

Interview series

From archaic systems to advanced analytics: Hospital IQ helps MercyOne Des Moines Medical aggregate data to improve inpatient operations

[MercyOne Des Moines](#) is a nonprofit Catholic healthcare provider comprising multiple hospitals and other facilities in Des Moines, Iowa. With a staff of approximately 7,000, including 1,200 physicians and allied health professionals, MercyOne Des Moines is one of Iowa's largest employers and one of the Midwest's largest referral centers.

[Hospital IQ](#) offers an operations management platform that uses artificial intelligence (AI), prescriptive actions, workflow automation, and streamlined communication to direct actions. It enables health systems to achieve and sustain peak operational performance that improves patient access, care delivery, and staff productivity.

The Google Cloud Healthcare and Life Sciences team spoke with Diane Murphy, Market Director for Central Iowa at MercyOne Des Moines, and Jason Harber, Executive Vice President of Operations at Hospital IQ, about aggregating hospital data on Google Cloud Platform and applying advanced analytics to streamline operations.

[Diane, what challenges did MercyOne Des Moines and Hospital IQ tackle together?](#)

Diane Murphy: We had a large number of clinical and non-clinical IT systems across both our individual hospital and our region. For example, perioperative services documentation was in one system, while cath lab documentation was in another. Inpatient, outpatient, and care management systems were separate as well. Because these systems didn't communicate—or if they did, it was one-way—we couldn't access correlative data across different systems, and we couldn't get valuable reports to drive improvements. Working with Hospital IQ gave us a huge opportunity to combine information from these systems in a way that would allow us to operationalize problem solving. For example, we had a very manual process in our centralized staffing



Let's get solving.

MercyOne Des Moines, Hospital IQ, and Google Cloud are...

"...solving for real-time data analytics that transform hospital operations."

Diane Murphy, Market Director for central Iowa, MercyOne Des Moines

"...changing the way administrators run their hospitals."

Jason Harber, Executive Vice President of Operations, Hospital IQ

management model and needed an electronic real-time tool that would help us predict staffing needs and deploy staff quickly. Hospital IQ engaged with us on a daily basis to understand our problem and partner with us to develop a solution.

What did MercyOne Des Moines' daily engagement with Hospital IQ look like, and how did you implement the solution?

Diane Murphy: We had three main goals: to improve how we manage our observation patients, to reduce our observation hours, and to understand whether we were placing patients in the right status at the right time. Hospital IQ generated, in real time, a highly specific list of patients who had both an observation status and a payor source of Medicare. We created several iterations of the list to improve our process. Ultimately it included which tests had been ordered, the status of those tests, how long each patient had been under observation, whether their discharge records were complete, whether they had an inpatient or discharge order, whether they were still in our facility, and how long it had been since their status had been updated. This is information that we were previously collecting manually, which was time consuming, inefficient, and at times, inaccurate.

Within 45 days, we reduced our overall average observation length of stay by over 14 hours. We also reduced our overall observation of patients in the hospital from 30 percent to 19 percent. This didn't happen because we forced people into inpatient status; it happened because we accessed the information we needed in order to identify the appropriate status for our patients.

How long did it take to analyze the information, implement the changes, and observe the results?

Diane Murphy: About 60 days. Hospital IQ had already created some lists for us, so we could make quick adjustments and get started. We saw a sustained change within 45 days of implementing the daily process I described and it continued to improve.



Diane Murphy,
Market Director for
central Iowa, MercyOne
Des Moines

“Our huge opportunity working with Hospital IQ was to combine systems in a way that would allow us to operationalize problem solving. We needed an electronic real-time tool that would help our hospitals deploy staff quickly.”

That's an awesome success story. Thank you for sharing that example, Diane. Jason, how does Hospital IQ integrate Google Cloud into its solutions?

Jason Harber: If you walked into any hospital right now—especially in this chaotic time of COVID-19—you'd see that they're running a lot of daily operations using spreadsheets, phone calls, text messages, and pages, which are very archaic and mostly manual processes. At Hospital IQ, we took a step back and thought, if we could aggregate the data across all of the disparate systems, apply advanced analytics to it, and then streamline standard operating practices, we could make a big change. We apply this recipe to help our clients time and time again.

From the beginning, we needed a platform on which we could scale and innovate quickly. Since we had significant in-house Google Cloud experience, we knew of the platform and what we could leverage. We needed strong data tools and the ability to create a multi-tenant enterprise system. Google Cloud seemed like the right platform for the job, and we've found this to be absolutely true. We built out a platform that scales across many hospitals, with thousands of users accessing it every day. Each month we innovate, scale, and deliver new features and capabilities to our customers, all on Google Cloud Platform.

How would you describe your relationship with MercyOne Des Moines?

Jason Harber: Hospital IQ and MercyOne Des Moines have a very special relationship. It's a match made in heaven, because they love to run fast and we love to run fast. Every day they're pushing us to be better, and we bring new ideas that push them to improve. It really is a true partnership.

When we engage a new customer like MercyOne Des Moines, one of the first things we need to do is set up the system. In a traditional healthcare IT environment, that conversation can be painful, because facilities often use many on-premise solutions and archaic practices that could take months, if not years, to rebuild into a major system. We come to our customers with a standard data



Jason Harber,
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specifications because we understand their basic problems. Beginning with these specifications, we're able to quickly and efficiently set up our platform for our customers within one to four months. After that, we engage people like Diane and begin refining the platform to solve their specific problems. Our process gives us a really quick time to value, which is powerful to witness. Google Cloud is essential for that speed and efficiency. I've never been able to serve customers the way I have been able to with the technology we have today.



To learn more about Google Cloud Healthcare and Life Sciences visit:

<https://cloud.google.com/solutions/healthcare-life-sciences>

For more information about how Hospital IQ can help you improve operational efficiency, visit: <https://www.hospiq.com>.