

3M Health Information Systems

Case study:

Intermountain Healthcare — AI-powered physician engagement to drive quality care



Snapshot of Intermountain Healthcare

Western United States

Large, not-for-profit health
system

24 hospitals and 225 clinics

2,841 licensed beds

3,000 physicians and advanced
practice clinicians

940,000 SelectHealth members

Health system profile

Intermountain Healthcare is a Utah-based, nonprofit health system composed of 24 hospitals, 225 clinics, a medical group with 3,000 employed physicians and advanced-practice clinicians, a health insurance company called SelectHealth, and 42,000 caregivers (which makes it Utah's largest private employer). Intermountain is widely recognized as a leader in transforming health care by using evidence-based best practices to consistently deliver high quality outcomes at sustainable costs.

3M products used

- 3M™ M*Modal CDI Engage One™
- 3M™ 360 Encompass™ System
- 3M™ Coding and Reimbursement System (CRS)

*“When documentation improves,
quality metrics improve.”*

-Dr. Kory Anderson

The challenge

Intermountain Healthcare launched an ambitious initiative for clinical documentation integrity (CDI) to move beyond manual processes and leverage technology to integrate workflows, automate routine work, prioritize cases with the most opportunity, and expand to all payer and quality reviews. Like many health systems, it faced resistance from clinicians who were already weighed down by administrative burdens and struggled to see the value of CDI programs.

Workflows for physician and CDI teams were often misaligned, leading to inefficiencies, documentation gaps and low query rates. This made it difficult to capture a clear view of the patient population, which was essential for accurate reporting on patient safety indicators (PSIs), hospital acquired conditions (HACs), risk of mortality (ROM) and other key quality measures.

Dr. Kory Anderson, medical director of physician advisor services and CDI at Intermountain Healthcare, said, “Our frontline physicians needed to get up to speed on the ‘why’ of CDI. Getting their engagement was essential to reducing the downstream consequence of documentation gaps, including significant impact on risk adjustment, quality metrics and continuity of care.”

Kearstin Jorgenson, MSM, CPC, COC, operations director, physician advisor services, Intermountain Healthcare, said, “We needed a way to intersect with physicians’ natural workflow, not to further complicate it. The scope of our CDI project expanded to the entire patient population, not just Medicare and Medicaid patients. Plus, we intentionally launched the project as part of Intermountain’s overall quality effort. We were asking for substantial change on a short timeline and there was a lot at stake.”

The solution

Intermountain’s CDI initiative required no less than a fundamental paradigm shift in how its teams document patient encounters—moving from a retrospective query model to a much more proactive approach. It partnered with 3M to deliver real time clinical insights to physicians within their normal workflow using **3M™ M*Modal CDI Engage One™** in tandem with the **3M™ 360 Encompass™ System**.

Real results

Intermountain Healthcare uses the 3M 360 Encompass System for single platform revenue management in tandem with 3M CDI Engage One to bring together CDI and physician workflows and deliver AI-powered clinical insights to physicians at the point of care. The result:



Improved CDI efficiency—
with an impact similar to
**4.6 additional
CDI RNs**, providing
more time for complex
quality reviews



Improved accuracy in
reporting of PSIs
by 20%



10-fold increase
in potential opportunity,
as CDI specialists
expanded to all payer
review



Quality impact from added
specified documentation and
codes that drive SOI, ROM,
Elixhauser, and other risk
adjustment factors



25-30% of resolved nudges
are short stay encounters with
1-2 day length of stay, typically
a challenge to address by
traditional CDI efforts



80-85%
of the encounters with
resolved nudges result
in specified code in
the final code set



9% increase
in query response rate



Decrease in the need for specificity
queries related to nudge concept

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“We knew we had to get out in front of the problem and stop chasing our tail. If we’re chasing retrospective queries, our skilled clinicians and CDI specialists don’t have time to reach beyond common, repetitive conditions to a deeper level where they can have more impact,” Dr. Anderson said. “3M CDI Engage One brings in artificial intelligence to provide proactive nudges to clinicians at the point of care, within the Cerner electronic health record (EHR) workflow, when they can close documentation gaps in real time, instead of fielding retrospective queries, days later, out of context.”

“To transform our CDI program, a crucial early step was to align with our well established physician advisor team, because they were influential, trusted advocates who knew how to translate our objectives to clinical teams on the front lines,” Jorgenson said. “It’s not realistic to expect physicians and their leaders to fully engage with documentation efforts, especially with new technology, until they can see a clear connection to quality and patient care. Once physician advisors catch this vision, they become strong advocates to educate their peer clinicians.”

“Technology is not a stand alone solution to all CDI gaps and problems,” Dr. Anderson said. “Coupling technology with ongoing peer to peer education about CDI, quality metrics and how finances are impacted by documentation is the real recipe for success.”

Engaging clinicians to customize new technology

Early in the CDI initiative, when Jorgenson walked rounds with caregivers, she often heard complaints about what was missing or hard to find in the patient record while clinicians documented encounters. “Doctors would say ‘I’m doing too much administrative work that isn’t bringing value.’ This worried me. I heard similar complaints from CDI teams. I knew we needed to gather feedback, really listen and let people on the front lines help us customize our new CDI technology to meet their needs,” Jorgenson said.

“What attracted us to 3M CDI Engage One was its flexibility to customize our approach. We didn’t want a black box solution. We needed to tailor the technology to focus where we could have the most impact,” Dr. Anderson said. “Right from the start we collaborated directly with clinicians to fine tune the AI technology to deliver the right volume and type of clinical nudges they needed.”

Jorgenson described their first steps: “We pulled together the best internal data we had about current documentation gaps. Then we met with service line leaders and facility medical directors to gather their feedback about how to customize the nudges and workflow. These leaders actually tested the nudges themselves to see how they would work.”

“We learned quickly that you don’t want to turn on too many nudges at once. You need to be targeted and precise,” Dr. Anderson said. “There’s a fine line between technology that’s useful and technology that interrupts. When we implemented 3M CDI Engage One, we focused on nudges that help clinicians quickly specify and clarify common conditions so they had more time for complex issues. We tuned the software to include some EHR documents and exclude others. We set it up to turn nudges on and off based on ongoing feedback from clinicians.”

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—Kearstin Jorgenson, MSM, CPC, COC, operations director, Intermountain physician advisor services (IPAS), Intermountain Healthcare

“CDI teams start to feel more like they are an extension of the care team.”

—Kearstin Jorgenson

“What we’re seeing as a result of this early collaboration is physicians are now improving how they document conditions on their own, without always having to be nudged. Clinicians are learning and changing their behavior as they use the software,” Dr. Anderson said.

Jorgenson agrees: “As we measure results from our CDI program, we’re seeing natural compliance. Rather than ignoring the nudges, physicians are responding and acting on what they learn consistently. We’re seeing more specific responses to document a more complete patient story. This is a good indication the technology is helping to decrease administrative burden and reduce rework for both clinicians and CDI teams.”

Better workflows, better collaboration

“By integrating 3M CDI Engage One with the Cerner EHR, we’re creating a collaborative workflow where we can ask clinicians to clarify issues in context, while the patient is in house, using EHR modules they are accustomed to,” Jorgenson said. “CDI teams and coders can each see what the other sees. We can work more proactively with our essential lab and analytics teams. CDI RNs can bring their clinical expertise to bear on particular cases using evidence sheets that support queries. CDI teams start to feel more like they are an extension of the care team.”

“We’re meeting various teams where they are, where they live, and this makes all the difference for engagement. They can see the value for themselves,” Dr. Anderson said. “These improvements in collaboration move us closer to a complete and accurate patient record, and when documentation improves, quality metrics improve. Reviews of quality indicators and second level mortality are becoming part of our standard CDI workflow.”

Using data to engage leadership

Intermountain uses data to drive continuous improvement for their CDI initiative. Jorgenson notes the high value of sustained, detailed reporting to senior leaders, including facility medical directors and service line managers.

“Working closely with 3M, we gather data to measure our performance and then report results regularly to both physicians and their leaders. Physicians can see exactly how they’re doing. Leaders can see which physicians respond to which specific nudges and queries. This not only helps us identify opportunities for peer to peer physician education, but we also learn how we can further customize our CDI technology to meet clinicians’ needs. We haven’t had a consistent way to do this in the past,” Dr. Anderson said. “We understand better than ever where we stand and how to identify opportunities for improvement. We also have the data to accurately represent the quality of care our organization provides.”

Results so far

Even in the early stages of its CDI initiative, Intermountain measured improved CDI efficiency with an impact similar to 4.6 additional CDI specialist RNs, freeing the CDI team to focus on more complex quality and mortality reviews. Case mix index (CMI) is improving steadily, and Intermountain has improved its accuracy in reporting of PSIs by 20 percent. According to Jorgenson, “the progress we’re seeing with PSIs, HACs and other quality metrics is almost exclusively due to CDI work.”

“Our project objective was to transform our CDI efforts with a quality focus and to build a patient centric and physician led strategy. Due to early collaboration as we customized the CDI technology together, we’ve made tremendous headway with clinician groups—particularly hospitalists, who are often physician advisors and educators—and with intensivists and our cardiology teams to a large extent. Trauma services now reaches out to us for help in a way they never have before,” said Dr. Anderson. “Physicians report reduced burnout and less disruption from retrospective queries. One key indicator of engagement is a nearly 10 percent increase in our query response rate. Across the board our teams recognize the value of optimizing and unifying workflows within the Cerner EHR.”

Looking ahead, Intermountain plans to extend its success with large trauma hospitals to community facilities and to continue to work toward all payer review and a value-based approach. “We’re just scratching the surface of what we can do,” Dr. Anderson said. “We also hope to leverage our success to enhance our compliance and care management efforts in the near future.”

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