

# Orchestrating the Future: From Forecast to Action: Dynamically Optimizing Operations Across the Care Continuum

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## Executive Summary

Over the past decade, centralized healthcare command centers have united people, processes, and data to drive proactive decisions. But as health systems shared their current command center approach, it became clear the technology had evolved into something more: an **enterprise operations and analytics system** that supports both centralized oversight and distributed decision-making.

This independent report from Signify Research explores how those health systems have turned insights into results.<sup>1</sup>

- \$20 million in savings in the first year through reduced length of stay
- 2,000+ new patients served annually
- 35+ bed equivalent in additional capacity without adding beds
- \$40 million in staffing savings due to reduced reliance on temporary labor

What's next: Next-generation enterprise operations and analytics systems will dynamically optimize operations across the full continuum of care by going beyond real-time data to use predictive analytics and prescriptive guidance. By unifying data now scattered across multiple systems, hospitals can better predict what patients will need, align resources in advance, anticipate issues, and move quickly to solving the next problem.

The takeaway: Enterprise operations and analytics systems turn fragmented data into cohesive, actionable intelligence that keeps the entire health system in sync. Predictive insights enable teams to dynamically optimize operations and proactively

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1 Reported results are not prescriptive and could vary depending on users, electronic patient medical records system used, facility size, and scope of adoption



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balance patient needs with staffing and resource availability. The result is fewer delays, faster action, and a connected continuum aimed at getting every patient the right care at the right moment.

## Introduction

Hospitals today face a paradox: they have more data than ever, yet up to 97% of hospital data goes unused<sup>2</sup>. Care teams struggle to act on critical information because it is buried in the EMR or scattered across multiple systems, siloed by role or department, and may even arrive too late to change the outcome.

The gap is not a lack of data or analytics. It's the inability to turn data into meaningful insights that drive actions. Without a shared, accurate view of operations, hospitals lose precious minutes to duplication, miscommunication, and missed handoffs. These delays compound under pressure from limited capacity, staffing shortages, and financial constraints.

A decade ago, centralized command centers began closing that gap, bringing people and data together for real-time operational decisions. Since then, many deployments have proven the model's value. Hospitals across North America and around the world have realized measurable gains in length of stay, access to care, staffing efficiency, and financial performance.

That central function is still essential, but command centers are no longer the only place the real-time operational support lives. Today, **enterprise operations and analytics systems** carry those predictive insights beyond the hub, delivering visibility and decision support to units, departments, and facilities across the enterprise.

**An enterprise operations and analytics system is a sophisticated, enterprise-level solution that uses predictive operational intelligence to connect system-wide awareness with central and frontline action. Powered by interoperability, predictive analytics, and AI, it enables healthcare leaders and care teams to coordinate system-wide operations and proactively respond to changing circumstances and demand patterns.**

## Aligning Operations Across the Enterprise

When we interviewed leaders from health systems about their command center technology, we expected to hear how centralized hubs were improving patient flow and boosting capacity. We did, but we also discovered that the same technology now drives operational decisions far beyond those walls.

<sup>2</sup> [www.statnews.com/2024/12/03/health-care-data-storage-environmental-cost-climate-change](https://www.statnews.com/2024/12/03/health-care-data-storage-environmental-cost-climate-change)



These organizations described systems that supported daily multidisciplinary rounds, accelerated transfers and step-downs, prioritized ancillary services, and coordinated capacity and staffing across entire regions.

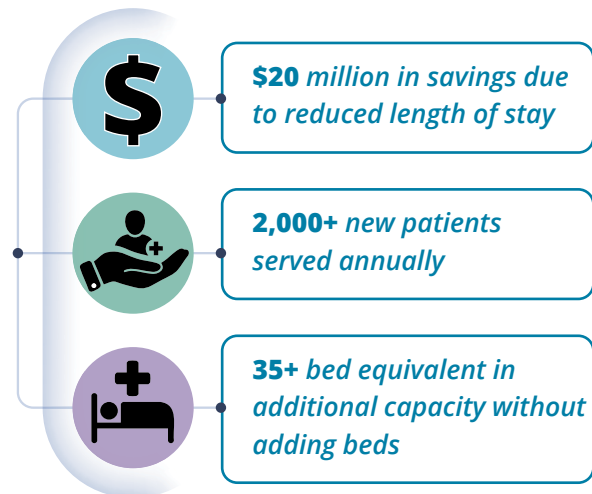
It became clear that what they called a command center had evolved into a sort of centralized nervous system or **enterprise operations and analytics system**. By leveraging advanced analytics in the central hub and across the entire organization, operational and care teams use the same insights to align resources, teams, and decisions in real time and proactively.

## Interviewed organizations

Participant	Provider Type / Scale	Location	Live Since
1	Integrated Health System	South Central US	2022
2	Integrated Health System	Western US	2023
3	Integrated Health System	Eastern Canada	2017
4	Academic Hospital	Eastern US	2019

The organizations we interviewed vary in size, geography, and structure, underscoring the broad applicability of an enterprise operations and analytics system. In every case, the technology supports their commitment to improving efficiency, supporting staff, and delivering timely, high-quality care.

## High impact results reported<sup>3</sup>



## From Central Hub to Enterprise-wide Operational Intelligence

Early command center deployments proved that bringing together timely information and the right people could improve performance organization-wide. The expansion from the original command center into a system for seamlessly orchestrating care across the entire organization represents a growing need for widely available, high-level operational intelligence.

The enterprise operations and analytics system has become an operational backbone that extends across regions, hospitals, departments, and units. At the central level, aggregated data gives leaders the full picture needed to make system-wide decisions on patient prioritization, bed allocation, transfer acceptance, and more.

At the frontline, role- and location-specific profiles deliver targeted information for immediate action. For example, a charge nurse can make

<sup>3</sup> Reported results are not prescriptive and could vary depending on users, electronic patient medical records system used, facility size, and scope of adoption

operational decisions at a unit-level without digging through multiple patient charts or calling bedside RNs for updates.

Now, frontline staff have the tools to act with confidence. Intelligence is accessible on mobile devices, unit dashboards, and workstations. Updates, alerts, and forecasts reach the people who need them to make informed decisions, whether they are in the command center, on a nursing unit, in imaging, or in a procedural suite. Decision rights are clearly defined: some actions are coordinated centrally, while others happen at the unit or departmental level, all informed by the same predictive insights.

This combination of co-located command centers and distributed insights throughout the organization supports both high-level strategic capacity decisions and the moment-to-moment needs of teams delivering care.

### Beyond the EMR

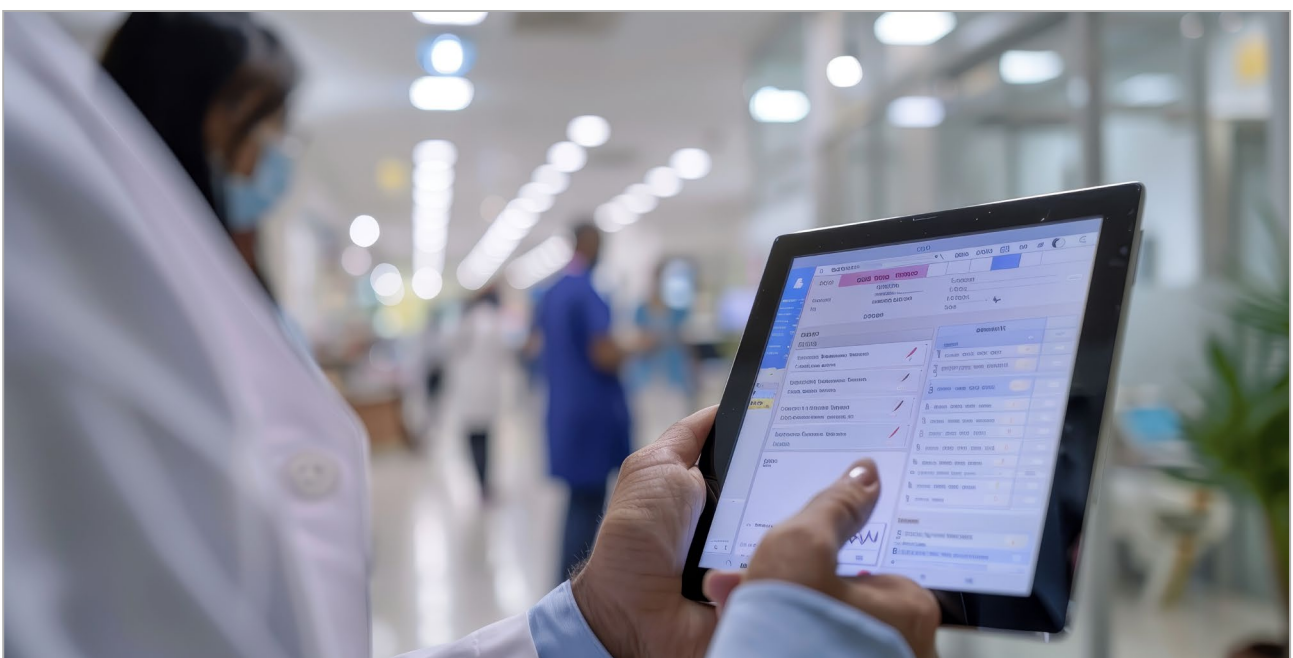
Electronic medical records have transformed clinical documentation and patient-level decision-making. But EMRs were never built to manage system-wide operations or provide the enterprise-level situational awareness needed to run a hospital.

While EMRs can show an individual patient's record and may have modules for specific functions—such

as viewing ED status or inpatient capacity—they struggle to connect those dots across the entire care continuum. They can't easily show how ED volume impacts inpatient beds, or how inpatient bottlenecks affect transfer acceptance. Building custom cross-sections of patients is typically a static process that can't be quickly adapted to answer urgent operational questions.

An enterprise operations and analytics system draws from many operational data sources beyond the EMR, such as bed management systems, operating room scheduling, environmental services tracking, radiology and lab systems, staffing and scheduling tools, devices and transport logs. Bringing these feeds together creates a real-time operational picture that single systems cannot offer.

With this foundation, an enterprise operations and analytics system delivers more than aggregated data. It unifies the information into a single source of truth across departments and service lines, while still allowing users to drill down to patient-level details when needed. Custom role- and location-based profiles give leaders and frontline staff the tailored information they need to act. This could be a full-system view for patient prioritization and bed allocation, or a charge nurse's list of patients ready for discharge. All of it is available without searching multiple records or waiting for reports.



Health system leaders explained why the EMR alone isn't enough:

*"The EMR has data, but not in a way that highlights the factors driving flow, quality, or safety. The command center brings those pieces together."*

*"The EMR couldn't unify data or give a system-wide view. We were stuck running historical reports—reactive instead of proactive."*

## Focusing on Operational Excellence

As care delivery becomes more complex, health systems increasingly recognize the need to match clinical excellence with operational excellence.

**As one Chief Nursing and Patient Care Services Officer at a large academic system put it:**

*"Our health system is well known for innovation in clinical quality and excellence. But we also have excellence in our operational innovation that we don't talk about as often. Our operational initiatives are essential to supporting our dynamic environment, which allows us to support our staff, deliver high-quality care, and remove inefficiencies in our processes."*

An enterprise operations and analytics system puts that operational innovation front and center, turning real-time data and predictive insights into coordinated action that drives improvements across the entire health system. While capacity management is a core use case, leaders emphasized that the benefits extend much further, touching quality, efficiency, staff experience, and financial performance.

Health system leaders shared the following benefits:

**Consolidated, real-time and predictive intelligence** that replaces fragmented data views with a unified operational snapshot spanning the ED, inpatient units, procedural areas, and post-acute settings.



**Improved efficiency** driven by quick, accurate decisions, seamless throughput, and better resource alignment

**Enhanced patient quality and safety** through stronger coordination across teams and service lines

**Time savings for staff**, who spend less time chasing data and more time preventing problems

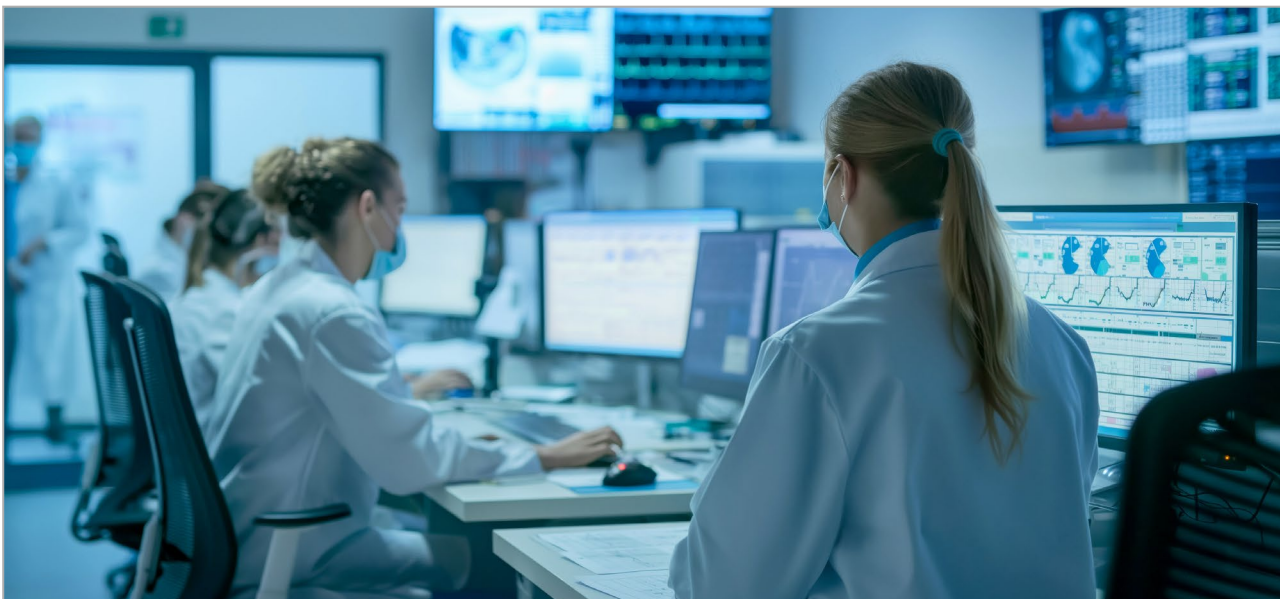
**Measurable Outcomes** including reduced length of stay, optimized staffing, improved flow, increased capacity, and fewer inefficiencies.

The following use cases illustrate how those benefits translate into real-world results.

### USE CASE:

#### REDUCING LENGTH OF STAY TO UNLOCK CAPACITY, IMPROVE SAFETY, AND \$20 MILLION OF SAVINGS IN YEAR ONE

A regional health system set out to reduce discharge delays, cut ED boarding, and improve the pace of patient progression across its hospitals. With a centralized command center at the heart, the health system deployed an enterprise operations and analytics system to boost visibility, standardize processes, and drive daily performance. The new technology gave teams real-time visibility into bed capacity, patient placement, and discharge readiness, which powers better workflows such as efficient multidisciplinary



rounds, proactive discharge planning, and timely bed assignments for ED admissions.

**One health system leader explained:**

*“It led to a significant decrease in length of stay for patients, but the driver was also around quality and safety, and our ER is a safer place now.”*

**Results in the first 10 months:**

- 1.07 day reduction in length of stay, increasing capacity without adding staffed beds
- Estimated \$20 million in savings in the first year, through increased patient volume by using that added capacity to treat more patients
- 63.9% reduction in ED boarding while maintaining steady admission volume
- 22.2% increase in transfers, improving access to care statewide

**USE CASE:**

**USING PREDICTIVE INSIGHTS TO MOVE FROM REACTIVE TO PROACTIVE OPERATIONS AT SCALE**

A large academic medical center faced persistent challenges with inpatient volume, staffing variability, and patient flow bottlenecks. During peak surges, it was often forced to go on emergency divert.

Implementing an enterprise operations and analytics system with real-time visibility and predictive census forecasting provided schedulers with accurate hourly and daily volume projections so they can staff to actual demand. With the ability to control operations proactively instead of reactively, the health system can manage higher volumes without adding beds or going on divert.

**Results:**

- 66% sustained reduction in the time from bed request to patient placement<sup>4</sup>
- \$40 million in savings with improved staffing and 50% reduction in reliance on temporary labor
- Ability to co-locate patients based on the appropriate care team to reduce caregiver travel times

**Leaders emphasized that these gains represent more than operational efficiency. They also reflect a new way of anticipating and managing demand:**

*“We used to go on emergency divert. Our bottlenecks meant we couldn’t bring any more patients into our hospital. We don’t have to do that anymore. We’ve learned how to manage flow, and now we can accept and integrate more patients.”*

4 All metrics provided by participant 4. Bed assignment time decreased from .8 in 2020 to .3 in 2021, 2022, and 2023.

**USE CASE:****EVOLVING FROM OPERATIONAL GAINS TO A FOCUS ON QUALITY**

A Canadian health system began using an enterprise operations and analytics system to address delays across the patient journey, from ED to bed placement to discharge planning.

Early efforts targeted operational efficiency, embedding real-time insights into daily operations to quickly spot and address bottlenecks. As those improvements took hold, the focus expanded to supporting quality and safety, with custom views and profiles designed alongside frontline teams to align with clinical priorities.

**Results:**

- 52% reduction in acute conservable medicine bed days
- 34% reduction in bed placement times for ED patients
- 76% reductions in delays for initial Allied Health Assessments
- No agency nurse use and zero full-time RN vacancies

**Leaders emphasized that the system's value went beyond numbers:**

*"We've created the space and visibility to open surge capacity when needed, without overextending resources."*

**"Staff told us:**

*'I like working here. I like the technology. I have time to give good care.' That's an almost immeasurable outcome from this system."*

**USE CASE:****EXPANDING REGIONAL ACCESS THROUGH SMARTER CAPACITY MANAGEMENT**

A multi-hospital health system faced a challenge common to many: despite having available beds across its facilities, the lack of real-time visibility often meant missing opportunities to accept transfer patients.

To address this, the organization implemented an enterprise operations and analytics system with a capacity view spanning all sites of care. Operational

teams gained a live snapshot of beds, staffing, and availability so they could replace guesswork with timely, informed decisions.

**Results:**

- 2,000+ more patients served each year
- Increased accuracy of site-of-care decisions by matching demand with available resources
- Improved staffing validation, enabling resources to be justified and deployed where they were most needed
- Increased regional transfer volume by 11 patients per day, more than double the targeted goal

**One leader noted:**

*"We had missed opportunities because we didn't have a clear line of sight into available resources. Now, we're capturing those patients because we know where we can care for them across the system."*

**Smart Deployments: Lessons from Leading Health Systems**

Every health system faces its own operational hurdles—whether it's financial constraints, staffing shortages, or bottlenecks in patient flow. The organizations we spoke with tackled them head on, pairing the right technology with



clear strategy, strong governance, and a culture that empowers teams. Their experiences reveal practical lessons for deployments that deliver lasting impact.

### 1. BUILD THE BUSINESS CASE

- **Establish Measurable Objectives.** Treat this as an investment, not an expense. Align on KPIs, target early wins, and link results to financial, operational, and clinical goals.
- **Frame capacity and flow as more than a financial issue.** Show how challenges like length of stay, diversions, and discharge delays also impact safety, quality, and access to care.

### 2. ENGAGE AND EMPOWER TEAMS

- **Gain buy-in early and often.** Involve frontline staff, department heads, and stakeholders across disciplines from the start. Cross-functional engagement builds a culture of ownership and systems that work for everyone.
- **Clarify roles and purpose.** Technology and process changes should lighten workloads, not add to them. Clearly define roles to build trust and speed adoption.
- **Lead with transparency and a supportive culture.** Clearly communicate how data will be used to improve operations and support teams rather than surveil them. Set expectations that this is more than a technology deployment. It is a cultural shift grounded in operational excellence and continuous improvement.
- **Partner with a vendor who works alongside your teams.** Choose one who understands your infrastructure, culture, and long-term strategy. Lean on them for on-the-ground support during implementation. They can help manage change and ensure the technology works for your teams.

### 3. MAKE INSIGHTS ACTIONABLE

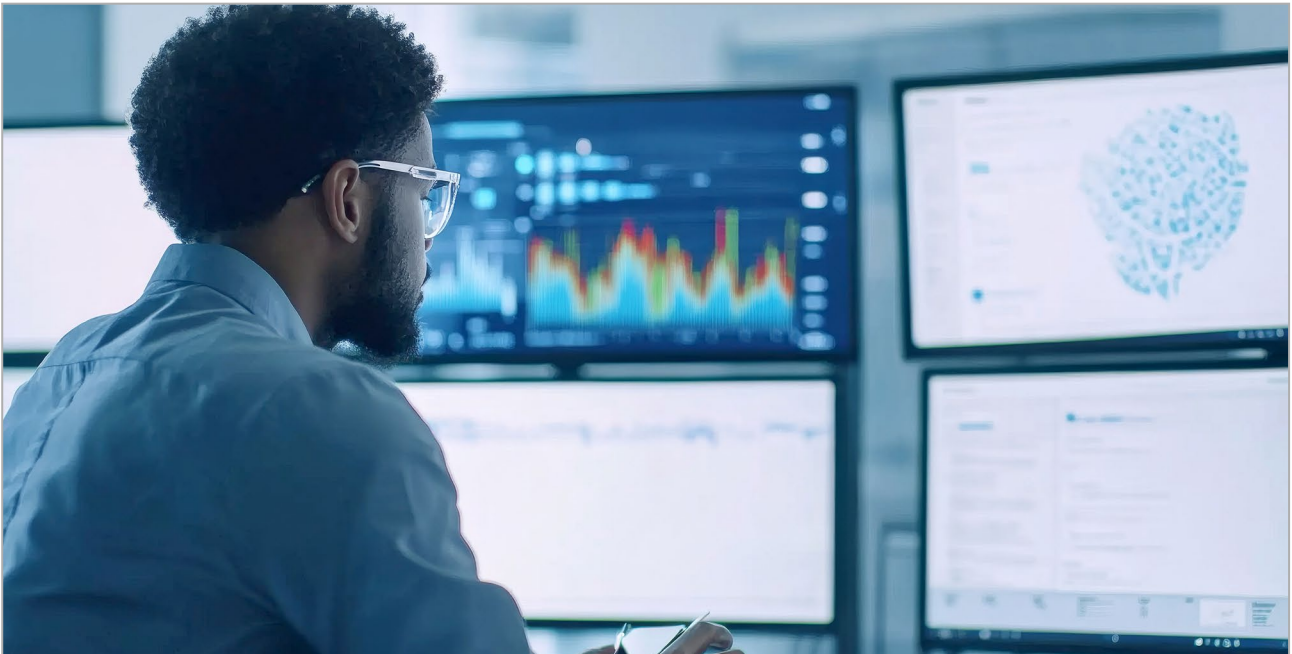
- **Design for all levels.** Enterprise operations and analytics systems create value at both the system level and the bedside. Build workflows that make insights accessible wherever they are needed.
- **Solve problems holistically.** Collaborate across departments to make improvements

without creating new barriers or bottlenecks elsewhere.

In following these lessons, healthcare institutions can counter some perceived obstacles that may be slowing their adoption of an enterprise operations and analytics system, including:

- **Cost.** Although enterprise operations and analytics systems require initial investment, the concern is unfounded in practice. All four providers interviewed reported rapid gains through efficiency, with one achieving full payback within six months. Initial cost concerns quickly dissolve once operational benefits become apparent.
- **Staff Surveillance.** Staff fears about performance monitoring represent a temporary hurdle that resolves once systems are operational. Providers consistently report that staff quickly recognize command centers as supportive workflow tools rather than surveillance systems, transforming initial resistance into advocacy.
- **Cultural Change.** Cultural adaptation is the most significant implementation challenge, requiring organization-wide engagement. However, providers using systematic approaches—emphasizing transparency and staff feedback—successfully navigate this transition. The key is selecting vendors with proven implementation expertise to accelerate adoption and maximize operational benefits.





These lessons, echoed by every organization interviewed, show that successful deployments are built on alignment, communication, and a commitment to using data to solve real problems. Early wins prove the value, but the real transformation comes from entrenching these practices into the DNA of the organization.

## The Future of Enterprise Operations and Analytics Systems

The next leap in enterprise operations and analytics systems will come from AI that amplifies the system's ability to anticipate needs, recommend the best next actions, and empower teams to make faster, more precise decisions. The next wave of innovation is a natural evolution that brings greater precision, speed, and scale to the work of caring for patients and supporting the teams who serve them.

Health system leaders envision a future with:

- Prescriptive recommendations for actions based on predictive insights.** Next-generation systems will not only forecast challenges such as admissions surges, discharge slowdowns, staffing gaps, or imaging delays. They will also prescribe the most effective actions to address them

such as recommending the redeployment of specific staff, routing patients to open rehab beds, or expediting imaging procedures to prevent downstream delays.

As one leader noted, "It would be nice if the technology could tell us what order things should happen. A lot of patients have multiple things scheduled, and there probably is some ideal way to take all of them and fit the puzzle together. That would really change the game."

- Proactive, system-wide discharge management.** Enterprise operations and analytics systems aim to use insights aggregated from multiple data sources to predict each patient's needs throughout their care journey, forecast an expected time of discharge, prioritize supporting services such as transport and imaging, and surface potential barriers to discharge to help teams avoid bottlenecks.

### As one leader put it

*"Right now we say: 'We think you're going to leave on Monday,' and that's about it. What we want to do is change the conversation so the clinicians, the patient, and the family all know the plan, using data to set an expected discharge and keep everyone aligned."*

- **Optimized allocation of staffing resources.** These tools will forecast hotspots and areas of need, helping ensure the right resources are in place before problems escalate. One leader shared, “It can now give us real, validated insight into where we were understaffed. Ultimately, in the long run, it’s helpful to see what’s truly happening in the organization so we can add staffing where it’s needed to consistently unblock necessary beds—even where we didn’t initially have open FTEs posted.”
- **Expanded reach across care settings.** By integrating ambulatory, pre-acute, and post-acute data, enterprise operations and analytics systems aim to support seamless care transitions and ensure patients are consistently in the right place with the right resources. One health leader said, “I’d like to see far more integration of the inpatient world with the outpatient world—home health, same-day surgery, community care. How can we use this technology across the continuum, especially as we try to keep people in the home and the community more?”

Many health systems now view enterprise-level operational intelligence as table stakes for

competing in an environment of constrained resources and rising patient expectations. Forward-looking health systems are already laying the groundwork by piloting predictive discharge models, experimenting with automated staff forecasting, and leveraging AI to power operational decisions. Those that invest now will be better positioned to handle surges, adapt to change, and deliver consistently high-quality care in the years ahead.

## Conclusion

Enterprise operations and analytics systems have already proven their value, helping health systems optimize resources, support staff, and deliver timely, high-quality care. The early gains—shorter stays, streamlined flow, stronger staffing alignment—are only the beginning.

With the emergence of AI, more predictive insights, and broader interoperability, the next generation of systems will deliver even greater precision, speed, and resilience. By embracing this evolution, health systems can stay ahead of disruption, build lasting operational strength, and deliver better care for every patient, every day.



At Signify Research we are passionately curious about Healthcare Technology and we strive to deliver the most robust market data and insights, to help our customers make the right strategic decisions. We blend primary data collected from in-depth interviews with technology vendors and healthcare professionals, to provide a balanced and complete view of the market trends.

Our major coverage areas are Healthcare IT, Medical Imaging, Clinical Care, Diagnostics and Lifesciences and Digital Health. In each of our coverage areas, we offer a full suite of products including Market Reports, Market Intelligence Services, as well as Custom Research and Consultancy services and Decision Maker research. Our clients include technology vendors, healthcare providers and payers, management consultants and investors.

All of the interviewed cohort use GE HealthCare Command Center technology.

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