



# Dispensing a strong dose of analytics for population management

## hMetrix helps improve healthcare decisions and outcomes with HPE Vertica in the cloud

### Objective

Help healthcare stakeholders manage patient risk and foster wellness by delivering user-friendly, business intelligence solutions

### Approach

Implement a big data solution on premise and in the cloud to enable analytics of complex patient and clinical data

### IT matters

- Provides a powerful, reliable database for 10 TBs of compressed data representing claims, patient records, and clinical information for quick access to patient information
- Achieves up to 70x improved response time, enabling faster data queries versus traditional databases
- Delivers real-time data from billions of records for healthcare providers serving patients

### Business matters

- Provides the analytical platform on which the company can monetize its healthcare solutions
- Saves a full-time database administrator's annual salary
- Serves 50 percent more customers than with the previous database environment, enabling the provision of additional revenue-generating solutions
- Allows staff to conduct complex, comparative, and predictive analyses on large data sets to help clients manage risk
- Helps health providers manage risk in compliance with new regulations governing bundled payments

hMetrix offers healthcare business intelligence and data science solutions that help payers, providers, employers, hospitals, and government agencies manage data, risk, and reimbursements. hMetrix provides healthcare organizations the tools and information needed to positively impact clinical and business outcomes.

Healthcare delivery is moving to a value-based system, where there is a greater need for alignment of payments with outcomes. This calls for in-depth analytics, healthcare experience, and top-of-the-line technology. hMetrix employs all three capabilities to help healthcare stakeholders. Although hMetrix has only 70 employees, its product slate enables it to compete with large healthcare solution providers in the field.

In ramping up for a project, the 12-year-old company must staff quickly, launch the appropriate infrastructure, and produce timely results. hMetrix leverages an HPE Vertica data analytics platform on which it provides established products like a self-service

analytics tool for care managers overseeing many patients. The platform also supports another hMetrix product, "*Episode Analytics*," that helps hospitals effectively manage risk in compliance with new government regulations concerning Bundled Payments. hMetrix plans to add more products to its suite—leveraging HPE's Vertica platform—that handles large data volumes, provides real-time data and storage for billions of records.

Seven years ago, hMetrix adopted its first HPE Vertica solution to overcome the velocity and volume limitations of its MySQL environment. The company needed a powerful big data platform for applying, combining, and analyzing large, complex volumes of U.S. Medicare/Medicaid claims data. The HPE Vertica solution has helped hMetrix serve 50 percent more customers for the past seven years, and still works admirably today.

"Other vendors have proprietary appliances and software, but HPE Vertica uses commodity hardware," says Zacharia Mathew, Director of

Analytics at hMetrix. “We didn’t have to figure out whether it was compatible. That was a big advantage. This allowed hMetrix to focus on building healthcare solutions for non-technical users to affect patient outcomes.”

## Impressive response times

Another benefit of this full-featured analytics system, he cites, is exceptional response time, which is vital for querying, comparing, reporting, and predictive modeling some 10 TBs of compressed clinical and claims data.

“In 2009, with the introduction of HPE Vertica, we immediately saw improvements in response times of 70 times compared to our legacy data warehouse,” Mathew says. “Using HPE Vertica with the Tableau visualization tool gave us the ability to analyze data at the speed of thought—without the development requirements. Fast response times mean that clients are impressed with our work and we can compete with larger organizations. When we show a demo powered by Vertica that is several times faster, outpacing their traditional database solution, the opposition melts away. That has helped us focus on the client’s business delivering solutions that ease the transition from opportunity to a signed contract. And that’s how we’re able to bring value to our customers and monetize this big data platform.”

Recently, hMetrix worked with a client developing a mental health application using a cloud-based version of HPE Vertica on Amazon Web Services (AWS)—a high-performance computing environment—to bring value to mental health treatment centers across the United States. The application allows rehabilitation managers to monitor the progress of program participants.

Mathew notes, “We didn’t have to do much to get up and running with HPE Vertica because it’s optimized and pre-configured to run on Amazon Web Services. In this particular case, we didn’t want to incur the capital expenditure for setting up servers and the operational cost of maintaining that infrastructure. So far it has delivered that promise. In this particular scenario, we will probably stay with AWS for some time.”

In addition to choosing an approach that enables hMetrix to stay extremely nimble and save money on infrastructure cost and administration, the company saves the annual salary of a full-time database administrator.

“Clients have seen our work and they always come back for more,” Mathew says, “and when they do, we have more data. We handle TBs of data, and we update 1 TB of data daily—all without a full-time database administrator.”

## Potent impact on care management

To maintain its portfolio of repeat clients and garner new ones, the firm strives to stay agile in responding to their demands. The HPE Vertica with AWS platform reduced the overhead and delay that companies experience whenever a system administrator or a siloed IT group faced time restraints or fell behind in client report generation.

“To improve operational efficiency and ensure ETL (Extract, Transform, Load) work transpires in a timely fashion, the company delegates database ETL work to analysts instead of needing a dedicated database administrator,” Mathew explains. “The simple functionality, governance, administration, and security enhancements of Vertica enable this process change.”

## Customer at a glance

### Industry

- Healthcare/Government
- Hospitals
- Insurance

### Primary software

- HPE Vertica Analytics Platform
- Amazon Web Services
- Tableau Software



“It’s great to see the speed, compatibility, and technical progress because of HPE Vertica in the cloud on Amazon Web Services. But more importantly, this solution is about improving lives and helping rehabilitation managers do their jobs.”

– Zacharia Mathew, Director of Analytics, hMetrix LLC

Whether for its own processes or in solutions for healthcare clients, hMetrix is keen on efficiency. “Our products, processes and tools powered by HPE Vertica enable our healthcare clients to do what they do best—take care of their patients,” Mathew concludes.

Learn more at  
[hpe.com/vertica](http://hpe.com/vertica)

