

4 Options for Choosing the Best Healthcare Analytics Solutions

By Dale Sanders

“A healthcare organization must have a data-driven culture with high aspirations that views analytics as a clear business differentiator.”

Analytics is a buzzword in healthcare today. You hear it often: “What does an organization need to succeed in a value-based care environment? Robust analytics.”

But what exactly does that mean? Anyone who has looked into implementing “analytics” for their organization knows that a multitude of options for healthcare analytics are available—and each vendor touts its approach to analytics as the best.

I’d like to take a moment here to summarize four primary analytics options available to healthcare organizations today. While doing so, I’ll not only highlight the options for healthcare analytics but also the pros and cons of each.

OPTION 1: BUY FROM A HOSTED ANALYTICS SERVICE PROVIDER

Some health systems choose to outsource all of their analytics work to analytics service providers like Humedica or Explorys. This approach is best suited for organizational cultures that want to avoid the details of healthcare analytics and data management but still aspire to improve basic internal and external reporting. This approach doesn’t require any investment in hardware or software, nor does it require developing in-house expertise in analytics processes. Another advantage is that it offers comparative analytics and benchmarking with other healthcare organizations. Inter-organizational benchmarking and comparative analytics is a major part of the business model and service provided by the vendors in this space.

So what are the limitations of this model? Organizations adopting this type of service are very limited in terms of the kinds of analytics they can perform. The analytics in this option are targeted at either Level 3 or Level 4 of the [Analytic Adoption Model](http://www.healthcatalyst.com/analytics-adoption-model/) (<http://www.healthcatalyst.com/analytics-adoption-model/>) below. They are locked in to the basic reporting capabilities offered by the vendor and are unable to adapt the functionality to meet their specific needs. In addition, substantive return on investment of this approach is neither well documented nor widely acknowledged.

Level 8	Cost per Unit of Health Reimbursement & Prescriptive Analytics	Contracting for & managing health
Level 7	Cost per Capita Reimbursement & Predictive Analytics	Taking more financial risk & managing it proactively
Level 6	Cost per Case Reimbursement & Data Driven Culture	Taking financial risk and preparing your culture for the next levels of analytics
Level 5	Clinical Effectiveness & Population Management	Measuring & managing evidence based care
Level 4	Automated External Reporting	Efficient, consistent production & agility
Level 3	Automated Internal Reporting	Efficient, consistent production
Level 2	Standardized Vocabulary & Patient Registries	Relating and organizing the core data
Level 1	Data Integration – Enterprise Data Warehouse	Foundation of data and technology
Level 0	Fragmented Point Solutions	Inefficient, inconsistent versions of the truth

OPTION 2: BUY “BEST OF BREED” POINT SOLUTIONS

Another option for healthcare organizations is to adopt best-of-breed point solutions like Crimson, Midas and Medventive to target specific analytic opportunities. These very specific analytics applications can be advantageous because they leverage targeted expertise in business and clinical areas that are not always available in other options. However, the very specificity of such applications is also the disadvantage of this approach. The applications may provide detailed analytics for a specific domain, but they don’t provide a single healthcare analytic perspective on patient care and costs. Also, a collection of point solutions does not facilitate data integration. And having a wide variety of solutions is costly and complicated to maintain.

OPTION 3: BUY FROM YOUR EMR VENDOR

Since providers have already invested heavily in their EMR (http://www.healthcatalyst.com/late-binding_data_warehouse_aids_transition_to_value-based_care/), many look to their EMR vendor for analytics capabilities. This approach offers the possibility of “closed loop analytics”—driving analytics back to the point of care in the EMR and clinical workflow. However, there is no proven track record with analytics to date from the EMR vendors. In fact, the track record is abysmal. This approach tends to be very focused on analytics that are specific to the EMR vendor’s data versus an integrated view of clinical, financial, patient satisfaction, and administrative data. They are much less flexible and adaptable to new sources of data and analytic use cases, especially complex use cases at Level 6, 7, and 8 of the [Analytic Adoption Model](#).

OPTION 4: BUY AND BUILD FROM A HEALTHCARE DATA WAREHOUSE PLATFORM VENDOR

The final of my options for healthcare analytics—and the one that I recommend after years of working in data warehousing—is to buy and build from an analytics platform vendor. These solutions offer the highest degree of analytic flexibility and adaptability, up to Level 8 of the Adoption Model. By implementing and owning



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In addition to his role at Health Catalyst, he continues to serve as the senior technology advisor and CIO for the National Health System in the Cayman Islands. Previously, he was CIO with the Northwestern University Medical Center, and regional director of Medical Informatics at Intermountain Healthcare where he served in a number of capacities, including chief architect of Intermountain's enterprise data warehouse. Dale is a founder of the Healthcare Data Warehousing Association.

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a healthcare Enterprise Data Warehouse (EDW), an organization creates a foundation on which to run analytics applications and drive an analytics strategy for years to come.

For this approach to be successful, a healthcare organization must have a data-driven culture with high aspirations that views analytics as a clear business differentiator. The approach is also best suited for a culture with a commitment to a higher degree of data literacy and data management skills throughout the organization.

Most vendors in this space have been plagued by a slow initial time to value. Because of this, the approach's ROI track record is inconsistent—sometimes very high, sometimes negative. Across all industries, the average ROI from successful EDW projects is 431%. It is not consistently that high in healthcare yet because the field is emerging as a specialty.

Health Catalyst is an analytics platform vendor that has found a way to create quick time to value for our client for our client, Indiana University Health. Read more on the Success Stories tab at (http://www.healthcatalyst.com/wp-content/uploads/IUHealthSuccess_v2.pdf). Unlike other platform vendors, who typically aren't able to demonstrate ROI for at least two years, we structure our implementation and pricing to demonstrate ROI in three-month increments. This means that clients are able to recognize the ROI from different phases of implementation before committing further investment in the solution. You can learn more about this approach [here](http://www.healthcatalyst.com/real-cost-healthcare-data-warehouse/) (<http://www.healthcatalyst.com/real-cost-healthcare-data-warehouse/>).

Strategy and Analytic Options

Strategy Option	Pros & Cons	Example Vendors
Buy & Build from an Analytics Platform Vendor	<ul style="list-style-type: none"> • Highest degree of analytic flexibility and adaptability • Requires a data driven culture with high aspirations that views analytics as a clear business differentiator • Best suited for a culture with a higher degree of data literacy and data management skills • Slow initial time-to-value plagues some vendors • Inconsistent ROI track record, but when ROI occurs, it's big 	<ul style="list-style-type: none"> • Caradigm Intelligence Platform • Health Catalyst • Healthcare Data Works • IBM Healthcare Data Model • Oracle Healthcare Data Model • Recombinant (Deloitte)
Buy from an Analytics Service Provider	<ul style="list-style-type: none"> • Best suited for cultures that want to avoid the details of analytics and data management, but aspire to improve basic internal and external reporting • Inter-organizational benchmarking and comparative analytics is a natural part of the business model and service • Limited analytic flexibility and adaptability • Substantive ROI is not well-documented nor widely acknowledged 	<ul style="list-style-type: none"> • Explorys • Humedica • Lumeris • Premier Alliance • Truven Analytics Suite
Buy "Best of Breed" Point Solutions	<ul style="list-style-type: none"> • Leverages expertise and very specific analytics applications in business and clinical areas that are not always available in other options • Does not facilitate data integration; i.e., does not provide a single analytic perspective on patient care and costs • Costly and complicated to maintain 	<ul style="list-style-type: none"> • AltaSoft • Crimson Suite • EPSI • MedAnalytics • Medventive • Midas • Omnicell
Buy from your EMR Vendor	<ul style="list-style-type: none"> • Offers the possibility of "closed loop analytics" driving analytics back to the point of care, in the EMR and clinical workflow • No proven track record with analytics to date from the EMR vendors • Tend to be very focused on analytics that are specific to the EMR vendor's data • Less flexible and adaptable to new sources of data and analytic use cases, especially complex ones 	<ul style="list-style-type: none"> • Allscripts Sunrise • Cerner PowerInsight • Epic Clarity & Cogito • McKesson Horizon • Meditech Data Repository • Siemens Decision Support

You can also [download a slide](http://www.slideshare.net/dalesanders1/strategic-analytic-options) (<http://www.slideshare.net/dalesanders1/strategic-analytic-options>) that that summarizes these four options, so you can use it and modify it as you gather and present your own strategic options. 🚀