as well as shorter lengths of stay. This adds to the challenge of maintaining notes in line with professional standards, and of making them available when needed. The use of temporary files continues to be problematic. The Health Records Group has been tasked with addressing these issues, which are also subject to recommendations from other internal reviews.

28 The clinical coding management structure was strengthened following our previous report. This included the appointment of a Clinical Coding Manager with responsibility for all coding teams and two coding team supervisors. However, arrangements have been compromised by the prolonged sickness absence of one of the supervisors, and despite the introduction of mitigating arrangements.

29 There is no evidence of training for board members to raise their awareness of the importance of clinical coding. However, the Board regularly receives information about coding performance as part of the Integrated Performance Assurance Report. The Board has previously received a copy of the NWIS clinical coding accuracy report. Information on coding accuracy is also provided on a regular basis to the Information Governance Sub-Committee.

30 Medical staff do not have a structured programme of training in relation to clinical coding. Awareness sessions are held with specialty teams on an ad hoc basis. Senior Health Board staff recognise the importance of clinical coding training for medical staff and acknowledge that the resources currently available are inadequate. An introduction to clinical coding was previously included in the induction process for new medical staff, but it is unclear whether this is still the case.

31 A clinical coding PowerPoint presentation was due to be emailed to all consultants at the time of our fieldwork. This was to include the ‘Royal College of Physicians Top ten tips for coding – a guide for clinical staff’. This was a one-off occurrence and there are no ongoing activities to promote standards. Coders said that medical staff are generally poor at fulfilling clinical coding requirements and the quality of discharge summaries is particularly poor. In addition, there is no evidence of routine involvement of clinicians in the validation of the use of clinical codes.

# Recommendations still outstanding

32 In undertaking this work, we have made no additional recommendations. The Health Board needs to continue to make progress in addressing our previous recommendations. The outstanding recommendations are set out in Exhibit 4.

Exhibit 4: recommendations still outstanding or overdue

| 2014 recommendations not yet complete |
|---|
| **Management of Medical Records**<br>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:<br>a) improving engagement between the medical records and clinical coding teams.<br>b) removing the use of temporary records, including poly-pockets and ensure files are merged into the master patient record.<br>c) reinforcing the Royal College of Physician standards across the health board.<br>d) providing training for ward clerks and other staff in relation to their responsibilities for medical records.<br>e) improving compliance with the medical records tracker tool within the Myrddin Patient Administration System. |
| **Clinical Coding Resources**<br>R2 Strengthen the management of the clinical coding teams to ensure that good quality clinical coding data is produced. This should include:<br>b) extending the range of clinical information systems that coders have access to, including the operating theatres system.<br>c) ensuring all staff receive consistent feedback on issues raised through validation and audit from all sites. |

| 2014 recommendations not yet complete |
| --- |
| **Board Engagement**<br>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:<br>b) 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. |
| **Engagement with medical staff**<br>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:<br>a) embedding a consistent approach to clinical coding training for medical staff across the health board.<br>b) reinforcing the importance of completing timely discharge summaries.<br>c) improving clinical engagement with the validation of clinical coded data. |

Source: Wales Audit Office

# Appendix 1

## Health Board progress against our 2014 recommendations

Exhibit 5: assessment of progress

| Recommendation | Target date for implementation | Status | Summary of progress |
|---|---|---|---|
| **Management of Medical Records**<br>**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:** | | | |
| a) improving engagement between the medical records and clinical coding teams. | Included in a wider action plan for Health Records | In progress | Clinical coding staff reported good relationships with health records staff across the Health Board. The Clinical Coding Manager recently met with the Health Records Manager for Carmarthenshire to discuss the processes in place between health records and clinical coding. They were satisfied that they were working well.<br>Clinical coding staff pull the majority of case notes from the filing libraries at Glangwili Hospital, Prince Philip Hospital, and Bronglais Hospital. Coding staff at Withybush Hospital can ask health records staff at Prince Philip Hospital to pull notes to be sent to the relevant site for coding.<br>Access to the health records library at Withybush Hospital has been restricted through the introduction of locks. Clinical coders do have access although they must ring to gain entry. This slows down retrieval of case notes.<br>The Director of Business, Planning and Performance intends to strengthen the Health Records Group to provide a focus for issues associated with effective health records management. |

| Recommendation | Target date for implementation | Status | Summary of progress |
|---|---|---|---|
| b) removing the use of temporary records, including poly-pockets and ensure files are merged into the master patient record. | Included in a wider action plan for Health Records | Overdue | Temporary notes and poly-pockets are still in use across the organisation. The Health Board's self-assessment response indicated that the numbers received into coding offices are not high. However, clinical coders across the Health Board told us that the situation had deteriorated over the period since our last review. There has been a decline in the organisation, maintenance and condition of individual patient case note folders because of greater movement of patients around the Health Board and shorter lengths of stay. Both factors add to the challenge of ensuring the notes are maintained in line with standards, and available when needed by clinical coding teams as well as clinicians.<br>A note is entered in Medicode whenever a poly-pocket is used as the source for coding. If an audit of the full case note is subsequently carried out, there will then be a flag to indicate that it was not available at the time of coding. |
| c) reinforcing the Royal College of Physician standards across the health board. | Included in a wider action plan for Health Records | In progress | A clinical coding PowerPoint presentation was due to be emailed to all consultants at the time of our fieldwork. This was to include the 'Royal College of Physicians Top ten tips for coding – a guide for clinical staff'. It is a one-off occurrence. We are not aware of ongoing activities to ensure that the standards are promoted. |
| d) providing training for ward clerks and other staff in relation to their responsibilities for medical records. | Included in a wider action plan for Health Records | Overdue | There is no ongoing programme of training to ensure that ward clerks maintain records in line with professional standards. Coding staff said that the standard of practice amongst ward clerks is highly variable, and there is no real ownership of the notes in some wards.<br>Ward clerks are managed by individual specialties and wards. This increases the need for ongoing communication (with ward staff in |

| Recommendation | Target date for implementation | Status | Summary of progress |
|---|---|---|---|
| | | | general as well as with ward clerks) about the importance of maintaining standards of practice and for the provision of training. |
| e) improving compliance with the medical records tracker tool within the Myrddin Patient Administration System. | Included in a wider action plan for Health Records | Overdue | All the clinical coding teams are asked to track case notes correctly using the Myrddin Patient Administration System. The Health Board's self-assessment indicated that this always happens, except for when case notes are collected from a ward in the morning and returned that afternoon. However, coding staff indicated that case note tracking is generally poor, except at Withybush Hospital. |
| f) putting steps in place to ensure that coders have early access to medical records for patients transferring to South Pembrokeshire Hospital prior to transfer. | Included in a wider action plan for Health Records | Implemented | An internal process has been established to inform the coding department about patients who are to be transferred to South Pembrokeshire Hospital (SPH). The relevant case notes are then coded before the patient leaves the site. A coder visits SPH once a month to code any episodes which have been missed. |
| **Clinical Coding Resources**<br>**R2 Strengthen the management of the clinical coding teams to ensure that good quality clinical coding data is produced. This should include:** | | | |
| a) reviewing the supervisory arrangements for Prince Philip Hospital to ensure that staff do not feel isolated. | October 2014 | Implemented | Clinical coding management team arrangements have been strengthened since our previous audit. This includes the appointment of a Clinical Coding Manager with responsibility for all coding teams and two coding team supervisors, one at Withybush Hospital and the other who supervises at Bronglais, Glangwili and Prince Philip hospital.<br>However, arrangements have been significantly compromised by prolonged sickness absence of the supervisor covering three sites, and despite the introduction of mitigating interim arrangements. While staff at Prince Philip Hospital commended the Clinical Coding Manager for the cover he has personally provided, the situation has |

| Recommendation | Target date for implementation | Status | Summary of progress |
|---|---|---|---|
| | | | affected their morale. In addition, consultants do not appear to be interested in the work that they do. |
| b) extending the range of clinical information systems that coders have access to, including the operating theatres system. | March 2015 | In progress | The clinical coding team have access to the operating theatres module of the National Patient Administration System. However, there is inconsistent clinical practice in the use of the theatres module, NPAS functions in general, and other key systems that support the coding process like ChemoCare[3] and the Welsh Clinical Portal.<br>Work had recently commenced to examine whether there are additional systems which could be utilised by the coding team to assist in the coding process. It was too early for any findings to be made available.<br>Second computer screens are gradually being made available to individual clinical coders to assist and expedite the coding process. |
| c) ensuring all staff receive consistent feedback on issues raised through validation and audit from all sites. | Ongoing | In progress | None of the coders are currently qualified to audit coding work.<br>In 2017-18 it was decided to have a supervisor and a coder carry out an audit of 30 case notes each month and to feedback the results directly to individual coders. The arrangement was suspended so that all coding team resources could be directed towards clearing the coding backlog. At the time of our fieldwork the situation had not changed. |

[3] ChemoCare is an expert chemotherapy electronic prescribing system with integrated appointment scheduling, which, using a single patient record, provides the medication record, clinical information and appointment schedule required for the safe management of cancer patients receiving chemotherapy.

| Recommendation | Target date for implementation | Status | Summary of progress |
|---|---|---|---|
| | | | The Coding Manager carries out data quality checks when time allows. However, his time has been heavily committed to providing a presence on each site to mitigate for the long-term sickness absence of one of the two coding team supervisors. |
| d) 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. | March 2015 | Implemented | Discharge letters are no longer typed by the clinical coding team at Withybush Hospital. Coders time is now entirely spent on coding episodes. |
| **Board Engagement/Resources**<br>**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:** | | | |
| a) 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. | March 2015 | Overdue | There is no evidence of training for board members to raise their awareness of the importance of clinical coding. |
| b) improving information to board on the accuracy of clinical coding. | March 2015 | Implemented | The Board regularly receives information about coding performance (see also paragraph 21) as part of the Integrated Performance Assurance Report. It has previously received a copy of the NWIS clinical coding accuracy report. Information on coding accuracy is also provided on a regular basis to the Information Governance Sub-Committee. |

| Recommendation | Target date for implementation | Status | Summary of progress |
|---|---|---|---|
| **Engagement with medical staff**<br>**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) embedding a consistent approach to clinical coding training for medical staff across the health board; | March 2015 | Overdue | Medical staff do not receive training in relation to clinical coding.<br>An introduction to clinical coding was previously included in the induction process for new junior medical staff, but it is unclear whether this is still the case.<br>In the months prior to our review the Clinical Coding Manager had sent a PowerPoint presentation on clinical coding to the Medical Director and the four hospital clinical leads with a request for feedback, with varying responses. The presentation is to be emailed to all consultants and service delivery managers for information and further feedback.<br>A Chief Clinical Information Officer (a respiratory consultant) had been in post for eight months and has two sessions per week to devote to clinical information issues. He would like to establish sufficient resource amongst clinicians across the Health Board to advocate and promote good practice in relation to clinical coding. His intention is to strengthen clinical representation on the Clinical Informatics Group to help focus on problematic areas. One example is endoscopy, where there is a high volume of patients and low quality of notes.<br>The Health Board recently approved a post of Chief Nurse Information Officer and planned to make an appointment to the post later in 2018. This will help to focus on note taking which will in turn support better coding. |

| Recommendation | Target date for implementation | Status | Summary of progress |
|---|---|---|---|
| b) reinforcing the importance of completing timely discharge summaries | March 2015 | In progress | The Health Board has been slowly rolling out electronic patient discharge arrangements, although it is still only available in a limited number of areas. Coding teams said that where this is in place, the quality of information entered in to the system is generally poor.<br>There is a cyclical issue which arises because of junior doctor intakes, which means that expected standards must be learned each time. Coding staff also indicated that electronic system updates can be problematic.<br>Coding staff said that the timeliness and quality of written discharges is variable and has deteriorated over time. For example, they are often illegible or blank. |
| c) improving clinical engagement with the validation of clinical coded data | March 2015 | In progress | There was little specific evidence of clinical engagement with the validation of clinical coded data. |

Source: Wales Audit Office

# Appendix 2

## Results of the board member survey

Responses were received from 20 of the board members in the Health Board.
The breakdown of responses is set out below.

Exhibit 6: rate of satisfaction with aspects of coding

| | How satisfied are you with the information you receive on the robustness of clinical coding arrangements in your organisation? | | How satisfied are you that your organisation is doing enough to make sure that clinical coding arrangements are robust? | |
|---|---|---|---|---|
| | This Health Board | All Wales | This Health Board | All Wales |
| Completely satisfied | - | 6 | - | 5 |
| Satisfied | 5 | 34 | 3 | 40 |
| Neither satisfied nor dissatisfied | 12 | 46 | 16 | 46 |
| Dissatisfied | 3 | 10 | 1 | 4 |
| Completely dissatisfied | - | - | - | 1 |
| Total | 20 | 96 | 20 | 96 |

Exhibit 7: rate of awareness of factors affecting the robustness of clinical coding

| | How aware are you of the factors which can affect the robustness of clinical coding arrangements in your organisation? | |
|---|---|---|
| | This Health Board | All Wales |
| Full awareness | 5 | 26 |
| Some awareness | 13 | 50 |
| Limited awareness | 1 | 17 |
| No awareness | 1 | 3 |
| Total | 20 | 96 |

Exhibit 8: 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 | 3 | 8 | 18 | 77 |
| No | 15 | 84 | 2 | 19 |
| Total | 18 | 92 | 20 | 96 |

Exhibit 9: additional comments provided by respondents from the Health Board

- Our clinical coding is not as timely as it has been previously, and the coding department appears stretched. Without timely, accurate coding with sufficient depth of coding it is difficult to interpret real time information, particularly benchmarked information.
- Needs a higher profile and ownership within the organisation.
- I understand that across Wales our approach to coding is in a different place to where it is in England. As I understand it this is partly at least attributable to the fact that in England coding plays a much greater role in driving the income of trusts. Consequently, there may have been a much greater investment in coding including technology to speed up coding than is the case in Wales. We may be in something of a vicious circle in that coding is usually suffering a backlog which greatly reduces its effectiveness and usefulness for clinicians so less attention is paid to the coding information produced. It's akin to you only weigh what you value.
- I do not recall clinical coding being addressed in any meeting. Obviously, it underpins all performance reporting, so it is implicit, but I don't believe it has been discussed so I am unable to answer most of these questions.
- As per latest IGSC report to BPPAC we know exactly where we are in terms of clinical coding and quality and with the volume of workload, we need more investment – in the front end to train our clinicians to code at source and at the back-end because good quality and timely coding saves lives, and that latter point is not an exaggeration.
- We have recently considered the need for further investment in clinical coding, however given the financial challenges the choices regarding investment make it difficult to prioritise clinical coding v clinical service delivery.
- Clinical coding requires investment in technology to maximise its productivity.
- There is clearly an issue with clinical coding capacity for us to be fully up to date all the time. I think the big issue for the Board is how we prioritise what investment we can make against all our priorities when in the financial position we are in. My assessment is that we are 'good enough' on the coding front, especially when looking at the position across Wales, but as with all things, there is always room for improvement.

- In an ideal world we would invest more in clinical coding than we do currently however we are overwhelmed with challenges as we have seen in the TCS Case for Change and this priority will be in competition with many others. However, improvements must feature in our clinical strategy moving forwards.

Wales Audit Office
24 Cathedral Road
Cardiff CF11 9LJ

Tel: 029 2032 0500
Fax: 029 2032 0600
Textphone: 029 2032 0660

E-mail: info@audit.wales
Website: www.audit.wales

Swyddfa Archwilio Cymru
24 Heol y Gadeirlan
Caerdydd CF11 9LJ

Ffôn: 029 2032 0500
Ffacs: 029 2032 0600
Ffôn testun: 029 2032 0660

E-bost: post@archwilio.cymru
Gwefan: www.archwilio.cymru