Clinical Documentation Intelligence: A Roadmap to Success
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Pamela Hess, MA, RHIA, CDIP, CCS, CPC
Session Objectives/Goals

1. Become reacquainted with the full scope of a CDI program
2. Understand the benefits of a well-structured CDI program
3. Gain information that supports the need for HIM practitioners to be the leaders in CDI
Clinical Documentation Improvement

• Why CDI?
  • July 11, 1995 announcement that the physician DRG attestation was no longer required effective September 1, 1995
  • In practice, review of attestation statements by the Peer Review Organizations (PROs) as a part of DRG validation review has resulted in less than a 0.01 percent denial rate of sampled claims. Therefore, in an effort to reduce burden, we are revising the regulations to eliminate the physician attestation requirement. We believe that this will reduce the burden on both physicians, who must sign an attestation on each of the approximately 11 million Medicare inpatient claims a year, and on hospitals, which are responsible for obtaining the signatures before they can submit completed claims for payment. In addition, the hospital claim form (UB–92), which must be signed by a hospital representative, contains a certification statement.
Clinical Documentation Improvement

• Coding Clinic Advice Changes
  • 2nd Quarter 1998 – Advice from Coding Clinic begins to emphasize querying the physician for confirmatory information
    • “The coder should never assign a diagnosis based on a patient’s signs and symptoms without confirmation by the physician”
  • 2nd Quarter 2000 – Documentation Guidelines
    • “…when the documentation in the medical record is clear and consistent, coders may assign and report codes. If there is evidence of a diagnosis within the medical record, and the coder is uncertain whether it is a valid diagnosis because the documentation is incomplete, vague, or contradictory, it is the coder’s responsibility to query the attending physician to determine if this diagnosis should be included in the final diagnostic statement....”
• Development Timeline
  • Early 2000’s
    • Focus on Physician Query
    • Focus on creating documentation tools / prompts
    • Tracking systems – CMI impact, physician trending
  • The move to ICD-10
    • “ICD-10 is not about coding, it’s about improved clinical documentation”
    • Increased focus on educating physicians
      • Elimination of documentation prompting unspecified code assignment
• Clinical documentation is health information
• Health information is the core element in:
  • Healthcare provider communication
  • Legal evidence that care was provided
  • Quality measurement, risk management, planning
  • Translation into coded data
• “...it’s the information about the patient that is really the common ground between the medical staff and healthcare managers.”
• *A Compelling Case for Clinical Documentation* – Ruthann Russo, PhD, JD, MPH, RHIT, 2008
• The role of the CDIP
• Domain IV – CDI Metrics and Statistics
  • Trend and Track:
    • Working DRG and coder final code
    • Physician query content, response, volume, provider identity
    • Measure the success of CDI program through dashboard metrics
    • Data for CDI benchmarking and trending as well as for specialty
    • Compare institution with external institutional benchmarks
  • AHIMA CDIP Exam – AHIMA Certification Candidate Guide
Clinical Documentation Improvement

• Core elements of a CDI program
  • Baseline study to assess current trends in documentation and coding
  • Physician Education
  • Ongoing concurrent assessment of documentation
  • Development of tools to assist process
  • Tracking of Case Mix Index (CMI) prior to, and throughout the program
CDI Roadmap Concept
The CDI Roadmap

Steps to redesign

• Identify the current best practices in CDI

• Apply these best practices to your facility CDI program
  – Develop a redesign roadmap for CDI that meets the upcoming challenges as we move to ICD-10 and navigate the dynamic payer reimbursement strategies
  – Present practical solutions for CDI program redesign to executives and managers at their facilities
CDI...Evolved

• What is clinical documentation?
• The *written expression of clinical data describing the patient’s diagnosis and subsequent treatment.*
  o Change in the “quality”, not necessarily the quantity, of physician documentation
  o Physician training that identifies problematic diagnoses and corresponding key words – *keep it simple*
  o Use of templates by physicians that include prompts or reference to essential information based on the patient’s diagnosis
  o Documentation that supports the continuity of patient care among clinicians
  o Documentation that supports medical necessity for the treatment and services provided – decreased payer denials
  o Clinical record that supports the quality of patient care provided at your facility
What is it used for?

- It can be aggregated into data used for a variety of purposes:
  - trending for epidemiology, clinical pathways, clinical outcomes, clinical research, quality measurement, evidence-based medicine, accurate reimbursement, and strategic planning.

- The ultimate goal of clinical documentation is an improved healthcare delivery system.

- With such a lofty goal, clinical documentation is a key factor in the upcoming ICD-10 transition.

- Existing CDI programs can be redesigned to capture and utilize the wealth of data that will be available once ICD-10 is implemented.
Design CDI as a Patient-centered Process

• Because CDI focuses on ensuring the best possible documentation in a patient’s health record, it is easy to draw some initial analogies between the function and its direct impact on patients, namely quality of patient care.

• There are additional areas that CDI programs can take advantage of to expand the patient focus of their function. These include:
  – Increasing the patient’s awareness of the health record,
  – Assisting the patient to obtain that record, and
  – Showing the patient how to read the information in that record.

• Part of our role in Information Governance
Top Priorities for Transformational Change

Current program function vs. the next level of CDI evolution

• **Governance**...CEO, CFO, CMO, CIO, CIGO

• **CDI Team**...CDI Without Walls...Collaborative, Cohesive team
  o Physician, CDS, Coder
  o Ancillary Departments (HIM, Care Management, Quality, IT, Compliance, Revenue Cycle)

• **CDI/Coder** documentation review process and on-going training
  o Ineffective transfer of knowledge between CDS and Coder including clinical indicators and coding guidelines

• **Physician Adoption**...Education & Communication Model

• **Technology**...NLP applications

• **Data Analytics**...next level drill down

Goal: Accurate Reimbursement...sustained through ICD-10 transition
CDS Role Transformation
Collaboration requires sharing of critical data by collaborative departments with CDI to allow analysis, action and feedback.

The clinical documentation integrated feedback loop

• The primary difference between thinking and thinking critically is the addition of a purpose and control for the thought process.
• During the thought process, one forms the thought about a specific situation.
• The application of critical thinking to this process involves being open to considerations, assumptions and detail prior to coming to a conclusion.
• It involves increased time, additional questions, and thoughtful contemplation of various considerations related to the situation at hand. (Celine 2014)
• Technology offers new opportunities for critical thinking


Critical Thinking Example

- An example of critical thinking in the CDI workplace is:
  - A CDI practitioner who reviews case documentation for a patient who has recently lost weight.
  - The physician does not provide explanation for the weight loss. The CDI practitioner gives no further attention to the weight loss.
  - The critical thinker further reviews the record for signs and symptoms causing the weight loss, such as peripheral edema, muscle wasting, subcutaneous fat loss, amount of weight loss, change in body mass index (BMI), nutrition notes describing changes in dietary habits and ideal body weight, and lab work providing indicators such as serum albumin.
  - The critical thinker responds to the above scenario by querying the physician regarding the patient’s nutritional status and possible malnutrition.

CDI/Coder On-going Training

• Training should not only include ICD-10 coding instruction, but also specific case review from the dual coded data to show DRG changes for cases coded in ICD-9 vs. ICD-10.
• Post ICD-10 study DRG variations between CDI and coding and drill down to lack of ICD-10 specificity
• Staff should be aware of grouper changes in ICD-10
• An example of this type of analysis can be seen below:

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>ICD-9-CM</th>
<th>MCC/CC</th>
<th>DRG</th>
<th>Weight</th>
<th>ICD-10-CM</th>
<th>MCC/CC</th>
<th>DRG</th>
<th>Weight</th>
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<tr>
<td>Chronic obstructive asthma, acute exacerbation</td>
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<td>J44.1</td>
<td></td>
<td>192</td>
<td>0.719</td>
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<tr>
<td>COPD, acute exacerbation</td>
<td>491.21</td>
<td>CC</td>
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<td></td>
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</tbody>
</table>

Physician Adoption
Physician Adoption

• Approximately 10-15% of the physicians will support new initiatives when adopted.
• A near equal 10-15% tend to oppose new hospital initiatives.
• It is important to create a strategy to win over the physicians less likely to accept the change.
• CDI Trainers may need to rely on communication from the CEO and Executive staff to win over the opponents.

Physician Adoption

• Physician education has evolved from one-on-one conversations and hard copy queries at the nursing station to remote communication and technology solutions.
• Many facilities have completely remote CDI staffs that communicate queries through email, in-basket requests and smart phone applications.
• The volume of email alone makes practitioners more selective in which communications will be answered.
• Ease of use and smooth processes are critical to getting queries answered, i.e., EHR drop down menus, smart prompts, and templates allowing routine queries to be built into the documentation process itself.
• Virtual meetings, web based tutorials and efficient query processes can provide ongoing education as new ICD-10 documentation deficiencies are identified.

Provider ICD-10 education is an on-going process.
Data Analytics
Best Practices for CMI Management

• Data analytics are used to measure and develop strategies for CDI program improvement and sustainability.

• The five best practices for management of financial measures in the CDI program are:
  – Track CMI closely and identify real patient mix change.
  – Track and report on MCC and CC capture rates across the organization and by service.
  – Know the benchmarks and validate the data regularly.
  – Do the right thing for the most accurate data outcome.
  – Create a concurrent documentation process with physician leadership.

Data Analytics

• The data captured with the dual coding process will provide a comparison of not only the payment variation for ICD-9 vs. ICD-10 DRG change due to a grouper variation, but will also include information on missing specificity that can change the code and possibly the DRG.

• Reports generated from the facility claims database can provide lists with corresponding account volume for:
  – Peer benchmarks for MCC/CC utilization,
  – Cases without MCC/CC,
  – Service line and physician specific DRG volume change for ICD-9 vs. ICD-10,
  – Case Mix Index trends, post go-live ICD-10, and
  – Coder/CDS CMI by service line.

• Trend analytics on DRG validation and medical necessity denials by payer are also important. Remember that the NCD (National Coverage Determination) and LCD (Local Coverage Determinations) covered code lists for specific diagnoses and treatments will change post ICD-10. Medical necessity denials can be reduced with an effective CDI program.
# CDI Productivity Dashboard

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<th>Summary Report</th>
<th>CDIP</th>
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<tr>
<td><strong>Time Period: 5/1/14 - 5/31/14</strong></td>
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<td></td>
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<tr>
<td>CDIP FTEs: 3</td>
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<tr>
<td><strong>Total Cases</strong></td>
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<td>652</td>
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<td><strong>Initial Case Review (ICR)</strong></td>
<td>601</td>
<td>605</td>
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<td>ICR %</td>
<td>94%</td>
<td>95%</td>
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<td>ICR per Day</td>
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<td><strong>Follow-up Case Review (FCR)</strong></td>
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<td>1242</td>
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<td>FCR %</td>
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<tr>
<td>FR per Day</td>
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<td><strong>Query (Total)</strong></td>
<td>144</td>
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<td><strong>Query (Rate)</strong></td>
<td>24%</td>
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<td><strong>Provider Response Rate</strong></td>
<td>90%</td>
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<td><strong>Provider Agreement Rate</strong></td>
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<th>Top Service Lines Queried</th>
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<td>Cardiology</td>
<td>Acute Renal Failure</td>
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<tr>
<td>General Surgery</td>
<td>Acute Respiratory Failure</td>
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<tr>
<td>Hospitalists</td>
<td>Congestive Heart Failure</td>
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<tr>
<td>Internal Medicine</td>
<td>Encephalopathy</td>
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<tr>
<td>Orthopedic Surgery</td>
<td>Excisional Debridement</td>
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<td>Other</td>
<td>Other</td>
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### Service Level Drill Down

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<tr>
<th>CMI</th>
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<th>1.7407</th>
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<td>2,464</td>
<td>3,425</td>
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<td>Obstetrics</td>
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<td>Vascular Surgery</td>
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| Medical MS-DRG % | 87.34% | 83.56% | 81.34% | 84.80% | 79.61% |
| Surgical MS-DRGs | 12.66% | 16.44% | 18.66% | 15.20% | 20.39% |

## Capture Rates

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<td>901</td>
<td>648</td>
<td>492</td>
<td>163</td>
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<td>MCC vs. Without MCC</td>
<td>26.0%</td>
<td>29.9%</td>
<td>30.5%</td>
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<tr>
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<td>11</td>
<td>9</td>
<td>9</td>
<td>7</td>
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<td>CC/MCC vs. Without CC/MCC</td>
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<td>55.6%</td>
<td>55.6%</td>
<td>57.1%</td>
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<td>581</td>
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<td>50.8%</td>
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<tbody>
<tr>
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<td>254</td>
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<td>MCC vs. Without MCC</td>
<td>17.7%</td>
<td>19.5%</td>
<td>21.3%</td>
<td>19.4%</td>
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<td>CC/MCC vs. Without CC/MCC</td>
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<tr>
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<td>792</td>
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<td>218</td>
<td>69.7%</td>
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<td>CC+MCC vs. Without CC/MCC</td>
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<td>71.2%</td>
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<tr>
<td>MCC vs. CC</td>
<td>825</td>
<td>560</td>
<td>406</td>
<td>152</td>
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<td></td>
<td>45.2%</td>
<td>47.7%</td>
<td>46.8%</td>
<td>45.9%</td>
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## Query & Response Rates

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<th>Mar</th>
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<th>Jul</th>
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<th>Oct</th>
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<td>Initial Reviews</td>
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<td>Productivity/day</td>
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<td>94%</td>
<td>91%</td>
<td>93%</td>
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<tr>
<td>CC capture Rate</td>
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<tr>
<td>Response Rate</td>
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<td>28%</td>
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<tr>
<td>Agreement Rate</td>
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<td>82%</td>
<td>84%</td>
<td>81%</td>
<td>78%</td>
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</table>

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Don’t Forget APR DRGs

Figure 11.7 shows an example of severity level tracking by physician. The table next to the graph shows that physician 09092 has a significantly lower average patient severity than the other physicians do. This information likely traces back to problems with the physician’s clinical documentation practices.

Technology
“Rapidly changing technology offers a variety of options for maximizing clinical documentation improvement (CDI) program efficiency and capture of ICD-10 specific data.

CDI tasks have evolved from a manual paper process used for case review and data analytics.

Current state includes health information systems using natural language processing (NLP) to identify cases and provide analytics in a graphical format.

EHR uses the latest technology such as NLP to identify key words and phrases making it easier for the CDI specialist and coders to determine query opportunities.

Half of the target CDI cases reviewed concurrently require no further action...CDI teams can leverage technology for rapid analysis to determine cases needing further clarification.

The CDI practitioner can use this saved time to clarify complex concurrent cases directly with providers, expand the program to include other payers, and for critical one-on-one education with providers.”

NLP offers a solution to the problem of data mining within textual information.

Historically, most data retrieved for the purposes of analysis and reporting was identified by the technology from a discrete data field within the software.

For example, the patient’s blood pressure reading could be identified by the technology from a discrete field in the vital signs flowsheet.

Data mining within narrative text presents a problem with interpreting the data due to contextual concerns.
The number of pneumonia cases cannot be discerned by the CDI specialist from the documentation below because there are various meanings to the phrases using the word pneumonia:

- Evidence of pneumonia
- Pneumonia cannot be excluded
- Rule out pneumonia
- Pneumonia is not appreciated
- Pneumonia in 1985

NLP technology offers a solution by extracting individual words and determining the relationships among them.

The technology uses modifiers and relational assigned values to determine actual incidences of pneumonia.

• Healthcare professionals use NLP to complete the patient story in the clinical record by facilitating workflows, enabling collaboration, and providing insight for improved care delivery.
• Medical transcription professionals have used it extensively to provide automatic provider dictation translation.
• Cloud-based technology can be used to convert physician narrative into a customized EHR.
• This results in a more detailed clinical record that improves the quality of data and enhances provider efficiency by automating clinical documentation.
• Through a process called collaborative intelligence, NLP has several solutions to improve clinical documentation.

Collaborative intelligence provides a solution to improving clinical documentation:

- Search and discovery based on semantic indexing and ontological reasoning
- Real-time CDI
- Computer-assisted coding (CAC) workflow
- Front-end and back-end speech understanding-based documentation workflows
- Meaningful-use abstraction workflows to enable reporting on quality measures
- Meaningful-use list management including medication reconciliation

Figure 16.1  Collaborative intelligence

PHYSICIAN
CDI Alerts

NURSE
Concurrent Review

CODER/CDS ABSTRACTOR
Concurrent Coding
Concurrent Abstraction

Content Server

Signed Clinical Notes

Content Tagging

Medication Admission Records

Nurses Notes

Lab Results

Query Process Transformation

- Review census for new patients
  - Manual Clinical Doc Review
  - Assign Working DRG
  - Submit Physician Query
  - Query response positive?
    - Yes: Update DRG
    - No: Review record every 2-3 days
  - Coder Final DRG
  - Drop Bill

- Coder & CDI Pre-bill automated analysis & Final DRG

For Specific Cases, these steps may be eliminated
What The Market Wants

Market Driven CDI Transformation

To maximize revenue while improving patient care, providers turn to clinical documentation improvement (CDI) services and solutions for ICD-10 preparedness, case mix index (CMI) improvement, and/or revenue cycle optimization. Regardless of the catalyst, providers look for specialized resources to implement new CDI programs or support existing ones. While firms’ approaches to CDI vary and the scope of offerings is often different, providers in this report rated their vendors based on the overall experience they had. Firms that offer combined CAC and CDI solutions are garnering the greatest mindshare, followed closely by firms focused mainly on CDI.

Ten Best CDI Operational Practices

Listed below are ten best CDI operational practices that enhance CDI programs and encourage sustainability.

- Designing CDI as a patient-centered process
- Creating a vision
- Implementing initial compulsory physician education
- Creating policies and procedures and require sign-off
- Maintaining complete query documentation
- Operationalizing a feedback loop between denials, management, and CDI
- Operationalizing a feedback loop between CDI and compliance
- Operationalizing a feedback loop between HIM and CDI
- Conducting continuous targeted physician education and relationship building
- Using rigorous management/technology tools

Conclusion

• As you can see, redesigned CDI processes can impact the accuracy of ICD-10 data and effectiveness of its use through data analytics used for critical thinking and transformational change management.
• ICD-10 requires more significant and rapid change in our provider education, data collection, and strategic planning based on focused analytics.
• Clinical Documentation Improvement change will ensure that ICD-10 benefits are realized.
• Stay tuned for an exciting & memorable ICD-10 transition!