

CDI for Coding, Reporting, & Research

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Sources: AHIMA CDI Toolkit · Bowman (2013) · O'Malley et al. (2005) · WHO Data Quality Guide



Documentation and Coding (ICD – Conceptual)

Slide 1 of 12

ICD codes describe diseases. You do NOT need to memorize codes.

But you need to understand: the code can only be as accurate as the documentation that supports it.

ICD-10 Requires Specificity In:

- Heart failure — systolic vs. diastolic
- Pneumonia — type and organism
- Fractures — pathological vs. traumatic, site, laterality
- Respiratory failure — acute, chronic, or acute-on-chronic

CDI is "the process an organization undertakes that will improve clinical specificity and documentation that will allow coders to assign more concise disease classification codes."



Where Coding Errors Come From

Slide 2 of 12

O'Malley et al. — Three Levels of Error

Patient & Clinician Level

- Patient doesn't share all symptoms
- Clinician may not ask the right questions
- Diagnosis is **an expression of probability**, not certainty

Record & Coder Level

- Clinicians use **synonyms** — "stroke" = 5+ different codes
- 40% of physician errors are **omissions**
- 11 experienced coders disagreed on >50% of records

WHO confirms the same error sources:

- **Medical record:** missing info, poor documentation, non-approved abbreviations
- **Provider:** incorrect main condition, doesn't understand coding requirements
- **Coder:** codes from front sheet only, time pressure, lack of training



Documentation and Research

Slide 3 of 12

Research uses clinical notes to:

- **Identify patients** for studies (using coded data)
- **Measure outcomes** (severity, mortality, quality scores)
- **Study trends** (disease prevalence, treatment patterns)

O'Malley's Guidance for Researchers:

"Codes are likely to be most accurate when: the disease has a clear definition with observable signs, highly qualified physicians document information, experienced coders assign codes, and the codes are not new."

"Codes are more likely to be accurate in calculating disease prevalence than disease incidence."

Key principle: Research quality depends on documentation quality. If the documentation is poor, the research is unreliable.



CDI in Practice — Paper & Electronic

Slide 4 of 12

CDI Works in Every Environment:

- Paper systems
- Full EHRs
- Hybrid systems

Key CDI Actions:

- **Complete notes** — review for conflicting, incomplete, nonspecific documentation
- **Standard formats** — use clarification forms, workflow tools, audit templates
- **Timely entries** — addenda should be timely with date and reason
- **Clear communication** — written, verbal, or electronic queries

Different Systems, Different Risks:

Paper

Legibility, completeness, lost paperwork

EHR

Copy/paste, templates, adjacency errors, decision support errors



CDI and Quality Improvement

Slide 5 of 12

Quality Improvement Asks:

1. What is going wrong?
2. Why?
3. How do we fix it?

CDI Improves Quality By:

- **Reducing errors** — clarifying missing, conflicting, or nonspecific documentation
- **Improving communication** — CDI as "another set of eyes" during chart reviews
- **Supporting audits** — documentation is the #1 reason for third-party audits

"Organizations that choose to neglect or underfund CDI programs are at risk for substandard quality reporting."



The CDI Audit — A Practical Tool

Slide 6 of 12

WHO Coding Audit Method (adaptable to any setting):

1. Select an **expert coder** and provide additional training
2. **Randomly select** a specified number of records
3. **Re-code** the records and compare with original codes
4. If discrepancy → **reconciliation process**
5. **Feedback to coders** + retraining + follow-up audit



"Soft Statistics" — Quality Beyond Revenue

Slide 7 of 12

CDI improvements that don't directly equal revenue but profoundly affect quality:



Severity of illness capture



Days to billing



Retrospective queries

- Correct patient status (observation vs. inpatient)
- Reduction in inappropriate admissions
- Decrease in readmissions

"As healthcare moves forward with quality-driven reimbursement and clinical quality measure reporting, both organizations and physicians will have to provide justification for patient care and demonstrate quality outcomes."



Case Study: "Good Care, Bad Data"

Slide 8 of 12

SETTING: CANCER CENTER IN A RESEARCH COLLABORATION

A hospital wants to study outcomes of breast cancer patients receiving chemotherapy.

Clinical care is **excellent**. But the records show:

- Cancer **stage missing** in many files
- Treatment intent (**curative vs. palliative**) unclear
- Side effects **poorly documented**

Result: Researchers cannot compare outcomes across hospitals.



Cross-Source Evidence

Slide 9 of 12

All our sources converge on this case:

- **AHIMA Toolkit:** CDI benefits go "beyond reimbursement." Soft statistics show specificity's impact on data integrity. (Page 23)
- **O'Malley:** "The accuracy of cancer diagnoses is typically higher than of schizophrenia diagnoses, in part because tumor histopathology and serum markers are less ambiguous" — *but only if the data is actually documented*
- **O'Malley:** "Codes are more likely to be accurate in calculating prevalence than incidence" — cancer registries tracking incidence are especially vulnerable
- **WHO Guide:** "Cancer registries rely on accurate data being collected and forwarded by the facility or person treating a patient"

CDI Improvement Actions:

- Add structured fields for **stage, treatment intent, adverse events**
- Train nurses to document side effects clearly
- Align documentation with **cancer registry needs**



Discussion

Slide 10 of 12

Discussion Questions:

1. How does CDI affect cancer research?
2. Why is standardized documentation important for multi-hospital studies?
3. How can CDI support national cancer control programs?

Key Insight:

"Research quality depends on documentation quality."



How to Teach CDI Well

Slide 11 of 12

Use Real Stories

"Bacteremia" vs. "UTI." Heparin not given due to copy-paste. Amputee's "normal extremities." 67% of diagnoses missing.

Keep Language Simple

CDI = "the process that will improve clinical specificity." Don't overcomplicate it.

Avoid Blame

"Physicians are often not trained on proper documentation skills." It's a system issue, not a character issue.

Focus on Patient Safety

Cancer treatment delayed years due to EHR defaults. Baby died from transcription error. Documentation saves lives.



Course Key Takeaway

Slide 12 of 12

"Documentation is part of patient care."

Across All Sources:

- **AHIMA Toolkit:** "The foundation of every health record in every setting"
- **O'Malley:** "Many sources of error are interposed between a person's disease and the code applied to it"
- **Bowman:** "The quality of healthcare depends on the integrity, reliability, and accuracy of health information"
- **WHO:** "Poor, inaccurate and incomplete documentation has a substantial impact on data quality and on the process of health care"

Every quality measure, every research study, every reimbursement decision, every audit defense, every patient safety initiative depends on what providers write — or fail to write — in the health record.

