

## **James L. Holly, M.D.**

### **The AQ Journey: Business Analytics at SETMA**

**By James L. Holly**

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Borrowing IBM's *Principles of Being a Change Agent*, SETMA adopted the statement, "If you're going to make a change, it had better make a difference." With that principle in mind, in 2009 SETMA's partners turned to business intelligence (BI) software to provide physicians with performance metrics at the point of care for quality measurement and continuous quality improvement. Since SETMA's founding, SETMA's partners and management adopted the goal of designing a healthcare delivery system that would integrate all of the components of a family's health needs in a multi-specialty setting.

Since then, the practice has grown to become a multi-specialty organization with seven clinical locations and a secure electronic medical record (EHR) system for all patients, which can be accessed at four hospitals, five emergency rooms, 32 nursing homes, and all SETMA providers' homes. Clinical support services have expanded to include a clinical laboratory, cardiac evaluation laboratory, infusion clinic, Joslin Diabetes Clinic, mobile x-ray services and a physical therapy department, as well as several specialty clinics. In addition SETMA has launched a Health Information Exchange, and a secure patient web portal.

### **Business Outcomes**

Committed to making SETMA the premier private, primary healthcare group in Southeast Texas, the organization has reaped considerable benefits from a higher "analytics quotient (AQ)".

These include:

- Providing clinicians with access to daily reports before, during and after patient encounters to ensure care standards are being met
- Enabling and requiring each provider to personally examine their performance at the point-of-service by leveraging over 300 quality metrics

- Delivering access to comparative data at a click of a mouse—instead of waiting 36 hours or in some cases eighteen months for reports
- Eliminating any uncertainty over whether national quality standards are being met
- Public reporting by provider name at [www.jameslhollymd.com](http://www.jameslhollymd.com) of these performances, as well as giving the patient a summary of the performance on their care at each visit.

Based on this history, SETMA collaborated with IBM to define the phases of the development of four phases of provider analytic quotient. They are: aspirational, experienced, leaders, masters.

### **Phase 1: Aspirational**

SETMA has been capturing quality metrics for over 15 years but historically, drilling into the data to analyze results was time-consuming. In the past, analytics took a lot of time; now we want to analyze quality results and deliver daily reports, and we want to deliver reports on every patient and every provider every day—as well as on populations of patients. Quality metrics can unveil patterns, but this requires the ability to analyze complex information quickly. You could have a big quality department performing this analysis, or you could have the right tools.

### **Phase 2: Experienced**

The analysis of patient encounter data may seem simple until you consider that our patient database is huge, and it would typically require 36 hours to run the reports we require to continuously improve patient care. If you want to report on something every 24 hours but it takes thirty-six hours to produce the reports, you can see that things have to be done differently.

Today, patient care metrics are tracked to ensure that SETMA is continuously improving the quality of care, and every day a report is generated on every patient that is designed to ensure that each patient is receiving superb care. Healthcare providers are able to review a detailed report before a patient arrives for a visit so they can know exactly what that patient needs to be brought up to SETMA's standards for quality of care.

### **Phase 3: Leaders**

Progressing in the development of SETMA's AQ, SETMA sought to audit results and enable real-time tracking by individual patients, and with the ability to analyze results by populations of patients. We wanted the ability to audit results based on accurate and timely information, and we wanted the ability to aggregate information so that we could do public reporting which could be posted on our website making this information available to other organizations. This continuously put pressure on SETMA providers do a better job.

### **Phase 4: Masters**

The Masters level of AQ results from designing analytical tools to provide management and practice leaders the information needed to improve the infrastructure needed both to create and sustain excellence in a complex medical practice. Going forward, SETMA will increasingly use business intelligence to analyze financial metrics so we can find ways to decrease our costs while maintaining or improving the quality of care we deliver.

## **Raising the Personal AQ**

Patients love to see information about themselves. If you give patients educational materials with their name on it and with their data analyzed in it, they will read it, pour over it and discuss it with you. In other words, they will learn. If you tear off a generic sheet and give it to them, it often goes in the waste basket. If you give patients an analysis of their health risk AND if you include a “what if” scenario, i.e., what will their health risk be if they make a change; you can prove to them, “if you make a change, it will make a difference.

SETMA providers often bring patients to the computer and show them the reports we can generate in one second such as all twelve Framingham Cardiovascular Risk Scores. At the end of a visit, when a SETMA provider gives the patient a copy of their visit summary it includes the “what if scenario.” Also, all patients and the entire community can go to SETMA’s website and review provider and practice performance on hundreds of quality metrics. The value of this public reporting of SETMA performance is enhanced greatly in that it is public reported by provider name.

Everyone at SETMA views the system as incredibly exciting and meaningful. Auditing electronic patient records provides insights that make a difference—a real difference to real people, people with hopes and dreams and families and real challenges. With analytics, SETMA is doing some pretty exciting things. But I think they’re meager compared to what we will be doing in the future to analyze patient care and improve the quality of care we provide to our patients.