



CASE STUDY

Predictive OR Staffing Implementation

500-Bed Hospital, Chicagoland Area

12.6% Reduction in Total Labor Costs per Running OR	4.1% Increase in Surgical Volume	100% Report Increased Provider Morale and Decreased Burnout*
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*Surveyed participants include anesthesia and perioperative leaders

Executive Summary

This case study documents the implementation of ORlogic's predictive staffing platform at a 500-bed hospital in the Chicagoland area. Over the implementation period, the hospital achieved a 12.6% reduction in total labor cost per running OR, while increasing surgical volume by 4.1% and improving provider morale and decreasing provider burnout.

Background and Initial Challenges

Prior to implementation, the hospital's perioperative department faced several operational challenges common to surgical services:

- Block schedules did not account for block releases, add-on cases, service-specific variability, or seasonal patterns
- Staffing decisions were based on static assumptions and historical averages rather than projected daily demand
- Frequent understaffing on high-volume days and overstaffing on low-volume days
- Last-minute staffing adjustments created scheduling unpredictability for clinical staff
- No centralized forecasting tool to align perioperative services and anesthesia leadership on projected demand

Implementation Approach

ORlogic integrated with the hospital's existing scheduling and EMR systems to analyze thousands of data points, including historical patterns, current bookings, block utilization, service-level trends, and seasonal variability. The platform forecasted OR and procedural demand, continuously looking ahead 60 days.

Based on these forecasts, the system produced location-specific staffing targets, accounting for provider skills, staff types, scope of practice, and local staffing models. The platform identified coverage gaps and recommended the appropriate resource allocation to address them.

Results

Financial Outcomes	Operational Outcomes	Organizational Outcomes
• 12.6% reduction in total labor cost per running OR • 4.1% growth in surgical volume • Reduction in over- and under-staffed days through alignment of staffing levels to projected running rooms	• Staffing decisions shifted from day-of adjustments to days or weeks in advance • Reduction in last-minute staffing changes and same-day schedule modifications • Increased schedule predictability for clinical staff	• Shared forecasting data aligned perioperative services and anesthesia leadership decisions • Centralized data reduced conflicting interpretations of staffing needs • Leadership time reallocated to other operational priorities

"ORlogic gave us a clear picture of what was actually going to happen in our ORs. Instead of reacting every day, we could plan ahead—and the financial and operational impact was real."

— Perioperative Executive, Large Chicagoland Hospital

Conclusion

This implementation demonstrated that predictive staffing tools can produce measurable results. While improving scheduling predictability for clinical staff, a growth in volume and reduction in labor costs per OR was achieved. The key factors contributing to these outcomes were the integration of multiple data sources for demand forecasting and the translation of forecasts into actionable, role-specific staffing recommendations.

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