Oracle Customer Case Study

Smart Data from Oracle Autonomous Data Warehouse Cloud Helps QMP Health Save Lives

Faster analytics deliver cost-cutting efficiencies for healthcare providers—along with world-class care.
Oracle Makes Data Warehousing Easy

QMP uses Oracle Cloud technology to provide its healthcare industry clients with fast access to analytical data. QMP’s CAREiQ healthcare technology platform is a service built on Oracle Autonomous Data Warehouse Cloud technology.

Oracle Autonomous Data Warehouse Cloud is built on groundbreaking self-driving, self-repairing, self-securing technology. It is easy to use, self-tunes, scales elastically, and delivers extraordinary query performance. Fully autonomous operation removes the need for IT pros to perform routine administration, making it a very cost-effective solution, while machine learning algorithms automatically improve security, reliability, and performance.
Today’s US-based healthcare providers face mounting pressure to innovate, respond to changes, and carefully monitor costs as the population ages and the demand for care increases. One significant cost for growing healthcare companies is establishing systems to collect and analyze patient data. For smaller companies that don’t have much experience with analytics, it can be difficult to allocate the required time and resources to build and maintain these software assets.

Fortunately, new autonomous technology from Oracle offers an easier path to faster analytics. Quality Metrics Partners (QMP), a Dallas-based healthcare holdings company specializing in ancillary service management, used Oracle tools to create a cloud-based healthcare technology platform called CAREiQ that has life-saving implications.
“Perhaps the most important outcome of our new cloud service is better care for the patient population,” says QMP’s CEO Michael Morales. “Oracle tools enable us to educate physicians and help them be more aware. They can discover patterns in the data that assist with their diagnosis and detect potentially overlooked disease markers. They can also receive alerts so they can be proactive about conditions that may not have been caught otherwise.”

These insights are particularly valuable in today’s value-based care environment, where reimbursement structures incentivize healthcare providers not merely to treat individual patients, but to proactively manage the health of their patient populations too. Health plans and healthcare providers must identify members with chronic conditions and make sure they are getting the necessary treatment.

CAREiQ doesn’t just drastically decrease the average turn time for blood sample results; it also integrates data from multiple sources and systems into cohesive reports so physicians and clinicians can easily spot trends in their patient populations.

“Patients don’t want to be put off for a week or two as they wait for results from blood tests or details about their bill,” Morales says. “Oracle Autonomous Data Warehouse and Oracle Autonomous Database provide an intelligent, self-driving platform that enables us to get results to their healthcare providers very quickly. With our Oracle-based CAREiQ platform we have reduced the turnaround time for delivering lab results from two weeks to 48 hours, and often to same-day results. That is not only a key factor in staying competitive in the market; it can be a life-or-death situation when a patient requires fast diagnosis.”
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—Michael Morales, CEO at QMP
A Small Business Making Big Changes in Healthcare

Founded in 2014, QMP began as an owner of diagnostics laboratories. The company now delivers data analytics and other services to hospitals, clinics, and laboratories. It performs diagnostic screening, medication monitoring, pharmacogenomics, molecular pathogen testing, billing analysis, and other services for its clients, serving hundreds of thousands of patients throughout the United States.

QMP’s business model has evolved quickly as a result of the new technology solutions built on Oracle Cloud services. QMP created a laboratory management company called ManaCare Health to better serve and manage laboratories across the country. Part of this management consisted of delivering healthcare technology beyond the initial QMP business umbrella. QMP used Oracle Autonomous Data Warehouse Cloud, Oracle Analytics Cloud, and other Oracle technologies to build CAREIQ. The healthcare technology platform enables the company to improve its internal processes and also offer diagnostics, billing analysis, and other lab services to healthcare providers.
QMP’s CAREiQ platform now circumvents manual processes with Oracle Autonomous Data Warehouse Cloud. Oracle’s fully managed data-warehouse service is self-driving and self-repairing, with patches and upgrades applied automatically without any human intervention, helping QMP eliminate manual, error-prone management processes. Routine management tasks such as provisioning, patching, backups, tuning, and applying security patches are automated.

The new platform enabled QMP to avoid hiring a projected 15 to 20 additional analysts per laboratory to manage its growing data, saving the company hundreds of thousands of dollars in employee costs. It also empowered the company to scale seamlessly and grow much faster than its competitors.

As colleagues from competing laboratories asked about QMP’s impressive analytics practices, Morales recognized a potential to expand the business. “We realized there was an opportunity for us to reuse the Oracle Cloud technology,” Morales says. “We saw a chance to offer these benefits to small and midsize healthcare businesses so they could quickly advance their ability to analyze information, spot trends, and track what’s important to their practices. Our analytic platform gives them a level of insight into critical metrics that up until now only large corporations had access to.”

Small and midsize businesses must consider the costs and overhead of growth as they strive to compete against billion-dollar companies that have spent years refining their processes. Rather than allotting months to creating an on-premises BI platform, QMP’s clients can typically get set up on the CAREiQ cloud-based platform within a week. Once they’re on the system, they can get diagnostic screening results and other information returned within hours.
“A lot of smaller healthcare providers don’t have the luxury of devoting years to improving their practices,” Morales continues. “In partnership with Oracle, we were able to use Oracle’s tools to build the business analytics platform we need so we can make smarter decisions faster. Now we offer that functionality to other healthcare organizations to help them leverage their data so they can provide better service to their patients and prosper in this competitive industry.”
Consolidated Data Supports New Service Model

“Oracle tools enable us to educate physicians and help them be more aware. This comprehensive solution brings healthcare into the 21st century and is saving lives.”

—Michael Morales, CEO at QMP

Most healthcare organizations either focus on improving the patient experience, improving the provider experience, or improving internal processes. According to Morales, big data analytics allows an organization to focus on all of those aspects and deliver a single resource for improved patient outcomes. “It’s a new universe that we are just beginning to appreciate as a healthcare pioneer,” he states.

QMP pulls client data from various sources including multiple types of electronic medical records systems, laboratory information systems, and billing systems. It uses Oracle Cloud Platform for integration to gather the information and prepare the data. The cloud service helps QMP quickly reformat transactions, combine data from multiple tables, and then load them into Oracle Autonomous Data Warehouse.

“We connect our CAREiQ platform to our client’s electronic medical records system to provide them with the same kinds of reports and dashboards that enabled us to surpass our competitors,” Morales explains. “We can tap into the database of a clinic or hospital and pull data to the Oracle Autonomous Data Warehouse Cloud. It loads and scales immediately to the required size. Built-in adaptive machine learning technology automatically tunes, upgrades, and patches the database while it’s in operation, even as workloads increase and decrease.”
Autonomous Technology Drives Progress Internally and for Clients

The inherent efficiency of Oracle Cloud Services has enabled a nine-fold growth for QMP’s business in the past year. To continue the growth of new laboratories, supporting new clients, and expansion to new service models, the Oracle Cloud services are essential. Automation also enables database administrators (DBAs) at QMP to take on new roles. Because they no longer need to concern themselves with mundane tasks related to managing the database, they can instead focus on new projects that utilize analytics, AI, blockchain, and other emerging technologies.

“We are working with Oracle to combine analytics with blockchain, artificial intelligence, and IoT to make this a much more comprehensive solution,” Morales says.

“For example, we’re using blockchain technology in conjunction with Oracle Database Security to tie together the laboratories, physicians’ practices, and hospitals to create a decentralized network of healthcare providers that can better benefit patients.”

“Oracle’s autonomous technology has been quite a paradigm shift for our DBAs,” adds Steve Chamberlin, CIO of QMP. “Now we don’t need to have a DBA constantly involved in managing the system. We can grab the data we need from another database, another cloud service, or lab files, and then load it directly into the warehouse. Oracle establishes the architecture and manages the process—and it’s actually more efficient than what our DBAs constructed.”
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—Steve Chamberlin, CIO at CAREIQ

Along with the persistent goal of streamlining their processes, healthcare providers must comply with Health Insurance Portability and Accountability Act (HIPAA) regulations governing the security and privacy of patient data. Chamberlin says the Oracle tools help immensely with that challenge as well. "Oracle provides a secure environment that uses encryption technology and other advanced database security technologies to help us with the HIPAA regulations," he explains. "It was quick and easy to put it in place. In addition, the Oracle data centers are audited every quarter. That's way more often than what small companies can afford to do."
Self-Driving System Automatically Scales to Meet Growing Needs

Morales adds that the system’s ability to self-adjust to a fluctuating diagnostic workload helps CMP manage IT costs. “Oracle Autonomous Data Warehouse Cloud is faster and more responsive than Oracle’s previous Database Cloud service,” he says. “We can scale up processors when we’re running a backup or loading data. And then we can scale the processors back down again during business hours so we’re actually saving money. The performance and scalability tuning takes place automatically behind the scenes. So if you throw a bigger workload at it, it accommodates for you.”

One of the biggest challenges hospital systems face is the amount of patient data they work with.

Managing information about hundreds of thousands of patients can be very difficult. “It could take nine months to two years for a healthcare provider to do a true analysis and set up a business plan to get large volumes of data onto an analytics platform with a traditional partner,” Morales says. “If they partner with us, we can take their data and spin up analytics tools to support decision-making within a week or two.” Oracle Autonomous Data Warehouse Cloud makes it easy for QMP to quickly add capacity as workloads increase. “We simply create a new instance in the cloud and we can load a new client’s data immediately,” he continues.

These process efficiencies are a win for everyone involved. QMP improves internal efficiencies and expands its business model; doctors and clinicians at client organizations can make better decisions and focus on what they’re good at; and patients get test results and diagnoses more quickly. QMPs CAREIQ service offering enables smaller healthcare organizations to benefit from enterprise-grade technology formerly only available to large companies with many IT professionals on staff.
“If we can spot trends and help deliver better results faster, of course we can save money and improve our business—but we can also help doctors make intelligent decisions and focus on what they’re good at,” Morales concludes. “Autonomous technology from Oracle enables us to provide them with simple tools that can help them run their practice better so they can more effectively manage the entire patient population under their care.”

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