

## Case study:

# UC Davis Medical Center – Engaging physicians and CDI operations with AI and automation

Sacramento, Calif.



## UC Davis Medical Center

Sacramento, Calif.

Multispecialty academic  
medical center

30,000+ annual admissions

646 licensed beds

200+ emergency patients  
per day

Serves 65,000-square mile  
area that includes 33 counties

## Hospital profile

UC Davis Medical Center serves a 65,000-square mile area that includes 33 counties and six million residents across Northern and Central California. The 646-bed acute care teaching hospital maintains an annual budget of roughly \$1.7 billion. UC Davis admits approximately 30,000 patients per year and handles more than 800,000 visits. The medical center's emergency room sees more than 200 patients per day on average.

## 3M technologies used

- 3M™ M\*Modal CDI Engage One™
- 3M™ 360 Encompass™ System
- 3M™ M\*Modal HCC Management
- 3M™ M\*Modal Fluency Direct
- 3M™ Coding and Reimbursement System

*“When physicians see the clinical evidence behind the automation and see how the 3M software supports compliance, this builds confidence and support. They get it.”*

-Tami McMasters-Gomez,  
Director of coding and CDI services

## The challenge: Moving to the next level

Clinical documentation integrity (CDI) leaders at UC Davis Medical Center recognized the power of new technology to improve efficiency and overall quality of documentation – and ultimately patient care.

“Our CDI team is tenured and experienced, and we have solid processes already in place to build on. When we started our CDI technology initiative, we were ready to move to the next level. At the same time, we had manual processes to update so we could review more cases, better manage concurrent reviews and consistently identify quality gaps such as patient safety indicators (PSIs),” said Tami McMasters-Gomez, director of coding and CDI services at UC Davis Medical Center. “To reach the future state we envisioned, we needed technology and automation to enhance the best work we were already doing.”

CDI leaders at UC Davis knew the CDI initiative needed to be highly collaborative across multiple teams. Perhaps most important of all, they needed full engagement with physician leaders and clinicians throughout the organization. They knew they had some work to do to get there.

## The solution

UC Davis partnered with 3M to help close the loop between revenue integrity and patient care using **3M™ M\*Modal CDI Engage One™** in tandem with the **3M™ 360 Encompass™ System**. This combination helped the hospital bring together workflows for physicians and CDI teams to help both teams improve the quality of clinical documentation while reducing burdensome retrospective queries and rework for common documentation deficiencies.

CDI leaders at UC Davis wanted physicians to feel that 3M CDI Engage One was their own front end, clinical documentation solution to help them better capture the patient story while they were caring for the patient.

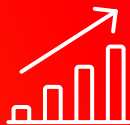
According to McMasters-Gomez, a pilot group of physicians liked having the support they needed to address documentation deficiencies in real time as they worked in the electronic health record (EHR), and thought the front end clinical nudges were much better than receiving queries retrospectively. As with all new technology initiatives, change management has been important. “We did get a little push back as we rolled out the new technology to busy physicians, so we focused on socializing the technology using videos and peer to peer training. Because we’re a teaching hospital, this training process is ongoing.”

## Real results

UC Davis Medical Center uses **3M M\*Modal CDI Engage One** and the **3M 360 Encompass System** to:



Bring together workflows for physicians and CDI teams, enabling better engagement, efficiency and collaboration



Improve case mix index (CMI) by **7.4%**



Increase capture of CCs and MCCs by **5%**



Positively drive query agreement rates above **80%**



Identify outliers for expected length of stay and expected mortality



Establish backend reviews and controls to improve accuracy and compliance

## Case study: UC Davis Medical Center

Unlike many artificial intelligence (AI) tools, the 3M software provides the flexibility to tailor the solution with specific clinical thresholds and protocols. This provides an opportunity to better engage service line leaders and frontline physicians in use of the solution in ways that are meaningful to them and their patients.

For CDI teams, the technology enables better workload management by using AI to prioritize cases with the most opportunity, and automate traditionally burdensome CDI tasks. Because the technology helps physicians address common documentation gaps – the low hanging fruit – with minimal manual intervention, CDI teams can better use their skills on complex quality reviews.

CDI project leaders at UC Davis work directly with various teams to continuously improve. As the initiative grows, they are seeing an increased number of other hospital teams seeking their expertise on how to drive outcomes. The 3M software helps them to showcase their CDI team's expertise and collaborate more efficiently with teams including coding, case management and quality.

“We had a very manual review process for managing patient safety indicators (PSIs) that could bog down in an ongoing cycle of emails between teams: CDI specialists would identify potential PSIs, then contact the quality team, the analyst team and then coding,” McMasters-Gomez said. “We needed a better way.”

“Now we have a shared prioritization tool in 3M that brings PSIs to the forefront across teams so that we can collaborate and do reviews concurrently. Our 3M software has also helped us transform manual reviews for malnutrition and sepsis to automatically prioritize these common factors,” McMasters-Gomez said.

## Start with common ground to win over physicians and executives

“Physicians are far more receptive when we talk to them in their own language. For example, evidence-based practice is a priority, real time versus retrospective resonates with them, and they are laser focused on outcomes and patient care,” McMasters-Gomez said. “It's essential to reinforce the ‘why’ with clinicians, but when they see the clinical evidence behind the automation and see how the 3M software supports compliance, this builds confidence and support. They get it.”

Another successful example is UC Davis' work with pediatric physicians. CDI leaders sat down with these physicians to create evidence-based clinical definitions, diagnoses and automation rules specifically for the pediatrics service line. As a result, many of these physicians are now advocates for the 3M technology.

CDI leaders at UC Davis also leveraged the success of a large scale sepsis improvement initiative already underway at the hospital, demonstrating how the 3M CDI technology, specifically automation, could enhance what physicians and other teams were already working on.

The CDI initiative helps identify sepsis and sepsis shock rates, and better defines the impact of sepsis on expected mortality. Other teams are collaborating directly with the CDI team to establish customized clinical nudges to further boost the overall sepsis improvement program.

*“Technology and automation enhance the best work we’re already doing.”*

—Tami McMasters-Gomez

## Fine-tuning and collaboration

“The ability to customize nudges in 3M CDI Engage One is a big deal,” McMasters-Gomez said. “We can apply a service line’s unique clinical criteria to customize how the nudges will work as physicians document a case or clarify a diagnosis. The physicians help to choose which clinical nudges will fire and which will not. This collaboration wins physician engagement because they are a crucial part of the customization process.”

Collaboration generates ongoing feedback. The software helps physicians understand the clinical evidence behind the nudges and easily view the evidence as needed, in real time within their EHR workflow. To create a partnership between teams, CDI leaders at UC Davis take a distinctive approach: They prepare for a physician meeting with specific examples for physicians to react to. They show the rule behind the clinical nudge and the evidence that supports it. Then they break it down and modify it together.

## Real results

UC Davis is seeing strong correlations between its adoption of 3M technology and improvements in key performance indicators ranging from documentation accuracy to physician engagement, from finance to quality and population health.

“We continue to see trends move in the right direction,” McMasters-Gomez said. “For CDI programs where we’re at 100 percent response rate, we’re seeing more than 80 percent query agreement rates. This clearly demonstrates improved physician engagement.”

The hospital has been able to integrate its workflows for physicians and CDI teams – streamlining backend reviews and improving overall accuracy and compliance. This increased efficiency, has enabled CDI teams to touch more cases, and improve CMI by 7.4 percent.

The UC Davis team found that the 3M software helps them keep quality at the forefront – capture of comorbidities and complications (CCs) and major comorbidities and complications (MCCs) increased by 5 percent. The organization gets a more accurate picture of its patient population by watching quality indicators such as expected mortality and expected length of stay – especially with certain diagnoses and populations, including sepsis and pediatrics.

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## Next steps: Outpatient CDI

UC Davis is building on its success with inpatient CDI to extend to outpatient using **3M™ M\*Modal HCC Management**, which helps the organization review more cases and prioritize its work based on hierarchical condition category (HCC) capture and related risk adjustment factor (RAF) scores.

3M HCC Management provides a clear view of patient encounters so that clinicians can document and manage patients' chronic conditions and review supporting evidence. Because its inpatient and outpatient programs are closely aligned, CDI leaders at UC Davis see the value of using the same 3M platform for both.

"We're just getting started with outpatient, but we will work closely with the population health team as well as with professional coders to ensure the work we're doing isn't overlooked and that the diagnoses actually get on the claim," McMasters-Gomez said. "There is great potential to improve patient care outcomes going forward."

## Call today.

For more information on how 3M software and services can assist your organization, contact your 3M sales representative, call us toll-free at **800-367-2447**, or visit us online at [www.3M.com/his](http://www.3M.com/his).



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