Suggestions for Quality Assurance

Queensland Coding Audit and Education Committee (QCAEC)

August 2017

Queensland Government

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Contents

Introduction

Coded clinical data is integral to a variety of critical internal and external reporting functions that support the management of hospital services and delivery of patient care inclusive of:

- Patient safety
- Clinical governance
- Clinical training, education and research
- Service planning
- Activity funding.

Proactive and reactive hospital based clinical coding audit programs provide assurance that coded clinical data is regularly assessed for accuracy, integrity and fit for purpose by:

- Measuring coding accuracy against the national standards and rules for clinical classification
- Examining how documentation effects DRG assignment and subsequent cost weights
- Examining how coding errors effect DRG assignment and subsequent cost weights
- Validating the data underpinning clinical reporting such as patient safety, quality key performance indicators (KPI) compliance, clinical audit and so on
- Assessing the knowledge and expertise of individual clinical coders.

Three key criteria are used to assess the quality of coded clinical data and apply to all types of coding audits:

- Accuracy
- Consistency
- Completeness.

Internal audit programs remain the domain of hospital based Coding Services and are best suited to small sample sized targeted audits that minimise the drain on resources by being minimally complex to design, quick to execute, readily reportable, frequently repeated or able to be performed ad hoc. They serve to act as a method of coder education and are an effective risk management strategy for key clinical data reporting. It is essential to understand that targeted audits **cannot** provide a definitive measure of overall Coding Service quality.

External audits are best utilised for larger sample sized audits that aim to measure overall Coding Service quality and are generally repeated at longer intervals. As they are conducted independent of the healthcare facility and according to a structured framework they will reduce bias and enable comparative benchmarking over time.

Coding audits provide an opportunity to enhance communication between clinicians and clinical coders, raising any anomalies in the ICD-10-AM /ACHI classification, AR-DRG grouper or cost weights assigned to DRGs. These anomalies may be reported to

the relevant jurisdictional and Commonwealth bodies for review/consideration in the revision processes for future versions of the classification and/or grouper software.

Objectives of the Internal Clinical Coding Audit Guide

The overall objective of this guide is to:

- Provide general principles relating to coding auditing as used by clinical coding auditors and instances of best practice for clinical coding audit
- Support auditors, coding and health information services to develop, edit, enhance their own internal audit program based on needs, and resources available to them
- Explain the basic principles and considerations of an internal audit program
- Share insight, knowledge and tips between those undertaking coding auditing
- Provide examples of audit tools, reports etc.

Scope of the Internal Clinical Coding Audit Guide

This guide is intended for anyone involved with undertaking clinical coding audits. This may be the coding auditor, coding manager, clinical coder, clinician etc.

Please note that this guide does not provide the full audit methodology or audit tools used by a clinical coding auditor when conducting audit.

Key Elements of an Internal Clinical Coding Audit Program

- An annual program of work or deliverables - what audits will be conducted for the year
- An annual planner - when will each audit be conducted and by whom
- Audit methodology - how will each audit be undertaken in terms of sampling and scope
- Audit criteria and error classification – what criteria will you measure against and how will you classify the errors where the criteria is not met.
- Creating tools to conduct the audit – data collection sheets, spreadsheets.
- Report templates for reporting results
- Statistical reporting methodology and tools
- Evaluating the program – feedback surveys, evidence of improvement

Developing an Internal Clinical Coding Audit Program

The following steps are provided to assist in the development of an internal clinical coding audit program.

Step 1 Consider the types of audits that would add the most value for the healthcare facility and identify the potential resources required/available.

Step 2 Identify who has the skills in the current team to assist in the completion of audits.

Step 3 Identify how much time can be or should be allocated to an internal clinical coding audit program. It is best if this is expressed as full time equivalent (FTE) hours. This is essential to know as it will inform the scope of the audit program.

If seeking funding from management it is a good idea to try and quantify how the benefits of an internal audit program will outweigh the investment. This may require evidence of before and after effects of auditing on accuracy of data and/or funding for reporting.

Step 4 Develop an audit planner. This is a schedule of what audits will be performed when, how and by whom. Tick them off as they are completed. Most planners are annual but they could be three or sixth monthly. It is important to be realistic about what can be achieved within the FTE identified at Step 3.

You may wish to weight the importance of these audits should competing priorities or unexpected loss of auditing resources within the Coding Service detract from completing the program in full, i.e. the less important audits can be postponed/cancelled.

Step 5 Develop the tools and documents required for completing the audits. These include data reports needed to generate samples or audit lists, the audit tool to complete the audit and the reporting tools or documents.

Look for ways of optimising the use of tools and resources. Are there other services that can provide reports that identify audit cases? Can coders put cases aside as they code or review cases at the time of coding rather than retrospective auditing? Can reporting be automated? Are there other Coding Services that are willing to share their audit tools?

Step 6 Keep a record of audit activity and associated outcomes. This information will inform management reporting, benchmarking and provide evidence of the value of the audit program. It must be recorded in a way that allows comparison over time. See section Recording Clinical Coding Audit Activity.

Conducting the Clinical Coding Audit

The following steps provide guidance on undertaking a Clinical Coding Audit. You can determine Steps 1, 2 and 3 ahead of time and include in the annual audit program and planner.

To conduct the clinical coding audit, the source document made available to the auditors must be the full medical record (either paper or electronic or a combination of both). The information extracted from the full medical record will be the standard against which data quality will be measured.

Step 1 **Scope:** Identify the scope or extent to which you will audit each episode of care. It is not always necessary to audit all codes. This will depend on the nature of the targeted audit. For example a Questionable, Unacceptable and Ungroupable Targeted audits would only require the Principle Diagnosis (PD) and procedure code to be audited to confirm if it should or should not be one of these DRGs. Minimising the scope is a good way of maximising scant auditing resources and still achieves the objectives of the audit. As another example, if you are required to audit the coded data for ACHS Clinical Indicator or Variable Life Adjusted Display (VLAD) cases you can save time by just auditing the codes that the indicators uses and ignore all others in the episode of care. Identifying the scope also assists in determining the sample size.

Step 2 **Audit Sample:** The larger the sample size, the more confidence you can have in the outcome that is being assessed. If you are not auditing all the codes or additional data items in an episode of care i.e. you are reducing the scope, you may be able to increase the sample size. If the targeted audit only has a known low volume number of cases in a given timeframe you may wish to audit 100% of the cases. Selecting the sample will depend on what you are auditing. Most of the time a simple random sample will be sufficient but for some audits stratified sampling maybe more useful. For example with Individual Coder Targeted Audits you may want to pick random cases from each clinical speciality. Sampling from the most recent data serves more purpose as you are reviewing and correcting current practice, however auditing older data will at times be necessary. For example if you discover that a new coding rule has not been applied over an extended period of time you might go back further in the date range. Or used as comparison from before after.

Have extra's health records in your sample list in case some are unavailable or incomplete for audit purposes.

Step 3 **Time:** You will get through the audit on time and with greater accuracy if you schedule the time, this includes doing the audit, feedback to coders and report writing/recording of results. It is tempting to do bits of the audit between other jobs but this can result in auditing inconsistency and the audit taking longer than necessary or not completed at all.

Step 4 **Notification:** It is advisable to inform coders that you are undertaking an audit. This includes the type of audit, and what, when and how feedback will be given. It is a good idea to remind coders to leave time in their work day to discuss discrepancies with you otherwise finalising the audit will be held up. If there are any changes/delays in undertaking the audit, let them know. You can notify the coders via email or face to face.

Step 5 **Consistency:** Be consistent in how you classify errors. Definition of error types and reason for error should be documented when developing your audit methodology. Consistency is essential if two or more auditors are undertaking the same audit. Refer to appendix 5 for examples of error types

Step 6 **Feedback:** If you want to see improvements in coding quality you have to provide constructive evidence based feedback. This can also include feedback to clinicians about documentation. Feedback to clinicians would not normally occur during the audit nor undertaken in the same way as with a coder. (See Clinical Coding Audit Feedback and Lessons from Audit below for further information).

Step 7 **Amending:** The codes in the audited records should be amended once agreement on code changes has been reached between auditor and coder. It is preferable for the coder to amend their own work and update information system accordingly and in a timely manner.

Step 8 **Reporting:** Reports can vary in length and complexity depending on the type of audit undertaken. The audit report should contain the findings of the audit including areas of good practice, analysis of errors and recommendations. It may also include a summary of or outcome from feedback provided

To save time and maintain consistency, create some report templates that audit findings and recommendations can be entered in to.

Confidentiality: Individual coder's audit results or performance should only be discussed with supervisors and others who have been identified as authorised recipients.

Clinical Coding Audit Feedback

Feedback refers to the discussion between coder and auditor about coding discrepancies and good practice noted during audit. Feedback is an essential component of auditing and coded data will not improve until feedback is given. This is a communication skill that improves with practice but here is some helpful information.

Key considerations:

- Giving effective feedback takes time and should be factored into audit schedules and coders and auditor's workload.
- Individual coder feedback can be given at any time during a coding audit, it is not necessary to wait until the audit is complete.
- Determine whether specific coding errors warrant both individual coder feedback and team education.
- Determine if feedback should be face to face or via feedback form (or both). This will depend on the complexity of the coding discrepancy and the experience of the coder. Complex feedback should be face to face especially if the feedback is to an inexperienced coder. A feedback form can be a reference for less experienced coders to refer to at a later time.
- Timing and place of feedback should be conducive to an open, private and receptive discussion. The medical record should be accessible at time of feedback.

When giving feedback:

- Emphasise the importance of discussing coding discrepancies as education opportunities and to achieve data consistency. This is particularly important when there are multiple team members who may be coding the same clinical concept in different ways.
- Provide constructive feedback that identifies the good as well as areas for improvement. Allow for and be prepared to answer questions in regard to audit findings.
- Allow the coder to review the auditor's findings and provide response as the coder may have a valid reason for choosing the code they did. Auditors make mistakes too.
- The auditor must provide evidence as to why the code is incorrect. Auditors should reference Australian Coding Standards, Nationally ratified coding advice e.g. ACCD Coding Rules and the conventions of ICD-10-AM/ACHI. If clinical coders have been instructed to follow state coding committee advice then this can be used in audit and referenced as evidence. Providing unequivocal written evidence removes grounds for dispute and differences of opinion, allowing the coder to accept the error and at the same time providing the corrective action.
- Differences in clinical opinion or interpretation of clinical documentation between coder and auditor are best resolved with a documentation query to the treating clinician/s. It is good practice for the clinical coder to complete this documentation query.
- Differences in interpretation of codes or coding rules between coder and auditor are best resolved through an internal arbitration process or a query sent to the CCAQ.

- Be consistent in what you say especially if auditing multiple coders. If more than one auditor is undertaking the same audit then they must be consistent in their feedback as well.

Arbitration:

In the event that both coding auditor and clinical coder cannot agree on an audit outcome it is important to have an arbitration process in place. This is usually a third party who will either provide their independent opinion or they may have the authority to make the final decision. To prevent bias it is essential that this third party is not provided the opinion of the auditor or coder.

During or after a coding audit, it is advisable that any audit related questions or queries raised by clinical coders with other auditors or other clinical coders are always redirected back to the original auditor. This eliminates potential for conflicting or erroneous advice and ensures the arbitration process is correctly utilised.

Clinical Coding Audit Reporting

Results reporting for Internal Coding Audits can vary widely from simple one page documents to more formal multiple page reports. Appendix 4 provides an example of what can be included in a report. The type of audit will dictate the type of report required. Not all auditing activity will warrant individual reporting, but can be presented as a summary of audit results over a period of time e.g. in a table or spreadsheet. There will unlikely be many internal audits that will require the full elements of a formal report as sample sizes and results will be too small to warrant it.

The information presented will depend on who the report is going to. It is important to identify who your report recipients should be and what information they are interested in receiving and in what detail. Some service directors and executive recipients will not wish to receive a report on each audit performed but will only be interested in quarterly or annual cumulative results, benchmarking and evidence of audit activity achieved. The following table presents suggested recipients, frequency of reporting and report information. Refer to appendix 3 for examples of reports

Recipient	Information required	Time	Suggested document
Clinical Coder	All codes in error (number and percentage) and why DRG changes (number and percentage) and why including impact on WAU Recommendations for improvement	As they occur	Audit working sheets that show coder vs auditor codes and DRGs and feedback.
Coding Manager	All codes in error (number and percentage) and why DRG changes (number and	As they occur	Finalised audit report Audit working sheets (as above)

	percentage) and why including impact on WAU Recommendations for improvement Classification of errors to type including definition of error type Audit sample size Audit methodology Coder and auditor identification		
Service Director	Summary of audit activity completed Coding accuracy per audit DRG changes per audit WAU variance per audit Documentation issues PAS data issues Recommendations per audit Corrective actions taken	Quarterly	
Executive Director/Clinical Director	Summary of audit activity completed Coding accuracy per audit DRG changes per audit WAU variance per audit Documentation issues PAS data issues Recommendations per audit Corrective actions taken	Bi annual or annual	
Finance Manager	Summary of audit activity completed Coding accuracy per audit DRG changes per audit WAU variance per audit Recommendations per audit Corrective actions taken	Quarterly, bi annual or annual	
Quality Manager/Patient Safety	Summary of audit activity completed Coding accuracy per audit Recommendations per audit Corrective actions taken	Bi annual or annual	

DRG Changes

DRG changes are often considered undesirable, resulting in revenue loss but they can equally result in revenue gain. So when reporting DRG changes it is imperative to explain the impact. Either way they are an inevitable outcome of audit and if appropriately monitored and corrected in a timely manner will have minimal adverse effect. Therefore it's a good idea to know which DRGs in your hospital casemix are susceptible to significant revenue loss or gain and include these in your audit program. Some of these can and should be reviewed at the time of coding.

Targeted audits may result in greater DRG changes especially if they are being aimed at known problem coding. Episodes of care with multiple presenting problems can also result in greater DRG changes depending on how clinical documentation reads and how coder and auditor choose to interpret and apply associated Australian Coding Standards. What may appear to be minor clinical conditions for coding can also change DRGs.

DRGs changes can also be categorised to error type or reason for DRG change. Refer to appendix 5 for examples.

Lessons Learned from Audit

Lessons learned from audit are findings and insights that if shared or implemented will lead to improvement.

This may include improvements in;

- Coding or clinical knowledge
- Coding practice or processes
- Clinical documentation
- Audit processes or procedures

Lessons learned can be shared through emails, newsletters/information flyers, meetings or education sessions with auditor, clinical coders and clinicians.

Significant audit findings on one or two coding concepts can be addressed in a structured education session with clinical coders. The proposed education session should be a recommendation of the audit.

It is helpful to present:

- a summary of the audit findings
- demonstrative examples of where errors were made
- instruction on how to correctly code
- evidence to support this instruction

Recording Clinical Coding Audit Activity

Providing evidence of regular clinical coding audit activity improves confidence in the quality of the coded data being used for reporting.

Every time coding is reviewed, whether in full or partially, it could be considered an audit and can be counted toward audit activity. Audit activity is recorded on the audit planner and reported to provide evidence that quality monitoring is occurring. Therefore, it is important to identify what activities are considered audit activity and to include these on the audit planner. Here are some suggestions of what could be included:

- Coding related EVA validations
- PICQ validations (trademark)
- Review of trainee coding
- Round table audits performed for education
- VLAD reviews

On your audit planner, note when or if audits have been completed. If an audit is not completed, include a reason why. This can then be used to report audit program compliance. Periodic and annual audit compliance reporting serves the following purposes:

- To monitor compliance with the annual audit plan.
- Provides evidence to senior managers that the audit program was completed and if not completed, why.
- Calculates the percentage of annual discharges that were audited in one form or another.
- Identifies resource shortages impacting on undertaking or completing the audit program.
- Identifies possible improvements to the audit program, such as increase/reduce variety and range of audits, review of complexity and resource requirements.

Evaluation of Clinical Coding Audit Programs

Internal Audit Programs should be re-evaluated yearly due to:

- Changes in ICD-10-AM/ACHI/ACS editions that may effective targeted audits and identify education deficits in regards to Editions changes.
- Changes in DRG Version that effective DRG or ABF audits
- Improvement in coding practices that indicate that the audits are no longer required
- Planned volume of audit activity may have proven to be unachievable within the timeframes and audit resources. In these instances, the frequency or sample size may need to be reduced.
- New or modified Activity Funding requirements and contracts

Internal Audit Programs can also be adjusted mid cycler if:

- Audits demonstrate a significant improvement in coding practices and are no longer required
- Initial audit findings reveal that the audit rationale can be further refined to reduce the audit sample (e.g. Exclude admissions with short length of stay)
- New coding issues arise that are more important in terms of risk to data quality, e.g. new coding rule, new clinical speciality commences.

Internal Clinical Coding Audit KPI's

The following are suggested Key Performance Indicators (KPIs) that can assist in auditing goal setting and benchmarking:

- Percentage of compliance with Audit Planner
    - What percentage will be acceptable e.g. 100% compliance, 90% compliance
- Percentage of in scope annual discharges audited
    - What percentage will be acceptable e.g. 2% of discharges, 5% of discharges
- PICQ™ Measure
- Number of coding related Admitted Patient EVA messages remaining at the end of the month

Audit tools

There are a number of tools that can be used to facilitate auditing and reporting of audit results. They can include but are not limited to:

- PICQ™
- PICQ™ Extract Report
- HBCIS Reports
- QHERs Reports
- Coding Audit Report Template
- Coding Audit Planner Template
- Statewide Coding Audit Criteria
- Crystal Reports
- SAS
- Other external body audits

Clinical Coding Audit Support

Need help or have a query? Email: QCAudit@health.qld.gov.au

Abbreviations

Acronym	Description
ABF	Activity Based Funding
ACCD	Australian Consortium for Classification Development
ACHI	The Australian Classification of Health Interventions
ACS	Australian Coding Standards
AF	Activity funding
AR-DRG	Australian Refined – Diagnosis Related Group
CCAQ	Clinical Coding Authority Queensland
DRG	Diagnosis Related Group
EDS	Enterprise discharge summary
EVA	Electronic Validation Application
ICD-10-AM	The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification
KPI	Key Performance Indicator
LOS	Length of Stay
PICQ™	Performance Indicators for Quality Coding™
QCAEC	Queensland Coding Auditing and Education Committee
VLAD	Variable Life Adjusted Display
WAU	Weighted Activity Unit

Appendices

Appendix 1: Suggested Clinical Coding Audits

Clinical Coding Targeted

These audits are undertaken to ensure changes in coding practice have been learnt and to provide coders with a measure of individual quality.

Title:	**Individual Clinical Coder Audits**
Description:	An audit on the codes produced by individual coders over a given timeframe and casemix
Scope:	Audit all ICD-10-AM, ACHI codes and COF
Sample Size:	20 discharges Random selection from previous months coding cycle
Frequency:	Retrospective sampling: Six monthly Yearly *NOTE: Additional Individual Coder Audits may be required for coders who return suboptimal results*
Responsibility:	All Clinical Coders
Tip:	The results can be used to inform education topics and performance appraisal and development interviews. Consider auditing for with other data collection such as Queensland Cancer Registry

Title:	**QHAPDC Morbidity Data Validations**
Description:	Review of Queensland Hospital Inpatient Processing system (QHIPS) Validations messages related to: DIAG DRG
Scope:	Audit the data validation error only
Sample Size:	100%
Frequency:	Monthly
Tools:	Electronic Validation Application (EVA)
Responsibility:	All Clinical Coders
Tip:	It is a better use of auditing resources and a valuable education opportunity if validation errors are given back to the individual coder to self-review and correct

Title:	**Performance Indicators for Coding Quality (PICQ)**
Description:	Audit of PICQ indicators as selected by the Coding Service
Scope:	Audit the code/s in error only
Sample Size:	100%

Frequency:	Monthly *NOTE: Recommend PICQ auditing prior to QHIPS extraction*
Responsibility:	All Clinical Coders
Tip:	It is a better use of auditing resources and a valuable education opportunity if PICQ errors are given back to the individual coder to self-review and correct

Title:	**ICD-10-AM/ACHI Code**
Description:	An audit of where there has been recent ACS, coding classification changes, suspected or high incident of coding error
Scope:	Audit the code rule/concept only
Sample Size:	As desired
Frequency:	Ad hoc
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder

Patient Safety Reporting Targeted

These types of audits are best undertaken as pre-emptive audits meaning the coding is audited prior to any reporting.

1. Title:	**Variable Life Adjusted Display (VLAD) Coding Audit**
Description:	An audit of the codes utilised in VLAD criteria to ensure the VLAD flag is valid before escalating to clinical review
Scope:	Audit the VLAD criteria only
Sample Size:	As per HHS identified cases
Frequency:	Ad hoc
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder
Tip:	Clinical coders can self or peer review codes known to flag a VLAD at the time of coding

2. Title:	**Australian Council on Health Care Standards (ACHS) Clinical Indicators**
Description:	An audit of the codes utilised in ACHS CI reporting to ensure data accuracy before escalating to clinical review.
Scope:	Audit the ACHS CI definition only
Sample Size:	As per identified cases
Frequency:	Ad hoc
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder

3. Title:	**Routine Hospital Quality Reporting**
Description:	An audit on the accuracy of codes utilised in quality reporting. Such reporting my include: - Health Round Table - Surgical Complications - Adverse Events

Scope:	Audit the data definition or codes/s utilised in reporting only
Sample Size:	As per identified cases
Frequency:	Ad hoc
Responsibility:	Coding Auditor / Manager / Advanced Clinical Coder

Activity Funding (AF) Targeted

These audits are undertaken to ensure coded data is optimizing Activity Funding.
Tip: Adjacent DRG and ICD-10-AM/ACHI codes that incur penalties, incentives and loadings under Activity Funding agreements should be reviewed at the time of coding to reduce retrospective auditing

4. Title:	**DRG 801 Unrelated OR Procedures**
Description:	An audit of DRG 801 Unrelated OR Procedures – optimisation of DRG specificity and complexity through review of code assignment - 801A OR Procedures Unrelated to Principal Diagnosis, Major Complexity - 801B OR Procedure Unrelated to Principal Diagnosis, Intermediate Complexity - 801C OR Procedure Unrelated to Principal Diagnosis, Minor Complexity
Scope:	Audit for the DRG only - Cease auditing the code set once principal diagnosis and principal procedure code are confirmed
Sample Size:	100% of the DRGs
Frequency:	801 DRGs can be reviewed at the time of coding and/or monthly prior to data extraction
Responsibility:	All Clinical Coders
Tip:	Clinical coders can audit this at the time of coding by self or peer review

5. Title:	**Adjacent DRG (ADRG)**
Description:	An audit of B, C & D DRG's audited for higher split within the ADRG – optimisation of ADRG complexity through code assignment.
Scope:	Audit for the DRG only - cease auditing the codes set once optimal ADRG achieved
Sample Size:	10% - 100% of discharges *NOTE: Percentage chosen is dependent on total discharges within an ADRG and auditing resources*
Frequency:	Retrospective sampling: - Ad Hoc - Monthly - Quarterly - Six Monthly *NOTE: Frequency is dependent on total monthly discharges with*

	B & C split, casemix complexity of the facility and auditing resources
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder
Tip:	Consider high volume DRGs or DRGs with known documentation deficiencies around diagnoses that carry significant DCLs

6. Title:	**DRG Length Of Stay (LOS) Outlier**
Description:	An audit of DRG Inlier LOS versus actual LOS – correct DRG and optimisation of ADRG complexity through code assignment *NOTE: LOS Outliers include episodes of care under the inlier LOS as well as over the inlier LOS*
Scope:	Audit for DRG and ADRG only - ceasing auditing the code set once DRG and optimal ADRG achieved
Sample Size:	10% – 100% discharges *NOTE: Percentage chosen is dependent on total discharges with LOS outlier and auditing resources*
Frequency:	Retrospective sampling: - Ad Hoc - Monthly - Quarterly - Six Monthly *NOTE: Frequency is dependent on total monthly discharges with LOS outliers and auditing resources*
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder
Tip:	*LOS outlier are not always coding related but can be due to the following reasons:* - *administrative (eg discharge delayed because social work review delayed)* - *social (eg discharge delayed as home services not in place)* - *medical (eg discharge delayed due to new or persistent condition*

7. Title:	**DRG Clinical Outlier**
Description:	An audit of DRGs clinically different to Unit specialty – Confirm these outliers are the result of bed management strategies and not coding errors Examples: Gynaecology DRG in Vascular Unit
Scope:	Audit for DRG only
Sample Size:	10% – 100% discharges *NOTE: Percentage chosen is dependent on total monthly with clinical outlier DRGs and auditing resources*
Frequency:	Retrospective sampling, either: - Monthly - Quarterly - Six Monthly

	NOTE: Frequency is dependent on total monthly discharges with clinical outlier DRGs and auditing resources
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder

8. Title:	**High Cost Procedures**
Description:	An audit on missed ACHI codes for high cost procedures Examples: - Mechanical Ventilation - Hip and Knee Joint Replacement
Scope:	Audit for the missing procedure only
Sample Size:	100%
Frequency:	Retrospective auditing - Monthly - Quarterly - Six Monthly *NOTE: Frequency is dependent on total monthly purchasing initiative events and auditing resources*
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder
Tip:	To identify missing codes alternate information systems may need to be utilised to identify potential events for reconciliation against coded episodes of care. E.g. utilise ORMIS procedure reports to reconcile against ACHI codes.

9. Title:	**Activity Based Funding Purchasing Initiatives**
Description:	An audit of ICD-10-AM and ACHI codes that inform purchasing initiatives Examples - Hospital in the home (HITH) - Pressure injury stage 3 and 4 *NOTE: Refer to latest Health Funding Principles and Guidelines for purchasing initiatives utilising DRGs and ICD-10-AM and ACHI codes*
Scope:	As a minimum audit for clinical codes effecting the ABF Adjustment and Initiatives
Sample Size:	10% - 100% of discharges *NOTE: Percentage chosen is dependent on total monthly purchasing initiative events and auditing resources*
Frequency:	Retrospective sampling: - Ad Hoc - Monthly - Quarterly - Six Monthly *NOTE: Frequency is dependent on total monthly purchasing initiative events and auditing resources*
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder
Tip:	Pressure injury review is usually undertaken by wound care /

	pressure injury management teams. Enquire if all stage 3 and 4 coded pressure injuries can be referred to the wound care / pressure injury management team for immediate review before finalising codes for the coding month.

10. Title:	**ABF Adjustments**
Description:	An audit of ICD-10-AM and ACHI codes that inform ABF adjustments Examples - Renal dialysis - Transplant support - Cystic fibrosis - Radiotherapy *NOTE: Refer to latest Health Funding Principles and Guidelines for adjustments utilising DRGs and ICD-10-AM and ACHI codes*
Scope:	As a minimum audit for clinical codes effecting the funding mode adjustments only
Sample Size:	10% - 100% of discharges *NOTE: Percentage chosen is dependent on total monthly ABF localisation events and auditing resources*
Frequency:	Retrospective sampling: - Monthly - Quarterly - Six Monthly *NOTE: Frequency is dependent on total monthly localisation events and auditing resources*
Responsibility:	Coding Auditor/Manager, Advanced Clinical Coder

Appendix 2: Examples of Clinical Coding Audit Frameworks and Planners

Example 1: Audit Framework or Program describing type of audit and how it will be conducted (page 1 only)

Audit Framework 2017

Audit Type	Description	Audit Goal (Quantity)	Data Source/Audit tools/ Reporting	Frequency	Responsibility
Coder Targeted	A Coder Targeted Audit of 20 admissions is required to be performed for all staff once per year.	ALL AO4 & A05 Coders and Advanced Coders: Once per year	**Data Source:** *QHERS – Coder Audit report by Coder ID **Audit Tools:** *Audit Sheet Template *Audit Tally Sheet *Coder Targeted Audit Report Template *Audit Guidelines of Error counting **Reporting:** * Individual Coder Audit Reports * eCARTS * Director Clinical Information Services (DCIS) – CIS Statistics Report **Feedback:** * Audit feedback to individual coder's at time of audit * Coder's to provide feedback to Senior HIM on audit experience	Feb 2017: Currently 24 Audits per year (minimum) Four audits per month over 7 months	Advanced Coders (A05's)
801 DRGs Procedure not related to Principal diagnosis	Audit of 801 DRG's including the following: ➢ 801A OR Procedures Unrelated to Principal Diagnosis W Catastrophic CC ➢ 801B OR Procedure Unrelated to Principal Diagnosis W Severe or Moderate CC ➢ 801C OR Procedure Unrelated to Principal Diagnosis W/O CC	100% of the target population	**Data Source:** * QHERS – *Any DRG report* **Audit Tools:** *eCARTS **Reporting:** * DCIS – CIS Statistics Report **Feedback:** *To individual coder's at time of audit	Weekly auditing of 100% Target Population	Coding Team – initial review Advanced Coders (A05)- follow up

Example 2: Audit Planner describing type of audit and when it will be conducted (page 1 only)

Auditors:		January	February	March	April	May	June	July	August	September	October	November	December	Comments
PICQ	All coders	All	All	All	All	All	All	All	All	All	All	All	All	GYM & NGH mag run once per month
	Achieved	*Yes: wkly*	*Yes: wkly*											for pre-extraction PICQ
HQI Validations	All coders	All	All	All	All	All	All	All	All	All	All	All	All	GYM & NGH mag run once per month
	Achieved	*Yes*	*Yes*											for pre-extraction PICQ
Coder Targeted		N/A	N/A	KW - ST EG - GD LL - LK	EG - CS LL - CD JR - KG KW - JR		EG - LR NY - MM LL - NY JR - AH	KW - EG JM - CL NY - JM KW - DG		KW - JH NY - RW EG - KW	EG - KP NY - PM JM - LL	EG - JW KW - BB	N/A	dual auditors for some audits
	Achieved													
801 DRGs	All coders	All	All	All	All	All	All	All	All	All	All	All	All	
	A05 Advanced Coder	GYM-KW	GYM-KW	GYM-KW NGH-LR SCUH-KG	GYM-KW	GYM-KW	GYM-KW NGH-LR SCUH-KG	GYM-KW	GYM-KW	GYM-KW NGH-LR SCUH-KG	GYM-KW	GYM-KW	GYM-KW NGH-LR SCUH-KG	
	A05 Achieved	Ye s	Yes											

Appendix 3: Examples of Clinical Coding Audit Reports

Coding audit reports could include all or any of the following elements:

- Date and time of audit
- Auditor/s name
- Coder/s identification or name
- Audit type
- Intent/purpose of the audit
- Sample size and methodology
- Error classifications used in the audit
- Tally of errors made
- Tally of DRG changes +/- DRG Weighted Activity Unit shift (up or down)

- Comparison of Coders codes/DRGs to Auditors codes/DRGs
- How feedback was undertaken and to whom
- Recommendations
- Potential documentation queries that could/should have been sent

Example 1: One page audit report

Clinical Coding Audit Report

Audit Purpose:	*What were you measuring or assessing*		
Audit Period:	*What period of discharges did you use*		
Report Recipients	*Who will receive a copy of this report*		
Hospital Name:		**Auditor Name:**	
Commencement date:	*dd/mm/yyyy*	**Date of completion:**	*dd/mm/yyyy*
Methodology:	*How did you pick the sample. What report did you use to obtain the sample. What was the scope ie what was included or excluded*		
Audit Summary: Accuracy Rate: DRG Changes: Note: The audit was conducted in full accordance with the SCHHS Coding Audit Protocol	*Why were errors made. Where there any identifiable trends,* *How much information you provide her depends on who the report recipients are.*		
Audit Recommendation	*What corrective action was or can be taken episode.* *You can also comment on whether is audit should continue or can be ceased*		

Audit Findings

Please insert table or comments here (the following are suggestions only)

Coder's DRG	Coder's Base Price	Auditors DRG	Auditors Base Price	Reason for DRG change	$$ Difference

UR Number	Description of errors	Original DRG

UR Number	Description of errors	Reason for error	Coders DRG	Auditor DRG

Example 2: Formal coder targeted audit report (page 1 only)

CLINICAL INFORMATION MANAGEMENT SERVICES

CODING AUDIT REPORT

Audit Objectives

- Identify inaccuracy with the application of ICD-10-AM/ACHI directives, Australian Coding Standards, ACCD Coding Rules
- Identify documentation deficiencies that impacts on the accuracy of clinical coding
- Monitor the accurate allocation of DRGs for Activity Based Funding
- Identify education/training needs for clinical coders

Audit Type:

- ICD-10-AM 9th Edition Clinical Coding Audit
- Coder Targeted

Audit Sample:

- 20 discharges from most recent completed coding months of July & August were audited by (auditor name).
- Semi-Random selection from representative casemix including: Emergency (4), Diag (2), Cardiology (2), Surgical {Surg, Urol} (4), Obstetrics(4), Paediatrics (4)

Audit Criteria

The following 9 audit criteria will be applied and classified into 4 error types and further weighted as Type 1, Type 2 or Type 3.

- **Incorrect Principal Diagnosis** – The wrong diagnosis was selected as per ACS 0001. This does not pertain to incorrect ICD code.
- **Incorrect Diagnosis Codes** – The correct diagnosis was identified but the wrong ICD code selected.
- **Missing Diagnosis Codes** – Diagnoses were not identified and coded.
- **Overcoded Diagnosis Codes** – Diagnoses that did not meet the definition of ACS 0002 were coded.
- **Unsubstantiated Diagnosis Codes** – Diagnoses were identified and coded but not evident in documentation.
- **Incorrect Procedure Codes** – The correct procedure was identified but the wrong ICD code selected.
- **Missing Procedure Codes** – Procedures were not identified and coded.
- **Overcoded Procedure Codes** – Procedures that are inherent in another procedure code were coded.
- **Unsubstantiated Procedure Codes** – Procedures were identified and coded but not evident in documentation.

Additional Audit Criteria

The following data items are also reviewed for accuracy as part of the audit process and reported separately to above criteria.

- Procedure date
- Condition Onset Flag
- Supplementary Codes
- Queensland Cancer Registry
- Completion of Smoking Cessation Fields in HBCIS

Where the auditor has noted a documentation query may have assisted code selection this will be noted, discussed with the Clinical Coder and reported separately. They are not considered errors in audit.

Result for xxxxx

Date: xxxx

Hospital: xxxx

Accuracy rate: xx.x %

Type 1 errors: xx

Type 2 errors: xx

Type 3 errors: xx

DRG changes: xx

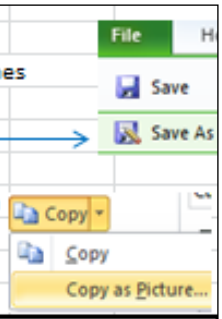
Comment:

Appendix 4: Examples of Clinical Coding Audit Tools

Example 1: Coding audit data report table (page 1 only)

Intruction to Auditor:

1. Complete the table below and remove any instructional comments in red and any unwanted lines
2. From the menu bar above, select File, Save As.....name location
3. Highlight the table from cell 10A to cell 49F and click on the down arrow of the Copy button from the menu bar above Select Copy as Picture and Paste into Audit Report



Coding Criteria	URN	Comment	Discrepancy Detail		
			Error Weight	Error Clarrification	DRG Change
Incorrect Principal Diagnosis	123456	Enter comment here. Adjust hieght of cell to enable full view of comments	x	x	x
Condition selected was not correct					
		To add additional cells right click here and select 'Insert', click on 'Entire Row'			
Incorrect Diagnosis Codes	123456	Enter comment here. Adjust hieght of cell to enable full view of comments			
Code selected was not correct					
		To add additional cells right click here and select 'Insert', click on 'Entire Row'			
Missing Diagnosis Codes	123456	Enter comment here. Adjust hieght of cell to enable full view of comments			
Not all codeable conditions were coded					
		To add additional cells right click here and select 'Insert', click on 'Entire Row'			
Overcoded Diagnosis Codes	123456	Enter comment here. Adjust hieght of cell to enable full view of comments			
Unnecessary codes were added					
		To add additional cells right click here and select 'Insert', click on 'Entire Row'			
Unsubstantiated Diag. Codes	123456	Enter comment here. Adjust hieght of cell to enable full view of comments			
Codes were not supported by doc.					
		To add additional cells right click here and select 'Insert', click on 'Entire Row'			
Incorrect Procedure Codes	123456	Enter comment here. Adjust hieght of cell to enable full view of comments			
Code selected was not correct					
		To add additional cells right click here and select 'Insert', click on 'Entire Row'			
Missing Procedure Codes	123456	Enter comment here. Adjust hieght of cell to enable full view of comments			

Example 2: Coding audit data collection sheet (page 1 only)

SCHHS - CODING AUDIT SHEET	Auditor: EG KW JM LL NY JR	Coder:	URN:	Date Audited :- / / 17

Criteria and Error Weight		Classification of Error				Comments
1 DRG chg, threaten integrity, failure to fallau index/ACS 2 No DRG chg, nat minimal threat to data, may fail to fallau index / ACS 3 Non-threatening oversight		ACS/CM / NCCC	ICD-10	Docum.	Abstr.	State ACS and /or rationale for assigning error
Incorrect Principal Diagnosis *Condition selected was not correct*	Type 1 Type 2 Type 3					
Incorrect Diagnosis Codes *Code selected was not correct*	Type 1 Type 2 Type 3					
Missing Diagnosis Codes *Not all codeable conditions were coded*	Type 1 Type 2 Type 3					
Overcoded Diagnosis Codes *Unnecessary codes were added*	Type 1 Type 2 Type 3					
Unsubstantiated Diag. Codes *Codes were not supported by document.*	Type 1 Type 2 Type 3					
Incorrect Procedure Codes *Code selected was not correct*	Type 1 Type 2 Type 3					
Missing Procedure Codes *Not all codeable procedures were coded*	Type 1 Type 2 Type 3					
Overcoded Procedure Codes *Unnecessary codes were added*	Type 1 Type 2 Type 3					
Unsubstantiated Proc. Codes *Codes were not supported by document.*	Type 1 Type 2 Type 3					

DRG _____ DRG CHANGE ?	UNIT	DCS		Accurate ?	Comments
		YES	NO		

Administrative Action	YES	NO	N/A	Comments / Discussion with Coder
SUPPLEMENTARY CODES assigned correctly				
CPoA assigned correctly				
Cancer registration completed				
Procedure dates assigned correctly				

Type 1	Type 2	Type 3	Coder	Auditor	CCL/Recommended	eCART$	

Coder's Code	Auditor's Code	EMR Page / Form	Document^ Date/Time	Place on Form	Documentation or Auditor Comments

Example 3: Audit notification email

Auditors instruction for use:

1. Copy and paste this text into the email to be sent to the clinical coder
2. Tag your email as ! High Importance from the Message menu bar
3. Request a ☐ Request a Read Receipt from Options menu bar
4. Attach the Coder Targeted Audit Methodology and the Coding Audit Protocol documents found at G:\CODING\INFORMATION MANAGEMENT\AUDIT\SCHHS Coding Service\QUALITY\Supporting Documents

Good Morning [Coder Name]

The SCHHS Coding Service, Coding Quality Program, includes a series of planned individual coding audits and your audit is now scheduled to commence.

To assist in the efficient and effective completion of your audit, please action the following instructions.

- Read the Coding Audit Protocol and the Coder Targeted Audit Methodology attached
- Note the audit schedule and time frames in the table below

Auditor/s	[Auditor Name]
Audit Purpose	Identify inaccuracy with the application of ICD-10-AM/ACHI directives, Australian Coding Standards, ACCD Coding Rules Identify documentation deficiencies that impacts on the accuracy of clinical coding Monitor the accurate allocation of DRGs for Activity Based Funding Identify education/training needs for clinical coders
Audit Sample	Random sample of 20 episodes of care Selected from the month of [Month]
Schedule of Activity	**Date**
Audit Commencement	[dd/mm/yyy]
Audit Completion	[dd/mm/yyy]
Final Audit Feedback	[dd/mm/yyy]
Draft Audit Report	[dd/mm/yyy]

Please contact me if you require further information or clarification regarding this audit.

Regards

[Auditor Name]

Appendix 5: Examples of Clinical Coding Audit Error Classification

Example 1: Formalised document

Audit Criteria

The following 9 audit criteria will be applied and classified into 4 error types and further weighted as Type 1, Type 2 or Type 3.

- **Incorrect Principal Diagnosis** – The wrong diagnosis was selected as per ACS 0001. This does not pertain to incorrect ICD code.
- **Incorrect Diagnosis Codes** – The correct diagnosis was identified but the wrong ICD code selected.
- **Missing Diagnosis Codes** – Diagnoses were not identified and coded.
- **Overcoded Diagnosis Codes** – Diagnoses that did not meet the definition of ACS 0002 were coded.
- **Unsubstantiated Diagnosis Codes** – Diagnoses were identified and coded but not evident in documentation.
- **Incorrect Procedure Codes** – The correct procedure was identified but the wrong ICD code selected.
- **Missing Procedure Codes** – Procedures were not identified and coded.
- **Overcoded Procedure Codes** – Procedures that are inherent in another procedure code were coded.
- **Unsubstantiated Procedure Codes** – Procedures were identified and coded but not evident in documentation.

Additional Audit Criteria

The following data items are also reviewed for accuracy as part of the audit process and reported separately to above criteria.

- Procedure date
- Condition Onset Flag
- Supplementary Codes
- Queensland Cancer Registry
- Completion of Smoking Cessation Fields in HBCIS

Where the auditor has noted a documentation query may have assisted code selection this will be noted, discussed with the Clinical Coder and reported separately. They are not considered errors in audit.

Error Classification

- **ACS/ACCD Coding Rules** – The error occurred due to failure to follow directives of Australian Coding Standards and/or ACCD Coding Rules. Where an error can be classified to an ACS/ACCD Coding Rules then it should be counted to this error classification in preference to other error classifications.
- **ICD-10-AM**– The error occurred due to failure to follow directives of ICD-10-AM including incorrect utilization of index and tabular eg tabular browsing, failure to follow coding conventions.

- **Documentation** – The error occurred due to inadequate, poorly constructed, conflicting, missing or illegible documentation and should include cases where a documentation query would have assisted in allocation of a better code.
- **Abstraction Error** – The error occurred as a failure to reflect the documented specificity of the condition or procedure in the relevant diagnosis or procedure code, where the error cannot be classified to ACS, ACCD CR, ICD-10-AM or Documentation.

Error Weighting

The following is an attempt to define the severity of the errors as discussed in this report. Each code is judged against the error type and can be used to assist in understanding the severity of errors rather than a raw count of errors.

- **Type 1** – An error that has resulted in a DRG change, threatens the integrity of the morbidity data base, indicates a failure to follow the index, tabular directives and the Australian Coding Standards.
- **Type 2 –** An error that has not resulted in a DRG change, either does not threaten or is a minimal threat to the integrity of the morbidity data base, but may indicate failure to follow the index, tabular directives and the Australian Coding Standards. It is likely to be an oversight at the time of coding.

The following are exclusions:

Missing/duplicate Allied Health codes – Type 3

- **Type 3** – An error that has not resulted in a DRG change, does not threaten the integrity of the morbidity data base, and does not indicate failure to follow the index, tabular directives and Australian Coding Standards. It is likely to be an oversight at the time of coding. For example, duplicated allied health codes. Type 3 errors are not included in error percentages.

Error Counting

Any error discrepancy percentages are an approximation only and not a pure measure of performance due to the following factors:

- The sample size within these audits is not statistically significant.
- Not all errors are of the same significance and there is limited ways to measure this. *See "Error Weighting" above, for definition of "Type 1, Type 2 and Type 3".* The error weighting to a Type 1, Type 2, and Type 3 is a subjective task at the discretion of the auditor.
- Where documentation is inconsistent there is always differences between codes chosen by coders and auditors.
- The complexity of the clinical casemix at each facility is varied making comparison between coder error rates unfair.
- The total number of correct codes used in the error rate calculation varies from audit to audit and can skew averages.

Error discrepancy rates are calculated as a total of all incorrect codes weighted as Type 1 and Type 2 over the total auditor codes (ie correct codes) as identified by the auditor and agreed to by the coder, and converted to a percentage

Incorrect codes / Total auditor codes x 100 = error discrepancy

Hints for counting incorrect codes and total codes:

- Where external cause and morphology codes are repeated due to QHAPDC sequencing requirements, these should not be counted in the total auditor codes.
- Codes given type 3 errors should not be counted in the total auditor codes.
- Supplementary codes are not counted in the total auditor codes, with the exception of where a supplementary code should have been an 'other chapter code' and then it is counted as a Type 2 error.
- An error made with combination codes such as a missing or over-coded surgical complication or dagger and asterisk that result in one incorrect code making the other codes incorrect are counted as one incorrect code only.
- Combination codes (eg external cause, morphology, dagger and asterisk) can be counted as multiple errors if individual components of the combination code are incorrect.

Example of counting combination codes:

- The coder codes re-admission with post op tonsillectomy pain to R07.0 only. Whilst the correct coding involves 3 additional codes this is counted as 1 error, the missing T81.8. The Y and U codes are bundled in with the T code and therefore should not be counted as errors. In the final tally of correct codes this is also counted as 1.
- Injury coding results in an incorrect activity code and place of occurrence codes; this would be tallied as two errors within the count of four codes (injury + 3 external cause codes) in the final tally of auditor codes.

Example 2: Suggested Code/DRG Error Reasons

Principal Diagnosis	- Incorrect Code
Principal Diagnosis	- Incorrect Condition
Additional Diagnosis	- Incorrect Code
Additional Diagnosis	- Missing
Additional Diagnosis	- Overcoded
Additional Diagnosis	- Unsubstantiated
Procedure	- Incorrect
Procedure	- Missing
Procedure	- Overcoded
Procedure	- Unsubstantiated

Example 3: Suggested sub-classification of 'documentation' error

If you choose 'documentation' as an error type then qualify it so it has more meaning to those reading your report. The following are some example:

- *Legibility* – ability/inability to decipher handwriting, symbols, acronyms or abbreviations
- *Completeness* – missing or incomplete documentation e.g. abnormal test result with no clinical interpretation, change in medication with no clinical indication to do so, procedure performed but no reason provided

- *Clarity* – conflicting or inconclusive diagnoses or procedures e.g. no underlying cause identified after investigations reported potential causes, multiple differential diagnoses, angina vs chest pain
- *Consistency* – interchanging of terms used e.g. lower respiratory tract infection vs pneumonia, sepsis vs bacteraemia
- *Precision* – broad terms used when more definitive diagnoses or procedures exist e.g. FESS, chronicity of disease not identified, diabetes vs Type 2 DM

If it is your 'policy' to note if an episode of care has been coded with or without a discharge summary you may wish to also capture this information in the audit. For Enterprise Discharge Summary (EDS) users this could include Interim versus Final discharge summary.