

Northstar Anesthesia improves margins with PowerBI and US Medical IT

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Nearly every healthcare delivery organization today is challenged with producing timely operational analytics reports that require integrating real-time data from multiple data sources without the need to call in expensive *analysts* every time a report is needed. For all but a small number of healthcare organizations, the dream to realize the benefits of self-service BI for the masses has been more of an elusive pipe dream. All too often, that's because the few business intelligence analysts they have can't begin to meet the explosive demand for new, ad hoc, and custom reports.

I recently came across an outlier health care organization that's making real-time, self-service and mobile BI a reality and ubiquitously available to its 2000 associates: NorthStar Anesthesia (NSA). Based in Dallas, NSA has empowered its executives to view operational data in real time, gain new insights to improve financial performance, and share insights broadly and instantly with the people who needed them by implementing

a simple, familiar, and easy to use self-service BI within a period of weeks and an investment under six figures. Below is a transcript of my interview with NSA's VP of Operations, Matthew Mettry.

Schmuland: Matt, I'd like to thank you for investing your time today to share your story about improving the bottom line by mobilizing BI and making available broadly to frontline teams within a highly regulated healthcare environment. Before we get started would you mind giving the audience a brief overview of your organization, your role, and a few words about your journey.

Mettry: NorthStar employs more than 2,000 anesthesia providers nationwide with over 180 facility contracts across 20 states. Our two founders established NorthStar 12 years ago on the premise that anesthesia contractors should treat patients, surgeons, providers and hospital administrators like first class customers — and as a result, became one of the most successful and fastest growing anesthesia care companies in the US. NorthStar's headquarters are located just outside of Dallas in Irving, TX and we continue to expand into new regions across the United States through partnership with hospitals, ambulatory surgery centers, and clinician groups. I'm responsible for the operations at 20 – 30 hospitals and surgery centers throughout the Southwest part of the country with a \$63 million annual revenue target – key responsibilities include; financial performance, customer service, optimal staffing and on-going communication with customers (hospital leadership).

Schmuland: Matt, what was the original impetus for this project at Northstar Anesthesia? What were the pains that the organization was experiencing that compelled you to find a solution to relieve that pain?

Mettry: Every healthcare organization in the US today is battling to bend their own cost curve to survive the shift from the discount fee for service payment models of today to the fee for value payment models of tomorrow. But even before that shift occurs, what's happening now for most independent physicians and hospitals is they're seeing their margins squeezed in a way they've never experienced before—because operational costs are rising at least 3-4% more than reimbursements and many are seeing their reimbursements actually fall. This is keeping hospital administrators up at night because maintaining healthy operating margins has become a huge challenge and can threaten the viability of the organization. Like us, everyone knows they have operational costs to cut somewhere in the organization, but the mind numbing challenge is finding the right areas to cut fast enough and empowering frontline teams to act fast enough to make a difference each month.

“These insights are driving increases in employee productivity which is driving down costs for the hospitals, health insurers, and patients.” – Matthew Mettry, VP Operations, Northstar Anesthesia

That was exactly our predicament. We actually had the data we knew we needed to manage our operations to maintain or grow our margins, but the data declined in usefulness each month because we couldn't pull it together fast enough for it to be actionable. We've organized our operations around four groups. Each group relied on a 30-slide monthly Operations Report to monitor and maximize their performance, based on feeds from multiple data sources like HR, Billing, Medical Records, and Time Tracking. This report was based on a static template that had to be manually updated each month. Each slide in the report had about 20 discrete data points. Multiple that by 30 slides for each of the four groups and you end up with 2,400 data points that had to be manually updated each month. So as you can imagine, we experienced a massive time sink every month to produce a report for each group.

Like most healthcare organizations, we had just a small number of high cost, highly skilled “data mavens” who could produce these reports and, in fact, they were the only ones who could produce those reports because they had special access to all of these back end systems. Every month they would access these back end systems, manually update the spreadsheets in the slides, and then sent them out to the group executives. Not surprisingly, with the fast pace of change in the industry in the past few years, the number of reports we needed was growing at a pace that our analysts just couldn't keep up with.

This translated into a snowballing amount of work each month that was consuming more and more of our analysts' time such that, by the time the report was ready, the data was out of date and, effectively, useless. It was yesterday's news instead of today's news and trends. We were putting so much time and labor into producing these reports—and yet, the latency of the data in these reports made it nearly impossible for our executives to achieve any of the incremental improvements in operational efficiency we needed to protect, let alone grow our margins.

On top of that, we were asking these high cost, highly skilled analysts to perform 100s of repetitive tasks each month— which meant they had no time to conduct the root cause analyses we needed to understand the “why” to make the changes we needed to improve our operations. Many times when our executives would visit a client site, they'd ask for a special report in hopes of understanding what actions were needed to improve the performance and customer satisfaction of that site. But the process of building a

custom report was too exhausting, the report took too long to produce, and we couldn't restrict access to those reports with the granularity we needed.

Schmuland: It sounds as if the company was running in place, burning calories but never getting to the destination. You clearly had to turn this situation around. What was your vision for a solution and how did you go about realizing that vision?

Mettry: We knew we had to do more than just fix the latency problem with our immediate pains. The solution had to go beyond just addressing our yesterday's news problem and give us a platform on which we knew we could grow and expand our business. It had to be a platform that was both simple enough for everyone to use it but also scalable enough to deploy quickly whenever and wherever we needed insights—and tap into new data sources yet to be determined, including sources located in the cloud as well as on premise. We needed a platform that would enable us to get and stay ahead of the fast pace changes coming at us.

We needed a platform that enabled us to build a report once and have it automatically refresh with live data from all of our core data sources and update the report in real time from all of those data sources. We also needed a way to share data across and beyond our organizational boundaries with those who needed to act on that data — so we needed a platform with security and privacy and permissioning built in rather than bolted on. And those reports had to be viewable regardless of what operating system, browser or device the end users had. Last, but not least, we had to free up time for our analysts to shift their focus to getting to the root causes of problems, rather than just refreshing reports.

Schmuland: After evaluating multiple options, you ended up choosing [Microsoft Power BI](#). What were the main reasons that you chose Power BI over many alternatives?

Mettry: We did a white boarding session with [US Medical IT](#) and they challenged us to come up with the reports that we thought were only possible in our dream reports. They showed us how Power BI could connect with all of our data sources to automatically populate these reports. They also demonstrated to us how quickly we could get these reports out and in the hands of the executive decision makers teams to take immediate action. I can summarize the reasons we chose Microsoft Power BI in four words: trusted, affordable, easy, and familiar. First, trusted. Microsoft is trustworthy because their [HIPAA Business Associate Agreement](#) is coupled with their leadership in cybersecurity, privacy, compliance, and transparency, which has proven their long term commitment to serve as a trusted data steward for the industry. And we can restrict access to data down to the user and field level. Second, affordable. Power

BI is the most affordable solution in market. For example, Power BI is included in our license for Office 365 and there's no additional charge for the Power BI desktop while other desktop solutions would have cost us about \$2000 per user. Third, easy and familiar. The platform had to be sufficiently familiar and intuitive to work for both our analysts and our end users who were already familiar with Excel. Power BI reports are easy to create and distribute and it's extremely easy to connect Power BI to disparate data sources. And it's familiar because it works with whatever our mobile end users already have — the device, the operating system, and the browser that they prefer and are most familiar with.

"For our associates, Power BI is to data like a hot knife is to cold butter." – Matthew Mettry, VP Operations, Northstar Anesthesia

Schmuland: Matt, could you bring this solution to life for us by walking us through a few examples of Power BI to give our audience a feel for the simplicity and the flexibility of Power BI?

Glad to do that. I pulled a couple of examples of how Power BI can be used to more precisely and proactively manage operational costs. In the first example a business leader asks the question in natural language, "Our labor costs have increased but our patient volume hasn't. Which of our hourly employees are clocking in excessively early?"

There is a growing variance between actual and budgeted values.
Which of my locations are most responsible for this variance?

How does this chart work?

This view displays variance between actual monthly and budgeted monthly measures.
Select a single measure from the left filters, or select a location from the chart, to see the variance between actual and budgeted values.



Schmuland: Can you cite any bottom line benefits and any that came as a surprise? A discovery you weren't looking for?

Mettry: Yes, several. \$50,000 in missed revenue, \$1M in excess labor costs, and faster payments as a result of better invoice details. Just one Ad Hoc Report immediately translated into \$50,000 in additional revenue because we were able to quickly identify patients initially flagged as uninsured that did, in fact, have insurance. Another area of huge saves was our labor costs, which are our number one expense. A single report that pulled numbers that were sitting in our systems identified more than \$1 million in excess labor costs and that gave our staff the tools to manage their labor metrics in real time.

Another surprise was that our revenue cycle improved dramatically as a result of prompter payments by our clients. The invoices we send to our clients include very large amounts because they include multiple line items, multiple cases, and are based on payment terms that are complex. Because we weren't giving them enough details

about the line item charges, they were often slow to pay because they needed to independently verify many of the line item amounts. With Power BI, we can deliver extremely detailed invoices to every client and this has resulted in much faster payments and less meetings where clients were challenging the charges.

Schmuland: Are you seeing any productivity gains among any of your associates where they're able to do more or new things they couldn't before in the same or less time?

Mettry: Glad you asked. Our analysts are using 'R' to develop new insights and channeling these reports through Power BI as a secure distribution channel that allows access only to those who are authorized to see those reports. Our first set of R reports are focused on the most crucial area of NSA's business: Operating Room Utilization. These insights are driving increases in employee productivity which is driving down costs for the hospitals, health insurers, and patients. It's actually a quadruple win because NSA is proving itself to utilize resources more cost-effectively than our competitors.

Schmuland: Would you go so far as to say that Power BI is empowering you to digitally transform NSA in a way that you couldn't before?

Mettry: Yes. Power BI is truly enabling us to make self-service and mobile BI a reality and ubiquitously available to our 2000 associates. For our associates, Power BI is to data like a hot knife is to cold butter. I now have 5 "Power BI Disciples," which includes our Director of Strategic Planning as well as analyst from our operations group. These disciples are able to build the custom reports that no one had time to produce before and these reports are translating into real savings for the organization.

These Power BI disciples are enabling us to digitally transform our organization because our newfound capacity to product custom reports is generating new insights that are, in turn, generating transformational changes across the organization. In the past, every report was manual and custom reports were a rarity – we now have instant refresh on our standard reports and Power BI has freed up time for our analysts to build custom reports that identify the root cause of a trend. The hardest part of data analytics is the data prep and Power BI makes that extremely easy. So we can now quickly–almost instantly– produce these reports and share these findings broadly across our organization and with our clients. Everyone benefits, including our own customers. This has become a differentiating advantage and a compelling reason for our clients to choose us or renew their contracts with us rather than our competitors.

Schmuland: What advice would you offer to your peers who might be searching for a business intelligence solution that works for analysts and the rest of us?

Mettry: Hire a company like [US Medical IT](#). I would say hire these guys to host a white boarding session without boundaries, just what are your dream reports. Let them help you connect your data sources and build these initial reports. Once the platform is in place you'll be able to see how quickly and virally these reports spread across your organization like wildfire.