

# Computer-Assisted Coding: An Industry Update

Fusion CAC from Dolby Systems, Inc.



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## Meeting Agenda

- 1 Coding Challenges
- 2 CAC In Coding Workflow
- 3 CAC Revenue Impact
- 4 CAC Case Study

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Kozie Phibbs, RHIA CAC Territory Manager

## **CODING CHALLENGES AND REVENUE IMPACTS**

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### Coding Challenges And Their Direct Revenue Impact

- Regulatory Requirements for Coding Compliance (Office of Inspector General)
  - Impact of MS-DRG's
  - Present on Admission (POA) Reporting
- Coder Workforce Shortage
- Reduce DNFB/Revenue Cycle Management
- Coding Variability
- Dependency On Outsourcing

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### Coding Challenges And Their Direct Revenue Impact

- ICD-10-CM Education and Preparation
- Recovery Audit Contractors
- Medicare Administrative Contractors – Part A & B
- Missing or Late Documentation
- Physician Education To Improve Documentation

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Heather Eminger, Product Manager  
**HOW CAC FITS INTO CODING WORKFLOW**

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### What is Computer-Assisted Coding?

- Computer-Assisted Coding (CAC) is the use of computer software that automatically generates a set of medical codes from documentation provided by healthcare practitioners and study results for review and validation by a Coder
- AHIMA e-HITM Work Group on Computer-Assisted Coding. "Delving into Computer-Assisted Coding" (AHIMA Practice Brief). Journal of AHIMA 75, no.10 (Nov-Dec 2004)

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### How can it be used?

- CAC Provides Suggested Codes Upon Admission and Throughout the Patient's Stay
  - In Patient Charts
  - Outpatient
  - Interventional Radiology
  - Emergency Room
  - Ancillary
  - Laboratory

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### CAC is Powered by Natural Language Processing (NLP)

- The NLP software identifies patterns in the language found within the text of charts
- The NLP engine extracts this data and applies the correct ICD or CPT code
- The entire chart is considered and not just single documents
- Free form text is processed and does not require changes in physician behavior
- Structured input is not required

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## Works Upstream From Your Existing Coding System

- 1 As the patient's care is given, an electronic or paper or hybrid chart is created
- 2 CAC pre-codes the chart and presents the results to the medical coder for verification
- 3 The medical coder is presented with an electronic chart, pre-coded and abstracted
- 4 A medical coder verifies the codes and submits them to the coding system
- 5 The coding system sends the codes to a financial system to generate a bill

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## Familiar Coding Screen - Blank

3M Coding and Reimbursement System - 5067350

Contact Us

3M Admit Diagnosis Short Term Hospital (2) Male, 65

Enter Keyword or Code:

Continue  
Back  
Add Diagnosis  
Add Procedure  
Codebook  
Direct Code  
Cancel

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## CAC Screen With Codes Identified and Linked

Encoder Procedures HCPCS Codes Diagnostics Upload Account BOOP Name Print Exit

Account Information: Discharge Summary, History & Physical, Consultation, Progress Note

ICD9-CM Codes: 162.9, 187.2, 253.9

Diagnostic Codes: MALDI NEUPLASIA BRONCHIELLUM, SECOND MALDI NEUPLASIA FLEW, NEUROHYPOPHYSIS DISEASE OT

MEDICAL RECORD NUMBER: 4204569  
PATIENT NAME: BOOP, BETTY

DISCHARGE SUMMARY:  
Diagnoses: bronchogenic carcinoma, malignant pleural effusion, GIACH, hypernatremia, hypokalemia, anemia, GERD/Mx, Rubeola's hypernatremia and low H causing weakness and paresthesia resolved after hydration and the water restriction. CXR was positive for RLL lesion and effusion. Thoracentesis by Dr. Ramey provided 100cc of serosanguinous fluid. Cytology was positive for non small cell carcinoma. The patient was seen by Dr. Buzz Lightyear from thoracic surgery who advised a VATS procedure next week for Mrs. Rabeo's tumor. As the patient's symptoms were gone, she will be discharged for workup of her lung cancer as an out patient. She is to take all her original meds and complete her antibiotics orally (Kepp 500 q 8h) and she was instructed in a 1200 ml fluid restriction. Repeat labs are to be completed later this week in Dr. M. Mouse's office from nephrology. D: 10/01/2004  
10/02/2004 LIBR: John B. Smith, MD \*PRELIMINARY UNLESS NOTED

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**Encoder After CAC - Complete**

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**Positive Impacts on Workflow**

- Creates Digital Workspace If One Is Needed
  - Integrates To Chart Document Sources
  - Browser Based
- Creation of Saved Coding Audit Trails
  - For Internal or External QA Reviews
- Identification of Problem Documentation
- Measure Coding and Coder Output

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**Positive Impacts on Workflow**

- Automatic Data Abstraction
  - POA
  - Tumor Registry
  - P4P
  - Future Stimulus Reporting Requirements
- Identify Problem Coding Patterns for Resolution
- Concurrent and Retrospective Auditing

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Chris Casto, Vice President Healthcare

## HOW CAC FITS INTO A REVENUE STRATEGY

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### Positive Impacts On Revenue

- Increases Coder Productivity
  - Up to 80% Reduction In Time To Code Inpatient Charts
  - Up to 95% Reduction In Time To Code ED Charts
  - Up to 40% of Certain Outpatient Charts Can Go Straight To Billing
- Increases Workload Capacity Without Adding Staff
- Faster Processing Equals Decreased AR Days
- Eliminate or Reduce Outsourced Coding

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### Positive Impacts On Revenue

- Increase in Coding Consistency & Accuracy
  - Can Improve Case Mix Index
  - Decreases Exposure During RAC Audit
  - Optimizes Revenue Efficiency
- Tool For Concurrent Chart Review
  - DRG Coordinator, Charges Nurses
- Effective for Resubmitting Charts for Recovery
  - Automatic Triggers for Revenue Re-Capture

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### CAC Case Study

- Robert Wood Johnson New Brunswick, NJ
- 600 Bed Level I Trauma Center
- Implemented CAC in 2005
- 3 FTEs for Inpatient; 2 FTEs for SDS; 3 FTEs for ED; 1 FTE for Outpatient



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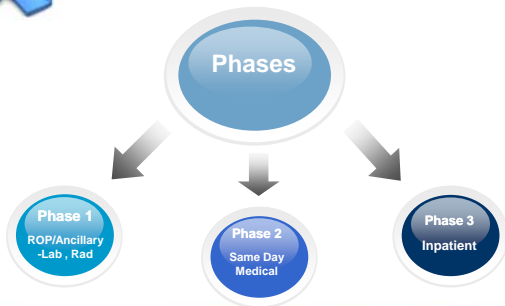
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### RWJ's Phased Implementation



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### Phase 1 Results

- Registered Outpatient, Ancillary, Lab and Radiology
  - 25% Reduction in Outpatient DNFB
  - Reduction in Medical Necessity Denials
  - 85% Reduction In Time To Code

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### Phase 2 Results

- Same Day Surgery
  - Further Reduction of the DNFB
  - Increased Coder Productivity to 35 Per Day
  - Eliminated Dependency On Outsourced Coding

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### Phase 3 Results

- Inpatient Coding
  - 25% Reduction in Inpatient DNFB
  - POA Reporting Became Automated
  - Recruitment Tool
  - “No Code Left Behind”
  - 50% Reduction In Time To Code
  - Educational Tool For Physicians/Coders

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# Questions?

For More Information  
<http://Customer.Dolbey.Com>




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