‘Using Computer-Assisted Coding to Improve Coding Quality and Compliance’

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HCCA

Speaker

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Disclaimer

• This material is designed and provided to communicate information about clinical documentation, coding, and compliance in an educational format and manner. The authors are not providing or offering legal advice, but rather practical and useful information and tools to achieve compliant results in the area of clinical documentation, data quality, and coding.
• Every reasonable effort has been taken to ensure that the educational information provided is accurate and useful. Applying best practice solutions and achieving results will vary in each hospital/facility and clinical situation.

Goals/Objectives

• Obtain an Overview of CAC
• Computer Assisted Coding and its Benefits
• Share Retrospective Auditing with CAC - case example
• Understand how using CAC can help achieve compliance
• Learn what to consider with CAC auditing technology
• Q&A
Overview: Coding

• Medical or clinical coding is very labor intensive and time consuming
  • Paper and electronic – volume of text and content
• During the coding process or reading of the medical record information can be missed; information that is useful and valuable to collect
  • 2-3 mins per hospital ancillary encounter/visit (lab/rad)… reduced to 20 secs?
  • 15-20 mins per hospital inpatient discharge … reduced to ….?
• Impact of poor clinical data collection/coding can be huge and wide-spread

Overview: Documentation

• The Medical Record:
  • The collection of information concerning a patient and his or her health care that is created and maintained in the regular course of care.
  • Medical Record shall contain sufficient, accurate information to identify the patient, support the diagnosis, justify the treatment, document the course and results, and promote continuity of care among health care providers.
  • The information may be from any source and in any format, including, but not limited to print medium, audio/visual recording, and/or electronic display.
Overview of the Medical Record – Concise and Accurate Information

- Discharge summary, including Discharge or final diagnosis and disposition.
- Initial diagnostic impression.
- Problem List (outpatient records only).
- Emergency Department record Allergy records.
- Advance Directives (if applicable).
- Medical History including, as appropriate: immunization record; screening tests, allergy record; nutritional evaluation, psychiatric, surgical and past medical history, social and family history, and for pediatric patients a neonatal history.
- Physical examination.
- Consultation reports.
- Physician Orders including those for medication, treatment, prescriptions, diet orders, lab, radiology and other ancillary services.
- Progress notes
- Concise and accurate record of nursing care administered.
- ii. Record of pertinent observations including psychosocial and physical manifestations and relevant nursing interpretation of such observations.
- iv. Name, dosage and time of administration of medications and treatment, Route of administration and site of injection shall be recorded if other than by oral administration.
- v. Record of type of restraint and time of application and removal.
- vi. Record of sedation and time of application and removal.

- Graphic and vital sign sheet.
- Results of all laboratory tests performed.
- Results of all X-ray examinations performed.
- Consent forms for care, treatment and research, when applicable.
- Problem List (outpatient records only).
- Emergency Department record.
- Anesthesia record including preoperative diagnosis, if anesthesia has been administered.
- Operative and procedures report including preoperative and postoperative diagnosis, description of findings, technique used, and tissue removed or altered, if surgery was performed.
- Pathology report, if tissue or body fluid was removed.
- Written record of preoperative and postoperative instructions.
- Labor record, if applicable.
- Delivery record, if applicable.
- Physical, Occupational and/or respiratory therapy assessments and treatment records, when applicable.
- Patient/Family Education Plan
- Discharge Instructions

Overview: Compliance Risk

- The medical record must contain sufficient documentation to demonstrate that the beneficiary’s signs and/or symptoms were severe enough to warrant the need for inpatient medical care. (More detailed information about this can be found in Chapter 6, Section 6.5.2 of Medicare’s Program Integrity Manual)
- Total of CMS approved issues across all RAC regions is up to 529
- Recovery Audit Contractor (RAC) complex review result in detailed review of the documentation
Overview: What is CAC?

• Computer Assisted Coding (CAC) technology automatically generates codes directly from clinical documentation.
• Computer/engine will “read” electronic text or handwritten documentation AND provide the tentative ICD-9-CM code(s) ready for validation.
• Leveraging:
  • Computer-based intelligence (systems)
  • Natural Language Processing (NLP)
  • EHR/EMR

Overview: CAC

• AHIMA has defined Computer-Assisted Coding (CAC) as use of computer software to "read" clinical documentation and automatically generate medical codes for review and validation by a trained human coder.
AHIMA – CAC Practice Brief

Delving into Computer-assisted Coding (AHIMA Practice Brief)

The practice brief describes computer-assisted coding (CAC) as a method or technique that uses an electronic health record (EHR) to automatically augment the coding process. It involves the use of software that can identify and extract data elements from the EHR, which are then used to generate codes that correspond to the data elements. This process can help improve the accuracy and consistency of coding, reduce coding errors, and ultimately improve patient care.

Background

The background section provides context for the practice brief, outlining the importance of CAC and its potential benefits. It highlights the need for improved coding accuracy and consistency, and the potential savings in time and resources that CAC can provide.

CAC: Natural Language Processing (NLP)

- Artificial intelligence is used to extract pertinent data and terms from a text-based document and convert them into a set of medical codes.
- Complex algorithms to recognize dictation, speech, and language patterns, generate codes, and enable querying electronic text.
- “History of cancer” means the patient does or does not have a personal or family history of cancer: by analyzing the context and semantics of the rest of the sentence the CAC engine will apply artificial intelligence to provide the ICD-9-CM code.

Automated Coding Workflow and CAC Practice Guidance

Over the past decade, clinical coding has become more complex due to:
- The expansion of prospective payment systems, such as the Medicare Severity-Diagnosis-Related Groups (MS-DRGs) system
- Increased pressure to improve coding accuracy and completeness
- The need to capture all relevant clinical information

This clinical practice brief presents a framework for improving coding accuracy and completeness.

Future Directions

The framework provides a foundation for ongoing improvement and innovation in clinical coding processes. It highlights the importance of continuous education and training for coders, as well as the need for ongoing system updates and enhancements.
CAC

For example, consider the following sentences that would appear in a typical radiology note:

- 1. I see a coin lesion on the patient’s left lung.
- 2. The patient’s father has a coin lesion on the left lung.
- 3. I have confirmed that the coin lesion is now absent in the patient’s left lung.
- 4. I have ruled out the presence of a coin lesion on the patient’s left lung.
- 5. There is a questionable coin lesion on the patient’s left lung.

Few coders would have trouble determining that while the coin lesion is codeable in the first example, it would not be codeable in the other examples. Clearly, recognizing the mere presence of the words “coin lesion” is insufficient to code the note correctly.

CAC: Codeable context or Noncodeable context

- How does the computer know what is codable context or Noncodable context?
- Natural language processing
- Language patterns and algorithms
- Statistically predicts and learns to emulate

Read, abstract and comprehend electronic text
CAC: What about “Content”?  

- In the EHR world or in a situation where the provider (user) creates the narrative this can be ideal.
- Improved content can change the code assignment.
  - Change the reimbursement
  - Enhancement of payment
  - Improved clinical data quality
- Some CAC products include an application to address poor content and to enhance it.
  - CAC content can be delivered to the physician at the point of care with some CAC products
  - Eliminates dictation and transcription costs

CAC: Capabilities & Benefits

- Ability to quickly find, review and verify electronic medical record documentation
  - Saving time
- Improve CC/MCC and HCC capture (key documentation)
  - Positive financial impact
- Improve case mix index
- Compliance and decrease risk
- Expedite coding process
  - Improve DNFC (lower days to billing)
  - Improve coding accuracy via edits/flags within CAC
CAC: Capabilities & Benefits (con’t)

- Potential improvement in coding productivity
  - Accelerate the coding processes
- Reduction in coding overtime and contract support
- ICD-10 Educational and Training leverage
- Utilize within CDI (Clinical Documentation Improvement)
- Expedite auditing retrospectively
  - Easy to validate the coding and supporting documentation
- Compliance audit trail
  - RAC defense
  - Reduce risk for regulatory audits

CAC: Capabilities & Benefits (con’t)

- Leverage EHR technology
  - Push the move to EHR
- Documentation enhancement
- Educational enhancement
- Focus on
  - MS-DRGs
  - APR-DRG (SOI and ROM)
  - CPT for CCI edits
  - Medicare Advantage/HCCs
CAC: Benefits Summary

- Productivity
- Accuracy
- Consistency
- Reimbursement
- Traceability/tracking
- Compliance/Risk

Barriers or Disadvantages

- Electronic text is ideal
  - Versus written
- Interface with your EHR
  - Internet, security
- Change
- Cost
- Implementation & resources
- ICD-10 looming
Healthcare Settings for CAC

- EHR is ideal
  - EHRs with an embedded clinical terminology
- All settings:
  - Inpatient
  - Physician office
  - Hospital Outpatient Surgery – Facility and Professional
  - Hospital Emergency – Facility and Professional
  - Hospital Radiology & Pathology CAC specifically (simple Dx coding)
  - Rehab
  - SNF
  - Any settings which requires coding

CAC Technology

- Usually there is an HL7 feed to send data between systems
- Another option is use existing interfaces offered by vendors to allow integration with their products.
  - The transfer process is completely transparent and controlled by your facility.
Simple CAC Technical Overview

Sample CAC view: Reads the electronic text
Sample CAC View: Text is hi-lighted for auditor/Validator to confirm codeable

Inpatient CAC: Diagnosis and Procedures can be identified in the EHR text
Outpatient CAC: Diagnosis & CPT

OPERATIVE DIAGNOSIS: Trauma of right fourth metatarsal phalangeal.

INDICATIONS:
1. Open reduction and internal fixation of right fourth metatarsal phalangeal.
2. Ligation and debridement of wound (flap) including bone.

OPERATIVE REPORT:
The patient, a 24-year-old female, was brought to the operating room and placed in the supine position. General anesthesia was given. The correct side of surgery was confirmed with the patient to the incision. A long incision was made (4 cm), and all of the tissues were retracted. The fixation was achieved with miniplates and screws. The incision was closed with absorbable suture. The patient was transferred to the recovery room. Postoperatively, the patient had a normal postoperative course and was discharged on the first postoperative day. The wound was clean and dry. The patient was seen in the follow-up visit and was scheduled for further surgery. The patient was discharged with instructions to return to work on the second postoperative day.

CAC Workflow

Computer Assisted Coding (CAC) Workflow

- Report to Coders
- Natural Language Processing (NLP)
- Coding
- Billing
- Human Quality Control
- Auditing
- Payment
- Reimbursement

The patient was brought to the recovery room in stable condition and suffered no complications.
NCAL KP Background with CAC – Auditing Project

- 2009 began looking at CAC technology
  - AHIMA
- 3M™ Demo Computer Assisted Coding March 2010
- A-Life demo in May 2010
  - Using NPL engine to read text
  - Prior HCC work with KP Colorado on physician side
- Decision made to provide A-Life 1000 MA IP Charts as a test
- EHR text sent (protected/secure) to A-Life

NCAL KP Background with CAC – Auditing Project (con’t)

- Results were positive with many false/positive
  - A-Life IP is not programmed to be “free-standing” so IP is not specific
  - “history of”, “prophylaxis Dx”, abbreviations
- Retooling recommendations made to A-Life to decrease the false positives
  - Audited results
  - + findings and ROI
- Began MA 2009 inpatient HCC Recapture with A-Life
  - Using external auditors for validation and then % of QA
NCAL CAC – (con’t)

- HCCs impact the “whole year” of care in any setting/encounter, and you only need the HCC once in that whole year to result in the payment impact for the year.
- Systemic diseases (e.g., diabetes mellitus, hypertension, Parkinson’s disease – see List A) are always coded, even in the absence of documented active intervention since these types of conditions meet one or more of the elements of the definition given above. (Coding Clinic, Second Quarter, 1990, page 14.)

Secondary Diagnosis Reporting

- clinical evaluation; or
- therapeutic treatment; or
- diagnostic procedures: or
- extended length of hospital stay; or
- increased nursing care and/or monitoring

Documentation to support the code(s)
Top 10 HCC Findings

Frequency of HCCs (Coded Only)

- Other
- Congestive Heart Failure and Shock
- Diabetes without Complication
- Ischemic Heart Disease
- Heart Failure
- Angina Pectoris/Old Myocardial Infarction
- Protein-Calorie Malnutrition
- Vertebral Fractures without Spinal Cord Injury
- Other Heart Disease
- Chronic Kidney Disease

*** Based on Intrinsic values – does not take into consideration benefit %, patient dates of expiration, nor HCC hierarchy.
NCAL Use of CAC – Auditing Project (con’t)

- A total of 21,380 MRNs were CAC reviewed
  - Medicare Advantage
  - Inpatient (with an ER encounter)
- Focus to capture Dx not coded but documentation
  - 1450 identified
  - Potential $6.2
- Identify physician query opportunities
  - 537 identified
  - Potential $2.2
- Audited and QA on CAC
- Cost: $880,000 approx. (CAC, Auditors, & QA)

Note: prior year all manual auditing, with CAC 15-20% productivity improvement
Assumptions

• Need an assessment of current coding workflow
• Greatest impact is with a greater proportion of electronic documentation
• Need to start with the simplest setting?
• Secure Funding and Budget
• Develop implementation roll out plan
• Engage key stakeholders in vendor selection
• IT and EHR team availability to meet timeline
• Develop implementation plan and roll-out – Pilot
• Track return on investment

Key Stakeholders

• Coding professionals
• Coding managers and HIM directors
• Physician liaisons
• IT professionals
• Revenue Cycle
• Patient accounts and billing professionals
• Compliance professionals
• Informatics and data reporting teams
• Various clinical staff as determined by the project
Audit Trail and Support Compliance

- Increased scrutiny for erroneous or fraudulent claims, leaving little tolerance for coding or billing errors
- RAC, CERT, OIG, etc.

Future role of the “Coding Professional”

- Auditor/Validator:
- Coding “validation” is the new job role
  - 75% of time validation
  - 10% of time abstracting and research
  - 15% coding
- Competent coding professional is needed
- Limited time to read/review the medical record
- Use of encoder… limited
- Audit trail where the key documentation to support the code was located for RAC, etc.
Variety of Vendors now Offering CAC

• ProVation Medical
• 3M™
• A-Life Medical (Ingenix)
• CodeRyte
• Plato
• QuadraMed
• Precyse Solutions
• Cobuis
• MedQuist

CAC Vendors

• Ask the CAC vendor for case studies using their software
• Ask for a reference list
• Request ROI for a specific # of records (type)
• Ask about technology aspects
• Request the “data workflow”
**3M™ CAC Projections….**

- Productivity Improvement
  - Inpatient 30% plus
  - Outpatient 50% to 100%
- Outpatient and Physician
- Coding Quality Improvement > 10%
- Reduce Coding Related Denials Up to 20%
- A/R Day Improvement – 5 to 60 Days
- Reduce Total Cost to Collect – Up to 40%
- Appropriate Revenue Increase – 3% to 5%

**Some Next Steps**

- Provide awareness
  - Read literature on CAC
- Engage key stakeholders
  - Include Compliance and Revenue Cycle
- Invite CAC vendors for conduct demo’s
- Establish committee
  - Engage key stakeholders
  - IT, HIM and Revenue Cycle
- Determine if RFP is needed
- Business case and Funding
- Implementation planning and timeline
Summary

- Harness this technology
- Productivity improvements
- Capture greater Accuracy and Efficiency
- Compliance Risk diminished
- Revenue improvements
- Create a bridge to ICD-10
- AND….. CAC does not eliminate the need for medical-coding professionals to be involved in the coding process, but it can make them more productive and accurate

The Golden Rule…

- If it’s not documented we can’t code it and that’s Compliance!
Questions

AHIMA – Practice Brief

Delving into Computer-assisted Coding (AHIMA Practice Brief)

The practice brief examines computer-assisted tools available to automate the assignment of certain ambulatory surgical codes (CPT-4), HCPCS (Healthcare Common Procedure Coding System) codes, and ICD-9-CM diagnosis codes. These codes are traditionally assigned by coding or HIM professionals as well as clinical providers. It also outlines the barriers faced in adopting and implementing these tools, providing guidance on the steps necessary to position coding professionals for the ongoing coding transition. AHIMA's chapter for computer-assisted coding (IHCN) is working to help healthcare organizations integrate and implement these tools to prepare for and thrive in a progressively changing world environment.

Background

The healthcare industry is facing increased demand for efficient and effective use of clinical data. Computer-assisted coding is approaching a tipping point where it is becoming a viable solution for improving the accuracy and efficiency of coding processes. Increasing pressure for improved documentation and reporting requirements is driving the adoption of these tools.

Many factors directly influence the change, including advances in natural language processing and the widespread adoption of electronic health records (EHRs). Compliance issues and the need for transparent, defensible, and efficient coding processes are driving the adoption of computer-assisted coding. As a result, healthcare organizations are looking for ways to enhance their coding processes, ensuring that they are meeting regulatory requirements and improving the accuracy of claims processing.

In summary, the adoption of computer-assisted coding is critical to maintaining a competitive edge in the healthcare industry. AHIMA is committed to supporting the coding professionals who are responsible for ensuring accurate and timely coding, and is working to provide guidance and resources to help them navigate the challenges of the ongoing coding transition.
References/Resources

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Thank you

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