Case Study:
Advanced Data and Analytics Power Transformation in Aging Services

Parker
we make aging part of **life** ®

Owl Health&Care
Technologies

Categories:

◆ Mitigate Risk
◆ Reduced Hospitalizations
◆ Enhanced Efficiencies and Business Acumen & Strategic Positioning
◆ Improved Financial Health and Patient/Resident/Client Experience

About the Organization

Organization Name:
Parker Health Group

Main Contributor:
James Dellapa, CIO

Organization Type:
Housing with Services, Home Health/Home Care, Adult Day Care/Senior Centers, Assisted Living Facilities, Long-Term Care Rehab Facilities, Skilled Nursing Facilities

Organization Description:
Parker Health Group is a not-for-profit aging services organization based in New Jersey. More than 800 employees and 300 volunteers assist over 400 seniors in five residential communities. Parker's offerings range from skilled nursing and post-acute care to support services like adult day care and rehabilitation.

Project Description

Parker Health is committed to becoming a data-centric organization. After investing time and money in disparate data and analytics initiatives, they needed a way to bring those gains together and build the foundation for much more substantial benefits across the enterprise. They partnered with Owl Health&Care Technologies (previously known as Caringale), a cloud business unit of ValueMomentum, to implement our ready-made data platform with the ability to customize visualization capabilities to make data-driven decision-making possible for a wide range of users and use cases.

Application Area

Financial, Clinical, HR, Quality (e.g., 5-Star Rating), Business, Risk Management

Parker Health's goals aligned with the key value proposition of Owl Health&Care Technologies' cloud-based data platform:

◆ Create a single source of truth.
◆ Build foundational capabilities for data unification and advanced analytics, emphasizing customizable visualization.
◆ Spend more time analyzing results and insights and less collecting data and creating reports.
◆ Define and adopt quantifiable Key Performance Indicators (KPIs) measure outcome versus desired state.

Core Services Offered

Data cleansing, data stewardship, migration/integration, consolidation, warehousing/clearinghouse, application program interface (API) development, data visualization, data exploration, modelling/model building, decision support, dashboards, benchmarking/scorecard across sites.

◆ Cloud-based data unification and reporting
◆ Analytics and advanced charting with AI
◆ On-demand business intelligence
◆ Customizable dashboards
◆ Drill-down capabilities by custom parameters
◆ Data pipelines and APIs

The LeadingAge Center for Aging Services Technologies (CAST) is leading the charge to expedite the development, evaluation and adoption of emerging technologies that can improve the aging experience. CAST has become a broad and far-reaching coalition of aging services organizations, technology companies, research universities, and government representatives.

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◆ Operational data store

◆ Data warehouse

Business Model

Standard of Business, Return on Investment (ROI) of Data Analytics Technologies

The need to provide high-quality care and improve stake-holder trust while maintaining regulatory compliance adds complexity to the everyday oper-ations of LTC and long-term post-acute care (LTPAC) businesses. Data fluency is critical to addressing these overlapping priorities.

There are a vast number of data sources within aging services, including clinical data, human capital information, compliance management, and financial reporting. The key is in bringing that data together and making it understandable and accessible to people throughout the enterprise with varying technical fluency.

James Dellapa, chief information officer at Parker Health, explains, "The challenge for LTPAC is not obtaining data. The information is already out there, available from hundreds of data sources. The true value is bringing it together to generate real-world, actionable insights accessible to more than just the data experts in providing quality care, improving resident and family experience, and helping scale operations."

Reporting and business intelligence could not be limited to IT specialists: Everyone from the CFO to heads of clinical areas, operations, sales, and HR needed business intelligence and data visualization tools they could use and understand to make better decisions.

Seeing the full context of data from different sources means stakeholders can make better business decisions. To that end, advanced data and analytics technologies, including visualization tools, are now table stakes.

Implementation Approach

Parker Health and Owl Health&Care Technologies worked on a six-month timeline starting in July 2022, with additional enhancements and capabilities to follow. Using Owl Health&Care Technologies' platform-based approach would allow the organizations to meet this ambitious goal and save time and money in the implementation.

Owl Health&Care Technologies put data pipelines in place to ingest data from more than 30 different data sources, including PointClickCare, Oracle HCM, and Smartlinx. Data was standardized, aggregated, cleansed, processed, and consolidated in an operational data store (ODS) and an enterprise data warehouse for historical data. APIs allow data and insights to be passed on to other systems. Owl Health&Care Technologies administers the underlying data platform, including encryption and backup services.

The visualization tools and on-demand business intelligence were standout features. Parker Health would gain customizable dashboards with built-in drill-down capabilities. Users could mix and match from any data set or application and highlight the specific dashboards most relevant to them.

Outcomes

Improved health outcomes, mitigated risk, enhanced efficiencies, improved financial health, improved patient/resident/client experience, enhanced business acumen and strategic positioning

Within six months from the July 2022 start date, Parker Health realized the initial benefits of the new data platform with pre-built reports, dashboards, and analytics to improve staffing, quality, financial, and operational outcomes. User-facing business intelligence and dashboards launched a few weeks later. Additional data sources were added throughout the following months.

Benefits Achieved

◆ Overall cost savings of more than $1 million compared to the potential cost of building data pipelines for each data source.

◆ Saved over 600 hours per month in data unification, cleansing, and reporting compared to maintaining disparate data sources.

◆ Shifted expenses from capital expenses to operational expenses for more predictable financial outlays and reduced depreciation of technical assets.

◆ Established KPIs for quantifiable benchmarking of business operations.

◆ Equipped Parker Health executives with more profound insights for decision-making.

◆ Centralized data for timely and accurate quality measures (QM).

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Additional capabilities gained or enhanced in this initiative include data slice and dice, prevention analytics, actionable revenue management intelligence, in-depth census monitoring to maximize occupancy rates, and built-in AI capabilities to establish root causes of high-cost adverse incidents to guide improvements to care plans. Parker Health can now sift through data from IoT sensors to monitor staff hygiene compliance and improve infection control strategies.

Challenges and Pitfalls to Avoid

Prioritize your data sources. With the enormous quantities of data available in the LTPAC industry, it's vital to focus on those that are most impactful to your specific business goals. It also applies to the variables you prioritize and spotlights for slice and dice capabilities. For example, Parker Health prioritized visibility into variables affecting staffing, such as shift, location, day of the week, leave requests, and open positions.

Incorporate cost-benefit analysis when planning an implementation approach. Owl Health&Care Technologies' approach to building the enterprise data platform and visualization initiative included a comparison to the data engineering effort for each data pipeline to be built and maintained for each data source. Using that as a point of reference, Parker Health could quantify time and money saved through Owl Health&Care Technologies' platform-based approach: over $1 million in savings and a 75% reduction in imple-mentation hours.

Lessons Learned

◆ Providers and partners bring complementary strengths to data and analytics initiatives.

◆ Do not underestimate the power of data and its connectedness.

◆ Look for hidden gems in seemingly unconnected data sources.

◆ Unify, cleanse, and model the data to make the insights future-proof.

Advice to Share with Others

1. Focus on building the foundation/data backbone to leverage optimally.

2. Consider a platform approach and not resolve to a piecemeal solution.

3. Focus on the foremost advantage of having all your data in one place (single source of truth), cleansed, processed, and unified.

4. Ensure the approach is vendor/service provider/cloud agnostic.

5. Build a model that can be leveraged for finer insights.

Edward Matthews, chief financial officer at Parker Health Group, comments, "Owl Health&Care Technologies gave us exactly the tools we need to truly understand the current state of our business and I look forward to seeing the predictive and prescriptive capabilities now underway."

Owl Health&Care Technologies also continues to connect additional data sources and external tools while further building out the API structure to integrate with existing and future partners.

Data Management and Business Intelligence (BI) Solutions for Aging Services