HealthCatalyst
ignite outcomes improvement

Partners' Enterprise Data Warehouse: Focus on Service and Value

PARTNERS
H E A L T H C A R E

HEALTHCARE ORGANIZATION

Large Healthcare System and ACO

TOP RESULTS

- Realized rapid-time-to-value using incremental analytics development
- Implemented an effective adoption and engagement strategy:
  - 15-20 percent increase in database queries quarter over quarter
  - 30 percent increase in number of users of the analytics tools quarter over quarter
- Self-service analytics environment in place
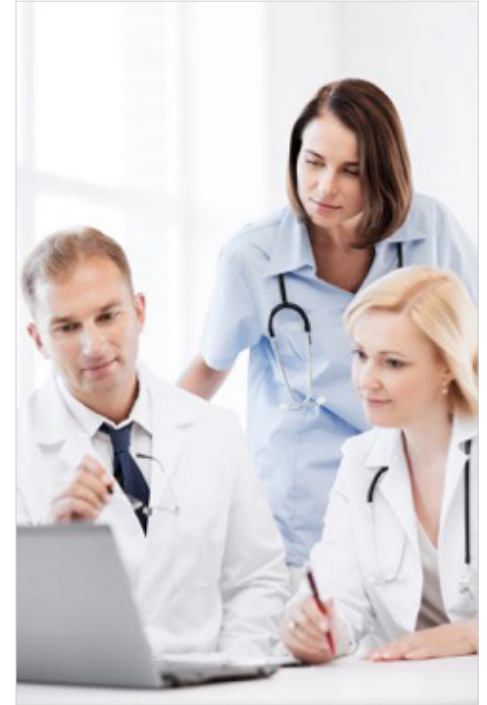- High end-user satisfaction

PRODUCTS

- Late-Binding™ Data Warehouse Platform
- Advanced Analytics

SERVICES

- Installation Services

As the healthcare industry rapidly evolves, data analytics has become an essential tool both for population health management and economic survival.[1] While this requires building analytics competency across the enterprise, once adopted, the benefits are abundant—from improved patient outcomes to reduced waste and costs.[2] The supporting framework for such broad analytics capability is a strong enterprise data warehouse (EDW). To rapidly gain value from this platform, healthcare organizations should follow an implementation strategy that, before anything else, identifies the problems analytics is intended to solve. It should also place as much emphasis on people and processes as it does technology.

Partners HealthCare, a not-for-profit health care system and accountable care organization with care entities throughout New England, is an example of how this approach quickly leverages analytics across the enterprise. Throughout implementation of its own EDW, Partners has kept a strong focus on organizational goals and the people who will ultimately drive the success of enterprise-wide analytics. Indeed, implementation has been a collaborative effort that draws on clinical, business, and IT expertise, and continuously engages end-users.

Such a strategy has turned out to be the difference for implementing an EDW that supports Partners' own advanced population health program—and creates more users of analytics across the entire health system.

> "Our vision is to harness data and deliver it to decision-makers in order to help them make the best possible decisions.
>
> Cynthia Bero
> IS Director
> Partners HealthCare

HARNESSING HEALTHCARE'S COMPLICATED DATA ENVIRONMENT

Partners knew that it was critical not to focus solely on the technology aspect of an EDW implementation and lose sight of the people and processes the solution was meant to serve. However, Partners did have certain technology requirements. The health system needed an EDW that was scalable, sustainable, and easy to support. It also wanted a model that out of the gate provided simple design rules that limits debates about architecture and instead creates consistency in solution design.

These features would help Partners overcome a common healthcare industry challenge: while automation of clinical and operational processes creates more data for the health system, it is generated within a very fragmented data environment. Stakeholders have different and often competing priorities in such a landscape, yet there are scenarios that call for broad access to data—from demonstrating quality and safety, to making strategic decisions about patient care redesign initiatives. A consistently designed EDW would help enable centralized data management within this decentralized analytics model.

Most importantly, it would serve as a shared, common platform that maximizes information by getting it in the right hands in a timely manner. This is the fundamental feature of "self-service" analytics where users from across the enterprise can access and mine data without assistance from IT—which in turn, more quickly produces business and clinical value.

ADVANCING AN EDW VALUE STRATEGY

To enable and support the quick advancement of analytic capabilities and competencies, Partners adopted a thoughtful mix of project management, user engagement, and technology processes for its EDW initiative. This is reflected in five key principles followed throughout implementation:

Incremental deployment. Adopting the Agile implementation methodology[3], Partners deployed an EDW in a phased, incremental fashion with each deliverable producing value.

Service orientation. Partners placed great importance on the needs of end-users and the analytic community, knowing that data management and delivery is a "high touch" service where a typical IT support model doesn't work.

> "A successful EDW project is outcomes-oriented and creates value in the eyes of its customers. The technology is secondary.
>
> Mike Noke
> Associate Director
> Enterprise Data Warehousing
> Partners HealthCare

Technical skills with business acumen. Team collaboration is key for deploying highly valuable solutions. Partners took care to create an EDW team that was well suited and comfortable engaging and interacting with their peers in business and clinical areas.

Prototyping. Partners demonstrated that iterating through demos and mock-ups is more efficient than simply asking for requirements and assuming they are actually what the business needs.

Flexibility. Given the diversity of the analytic community and the analytic needs at Partners, the EDW team leveraged a suite of solutions and approaches to best meet the needs. There isn't one solution or approach that meets every need, and some tactics work better with some customers than others. Standards are important, and there are times not to deviate—but not at the cost of better outcomes.

THE TECHNOLOGY SOLUTION

For an EDW that would harness and merge data for decision-makers across the enterprise, Partners deployed a late-binding enterprise data warehouse from Health Catalyst, creating an EDW analytics foundation supported by four cornerstones:

Repository of clinical, operational, financial and claims data, with clear design rules and expectations for data architects.

Tools for end users to manage and query the data. To help users learn the tools more quickly, Partners provided training and feedback on the tools to provide information for clinical and business decisions.

Support services to assist users in their understanding of the data, as well as use of the tools. Outreach and engagement included executive road shows, educational programs, user groups and a community forum experiment. An end-user/stakeholder survey was also developed and administered to measure adoption and satisfaction.

Governance to provide structure for program-level decision-making and prioritization. This laid the groundwork for adoption and engagement from executives to frontline staff. It also created an environment that increased collaboration across business entities and promoted continuous learning and process improvements. A key component was the formation of an advisory committee to act as a sounding board and promote stakeholder engagement.

DELIVERING VALUE FROM PARTNERS' EDW

By all measures, Partners executed an EDW and analytics approach that will serve as the foundation to support the organization's mission going forward. It achieved its original commitments to the governing board for the initiative, including goals for people, processes and technology, within its original time frame and budget. The result is a solid infrastructure in place to support informed and major improvements in patient care.

Realized rapid-time-to-value using incremental analytics development. By adopting the Agile methodology, Partners has an EDW and analytics that have quickly delivered value.

- Development of three major population health management and additional analytics applications timed and aligned with the prioritization process.
- Delivered analytics application features in continuous six-week cycles.

Implemented an effective adoption and engagement strategy. As a result of an outreach program that included executive roadshows, education sessions and user groups, Partners continues to support self-service analytics. Early results to date show a:

- 15-20 percent increase in database queries quarter over quarter
- 30 percent increase in number of users of the analytics tools quarter over quarter

Self-service analytics environment in place. Rollout to additional departments is continuous and enabled by self-support groups.

High end-user satisfaction. Based on the baseline results (shown below) of the internal survey to measure adoption and satisfaction, Partners has achieved a high degree of success with its initial EDW rollout. Improving and building its service offering remains an important focus of the team.

- Internal stakeholders say the EDW has improved analytic capabilities, both in terms of the number of additional analyses they can produce, and the quality of the analytic
- Almost all users indicated receiving a prompt response to their support requests, and that service was provided with an exceptional degree of respect and professionalism

WHAT'S NEXT?

Further success will depend on continuing to enhance existing analytic assets, and deliver new capabilities. Beyond that will be the increasing focus on analyst support and training. It will be important to ensure constituents are aware of what is available, understand the content, be positioned to leverage tools to analyze results, and, most importantly, interpret results that will ultimately drive decision making.

Partners continues to drive awareness and engagement in support of developing a culture of analytics. The ultimate success metrics: are users getting access to the data they need, and are they able to use it to effectively drive improvements?

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ABOUT HEALTH CATALYST

Health Catalyst is a mission-driven data warehousing, analytics, and outcomes improvement company that helps healthcare organizations of all sizes perform the clinical, financial, and operational reporting and analysis needed for population health and accountable care. Our proven enterprise data warehouse (EDW) and analytics platform helps improve quality, add efficiency and lower costs in support of more than 50 million patients for organizations ranging from the largest US health system to forward-thinking physician practices.

For more information, visit www.healthcatalyst.com, and follow us on Twitter, LinkedIn, and Facebook.