ALG SENIOR

MatrixCare®
by ResMed

Case Study:
Driving KPIs Through Data Analytics

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Categories:

◆ Improved Health Outcomes, Financial Health, and Clinician// Staff Satisfaction

◆ Enhanced Business Acumen/Strategic Positioning, and Efficiencies

◆ Optimized Reimbursement and Benchmarking/ Referrals

About the Organization

Organization Name:
ALG Senior, LLC

Main Contributor:
Chuck Czarnik, Chief Information Officer

Organization Type:
Assisted Living

Organization Description:
ALG Senior, LLC provides management services for a network of over 100 assisted and independent living communities. We partner with community-level management to create efficiencies in resident services, human resources, accounting, and marketing. We are headquartered in Hickory, North Carolina, and our network reaches across the United States, with a heavy concentration in the southeastern states.

Project Description

In 2020, ALG Senior launched an enterprise data warehouse. Two years later, we have unified clinical, financial, and sales data from MatrixCare and MatrixCare Marketing, alongside data from numerous other systems. We visualize our data and approach our analyses as storytellers. Our tools allow us to synthesize data from multiple sources, and provide targeted, precise calls to action for our communities. This improves our resident, employee, and partner experience, and is key in our value-based care initiative.

Application Area

Our toolset addresses just about every functional area and strategic priority we face in assisted living. We've made considerable investments to measure and track our residents' health and outcomes, positioning us to lead in a value-based care future. Marketing is critical post-pandemic. We have responded with forecasting and omni-channel spend-management solutions. We have built tools to surveil COVID risk and vaccination status in real-time.

Core Services Offered

MatrixCare provides a suite of solutions to support organizations with varying data needs. Although we use reporting and analytics heavily within the core MatrixCare platform (available to all customers), our warehouse is powered by the MatrixCare MyData product. This product enables raw data access, allowing us to go "under the hood" and pull just about any data point we need from anywhere within the MatrixCare application ecosystem.

We are showcasing some relatively advanced products that we have developed, but the MyData platform can be accessible to customers that have (or can grow) modest SQL programming skill. MatrixCare provides numerous technical references and guides within the MatrixCare Community portal to get a client started.

Business Model

Our industry has been hit hard by the pandemic, and we all face unprecedented staffing challenges. Value-based care presents both threat and opportunity. ALG Senior's niche within the broader industry is mid-market, value-oriented senior care. We believe more than ever that the prudent path is to operate with relentless efficiency. And a key to that efficiency is data. We transform that data to insight, into the right hands at the right time, with action bias.

Implementation Approach

Data Warehousing

Technically, our implementation follows a standard data warehousing approach: **Extract**, **Transform**, and **Load**.

We **extract** the tables and fields of interest from the MatrixCare MyData system. Some of the data of interest are lists: Communities, Residents, Physicians, Medications, etc. These dimensions serve as the foundation upon which we can subsequently slice the data for analysis. Other data of interest are measurements: bed assignments, dates, falls, and vaccination status, etc. These are attributes of the dimensions and allow us to measure items of interest.

Once we have extracted the data, we **transform** it into a format that makes it easier to analyze. For example, we may standardize the names of our communities so that they match other systems. Or we may consolidate falls data and medication lists into a simpler format so that we can study the relationship between them.

Finally, we **load** the data into the warehouse. It has now been standardized in a way that makes analysis fast and flexible. When we do this with multiple systems, it allows us to create composite analyses that look across data domains. For example, we could analyze ADL activity in MatrixCare against time and attendance data from HR to compute a service delivery cost.

Data Analysis

When we approach a new subject, we always attempt to frame our exercise as a question. And our analyses directly answer that specific question, often with an interpretation. For example, we have created a Sales and Occupancy Forecast model based upon MatrixCare Census and Marketing data. It accounts for occupancy, move-in/move-out trends, lead funnel activity, and sales conversion ratio. It automatically computes a growth strategy and forecasts our gap to goal. We can quickly see which communities are on track, are growing slowly, or, in some cases could decline from discharges outpacing admissions. Analyses like these give important insights upon which we make decisions, including investment ones, and are far easier to interpret than traditional row-column spreadsheet approaches. It is a step toward true prescriptive analytics.

In work toward value-based care, we have devoted considerable energy to clinical outcome reporting. We have developed falls metrics for our organization using the SNF NQF definition and use them for ongoing quality assurance purposes. These tools allow us to segment residents based on risk using MatrixCare Events data stream that feeds our warehouse.
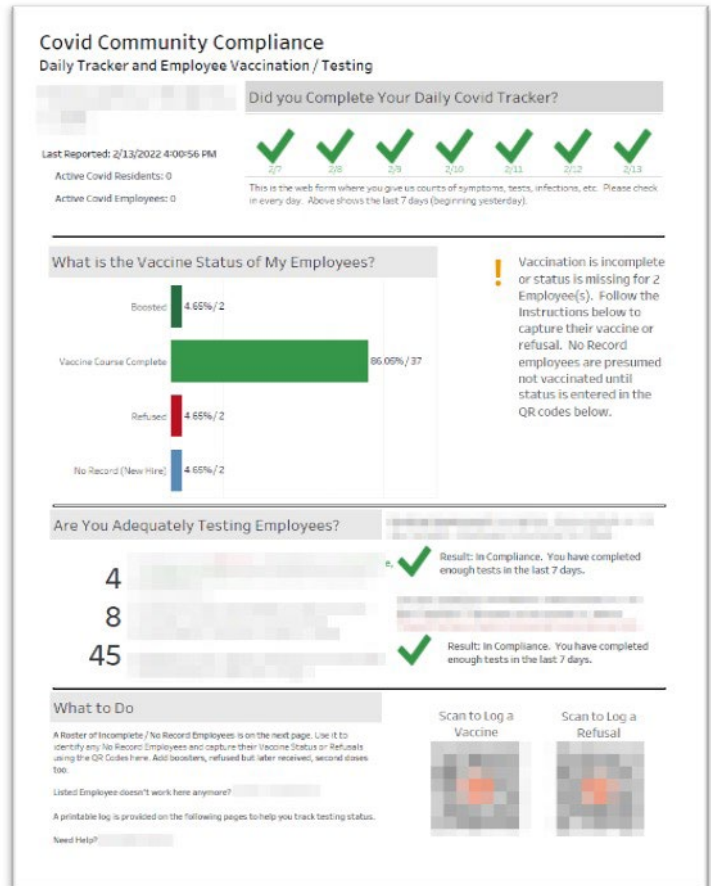
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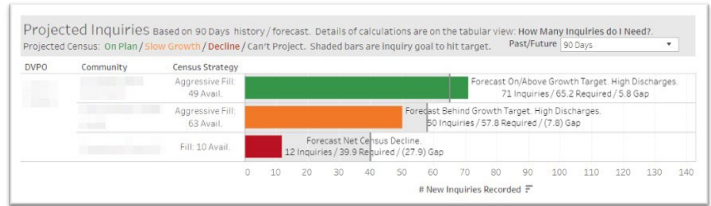
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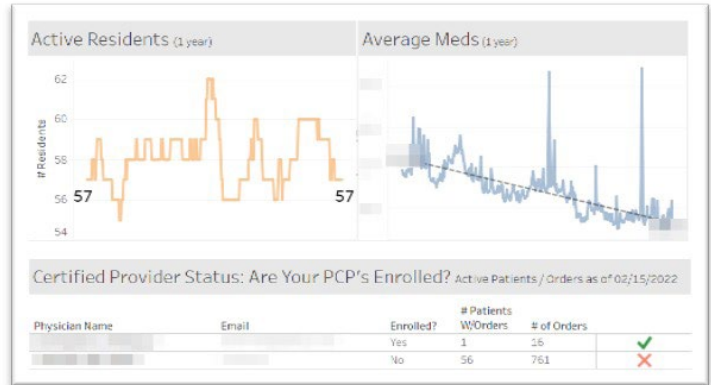
COVID Community Compliance, Daily Tracker

To further drive quality, we're scaling our analytics capability beyond our walls. In 2021, we launched our "***Certified Provider Program***." This is an initiative to recognize our residents' primary care physicians (PCPs) who agree to certain standards of practice and clinical goals. We have developed products that deliver a customized "provider review" that allows each PCP to see his or her performance specific to the residents under our mutual care. This tool is fully automated, and can produce a custom report of outcomes, COVID status, and prescriber trends among targeted medication classes in real time.

Many organizations have data analyst resources that support the corporate leadership team. The insights and strategy are often developed in the boardroom, and cascade through levels of leadership to eventually land at the front line.

However, organizations have many processes that just need to track sustainably. Examples include:

"Do I have vaccine status for all of my employees?" "Which residents have fallen in the last 30 days?" "What are my past due accounts that I need to follow up on?"

How do we monitor these key performance indicators (KPIs) and describe "success" to our communities without tying up the corporate leadership team? And how do we accomplish this knowing that our community leadership are caregivers, not data analysts?

We developed an analytics product specifically for our community leadership. In this product, we simplify the key insights and spotlight any actions required. The tool is a combination of analysis, interpretation, and instruction. When a metric is in range, we celebrate. When something is out of range, we do the interpretation for them, and give specific suggestions on how to correct it. We find that such gamification is a great motivator, and that driving process through data is a scalable, low-effort way to sustain.

Outcomes

Community-focused products have received universal praise. We have seen measurable improvements across KPI's: From COVID infection and vaccine tracking, to collections, to training completions. We're achieving this because we aren't just delivering charts and graphs. We are creating insights with the definition of success, decision support, and suggested actions baked in. Our community leaders respond accordingly, and the work often gets done with no escalation.

Our physician tools have been called "market defining." We have seen a 20%+ decrease in prescriber rates with some targeted drugs, like antipsychotics and antibiotics. In our opinion, the Certified Provider Program is key to achieving value-based care. We don't practice medicine, but with this program and tools we are influencing those who do. It improves outcomes for our residents and reduces stress for our employees.

Challenges and Pitfalls to Avoid

Spend the time on the front-end: Select vendors and tools with robust integration capabilities. Data locked away in a walled garden is of marginal value. MatrixCare has been a great partner.

Approach your analytics efforts with discipline. Rarely does a task conclude with an answer. The answer that you develop usually just leads to more questions. The art is the balance of knowing when to stop analyzing and start acting. We avoid this "analysis paralysis" by anchoring each effort to a specific question that is related to a process or outcome that we want to improve. We may not immediately execute a request to "*Build a falls dashboard.*" We do execute on specific falls questions, and from those questions a dashboard may eventually emerge.

Lessons Learned

In our world of "digital transformation" there is a near-insatiable appetite for data and analytics. Many organizations place their analysis resources in orbit around the senior leadership team. In our experience, front line and business partners need answers too. And often they are in the best position to act. This "grassroots" approach can be a powerful force multiplier. Democratize your data, and work to put simple insights into the hands of those most equipped to effect change. This allows senior leadership to focus on strategy more and to enforce process less.

Advice to Share with Others

We are sharing the fruits of a multi-year journey. And we have the benefit of scale and specialized talent. Developing a data culture is a transformation that is in reach for most operators. Staff within your organization that are strong with Excel can develop products upon MatrixCare MyData with a little specialized SQL knowledge. Training is readily available, and partners like MatrixCare have resources to help you get started. Start small and iterate. More advanced tools like PowerBI and Tableau (among others) will accelerate your capabilities. There are many third-party organizations that can provide a jumpstart. Seek them if necessary.