



The Future of Healthcare Excellence: Using Predictive Data to Hire, Retain and Succeed





How a Southern Multi-Location General Hospital Boosted Operations, Employee Performance, and Patient Care Across Departments

The hospital at the center of this case study, a medium-sized general hospital in the South, cares for some of the most traumatic and challenging cases in the region, often with the highest profile and highest risk. Despite its urban headquarters, the hospital's service area extends 150 miles into rural areas. The facility encompasses an acute-care hospital with more than 300 beds and has a regional Level 1 Trauma and Burn Center, Level 3 NICU, high-risk OB, rehabilitation center, long-term acute care, and a range of ambulatory clinics and services throughout the area.

With the healthcare industry trying to overcome an evolving set of challenges, including work fatigue, increasing expenses, and turnover at an all-time high, the hospital is focused on maintaining a stabilized, satisfied workforce while providing the level of patient care for which it has become known. It has partnered with Arena Analytics to help achieve this goal by using predictive hiring data to select and retain the most qualified staff for the job and improve overall operational efficiency.

..... The Result

The hospital's Operations and HR teams now work cohesively together to proactively predict employee and candidate performance with confidence. Not only has the organization been able to hire the right candidates for the right jobs, but Arena has also empowered hospital leaders to dramatically reduce turnover, limit reliance on staffing agencies, and most importantly, help improve operational excellence by providing the best employee and patient care possible.



The hospital prides itself on providing high quality care in all service areas and holds its staff to an equally high regard.

Transforming Turnover: Moving Beyond Applications & Assessments

Like many healthcare providers, leaders at this hospital face daunting workforce challenges. Other departments were also experiencing high turnover rates – housekeeping had a 360-day turnover in excess of 50%, and first-year nurses in its Nurse Residency program were turning over at the same rate as experienced new hires.

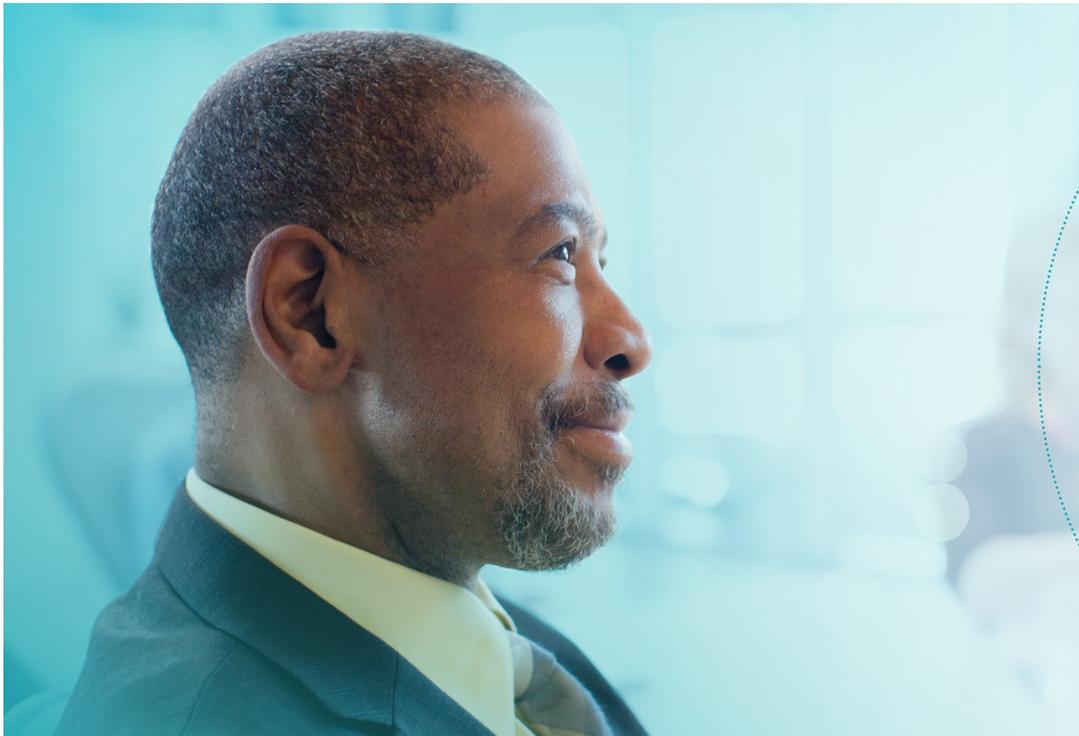
With staffing and benefits usually making up more than half of annual operating costs for a healthcare company, turnover directly affects the bottom line – not to mention the adverse impact it can have on patient care, nurse morale, and employer brand. To deal with high rates of turnover, healthcare companies often turn to supplemental staffing, which is also a massive cost driver. For every 20 traveling nurses hired, a hospital spends over three million dollars on average.

With the hospital barely breaking even, something had to change. The organization needed a way to maintain its high level of patient care while also reducing turnover and costs associated with hiring and onboarding. Knowing how closely linked patient care is to employee satisfaction, the company started by revamping its hiring methods to leverage predictive data to find the right candidates for the right positions and improve retention.

Though typical for healthcare organizations, some of the hospital nursing departments were experiencing an annual turnover of more than 40% and nearly 30% of nurses were leaving within their first year.

The traditional processes of having candidates fill out applications, undergo interviews, and take personality assessments were proving ineffective. Resumes, pedigree, and personal connections were not effective at predicting actual job performance, plus they unintentionally reinforced bias. HR and Operations leaders wanted a way to understand which candidate would thrive in a particular role and be a long-term asset to the organization.

Always seeking ways to innovate, hospital executives decided to explore using predictive data to transform not only its staffing approach, but look for scalable ways to improve performance, retention, and operational efficiency. The hospital hoped to replace outdated processes, improve diversity in hiring, gain greater confidence in its staffing decisions, and share insights across Operations and HR departments to make better, more data-driven decisions.



Key KPIs Achieved with Arena Analytics

22% Reduction

in annual employee turnover

\$7 Million Saved

by eliminating agency labor costs

Driving Total Talent Transformation

After careful consideration, the hospital discovered that Arena Analytics was the only solution provider with proven technology to predict a hire's likelihood to be retained with confidence and without bias. More like a strategic advisor than simply a technology platform, Arena Analytics helped HR leaders completely transform its talent acquisition and retention methods. By instituting a data-driven and transparent hiring process, Nursing leadership, Operations, and HR were all able to work together in complete strategic alignment. They collaboratively analyzed outcome data and predictive insights to hire the best candidates for each job. This led to higher revenue, a stronger employer brand, a better place to work, and a new standard of care for the 21st century.



Arena Analytics is the only platform developed specifically to help healthcare companies predict staff and operational performance with confidence.

Arena Analytics in Action

Using predictive data to turn the traditional job board on its head, the hospital started by opening its applicant pipeline to identify and match candidates to all available jobs – including existing applicants, potential matches in the Arena Analytics database, and internal candidates that might be better suited for another position.

Arena Analytics complemented existing processes and procedures by quickly adding predictive insights around a candidate's performance. Using data science backed models that analyze multiple data sources including the organization's own workforce data, the end result is a prediction of the candidate's likelihood to stay in the position for the long haul.

These predictions are highly specific to the candidate and the particular role being filled. The same person who thrives in one position may not succeed in another. If a candidate is not a match for that particular role, their application will be saved in case they are a better fit for a future opening. This continuous employee pool is a huge competitive advantage and reduces future recruiting costs.

Hospital leaders were able to get Arena Analytics' retention solutions up and running with little to no involvement from IT.

Arena Analytics not only closes the immediate need of filling open positions with the right candidates, but it ensures that the entire ecosystem thrives – nurses, hospital, clinical, HR and Operational leaders, patients, and the community. By matching candidates to open jobs and predicting their fit, retention, and performance over time, the hospital has lowered turnover, completely eliminated millions in agency spending, increased its talent pool, improved client care, and enhanced operational performance.



The New Standard of Care: For Staff & Patients

Simply stated, Arena Analytics helped the organization reduce turnover by hiring smarter, which has guaranteed continuity of care, saved money, and improved operational efficiencies. For a health system operating close to break-even, these are huge accomplishments.

After implementing Arena Analytics, the hospital reduced its 90-day turnover by 39% in the first six months. After one full year, turnover was down 22%. Once relying heavily on agency labor to backfill open positions, finance leaders were able to completely draw down that line item, a savings of \$7 million. And during the pandemic, nurse leaders were able to maintain nursing staff and quickly ramp up on hiring when needed by having these processes and an expanded talent pool already in place. Crucially, the hospital now spends less time hiring and training new staff, which can cost hundreds of thousands or even millions of dollars annually.

One of the strongest arguments for using predictive data was revealed when the hospital initially hired staff that were not recommended by the algorithm. The turnover rate for those employees ended up being a full 10% higher than the recommended pool, negatively impacting operational performance and the bottom line.

Results After Implementing Arena Analytics

39% Reduction

in 6-month staff turnover

22% Reduction

in one-year staff turnover

While the platform won't fully replace the humanity involved in hiring, the data-based predictions are proving to be accurate, unbiased, and extremely helpful. And the more Arena Analytics is used, the better the outcomes will be since the platform's machine learning uses real-time data to continually improve accuracy and keep pace with changes within the organization. By ensuring continuity of key staff, nursing leaders can provide the best care possible without spending unneeded time or money on re-hiring or re-training.

This hospital is at the forefront of the future of healthcare. By partnering with Arena Analytics, it has improved quality of hire and time to fill while ensuring it has the best staff on hand, ultimately saving significant costs that can keep the doors open and ready to serve patients.



“Thanks to Arena Analytics, our HR and Operations teams work together like never before. We have saved money, improved turnover, and broadened our applicant pool, while maintaining our high level of service during unprecedented times.”

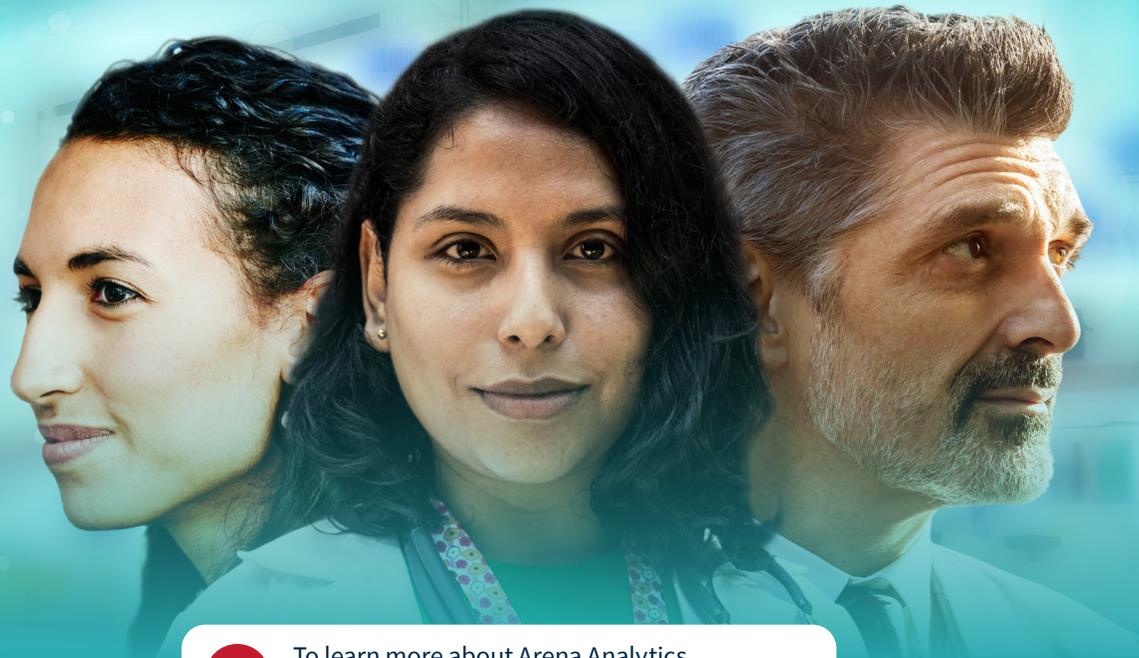
–Hospital Executive VP, COO & CNO

Leveraging insights from data analytics and machine learning, Arena matches people to specific positions, departments, and locations where they are most likely to thrive. By revealing each individual's likely performance, Arena is transforming the labor market from one based on perception and unconscious bias, to one based on outcomes. Healthcare clients have partnered with Arena to avoid the high cost of employee turnover, fill vacancies quicker, and optimize community-based hiring to build a high performing workforce reflective of the communities they serve. Clients include Newark Beth Israel, MultiCare, and Mt. Sinai. Learn more at arena.io.



Find out how Arena Analytics can help you predict staff and operational performance with confidence to retain key talent, reduce churn, increase your talent pool, actively eliminate bias and improve both staff and patient satisfaction.

Let's Get Started



To learn more about Arena Analytics,
[request a consultation](#) or call +1 (800) 734-3630