



2018 North American Clinical Documentation Improvement
Technology Leadership Award



2018
BEST PRACTICES
AWARDS

Contents

Background and Company Performance 3

Industry Challenges..... 3

Technology Leverage and Business Impact..... 5

Conclusion 8

Significance of Technology Leadership 9

Understanding Technology Leadership 9

Key Benchmarking Criteria10

Technology Leverage10

Business Impact.....10

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices.....11

The Intersection between 360-Degree Research and Best Practices Awards.....12

Research Methodology12

About Frost & Sullivan12

Background and Company Performance

Industry Challenges

Clinical documentation refers to data and information that is collected in the course of patient care. Clinical documentation forms the foundation of the legal medical record upon which healthcare decision-making and reimbursement is based. Medical records are highly complex and often unwieldy repositories of a wide variety of structured and unstructured data, typically containing lists or narrative descriptions of symptoms, diseases, injuries, allergies, medications, labs, orders, and other information including that of an administrative and financial nature. Clinical documentation must be as thorough and accurate as possible so that the legal medical record fully reflects the patient's history of clinical encounters and any treatments rendered.

Healthcare improvement and transformation depend on the ability of providers to efficiently and effectively capture, record, and analyze patient data and information. It's a process that grows in difficulty with the volume of health data. However, the widespread adoption of electronic health records (EHRs) and other digital health data have provided new capabilities that help clinicians navigate patient information. But there are still many gaps in both EHRs and clinical documentation that must be addressed. Thus, improvement in clinical documentation processes and workflows is a top of mind concern for all healthcare providers today.

Several important factors are converging to drive the strong emphasis on clinical documentation improvement, or CDI. First, the advent of ICD-10, which went into effect in October of 2015, significantly increased the volume, specificity, and complexity of assigning diagnostic, symptom, and procedure codes. Accurate codes can only be assigned when all relevant information about patient care is captured in the medical record. When data and information is fully captured, integrated, and correctly coded, providers can not only be fairly reimbursed for their work but can also have the confidence that patient data is reliable and can be leveraged and analyzed to support quality patient care. Working with a complete and accurate patient record not only drives clinician engagement but also has value for patients who could avoid potential payment disputes or other problems resulting from poor documentation.

Another key driver for CDI is changing methods of reimbursement, namely the rise of value-based care, which places a greater emphasis on quality performance. The Agency for Healthcare Research and Quality (AHRQ) issues its *AHRQ Quality Indicators Toolkit*¹, which positions CDI as a quality and safety initiative. A greater emphasis on quality performance means that providers are expected to report on numerous clinical care measures. Providers simply cannot meet more stringent requirements for documenting, analyzing and reporting a wide array of care quality and patient safety metrics without the

¹ Agency for Healthcare Research and Quality. *AHRQ Quality Indicators Toolkit. Documentation and Coding for Patient Safety Indicators*. 2016

right data and information to verify and support their medical decision-making across the care continuum.

Excellence in clinical documentation not only supports every aspect of care quality improvement but also helps providers meet their business and operational efficiency goals. Providers face an array of financial challenges and risks, and many are suffering from declining margins. In this environment, providers must maximize every aspect of their revenue cycle so that they can get quickly and fairly reimbursed. This means avoiding disruptive and time-consuming payment denials. Poor documentation leading to insufficient or erroneous coding is a key root cause for most denials and is a significant risk factor in the event of a Medicare audit. That makes CDI an essential business and strategic imperative to help providers protect revenue and maintain financial viability.

According to AHRQ, effective documentation and coding processes involve the following key steps:

- **Documentation:** Establish documentation criteria for providers, including specific diagnostic terms that are consistent with clinical definitions and compliant with coding regulations.
- **Coding:** Establish coding criteria for conditions or events using the documentation from providers, and offer training on using these criteria.
- **Query Process:** Establish an effective process that CDI specialists and coders can use to obtain clarification from physicians on documentation issues that may affect the coding process.

The new focus on coding for appropriate reimbursement as well as coding for accurate quality measurement and reporting is leading healthcare providers to deploy new capabilities to address their growing CDI needs. Providers are leveraging expert consultants to help them design new programs and initiatives for CDI and to train staff in best practices.

Many providers are also bringing on new information technology (IT) solutions to support their CDI efforts. Core features and functions to look for in a CDI IT product include robust data integration and mapping, comprehensive coding and analytics including risk adjustment and hierarchical condition category (HCC) coding, and automated queries. In addition, providers are increasingly looking for artificial intelligence (AI)-driven features to enable natural language processing (NLP) for computer-assisted coding (CAC), CDI and physician documentation. To ensure maximum impact and ROI, an IT solution must have the power to bring all these features together in a single, integrated platform that is adaptable for professional and facility documentation and billing.

Frost & Sullivan's analysis of the CDI market finds the 3M™ 360 Encompass™ System to be the ideal solution to address the complex and dynamic documentation and coding needs of today's healthcare provider organizations.

Technology Leverage and Business Impact

3M is a Pioneer and Market Leader in Technology Solutions for Health Information Management

3M Health Information Systems is a trusted vendor partner for organizations seeking to transform and optimize coding, documentation and quality improvement. The company offers a variety of revenue cycle management (RCM) and health information management (HIM) solutions designed to assist health systems and providers of all sizes. In addition to selling IT products, 3M partners in long-term relationships with clients for consulting and outsourcing services. An early pioneer in the CDI movement, 3M has over 25 years of experience delivering expert software and consulting services to leading provider organizations across the U.S. The company currently has over 2,000 hospital customers (approximately one-third of U.S. hospitals) for its industry-leading 3M™ 360 Encompass™ System, which leverages NLP, statistics and rules to automate coding and documentation improvement. For the CAC market specifically, 3M holds approximately 80 percent of market share, according to HIMSS.

3M™ 360 Encompass™ System Provides Rich Functionality to Meet a Variety of CDI Needs

Launched in 2011, the 3M™ 360 Encompass™ System seamlessly integrates CAC, CDI, concurrent quality metrics and analytics into a single application to capture, analyze and advance patient information across the continuum of care. The 3M™ 360 Encompass™ System was one of the first CAC products on the market and the first to offer a unified solution that combined coding and CDI in an integrated workflow on a single platform with the same functionality—a huge benefit for CDI workflow.

3M™ 360 Encompass™ quickly won strong market success because it was instrumental in meeting the growing needs faced by provider organizations as they shifted to ICD-10. Providers recognized that 3M™ 360 Encompass™ was the ideal solution to help them manage the challenges and complexities of ICD-10. Many CDI teams had been working with legacy 3M coding and reimbursement systems and thus found it easy to transition to the 3M™ 360 Encompass™ System. In addition, CDI teams immediately benefitted from new computer-assisted features like annotation of documents and auto-suggested codes.

3M™ 360 Encompass™ is an end-to-end solution consisting of five core functionalities designed to help diverse types of end-users and provider organizations achieve optimal coding and clinical documentation. These functionalities include:

- Computer-assisted facility coding
- HCC management
- Computer-assisted CDI

- Computer-assisted physician documentation
- Computer-assisted professional coding

3M™ 360 Encompass™ is embedded with NLP and AI capabilities that comb through disparate data and information in the patient's medical record thereby helping providers save valuable time and resources while also improving the consistency and quality of documentation. The NLP platform in 3M™ 360 Encompass™ helps locate important information that may have been overlooked, identifies missing information, and then auto-suggests a physician query—all while the patient is still in hospital.

Compared to other NLP and AI systems used for coding and documentation, 3M™ 360 Encompass™ has the most documents coming into the system for its CAC mechanism. This enables the AI tool to learn faster and grow faster—and do a better job of coding overall. 3M™ 360 Encompass™ interfaces seamlessly with leading inpatient EHRs like Epic®, Cerner®, Allscripts® and others to support a variety of additional functions, including utilization review, case management and physician documentation.

3M™ 360 Encompass™ Enables CDI as a Tool for Quality Improvement and Patient Safety

3M's technology solutions are instrumental for leading CDI programs into supporting broader goals for quality improvement and patient safety. This is a trend that has been growing since the changeover to ICD-10. The ICD-10 system is richer and more descriptive than ICD-9, thus allowing clinical documentation to support new quality and safety efforts. 3M™ 360 Encompass™ allows for concurrent coding—that is, matching data on inpatients to diagnosis codes—enabling early warning indicators that can help improve patient care. It's a natural function to take richer, more accurate data available from computer-assisted coding and CDI and pass that information along to the quality function so that appropriate interventions and actions can occur while the patient is still in-house.

3M™ 360 Encompass™ Helps CDI Teams Prioritize their Work

The 3M™ 360 Encompass™ System's CDI module continues to add functionality; one example of these continual upgrades is the free enhancement that assists CDI teams in prioritizing their worklists. Using NLP and an intelligent algorithm, the system prioritizes cases for review by a CDI specialist. CDI teams can customize rules to prioritize cases based on the organization's specific needs. This free feature removes the need to purchase point-of-care solutions from additional vendors that have similar capabilities. It also reduces waste by focusing the efforts of CDI teams on the most relevant cases with the biggest impact on documentation quality.

Lori Dixon, director of CDI for Piedmont Healthcare, uses the 3M™ 360 Encompass System to expand the reach of the CDI team. Dixon notes, "All of these changes have come about because the technology we use has given us new tools to prioritize the cases that we

review. The cases with the highest impact come to the top of our worklist and are reviewed first."

3M™ 360 Encompass™ Improves Clinician Engagement and Satisfaction

Clinical documentation has always been about accurate coding to receive accurate reimbursement as well as provide a complete record of patient care. Some clinicians may have resisted early efforts in CDI due to potential documentation and alert fatigue. However, now that CDI is growing in acceptance as a key lever for quality improvement, clinicians better understand the broader benefits of accurate and complete coding. In today's environment of value-based care, more clinicians realize the importance of collecting quality metrics. The 3M™ 360 Encompass™ System Platform also offers computer-assisted physician documentation (CAPD), which provides smart, prioritized and intelligent alerts designed to engage and enhance clinician interaction with EHRs to help organizations meet the goals of the Quadruple Aim. By providing information that is meaningful, helpful and impactful, 3M™ 360 Encompass™ helps clinicians better understand a patient's full status, enhancing both care quality and clinician engagement and satisfaction.

Eugene Christian, MD, CPE, and former chief medical officer at Carolinas Healthcare, is a believer in CAPD technology as an aid to physician engagement and satisfaction. "We have these great computer systems, why can't we make them work for us? That's what physicians want, a computer to help them. Well. 3M has come up with something really great."

3M™ 360 Encompass™ Positioned to Meet Changing Market Dynamics

Until recently, CDI has been more of an inpatient solution focused on Medicare patients. Today, the healthcare market is undergoing a massive shift with the convergence of inpatient and outpatient care and the consolidation of payers and providers into a single entity. This shift is bringing CDI into ambulatory care settings, making it relevant to all payers, not just Medicare. There are several drivers for ambulatory CDI, including the Merit-based Incentive Payment System (MIPS), which moves Medicare Part B providers to a performance-based payment system. Other drivers include the rise in value-based, risk-sharing agreements and accountable care organizations (ACOs), and the increased number of providers who have partnered with Medicare Advantage health plans. . These and other factors have led physician practices to be more willing to consider CDI solutions and services. The fact that 3M™ 360 Encompass™ integrates with leading ambulatory EHRs is a key value. In addition, 3M has its own consulting services team to provide outsourced coding, CDI and other HIM operations for both outpatient services and ambulatory practices.

3M™ 360 Encompass™ Provides Comprehensive Customer Value and ROI

CDI is a transformation initiative for providers who can substantially benefit from partnering with a top vendor with proven solutions to address a range of dynamic needs. 3M delivers the value customers need to deliver on the CDI promise and, in spite of many dynamic market shifts driven by provider consolidation and new competition, 3M's customers still recognize and appreciate 3M's long-standing healthcare expertise. 3M's approach to healthcare has been to address the needs of the entire market. Thus, 3M has created different products for different segments of the market, providing value-oriented pricing and customizable deployment. 3M customers have the ability to buy an end-to-end solution like 360 Encompass™ or opt for a per module or standalone implementation suitable to their unique needs. The 360 Encompass™ platform is typically deployed on-premise but that can vary. Back-end NLP functions are delivered as a service.

The ROI for 3M coding and CDI solutions comes from a variety of mechanisms including improved reimbursement, quality of care, and clinician engagement. In addition, the automation of time-intensive and resource-heavy coding tasks optimizes the CDI workflow and human resource allocation, allowing providers to achieve maximum patient care and business goals in the most cost-effective way while also reducing the administrative burden for coders.

At Henry Ford Health System, Steve Hathaway, senior VP of finance and chief revenue officer, and Susanne Gleason, director of HIM, clinical documentation and hospital coding, applied concepts borrowed from triage and dispatch in the ambulance industry. Using 3M technology, analytics and better workflows, they added about \$20 million to the health system's bottom line, according to Hathaway.

Conclusion

Frost & Sullivan research finds 3M Health Information Systems to be leading the market for excellence and innovation in advanced, AI-driven technology solutions for healthcare coding and documentation. 3M's position as a legacy RCM and HIM vendor offers a strong competitive advantage in a market that is becoming increasingly crowded with new CDI and NLP product vendors. As a health technology pioneer, 3M has shown exceptional foresight in its understanding of the importance of CDI not only for achieving proper reimbursement but also as a core competency for quality improvement and patient safety. Health market foresight and commitment to innovation and transformation has enabled 3M to stay ahead of the market and achieve continued success in delivering CDI tools that enable healthcare providers to meet diverse goals for improvements in care delivery as well as financial and operational efficiency.

With its exceptional overall performance and commitment to technology excellence, 3M has earned Frost & Sullivan's 2018 Technology Leadership Award in Clinical Documentation Improvement.

Significance of Technology Leadership

Technology-rich companies with strong commercialization strategies benefit from the increased demand for high-quality, technologically innovative products. Those products help shape the brand, leading to a strong, differentiated market position.



Understanding Technology Leadership

Technology Leadership recognizes companies that lead the development and successful introduction of high-tech solutions to customers' most pressing needs, altering the industry or business landscape in the process. These companies shape the future of technology and its uses. Ultimately, success is measured by the degree to which a technology is leveraged and the impact that technology has on growing the business.

Key Benchmarking Criteria

For the Technology Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Technology Leverage and Business Impact—according to the criteria identified below.

Technology Leverage

Criterion 1: Commitment to Innovation

Requirement: Conscious, ongoing development of an organization's culture that supports the pursuit of groundbreaking ideas through the leverage of technology

Criterion 2: Commitment to Creativity

Requirement: Employees rewarded for pushing the limits of form and function, by integrating the latest technologies to enhance products

Criterion 3: Technology Incubation

Requirement: A structured process with adequate investment to incubate new technologies developed internally or through strategic partnerships

Criterion 4: Commercialization Success

Requirement: A proven track record of successfully commercializing new technologies, by enabling new products and/or through licensing strategies

Criterion 5: Application Diversity

Requirement: The development of technologies that serve multiple products, multiple applications, and multiple user environments

Business Impact

Criterion 1: Financial Performance

Requirement: Overall financial performance is strong in terms of revenues, revenue growth, operating margin, and other key financial metrics.

Criterion 2: Customer Acquisition

Requirement: Overall technology strength enables acquisition of new customers, even as it enhances retention of current customers.

Criterion 3: Operational Efficiency

Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high-quality standard.

Criterion 4: Growth Potential

Requirements: Technology focus strengthens brand, reinforces customer loyalty, and enhances growth potential.

Criterion 5: Human Capital

Requirement: Company culture is characterized by a strong commitment to customer impact through technology leverage, which in turn enhances employee morale and retention,

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan Awards follow a 10-step process to evaluate Award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify Award recipient candidates from around the globe	<ul style="list-style-type: none"> • Conduct in-depth industry research • Identify emerging sectors • Scan multiple geographies 	Pipeline of candidates who potentially meet all best-practice criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	<ul style="list-style-type: none"> • Interview thought leaders and industry practitioners • Assess candidates' fit with best-practice criteria • Rank all candidates 	Matrix positioning of all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	<ul style="list-style-type: none"> • Confirm best-practice criteria • Examine eligibility of all candidates • Identify any information gaps 	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	<ul style="list-style-type: none"> • Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles 	Final prioritization of all eligible candidates and companion best-practice positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	<ul style="list-style-type: none"> • Share findings • Strengthen cases for candidate eligibility • Prioritize candidates 	Refined list of prioritized Award candidates
6 Conduct global industry review	Build consensus on Award candidates' eligibility	<ul style="list-style-type: none"> • Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates 	Final list of eligible Award candidates, representing success stories worldwide
7 Perform quality check	Develop official Award consideration materials	<ul style="list-style-type: none"> • Perform final performance benchmarking activities • Write nominations • Perform quality review 	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best-practice Award recipient	<ul style="list-style-type: none"> • Review analysis with panel • Build consensus • Select recipient 	Decision on which company performs best against all best-practice criteria
9 Communicate recognition	Inform Award recipient of Award recognition	<ul style="list-style-type: none"> • Present Award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance 	Announcement of Award and plan for how recipient can use the Award to enhance the brand
10 Take strategic action	Upon licensing, company is able to share Award news with stakeholders and customers	<ul style="list-style-type: none"> • Coordinate media outreach • Design a marketing plan • Assess Award's role in future strategic planning 	Widespread awareness of recipient's Award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.