Learning Objectives

- At the completion of this educational activity, the learner will be able to:
  - Relate the importance of the pre-bill review within the evolving landscape of clinical documentation integrity
  - Articulate measurable outcomes regarding physician education, financial accuracy, and value-based initiatives, reinforced by a successful physician advisor program
  - Describe takeaway strategies to reinvigorate a CDI program
### Evolution of Healthcare Reimbursement

<table>
<thead>
<tr>
<th>Goal</th>
<th>Category 1: Fee-for-service</th>
<th>Category 2: Fee-for-service</th>
<th>Category 3: Alternate payment models built on FFS architecture</th>
<th>Category 4: Population-based payment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No quality link</td>
<td>Quality link</td>
<td>Effective population management (segment) or episode of care. Service with shared savings and shared risk.</td>
<td>No volume link. Population-defined payment over time frame (&gt; 1 year).</td>
</tr>
<tr>
<td>Volume based</td>
<td>Link to quality and value (portion)</td>
<td>Effective population management (segment) or episode of care. Service with shared savings and shared risk.</td>
<td>No volume link. Population-defined payment over time frame (&gt; 1 year).</td>
<td></td>
</tr>
<tr>
<td>Medicare FFS</td>
<td>Traditional FFS</td>
<td>IQR VBP VBPP HBBP HACRP</td>
<td>ACO Medical home BPC (primary care, CIR) Comprehensive EMD Medicare-Medicaid FFS</td>
<td>Eligible Pioneer ACO (in Year 3-5)</td>
</tr>
</tbody>
</table>

### Opportunity Meets Challenge

Patient Population

- Risk
- MS-DRG
- City

**CDI**

- BPCI
- MSSP
- ACOs

**Documentation**

Value

Volume

### Value of CDI

Advisors

- Education
- Quality
- Impact

- Participation
- Compliance
- Data
- Risk

- Formulary
- Claims
- Policy

- Documentation Reviews
- Evidence-based Medicine
- Risk Stratification
- Healthcare Data

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The Impact of CDI: Clinical Coding Correlation

- MS-DRG
  - Principal diagnosis
  - Procedures
  - CC/MCC capture
  - CMI
  - Care management (medical necessity)

- Claims-based outcome measures
  - Cohort definition (inclusions, exclusions)
  - Qualifiers
  - Risk adjustment

- Alternate payment models
  - Target price
  - Population definition
  - Quality metrics

- Merit-incentive based payment system
  - Value-based modifier
    - Risk adjustment
    - Performance
      - Acute condition composite
      - Chronic condition composite
      - Alternate payment model

Tried and True: The Pre-Bill Review

- Establish focus
- Pre-bill/post review (baseline)
- CDS, code, advisor, medical staff education
- CDS concurrent review
- CDS, coder, advisor, medical staff education
- Pre-bill reconciliation

A Methodical Approach to Pre-Bill

- PLAN
  - Analysis (clinical)
  - Financial accuracy
  - Outlier (short/long)
  - Length of stay

- DO
  - Focused review of documentation
  - Involve physicians, CDE
  - Specialty specific

- ACT
  - Peer education
  - Physician advisory
  - Comparative data
  - Mobile technology

- STUDY
  - Focus on specialty
  - "What’s missing"
  - "What’s missing" to refine
Where to Start ----> Plan

<table>
<thead>
<tr>
<th>Objective</th>
<th>CDI impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS-DRGs (Targeted: Frequency, impact, specialty)</td>
<td>CC/MCC capture rate, CMI, target price (BPCI-CJR), financial accuracy, LOS</td>
</tr>
<tr>
<td>Focused ICD-10-CM, PCS</td>
<td>Population cohorts (inclusions, exclusions, qualifiers)</td>
</tr>
<tr>
<td>Targeted risk adjustment (AHQ, comorbid groupings, Hierarchical Condition Categories) (<strong>APR-DRG)</strong></td>
<td>Hospital Value-Based Purchasing Program Hospital Readmissions Reduction Program Hospital-Acquired Condition Reduction Program Medicare spending per beneficiary Medicare Shared Savings Program Value-based modifier</td>
</tr>
<tr>
<td>Other: Provider specific/service lines Compliance audits ICD-10 gap analyses</td>
<td></td>
</tr>
</tbody>
</table>

Measure Example: PSI-90

- Included in two CMS pay-for-performance programs (HVBP, HACRP)
- Documentation and code impact: Inclusions, exclusions, risk adjustment

<table>
<thead>
<tr>
<th>Measure Impact</th>
<th>PSI</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes discharge</td>
<td>PSI 1</td>
<td>Pressure ulcer not present on admission unstageable</td>
</tr>
<tr>
<td>Excludes discharge</td>
<td>PSI 3</td>
<td>Pressure ulcer present on admission</td>
</tr>
<tr>
<td>Excludes discharge</td>
<td>PSI 7</td>
<td>Central line–associated bloodstream infections</td>
</tr>
<tr>
<td>Excludes discharge</td>
<td>PSI 8</td>
<td>&quot;Pathology&quot; Fracture</td>
</tr>
<tr>
<td>Excludes discharge</td>
<td>PSI 13</td>
<td>Postop sepsis admission type other than elective</td>
</tr>
<tr>
<td>Risk adjustment</td>
<td>PSI 15</td>
<td>Accidental puncture/ laceration</td>
</tr>
</tbody>
</table>

Measure Example: PSI-90

PSI 15 v45a Risk Adj Comorbid Condition Impact (Top 90%)

<table>
<thead>
<tr>
<th>Comorbid Condition</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM</td>
<td>3.42%</td>
</tr>
<tr>
<td>DMx</td>
<td>15.78%</td>
</tr>
<tr>
<td>ANEMIAE</td>
<td>14.60%</td>
</tr>
<tr>
<td>PERVAGQ</td>
<td>14.60%</td>
</tr>
<tr>
<td>OBES</td>
<td>60.72%</td>
</tr>
<tr>
<td>ANEMIAE OBES</td>
<td>60.72%</td>
</tr>
</tbody>
</table>

0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0%
Do: Analysis of Records

- Initial review of Medicare sample with future goal of all charts and payers (sample size depends on maturity of program)
- Pre-bill post discharge with 24-hour turnaround minimizes impact on DNFB, but attainment of wealth of information

Study: Transform Data Into Information

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend of claims</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Inc. Reimbursement</td>
<td>$165,351</td>
<td>$115,315</td>
<td>$185,022</td>
<td>$226,891</td>
<td>$132,189</td>
<td>$66,727</td>
</tr>
<tr>
<td>Compliance Adjustment</td>
<td>$141,120</td>
<td>$49,315</td>
<td>$93,189</td>
<td>$278,178</td>
<td>$99,469</td>
<td>$37,061</td>
</tr>
<tr>
<td>ROI</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Financial Accuracy

Study: Efficiency

- Efficiency/length of stay = surrogate for cost
- Drivers:
  1. Throughput
  2. Patient complexity
  3. Documentation (expected LOS predicted by MS-DRG)

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>Potential</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average hospital days</td>
<td>0.5</td>
<td>1.0</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Current = Actual LOS – Initial GMLOS
Potential = Revised GMLOS – Initial GMLOS
Actual = Revised GMLOS – Actual LOS
Study: Impact of ICD-10

Study: Exploring Service Lines

... Focus CDI program efforts

Study: Deep Dive
Study: PSI Impact

Targeted PSI-90 review (hospital-specific report)

<table>
<thead>
<tr>
<th>PSI 12: Perioperative DVT/PE</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact type</td>
<td>Pre-review</td>
<td>Post-review</td>
<td>% change</td>
</tr>
<tr>
<td>Cohort volume</td>
<td>14</td>
<td>10</td>
<td>(28.57%)</td>
</tr>
<tr>
<td>CMS risk adjustment coefficient weight (average/case in cohort)</td>
<td>1.81027000</td>
<td>1.87905000</td>
<td>3.77%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSI 15: Accidental puncture/laceration</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact type</td>
<td>Pre-review</td>
<td>Post-review</td>
<td>% change</td>
</tr>
<tr>
<td>Cohort volume</td>
<td>3</td>
<td>3</td>
<td>0.00%</td>
</tr>
<tr>
<td>CMS risk adjustment coefficient weight (average/case in cohort)</td>
<td>0.15063333</td>
<td>0.30126667</td>
<td>100%</td>
</tr>
</tbody>
</table>

Act: Pre-Bill Drives Education

- Coding education yields quality data
- Clinical coding seminars integrate coding and CDI to improve compliance as well as recognition of opportunities for specificity
- Physicians play integral role to bridge gap of care delivery with the coding database
- Pre-bill allows for formalization of an educational process, which fosters the development of standard clinical topic references
- Fortifying the CDI team with evidence-based clinical knowledge escalates the level of communication with the medical staff, which in turn supports a long-term successful relationship

Clinical Coding Correlation

Consider catheter-associated UTI (T83.51XA) as the PDX

75-year-old male with chronic indwelling catheter presents with fever (102F), WBC 13K, and glucose 180 mg/dl (non-diabetic) with documented UTI and sepsis and treated with IV antibiotics. Catheter is changed at admission.

Patient presented with UTI with associated sepsis. There is documentation for a chronic indwelling catheter. After study, can the underlying etiology for the UTI be clarified as:

A. UTI due to chronic indwelling catheter
B. UTI unrelated to chronic indwelling catheter
C. Other
D. Clinically undeterminable
When the admission is for treatment of a complication resulting from surgery or other medical care, the complication code is sequenced as the principal diagnosis. If the complication is classified to the T80-T85 series and the code lacks the necessary specificity in describing the complication an additional code for the specific complication should be assigned.

Official ICD-10 Guidelines for Coding and Reporting: Section II. G.

What About Sepsis? SEP-1? SEPSIS-3???

Abstraction Criteria for Surviving Sepsis Campaign 2012

*Surviving Sepsis Campaign. International Guidelines for Management of Serious Sepsis and Septic Shock: 2012*

Act: Targeting Physician Education

Fee-for-Service With Value-Based Payment Modifier (2016)

Patient centered around episodes of care
Act: Targeting Physician Education

- Physician documentation central to 4 P’s
- Peer-to-peer specialty directed education
- Clinical trend analysis directs concise education
- Organize by service line with unique approach for hospitalists for a comprehensive framework as opposed to “nuts and bolts” for medical and surgical specialties

Raising Awareness: Cost and Risk

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description label</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCC 106</td>
<td>Atherosclerosis of the extremities with ulceration or gangrene</td>
</tr>
<tr>
<td>HCC 107</td>
<td>Vascular disease with complications</td>
</tr>
<tr>
<td>HCC 108</td>
<td>Vascular disease</td>
</tr>
</tbody>
</table>

- 21% of population over age 65 (often asymptomatic)
- High risk for CVA, MI, and limb ischemia
- Evaluation: Tobacco cessation, lipid management, BP control, ASA.
- Clinical evaluation: Noninvasive Doppler (ABI’s), CT angiography...
- Preventive medicine, early diagnosis

Screening for at-risk patients!

Beyond Inpatient ...

Population health: Documentation integrity drives predictive analytics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description label</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIA</td>
<td>Right carotid artery disease, probable embolic with left hemiparesis, persistent afib</td>
</tr>
<tr>
<td>CMI</td>
<td>Right CVA, probable embolic with left hemiparesis, persistent afib</td>
</tr>
</tbody>
</table>

Predicted LOS 2.1 2.4 3.4

Expected cost $4,257 $5,116 $6,486

CMI & wage-adjusted cost $4,521 $4,540 $4,255

Avg. Medicare payment $3,700 $4,550 $5,770

Variance - $821 $10 +$1,515

Severity Minor Moderate Moderate

Mortality < 5% 10% 10%
Targeted Approach Yields Demonstrable Benefits

- **Physician response**
  - Response Rate: Q1, Q2, Q3, Q4, YTD
  - Agree Rate: Q1, Q2, Q3, Q4, YTD

Targeted Approach Yields Demonstrable Benefits

- **Concurrent Query Impact**
- **Pre-Bill Impact (Final)**
- **Total CDI Program Impact**

Expand Education: Train a Physician Advisor

- Liaison between CDI team and medical staff
- Attain specificity while educating other physicians on key clinical issues as well as CDI team
- Query validation and development consistent with best clinical practice and evidence-based guidelines
- Peer-to-peer mediation with explanation of global and individual impact of documentation
- Facilitate ongoing education with medical staff
Hard Work Pays Off: Physician Advisor Training

- Amass the fundamentals through comprehensive study (modular approach):
  - Inpatient prospective payment system
  - Quality initiatives, including risk adjustment
  - Bridge ambulatory and postacute care
  - Fundamentals of physician advisor role

- Ongoing maturation with integration into pre-bill review

Experience Benefits of Physician Advisor and CDI

APR-DRG risk of mortality: Mortality index increase over 2-year period (Medicare only)

Experience Benefits of Physician Advisor and CDI

APR-DRG severity of illness: Severity of Illness increase over 2-year period
Integrating the Physician Advisor Into Pre-Bill Review

• Benefits:
  – Ground-level chart review solidifies the understanding of the disconnect between documentation for patient care and accurate coding
  – Direct individualized education for colleagues peer-to-peer reinforces the CDI team's credibility
  – Fosters regular reconciliation of the CDI initiative achieving complete and accurate documentation
  – Integration of the pre-bill process within the CDI team and the physician advisor training has reinforced the realized benefits regarding improvement in case-mix index, quality metrics, and severity of illness justified by a continued return on investment

Full Integration of Pre-Bill: Case-Mix Impact

<table>
<thead>
<tr>
<th>Case-Mix Impact</th>
<th>1.45</th>
<th>1.5</th>
<th>1.55</th>
<th>1.6</th>
<th>1.65</th>
<th>1.7</th>
<th>1.75</th>
<th>1.8</th>
<th>1.85</th>
<th>1.9</th>
<th>1.95</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chart review</td>
<td>1.537</td>
<td>1.574</td>
<td>1.613</td>
<td>1.656</td>
<td>1.709</td>
<td>1.763</td>
<td>1.821</td>
<td>1.881</td>
<td>1.943</td>
<td>1.997</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Physician advisor training</td>
<td>1.537</td>
<td>1.574</td>
<td>1.613</td>
<td>1.656</td>
<td>1.709</td>
<td>1.763</td>
<td>1.821</td>
<td>1.881</td>
<td>1.943</td>
<td>1.997</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Concurrent documentation program</td>
<td>1.537</td>
<td>1.574</td>
<td>1.613</td>
<td>1.656</td>
<td>1.709</td>
<td>1.763</td>
<td>1.821</td>
<td>1.881</td>
<td>1.943</td>
<td>1.997</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Medical staff education</td>
<td>1.537</td>
<td>1.574</td>
<td>1.613</td>
<td>1.656</td>
<td>1.709</td>
<td>1.763</td>
<td>1.821</td>
<td>1.881</td>
<td>1.943</td>
<td>1.997</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Added reimbursement</td>
<td>$18.1 million annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Key Points

• The role of CDI in the evolution of healthcare is expansive ... where to begin?
• Know what you don’t know ... utilize the pre-bill.
• The pre-bill review certainly compliments specialized audits, including ambulatory data analysis.
• A methodical approach yields vital information that drives a successful CDI initiative through ongoing collaboration of key stakeholders.
Thank you. Questions?

james.fee@enjoincdi.com

In order to receive your continuing education certificate(s) for this program, you must complete the online evaluation. The link can be found in the continuing education section at the front of the program guide.