3 Common Pitfalls in Healthcare Analytics

By Russ Staheli

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Finding a sustainable approach to healthcare analytics can be a challenge and requires a meaningful comparison of some of the more prevalent methods out there. Let's start by looking at those that seem to fail time and again.

The Report Factory

This approach uses an analytics platform alone and assumes that "if you build it, they will come." When a healthcare institution creates or buys an analytics platform, one of two things happen—Either users will come … or they won't.

If they don't come, that's usually when the CIO dusts off his or her resume.

If they *do* come, the first sign is often a backlog of report requests in the IT department. Why? Data can be addictive; once users get a taste, they want more and more until a dependency is formed. In most cases, it's a dependency on data that is slow in coming. It's not uncommon to see queues of report requests into the thousands and growing. Soon, clinicians and department heads decide the analytics platform or the IT shop is too slow and they hire their own dedicated analyst/architect.

The Flavor of the Month

When a healthcare organization realizes that simply opening the door to an analytics platform creates a "Report Factory," they may decide to take a more measured approach. This often results in a project-by-project "flavor of the month" approach to analytics.

The institution may tackle projects based on some form of prioritization—"squeaky wheels," or management's pet projects. At first, project members can be very excited, and it may result in potentially improved care or reports that really help.

Inevitably, those involved become dissatisfied. It becomes very difficult to keep more than a handful of projects on the burner regardless of who owns them, whether it's Quality Improvement, Patient Safety, IT, Lean/Six Sigma, Research, or other departments. Early gains are quickly lost. On one assignment, I distinctly remember a nurse saying as I approached, "Here comes another flavor of the month. I wonder how long this one will last." Such frustration is commonplace in organizations that have attempted to use data to improve care over and over with few sustained gains or real results.

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Point Solutions

The third common approach to healthcare analytics is deploying one or more point solutions designed to tackle specific problems in specific departments. The biggest issue with this approach is "sub-optimization." The organization may be able to optimize the specific area of focus, but these point solutions will offer very little insight into the impact both up- and down-stream. Another issue is the "technology spaghetti bowl." When the institution has just a few point solutions in play it is fairly simple for a small IT shop to maintain. But add additional point solutions (noodles) and unraveling that mess becomes a nightmare. Eventually, one of the Senior IT employees becomes "God of the System" and holds the organization ransom. If that person leaves, a vacuum is left behind.

Point solutions also result in multiple contracts, multi-cost dependencies, and multiple interfaces; complexities, confusion, and chaos that don't bode well for sustainability.

And What Works: An Introduction to Three Pillars for Healthcare Analytics Success

A successful, sustainable healthcare analytics system relies on three pillars, briefly introduced below. Tom Burton, Health Catalyst® Senior Vice President of Product and Development and Co-Founder, has written about these in more detail here: http://www.healthcatalyst.com/best-healthcare-analytics-approach

Deployment System

The deployment system a healthcare organization chooses can provide a robust prioritization methodology to ensure a good return on investment of an analytic system. It leverages existing personnel to form permanent teams within each area where the healthcare data analytics will be used. It's still a one project at a time approach, but it's sustainable since each team is trained to manage their own projects in their own space.

Analytic System

A strong analytic system is built on a platform enterprise data warehouse that acts as a single source of truth for the entire organization. Many applications can run on the single platform, each meeting the specific needs of the team. Once installed, any health system should assess their analytic strategy and capabilities using the Healthcare Analytics Adoption Model. This model, developed by a cross-industry group of healthcare industry veterans, leverages the lessons learned from the HIMSS EHR Adoption Model and describes an analogous approach for assessing the adoption of analytics in healthcare. Each level builds upon the foundation of the data warehouse and allows a system to progress systematically through many stages of analytics capabilities.

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From a clinical perspective, a content system should consist of evidence-based, best-practice guidelines, treatment cascade models, and order sets. On the departmental/operational side, content should include industry standard metrics and measurements, efficiency and effectiveness measures, and system measures.

In summary, while a sustainable healthcare analytics system may seem elusive, knowing what works and what doesn't can aid organizations in finding the right solution for their situation.

About the Author

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Russell joined Catalyst as a data architect in October 2011. He started his career as an Intern and later Outcomes Analyst at Intermountain Healthcare in the Institute for Health Care Delivery Research supporting the Advanced Training Program for Executives & QI Leaders (ATP) and the Primary Care Clinical Program. Before coming to Catalyst he worked as a Management Engineer Programmer Analyst for the Duke University Health System in their Performance Services department supporting their Infection Control and Epidemiology efforts. While there, he also worked as an external consultant to advance the analytical work of the Duke Infection Control Outreach Network (DICON), a collaborative of over 30 community hospitals. Russ holds an Master of Public Health in Health Policy and Administration from University of North Carolina Chapel Hill and a Bachelor's degree in Health Services Research from the University of Utah.