

Stabilized hospital workforce with a 12% turnover reduction



How a leading university medical center worked with Arena Analytics to **cut costs while boosting retention**

Summary

When a prominent statewide university health system's flagship medical center needed to curb rising staff turnover, it deployed Arena Analytics' predictive analytics solution to identify and hire job candidates most likely to be retained. In the first year, Arena's Retention Prediction helped to reduce turnover by 12%.

Background

Based in the Baltimore area, the flagship university medical center is known for its innovative approach to patient care and workforce operations. The center holds multiple awards for innovations in critical care, is in the top 10% of hospitals nationwide, and has been awarded the prestigious Magnet designation for nursing excellence. The flagship hospital comprises two urban campuses housing 1,100 beds and delivering high-quality care to 35,000 patients and 400,000 outpatients annually.

“Employee fatigue made it difficult to provide quality care in the face of vacancies, overtime, and longer shifts”.

The Challenge

The medical center requires a stable team to deliver quality patient care and uphold its strong reputation. Despite efforts to implement hiring, training, and onboarding processes and best practices, the center found that 42% of its essential staff members were quitting or being terminated within the first year of hire on the job.

The financial impact was staggering, with losses per worker varying from \$40,000 for nursing roles, to \$10,000 for medical technicians, and \$5,000 for dining services, administration, and housekeeping roles. In addition to fiscal impact, the growing staff shortage was beginning to affect the existing team. Employee fatigue and burnout made it difficult to provide quality care in the face of vacancies, overtime, and longer shifts. To address these growing concerns, the medical center's leadership team needed to find a way to stop turnover at its source and stabilize the remaining workforce.

The Solution

As a busy health system with limited resources to develop an in-house solution, the center selected Arena for its unique approach to boosting retention—by stopping turnover at the source. Arena’s sophisticated technology uses predictive analytics and machine learning to evaluate and predict each candidate’s likelihood of being retained across specific departments, teams, roles, and shifts—before they are hired!

Arena got to work by seamlessly integrating into the center’s existing Applicant Tracking System. As part of the regular interview flow, job candidates were prompted to complete Arena’s under 5-minute questionnaire. Ingesting candidate information along with data from the local labor market and from the employer’s own historical hiring trends, Arena’s machine learning algorithm produces a custom retention prediction for each candidate. With a quick glance at the candidate’s Likely, Neutral, or Unlikely prediction, hiring managers were able to quickly assess and focus on engaging candidates who are predicted to stay. By adopting Arena’s Retention Prediction tool and hiring more Likely candidates, the medical center was able to notably decrease turnover and start to stabilize their care teams.

The Results

The medical center prioritized hiring staff members that were predicted as likely to be retained, resulting in a 12% decrease in overall turnover in year one. By reducing staff turnover, the center realized significant cost savings to the bottom line. Using an average cost of \$20,000 to replace staff members, the 12% decrease in turnover enabled the center to realize \$1.7 million in savings. Following the success of its partnership, the university health system’s leadership has decided to expand use of Arena’s Retention Prediction solution to more of its system hospitals and medical centers.



12%

Turnover reduction in
year one



\$1.7M

Savings in labor costs

About Arena

At Arena Analytics, we believe that talent is equally distributed, but opportunity is not. Our goal is to rewire the labor market by applying predictive analytics, data science, and artificial intelligence to transform the way organizations identify, match, and hire people. When we get it right, the end result benefits everyone. Employers maximize retention, improve performance by matching people to the right jobs, and reduce bias in the hiring process. Employees find jobs that allow them to thrive, grow, and succeed. And the workforce as a whole becomes more efficient, productive, and equitable.