

# CoxHealth improves physician engagement and quality documentation through Embedded CDI.

In-workflow clinical documentation improvement (CDI) provides timely clinical insights to improve accuracy and team productivity in Cerner.

## Challenge

- Inefficient workflow for physicians and CDI team
- Out-of-context queries to physicians disrupted workflow and productivity
- Lack of communication between CDI and coding professionals

## Solution

- Embedded CDI™ powered by Nuance®
- Cerner Acute Case Management

## Results

- Improved physician education and engagement
- 100% physician query response rate
- 22% improvement in physician agreement rate
- 12% increase in CDI team review volume

## Summary

CoxHealth in Southwestern Missouri is widely recognized for its commitment to quality and patient safety. Each of its five hospitals holds accreditation by the National Integrated Accreditation for Healthcare Organizations, and is recognized by CareChex® as among the top 10% of U.S. hospitals for overall medical excellence and patient safety. CoxHealth also has been recognized by U.S. News & World Report as among the nation's high-performing hospitals.



“Embedded CDI has given us more satisfaction and ease of operability in what we’re trying to accomplish on a daily basis. It doesn’t interrupt the physician workflow. It’s part of a streamlined process.”

Angie Curry, BSN, RN, CCDS  
CDMP Corporate Manager  
CoxHealth

### **The role of CDI in value-based care**

Hospitals are rethinking their approach to clinical documentation improvement (CDI) as they struggle to manage competing reimbursement models—fee-for-service and value-based care. Patient volumes are shifting to the outpatient and ambulatory care settings, making it critical for acute care providers to consistently achieve the quality outcomes required for value-based care. Clinical and financial outcomes are closely linked, and physicians are central to the clinical documentation process.

Physicians need workflows to create clinical documentation that delivers timely clinical insights, advances clinical quality initiatives, improves reimbursement and complies with regulatory requirements. The CDI team needs a streamlined process to send queries and receive clinical clarifications to promote timely, quality clinical documentation. When documentation is specific, accurate and complete, it enables more thorough communication between caregivers and improves patient quality outcomes.

### **Evolution of CDI at CoxHealth**

When CoxHealth first launched its CDI program in 2003, reviews were conducted only on Medicare patients; it was a time-consuming process with a paper query system and stand-alone encoder. Any required changes to new patient admissions had to be reconciled manually, and these queries weren’t incorporated into the final medical record. CoxHealth was not capturing complete patient stories—which was critical to ensuring the hospital received reimbursement for the care it provided.

In 2011, the organization adopted Nuance Embedded CDI which, in addition to offering a clinically based approach to CDI, provided data collection and monthly reporting capabilities and ensured queries became part of the permanent medical record.

CoxHealth was encouraged by early practice improvements and a corresponding increase in overall Case Mix Index (CMI). The approach was working, but the CDI team still had a two-system process with dual logins and lengthy downtimes. Physicians and CDI nurses were left juggling an inefficient workflow.

When the organization had the opportunity to collaborate with Cerner® and Nuance on a CDI solution embedded within the Acute Case Management workflow, it didn’t hesitate. Two CoxHealth facilities participated—Cox South and Branson. The Embedded CDI solution took the program to the next level by helping the CDI team better manage its worklists, set priorities and access clinical strategies to guide it in creating queries that would engage physicians.

### **Promoting better communication among the care team**

Since Embedded CDI resides within the Acute Case Management module of Cerner Millennium® EHR, it complements the physician workflow. The CDI team simply sends a query through the tool to the physician message center within Cerner. The physician then receives and responds to that query, all within the same tool. This allows physicians, CDI teams and coding professionals to work collaboratively to capture and report complete and accurate clinical documentation.

The documentation improvement team at CoxHealth implemented Embedded CDI to focus on these types of chart reviews while patients were still in the hospital, helping reduce post-discharge and out-of-context queries—critical for documentation precision, accuracy and physician satisfaction. The built-in APR-DRG grouper allows them to collaborate with physician and coding professionals about the working diagnosis, which has led to better communication among the care team.

“Before they could see the working DRG, physicians didn’t fully understand how the primary diagnosis was chosen or how what they wrote affected it. Having this capability has positively impacted how we care for patients.”

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“Any provider who is caring for a patient can see how their documentation is affecting the patient’s diagnosis and the treatment plan, in real time,” says Angie Curry, Corporate Manager of the Compliant Documentation Management Program® (CDMP®) program at CoxHealth.

The CDI team at CoxHealth could now work effectively with both physicians and coding professionals to correctly determine and consistently apply the working diagnosis. The APR-DRG grouper functionality allowed the team to assign not only the primary diagnosis but also the diagnosis grouping, which is used by the coders on the back end.

“Before they could see the working DRG, physicians didn’t fully understand how the primary diagnosis was chosen or how what they wrote affected it,” Curry noted. “Having this capability has positively impacted how we care for patients.”

#### **Embedded CDI outcomes: improved efficiencies and better physician engagement**

The efficiencies gained with Embedded CDI made it possible for CoxHealth to include all primary DRG payers—not just Medicare—and expand chart reviews to all nursing units. Since CoxHealth made it part of a streamlined system, the CDI process is much less disruptive to physicians’ workflows and has increased their engagement, response rates and overall satisfaction.

“Embedded CDI has given us more satisfaction and ease of operability in what we’re trying to accomplish every day,” said Curry. “It is much simpler for the CDI nurses; they send queries straight to the physicians’ message center.”

CoxHealth reported significant sustained improvements to both physician engagement and CDI team productivity at both facilities. Physician response rates to queries sent by the CDI team have topped out at 100 percent, and physician agreement rates have improved an average of 22 percent across both facilities. Even more significant, the CDI team encounter review rates have increased an average 12 percent in the two years since the Embedded CDI implementation.

“We are very satisfied with the solution, and I think it brings CoxHealth to a level where we want to be with our CDI team,” Curry said.

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#### **Cox South and Branson facility results:**

# 100%

physician **query response**  
since implementing embedded CDI

# 22%

improvement in physician  
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# 12%

increase in CDI **team review volume**

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#### **Quality scores, ratings and artificial intelligence**

As CoxHealth looks to the future, Curry anticipates a keener focus on how clinical documentation affects quality ratings and patient care outcomes. The organization already has proven how more efficient capture of complete documentation can improve its own operations, but mounting pressure will continue to translate that to patient care. For example, physicians are now being measured on quality scores, which will be reported to the government and published for public consumption starting in 2018.

Curry believes the next step for healthcare technology is to employ artificial intelligence (AI) to assist the provider at the point of care to create a complete and accurate patient story. CoxHealth is currently exploring computer-assisted physician documentation (CAPD) as the natural next step in its quality improvement initiative. Using clinical strategies, Cerner Document Quality Review (DQR) with embedded Nuance CAPD can analyze all notes from the patient encounter, discover undocumented diagnoses and present clinical clarifications—impacting both principal diagnosis and severity of illness.

“Using artificial intelligence, CAPD will allow the physician to create a note that is more reflective of the patient’s disease course and the resources used to treat it—in real time,” said Curry. “The more we can use technology to increase the physician’s efficiency while preserving the ability to create an accurate medical record, the more widely accepted it will be.”

#### **Partnership matters**

According to Curry, the strategic partnership between CoxHealth, Nuance and Cerner has been instrumental to the success of Embedded CDI and improved clinical documentation.

“The teams have worked closely to make this successful, and it’s exciting to have all the necessary information located in one place,” said Curry. “That’s the biggest benefit that Cerner and Nuance have brought to us.”

To learn more about how Nuance Healthcare can help you improve financial performance, raise the quality of care, and increase clinician satisfaction, please contact us at 1-877-805-5902 or visit [nuance.com/healthcare](http://nuance.com/healthcare).

Nuance provides a more natural and insightful approach to clinical documentation, freeing clinicians to spend more time caring for their patients. Nuance healthcare solutions capture and communicate more than 300 million patient stories each year helping more than 500,000 clinicians in 10,000 healthcare organizations globally. Nuance’s award-winning clinical speech recognition, medical transcription, CDI, coding, quality and diagnostic imaging solutions provide a more complete and accurate view of patient care, which drives meaningful clinical and financial outcomes.

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