

DAKOTACARE:

Healthy Business Analysis with QlikView

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Mark Tracy – Director of Decision Support Systems, DAKOTACARE



Case study in brief

Company
Dakotacare

Industry
Health care

Challenge

- Too little information, too late
- Backlog in IT for reporting
- Significant amount of reconciliation of claims payments, denials

Solution

QlikView applications for claims processing (140 million records), underwriting and business performance analyses

Results

- Information at users' fingertips
- Instant accessibility – at massive volumes
- Efficient use of hardware resources
- Accurate base data
- Higher customer satisfaction
- Minimal reimbursement reconciliation

Company Background

DAKOTACARE, the health care plan of the South Dakota Medical Association, covers every hospital and over 98% of the state's physicians and pharmacies. A health care leader in South Dakota for more than 20 years, DAKOTACARE manages hundreds of millions of records on subscribers and providers, from coverage to codes to claims.

Finding and providing “the right answers at the right time” is critical to both ensuring good customer service and effectively managing the business, according to Mark Tracy, Director of Decision Support Systems of DAKOTACARE. That essentially sums up the company's reason for working with QlikView.

In comparing against “traditional” OLAP-based Business Intelligence solutions 18 months ago, Tracy found QlikView to be not only the lowest cost solution to purchase, but also the lowest cost to deploy and easiest to learn. “My largest hurdle in selecting QlikView was skepticism. I couldn't believe it would do what it said, at the price that it was,” he said. The free download from the QlikTech website convinced Tracy, and he in turn, convinced his management.

From Data Rich to Information Rich with QlikView

Healthcare companies process enormous amounts of data, mostly driven by codes for test and procedure descriptions, diagnoses, provider ID's and more. “Prior to QlikView, we were data rich and information poor,” said Tracy. DAKOTACARE's staff had to rely on IT for custom reports that would address internal reporting as well as questions from healthcare providers and clients. Their requests were placed in a queue, then prioritized, with the resulting reports coming days or even sometimes weeks later. “Much of our information needs are time-sensitive,” said Tracy. Too often, by the time people got their questions answered, they no longer needed the information. Also, representatives would not even ask for data requests knowing that their information needs would not be met prior to a decision deadline. Or, intrepid representatives would try to extrapolate answers on their own, often with varying results.

Now, the reps have the answers at their fingertips. Tracy explains the difference with an example in provider services, the DAKOTACARE department that works with physicians, hospitals, pharmacies and other healthcare providers. Periodically, for example, a provider will call DAKOTACARE asking a question regarding claim turnaround time. In a matter of seconds, a provider services representative can pull up the claims document in QlikView and see the average number of days from claim receipt until it was paid for the entire claims system, a particular client, health service provider, all the way down to a specific claim. The representative can then export the results and e-mail a file to a provider, showing every claim, every receipt and payment date going back as far as 2001. “Reps can show providers that a particular claim may have been an ‘outlier’ in a host of claims we’ve processed for them. They can drill to see why the payment claim in question was delayed. It’s about instant access to information,” he said.

Massive Data Volumes with ‘Phenomenal’ Response Time: QVD Technology

Instant access for DAKOTACARE representatives can mean sorting through a couple of hundred million records daily. That kind of volume made the transition to QlikView 7’s 64-bit, multi-processor platform design a simple decision; DAKOTACARE runs QlikView on an X-64 dual Xeon processor server with 12 gigs RAM.

QlikView 7’s patented QVD technology serves as a “meta” reporting application with a virtual data repository for all of the QlikView applications a company builds. DAKOTACARE is using QlikView to pull data from several source systems including SQL Server, Unidata, Pervasive, Oracle, Access, Paradox, and others. QlikView then consolidates the data into QVD files. These base QVD files replicate all the source data into one location. More importantly, is that once the data is stored in QVD files, QlikView can read the source data from these QVD files at a rate exceeding one million records per second. The result is that DAKOTACARE’s QlikView applications can then query the QVD data files, making queries extremely efficient and fast.

DAKOTACARE’s “base” claim data alone contains 140 million records with hundreds of columns of data, with detail on every claim paid since 2001. This QVD innovation allows unprecedented speed in incremental data loads, reducing the load on underlying data sources and allowing more frequent data refreshes. The frequency of QVD refresh (hourly, nightly or weekly) is a business decision based on an individual company’s needs.

Companies gain infinitely scalable business analysis solutions that provide summary KPIs as well as highly granular, detailed analyses. Tracy says that QlikView 7’s 64-bit design and QVD innovation didn’t change the approach, just the scale. “It not only allows you to load massive reports, but also accommodates lots of users with phenomenal response times. The innovation and scale of QlikView 7 moved it from a pretty cool tool to an enterprise-class BI solution.”

Creativity in Analysis Changes the Business - and the Bottom Line

Tracy called 2005 “the year of data access and enlightenment.” The process of developing DAKOTACARE’s QlikView applications uncovered and corrected many data errors, which impacted claims processing, provider reimbursements and ultimately, the bottom line. If reimbursement codes are entered incorrectly during client setup, for example, refund checks need to be issued, often weeks later. QlikView allows DAKOTACARE to “get it right the first time, before we get checks out the door.” As Tracy noted, “QlikView is an awesome audit tool.”

Empowering Users

QlikView didn’t just answer the company’s standard questions, it allowed people to ask questions they hadn’t thought to ask before – and it changed the way they worked. Users were always “spoon-fed” their information by relying on IT for reporting. As a result of working with QlikView, DAKOTACARE’s workers are more knowledgeable. “We are asking them to be more informed users – to take responsibility for owning and understanding the data,” said Tracy. That shift has paid off tremendously in time saved and information accuracy, as well as provider and customer satisfaction.

While Tracy and his team have “pushed” data ownership out to the field, they remain on-call to help users understand the data interrelationships and to walk them through new queries. “Users will call me expecting that they can’t get the answer and then are so surprised by the capacity,” explained Tracy. He related a recent call from an employee who wanted to extract a list of all active and COBRA members, subscribed to their HMO, who are male and over age 52. Tracy walked him through what he wanted to accomplish and they came up with a list in a few minutes, whereas before it was a several hour program request. “His comment was ‘QlikView rocks!’ I hear that all the time.”

It’s this ability to ask new questions and uncover new possibilities that makes QlikView so valuable to DAKOTACARE. There’s an opportunity cost to not having this ability, according to Tracy.

In his own Words: VP of Risk Management Digs Deep to Confirm Hunches

As important, departments are working with QlikView applications to determine and justify business policy. DAKOTACARE’s Vice President of Risk Management, Mike North, likens working with his QlikView applications to “a spreadsheet with a billion rows.” Of course it’s more sophisticated than that, but it expresses the capacity of analysis.

According to North, “QlikView enables me to investigate ‘hunches’. Historically, in every organization I’ve ever been a part of, IT time is limited and very valuable, and IT staff are typically over-utilized in an inefficient manner. Business unit managers are always asking IT for data, in hopes that they will gain information. When the data doesn’t produce information, they call IT and ask for more data. QlikView turns the tables on managers: the data is there all nice and pretty with a bow tied on. Now the capable manager is able to concentrate on converting the data into information – allowing for better decisions.

“In the past, I would spend a great deal of time trying to research an issue within my business unit, looking at various static reports. Then I would define my question, sit down with IT and try to describe the elements needed in order for a conclusion to be reached. The IT staff would produce reports which were EXACTLY what I had asked for. Unfortunately, I didn’t always ask correctly! So the exercise with IT would have to go around again.

“Managers are quick to send out a request for data because of ‘hunch’. This is necessary, but it’s not the most efficient manner to get the answers that they need. QlikView enables me to investigate those hunches myself. When I mine the data and realize that this isn’t the direction I need to go, I can stop, and pick a different direction. Now IT spends their time helping me analyze and understand my data, rather than build some report which may or may not be necessary.

“As a recent example, I had a concern that perhaps my age/gender rating ratios might be askew. Age/Sex factors are the core of determining rates. There are many other factors that go into developing a final rate delivered to a client, but the starting point is determined by age sex/factors. It’s inherently understood that certain demographics of people have different generalized risks. When these factors are “out-of-whack” it impacts the ability to manage an existing business and quote new business. Inappropriate factors will attract business that is under-priced (eroding margins) or cause the loss of business because of overpricing on certain demographics.

“There didn’t seem to be a problem on the surface, but a few off-hand comments by our agents made me wonder if things were ‘out-of-whack’. If that were true, then a full-blown study would be required. This type of investigation would involve significant time and money to come to a conclusion. At the end of this intense effort, you may learn that there isn’t an issue to be concerned with, and change nothing. I was able to drill into QlikView, and in only a few hours, I saw that there was undoubtedly an issue and that it needed to be addressed. QlikView gave me the information I needed to make an accurate decision that the study needed to be done. Without it, I would not have done the study – there was not enough obvious evidence to make me concerned. The end result would have been the same, but QlikView enabled me to make a quick decision rather than a guess.

“QlikView has given me the power to answer questions that no one has thought to ask. The only limitation I have run into in working with QlikView is my inability to come up with the question. Rest assured, when I do come up with a question, QlikView produces the results I need to come up with an answer.”

Looking Ahead

Moving into 2006, Tracy is looking at “the year of data trending and analyzing.” The company is creating and reporting on Key Performance Indicators (KPIs) across the board. Management will see a dashboard with instant access to gauge metrics such as average cost per member per month, loss ratios, payments accuracy ratios to name a few. KPIs will also be developed for individual departments; marketing, for example, will track quote activity, closing ratios, persistency, etc.

“The nature of our jobs – and how we do them – will change over time as the population ages and their needs change,” said Tracy. “QlikView will help DAKOTACARE to analyze, grow and change accordingly.”

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