

How Analytics Can Direct and Improve Clinical Documentation

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The ability to analyze and report meaningful clinical data is fast becoming a core career objective and job requirement for clinical documentation improvement (CDI) professionals. Today's CDI leaders are under increased pressure to promptly provide root cause analysis of CDI program disparities that impact quality outcomes and reimbursement.

This article explores the use of clinical analytics to monitor CDI program efficiency, measure query effectiveness, and analyze quality data performance. Additionally, it describes how a large, multi-facility health system analyzed clinical data to support the organization's enterprise CDI program. Drill-down examples and dashboards reveal root causes of CDI program disparities involving care locations, physicians, patient mix, CDI teams, and electronic health record (EHR) documentation templates.

Root Cause Analysis Yields Actionable Information

The inability to consistently generate useful information remains a major issue and source of frustration for CDI program managers, clinicians, data analysts, and executive leaders who need more sophisticated reporting that facilitates granular analysis.

During discussions following industry presentation sessions, a frequent complaint heard is: "I have this new CDI tool, but the reports are not useful. The system doesn't provide analytics required to make informed decisions."

The reports produced as a collective industry typically resemble a snapshot, a data "selfie" showing static results—key performance indicators (KPIs)—versus "live streaming" data that tells the full story. For example, a monthly report showing a query rate of 20 percent and a response rate of 92 percent is a snapshot. It doesn't reveal why a query rate or response rate is up or down from a previous time period.

Without data analytics, the who, why, where, and how are difficult to discern. Are your reporting tools generating meaningful data needed to drive program decisions? Are you presenting data-driven information to executive leadership? Meaningful reporting requires a deeper dive into your data.

If a KPI is above your target, why the success? If below target, what are the underlying issues? What steps are needed to improve that KPI? Data with root cause analysis yields actionable information to make informed decisions.

Data analytics can inform clinical decision support, improve outcomes, provide predictions for population health management, and more. Retrospective monitoring of metrics doesn't lead to improved outcomes. Leveraging data analytics to prevent inefficiencies before problems arise means monitoring data and intervening in real time to achieve concurrent versus retrospective analysis of indicators.

From Level Zero to Data-Driven Practice, Context is Critical

CDI program management demands reliable, concise, consistent, meaningful, and accurate metrics. While some organizations have started investing in healthcare analytics, many are still at level zero. Such was the case at Catholic Health Initiatives (CHI), a national nonprofit health system based in Englewood, CO. With 42 short-term acute care facilities, 26 electronic health record (EHR) implementations, and multiple CDI tools, lack of standardization prevented centralized, data-driven reporting of CDI efforts and results.

CHI faced disparities in metrics and calculations due to multiple vendors measuring the same indicators. In addition, measuring the same KPI over and over provided a narrow view of performance. Discovering different ways to look at the same metric can provide meaningful facets of the same measurement—for example, raising a benchmark from response rate to include timeliness of response.

A broad perspective shows everything that factors into individual performance—not only productivity, but production within the context of query rate, response rate, timeliness of response, impact rate, and agreement rate. Performance is based not only on number of new reviews and number of follow-up reviews, but also on those numbers within the context of all indicators being tracked.

Analytics can provide the context required for meaningful reporting and informed decisions in key areas, including program metrics, revenue metrics, and quality metrics.

Case Mix Index

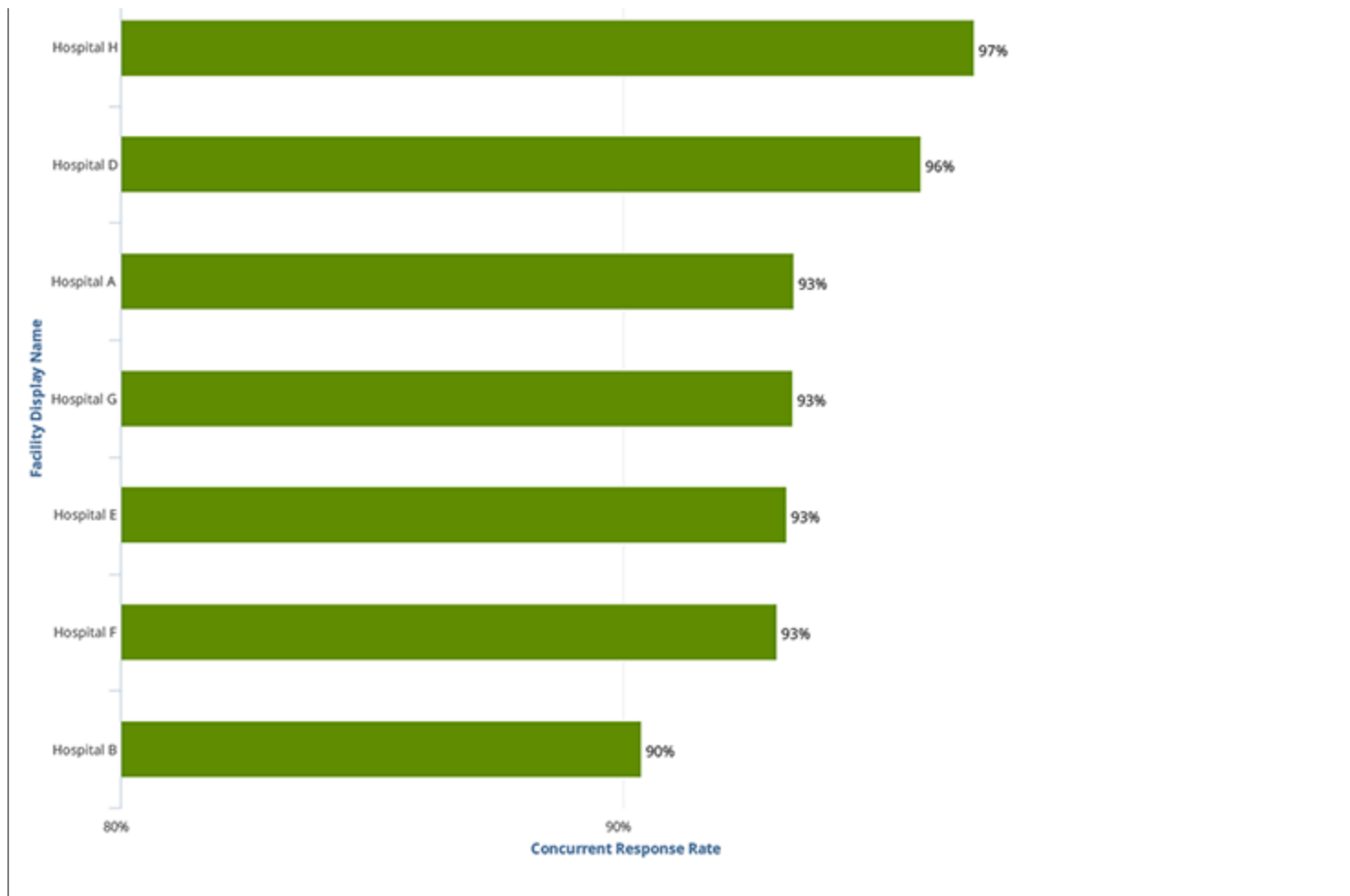
Organizations have always looked at case mix index (CMI)—medical versus surgical, CC/MCC capture rate, severity of illness (SOI), risk of mortality (ROM), observed-to-expected (O/E) mortality O/E ratio, and hospital-acquired conditions (HAC) and patient safety indicator (PSI) occurrences. It is helpful to view the same indicators by facility, specialty group, individual physician, clinical decision support, and coding professionals. Delving deeper into CMI shows all the factors that play into a physician's documentation, and helps demonstrate that the program is generating expected positive outcomes and return on investment.

Most healthcare professionals are familiar with the comment, “Your CMI is down.” CMI must be considered within context. What is your coverage rate? Do you have enough staff? Do you have new physicians on staff? Are templates used to their fullest capacity? Has the frequency of certain procedures shifted? Is your high-volume cardiothoracic or orthopedic surgeon on vacation?

As an example, CMI dropped dramatically at a particular facility within one month. Further analysis eventually revealed two important factors: 48 percent fewer transplants and 25 percent fewer open heart surgeries compared to the previous month. Access to real-time analytics could have provided the context to explain the shift in CMI, before the month-end dashboard was distributed and facility leadership requested an explanation.

Figure 1: Query Response Rate by Facility, and How It Can Vary

This graphic shows an example of a KPI snapshot that leaves the stakeholder asking for additional information. It's important to provide KPIs along with analysis of what the numbers mean and the “why” behind them.

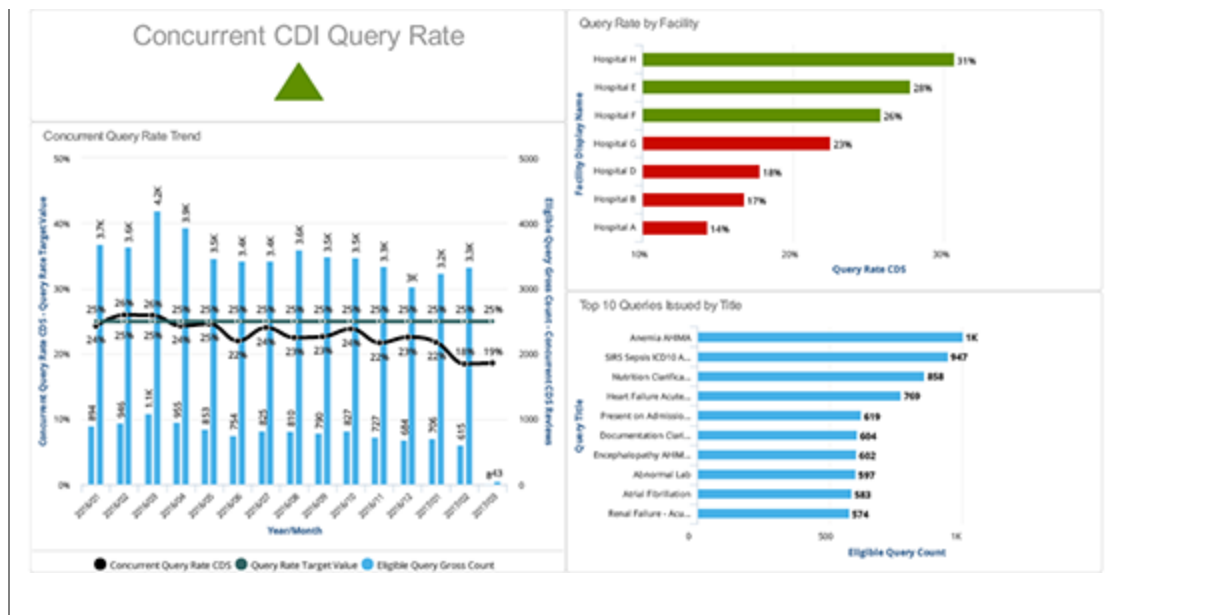


Response Rate

From a chief medical officer (CMO) perspective, a report showing a response rate of 92 percent would appear to be a positive indicator—physicians performing as they should, answering their queries, exceeding their targets. However, consider additional context. Perhaps this group of physicians responds 92 percent of the time, but they respond with “clinically undetermined” more than half the time. And their average turnaround time is 30 days. Make sure you’re providing KPIs along with analysis of what the numbers mean and the “why” behind them. In this case, a logical first step is to dig deeper by facility. See “Figure 1: Query Response Rate by Facility, and How It Can Vary” above for an example of a KPI snapshot that leaves the stakeholder asking for additional information.

Figure 2: Concurrent CDI Query Rate

This graphic shows the value of taking a query rate of 18 percent and drilling down for further analysis.



Query Rate

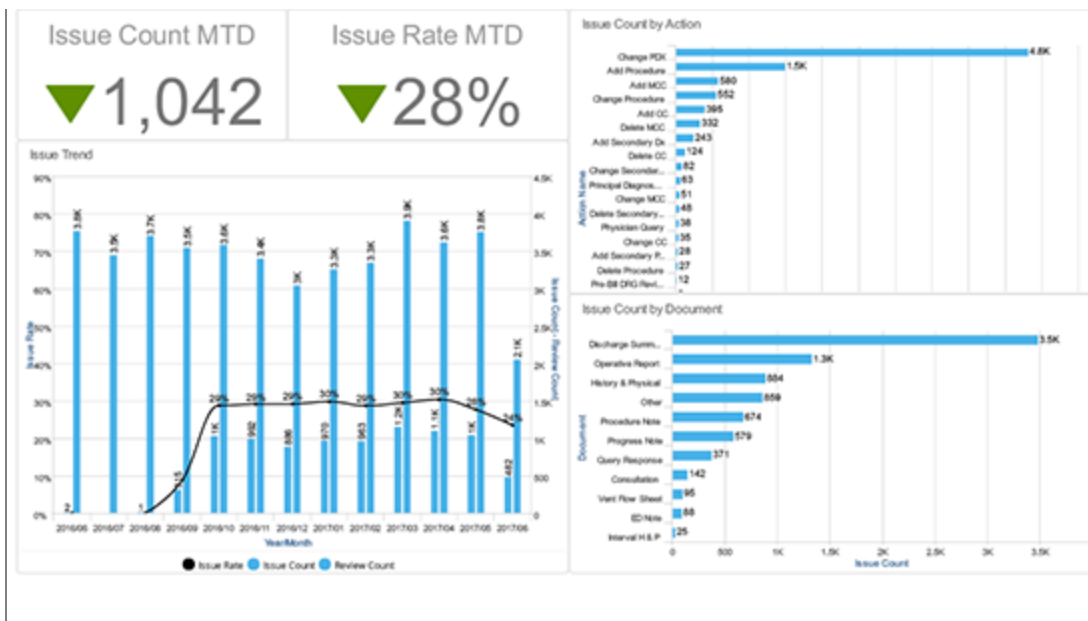
Leadership often requests numbers on the top query opportunities, but we can't assume that all physicians need additional education on these topics. Root cause analysis is critical to understanding the "why" and the "how" needed to improve outcomes. It is also helpful to compare query data from concurrent CDI queries versus retrospective coder queries to identify variances in outcomes or patterns worth investigating. The "Figure 2: Concurrent CDI Query Rate" graphic above shows the value of taking a query rate of 18 percent and drilling down for further analysis.

DRG Reconciliation

With the implementation of ICD-10 and the shift to value-based payment models—as well as new regulatory requirements—DRG reconciliation between CDI and coding is a practice that benefits from accurate, complete data analysis. At CHI, the top reason for DRG mismatch was principal diagnosis change. The reconciliation process involved drilling down to principal diagnosis by DRG, code, and documentation element, and then delving further to determine educational opportunities for individual CDI staff and coders. Don't overlook physician education opportunities revealed through DRG reconciliation analysis as well. This level of detail and analysis is much more informative than simply reporting a static percentage rate, as the “Figure 3: Issue Rate 4 Showing Rate, Cause, Document” graphic below illustrates.

Figure 3: Issue Rate 4 Showing Rate, Cause, Document

The level of detail an analysis provided through DRG reconciliation—a process that involves drilling down to principal diagnosis by DRG, code, and documentation element—is much more informative than simply reporting a static percentage rate.



The drill-down process should begin at the enterprise level and go down to account-level detail. Compile a “drill list” of account numbers that comprise a statistic or rate. This is especially important in interactions with physicians, medical directors, and leaders who may challenge your recommendation to improve a metric. Be prepared to show how you arrived at that metric. If you had seven queries with a response “clinically undetermined” then be prepared to present those cases. Use these encounters to identify educational opportunities, foster collaboration, and establish best practices.

CDI and Analytics: CHI Lessons Learned and Best Practices

- Standardize “what” is measured and reported
- Standardize “how” it is measured and reported
- Validate that data is entered correctly
- Interview key stakeholders and vet report requests
- Design visualizations that tell a compelling story or create a call to action
- Ensure distributed reports/dashboards contain a summary of analysis
- Use statistical process control when appropriate
- Create analytics that allow stakeholders to be proactive, not reactive

Next on the Horizon

In the era of value-based care, quality outcomes are critical for improved patient care and optimal reimbursement. CDI directors must be able to immediately identify the root cause of program disparities and query rate fluctuations. What’s beyond query rate, response rate, and case review rate?

Looking to the future, data analytics can provide clinical decision support for coding and CDI through real-time insights that enable preemptive corrective actions in clinical documentation and patient care. Leveraging technology to take clinical validation to the next level is changing the way we look at data and manage programs based on analytics, opening new possibilities for the HIM profession.

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Article citation:

Czahor, Amy. "How Analytics Can Direct and Improve Clinical Documentation" *Journal of AHIMA* 88, no.9 (September 2017): 36-39.

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