

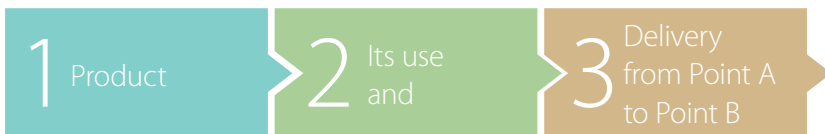
# Right on par

## Baptist Health optimizes inventory levels to lower costs

Health systems across America are seeking new ways to lower expenses, and the supply chain is fast becoming a primary target. At Baptist Health — one of Kentucky's largest health systems — the supply chain has been a significant source of savings for years. And Baptist Health is just getting started.

"We take a three-prong approach to pull cost out of the supply chain," said Michael Reeves, System Executive, Supply Chain for Baptist Health. "We analyze 1) product, 2) its use and 3) delivery from Point A to Point B — from manufacturer to distributor to hospital to bedside." According to Reeves, it's an evolution that has taken the better part of a decade, working in strategic partnership with Cardinal Health and major manufacturers to seek value beyond product price alone. Baptist Health's strong results are a benchmark for others to follow as they pursue new ways to cost-effectively improve patient outcomes in the new world of healthcare.

### We analyze



from manufacturer to distributor to hospital to bedside.

*"There has been a precipitous decline in the cost of getting the product where it needs to be."*

**Michael Reeves**  
System Executive, Supply Chain  
Baptist Health System

### ValueLink® Par Optimization

#### About Baptist Health

Baptist Health (formerly Baptist Healthcare System), is one of Kentucky's largest healthcare systems. Headquartered in Louisville, the system includes seven acute-care hospitals with more than 2,100 licensed beds in Corbin, La Grange, Lexington, Louisville, Madisonville, Paducah and Richmond. An eighth facility, Oak Tree, is a long-term, acute-care hospital in Corbin. Baptist Health also manages Hardin Memorial Hospital in Elizabethtown and Russell County Hospital in Russell Springs. For more than 85 years, Baptist Health has stood for high-quality care, patient satisfaction and nursing excellence, owning two of the four adult Magnet-designated hospitals in Kentucky. Baptist has grown its physician network to more than 450 employed physicians and more than 1,600 independent physicians. In addition to hospitals, Baptist Health includes urgent care and retail-based clinics, home health care, outpatient diagnostic and surgery centers, occupational medicine and physical therapy clinics, fitness centers and a health maintenance organization (HMO).



**BAPTIST HEALTH**

## Innovating to lower costs

Since 2008, Baptist Health and Cardinal Health have collaborated on an activity-driven distribution model that rewards greater efficiency with increased staff productivity and lower costs. A core driver of this approach is ValueLink® Supply Management Services, an industry-leading logistics service that constantly analyzes demand flow to improve delivery to the point of care. **ValueLink® Par Optimization** sets inventory levels and reorder points to precisely align with true demand, based on data analysis. As a result, fewer lines are picked, touchpoints are reduced and inventory levels lowered.

"As Baptist Health gains efficiency, so do we," said Kim Prather, IDN Manager for Cardinal Health. Part of her on site consulting role is to drive Par Optimization activities. "By picking fewer lines and reducing inventory, we're able to reduce fees." These process improvement efforts also free up labor that Baptist Health can now reallocate to more productive use. The financial benefits are clear: "There has been a precipitous decline in the cost of getting the product where it needs to be," Reeves said.

## Price transparency reveals more ways to save

In an activity-driven model, the base product price is transparent, so Baptist Health knows exactly what the true price should be for every facility in the system. "Because the net prices are published, Baptist Health can have a high level of confidence that it's paying the right price for every product everywhere," said Stan Farrell, Sales Consultant for Cardinal Health.

"With an activity-driven model, it's in everyone's best interests to eliminate waste," added Tim Bower, Region Director for Cardinal Health. "So we're always looking for new ways to save."

Because the distribution fee is as transparent as the product price, facility managers have a clear cost to manage, and target to lower, even further. That clarity drives every facility to become more efficient. "It takes the right relationship to see the value of collaboration for driving new efficiencies and finding new ways to save," Bower said. "Baptist Health and Cardinal Health have that relationship."

### Proving Par Optimization works

**\$215,000**

Improved  
**service levels**  
to clinicians

Par Optimization was piloted in two hospitals, Baptist Health Louisville and Baptist Health La Grange. The results speak for themselves:

Inventory savings

Clinician satisfaction

Delivery days

Lines picked

Touch points

These strong results have prompted Baptist Health to plan for Par Optimization throughout the health system.

Decreased  
from  
**six to five**  
saving  
**\$40,000**  
a year

**700**  
fewer a week

**Reduced**  
to streamline  
supply chain

*"Our strategy has been to consolidate inventory and reduce touchpoints, which is taking cost out of the supply chain."*

**Linda Bottorff**

Corporate Materials Manager  
Baptist Health System

## Taking out the touchpoints

“Our approach has been to consolidate inventory and reduce touchpoints to take cost out of the supply chain,” said Linda Bottorff, Corporate Materials Manager for Baptist Health. To implement the strategy, Baptist Health and Cardinal Health focused on one nursing station at a time, using data analysis to reveal how many times each product was “touched.” “Some had as many as 24 annual inventory turns — others as few as three. Neither level was ideal,” Bottorff said. Cardinal Health analyzed product data to reset touchpoints based on each product’s cost, velocity and utilization. Lower-cost commodities have more touchpoints; higher-cost items, less.

The demand-driven approach analyzed historical product usage for each product at the precise point of use — and even the exact time of day each was used. This minute-by-minute analysis revealed the ebb and flow of a particular product’s use at each site of care throughout the day.

“Our concept of Par Optimization is to look at the data to make effective changes. We put logistics to work,” Farrell said. “When we analyzed the data, we saw a lot of opportunities and made very specific recommendations for improvement. It was really eye-opening for Baptist Health.”

The analysis used a combination of mathematical calculation and clinical insight to establish logical and rational minimum/maximum par levels for each nursing station. “It sounds like it’s out of a textbook, but it’s really just common sense,” said Terry Wiese, Operations Manager for Cardinal Health. “We’re balancing volume every day, so there are no peaks and valleys. It’s about managing labor and carrying inventory at the best units of measure.”

## Increasing service levels

In addition to lowering costs, another major benefit has been improving service levels to clinicians. ValueLink® Services delivers a fill rate of 99+ percent. “And by correcting the stocking levels, we’re making sure enough of the product is there when it’s needed,” Farrell added. Too much of a product is not conducive to maximizing space; too little runs the risk of a stockout. The aim is to maintain a 24 to 48 hour supply of each product, based on what nurses need.

“If you’re taking care of them, nurses don’t even know Par Optimization is running in the background,” Bottorff said. “The product is there when they need it and they don’t run out. We haven’t had one complaint.” In fact, Par Optimization has raised satisfaction levels among clinicians. “Now they have more time to dedicate to patient care,” Bottorff said.

## Getting started

How should a hospital system start down the path of Par Optimization without getting overwhelmed? Accurate data is the foundation of a successful implementation. As a first step, Cardinal Health assisted in cleaning up and normalizing the data provided by Baptist Health. A ValueLink® Services line analysis could then pinpoint precise and immediate opportunities to lower costs and improve efficiency:

1. Using a Lean approach, Cardinal Health targeted the exact departments driving the majority of volume (mirroring the classic 80/20 rule, 20 percent of Baptist Health’s departments were responsible for 80 percent of product orders).
2. In particular, the analysis identified the lowest unit-of-measure products in the lowest quantities per order at the busiest locations.
3. Cardinal Health improved the ordering efficiency at those locations by recommending the appropriate par levels and reorder points. “The distribution cost is the same whether you’re ordering one or a case,” Bottorff said. “You’re throwing money away,” if you’re not using Par Optimization.

Wiese added that it’s essential to understand the product mix and how it’s currently stored. “Then ask yourself, ‘What don’t you need?’” Using Lean Six Sigma methodologies and the 5S process, Baptist Health was able to remove expired, obsolete and excess products — freeing up space to inventory the right products in the right quantities and producing more revenue.

### Lean 5S Analysis

- 1 **Sorting** to remove unnecessary steps
- 2 **Straightening** to arrange materials based on utilization
- 3 **Sweeping/shining** to facilitate workflow
- 4 **Standardizing** to keep processes consistent from site to site
- 5 **Sustaining** improvement via regular reviews

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**Linda Bottorff**  
Corporate Materials Manager  
Baptist Health System

## Teamwork is essential

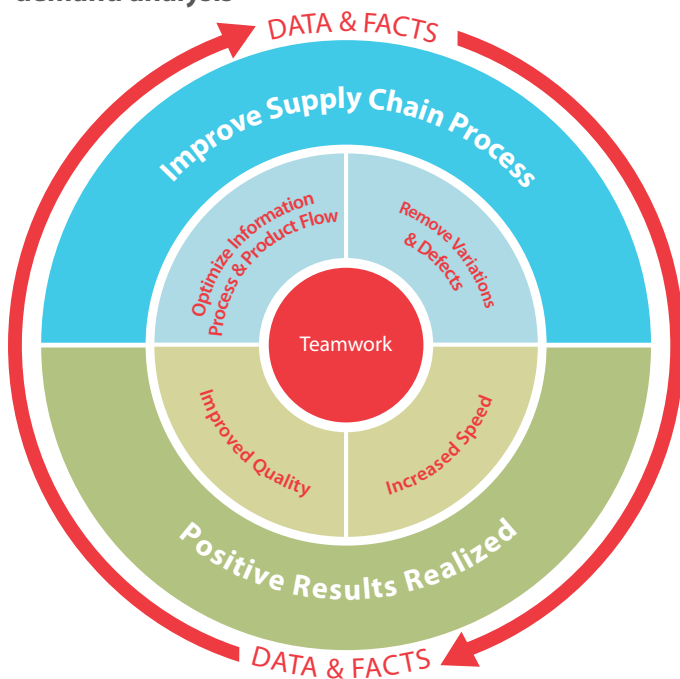
The strong bond that Baptist Health has with clinicians has been the catalyst for rapid and ongoing success. After all, new savings and efficiencies matter only if clinicians continue to have the products they need to take care of patients.

“Clinicians were included when setting up the Par Optimization program and establishing inventories,” Reeves said. The aim was to keep them involved and informed, while taking little if any of their time. “It can’t work without communication,” he said. “We’ve been successful because we’ve been patient with ourselves, doing only what our culture will allow. There’s some finesse to it.” Bottorff added, “It has to be a team approach as we standardize and optimize processes throughout the system.”

That teamwork includes a weekly meeting between Bottorff and Prather to look for even more opportunities to save and become more efficient — all while maintaining inventory levels that meet clinician needs. We are always asking ourselves, “How do we use ValueLink® Services to get more volume through the system?” Bottorff said.

“For Par Optimization to work best, it takes an internal champion like Linda Bottorff to help lead the way,” Prather said. “You have to show the hard-number results that prove the program works, take it one step at a time and be flexible. At the same time, you have to recognize that many of the benefits are ‘soft,’ such as increased speed, efficiency and eliminating waste. Put it all together and you have a powerful strategy for lowering costs while maintaining quality of care.”

## Optimizing the supply chain through demand analysis



## Rolling it out system-wide

Bottorff was skeptical of Par Optimization at first, due to an unsuccessful experience with it in the past. But she recognized that Par Optimization was the right thing to do and worked with Cardinal Health to refine the approach. “I was willing to try it one more time,” she said. With clear successes documented at the system’s two pilot hospitals, Baptist Health is now in the process of rolling out the concept to other sites throughout the system. Rollout is incremental: hospital by hospital, department by department. Using Lean Six Sigma as the overarching strategy, Baptist Health has the flexibility to set a comfortable pace for adoption.

Rather than convert each site all at once, the health system focuses first on those departments that drive the majority of line volume. In this measured way, Baptist Health and Cardinal Health continue to drive further efficiencies by identifying low quantity and low unit-of-measure orders — and then recommending the par levels and reorder points that optimize both cost and product availability at the point of care. Above all, clinician needs come first — new efficiencies and savings matter only when nurses continue to have the products they need, when and where they need them.

Reeves added, “This is becoming the standard throughout our system. Par Optimization is not a project — it’s a way of doing business. We’re measuring and managing all the time. It’s a continuous process — the more you get into it, the more you learn about yourself.”

## Optimizing for the future

Cardinal Health has been Baptist Health’s prime vendor for more than 10 years and has supported the system’s growth every step of the way. “We’re in acquisition mode and Cardinal Health provides us with templates to bring new sites into our system,” Reeves said.

“There’s more to this relationship than Cardinal Health being a good partner,” Bottorff said. “We have to be a good partner, too. That’s the meaning of true partnership — both of us working together to improve.”

Via the activity-driven model and strategies such as ValueLink® Par Optimization, Cardinal Health will help ensure Baptist Health can continue to grow cost-effectively. So this leading health system can remain focused on what matters most — providing better patient outcomes at the best possible cost.

*“Par Optimization is not a project — it’s a way of doing business.”*

**Michael Reeves**

System Executive, Supply Chain  
Baptist Health System

# What is ValueLink® Par Optimization?

How do you set the right inventory levels so that you always meet true demand without paying excess holding costs? That's the power of ValueLink® Par Optimization, leveraging actual demand data from the point of use to drive supply chain improvements:

- 1 Using mathematical calculations and clinical advisory to establish both **logical** and **rational** par levels
- 2 Aligning on-hand inventory and service schedule with **true demand**
- 3 Using a **Lean Six Sigma**, process-driven approach to optimize your supply chain
- 4 Analyzing **historical usage** for all products at all points of care — targeting the highest-volume departments first
- 5 Driving **predictability** into staffing and the ordering process

For Baptist Health, Par Optimization improves weekly delivery cycle and line activity management at the point of use, while eliminating excess/obsolete inventory and reducing stockouts. The result — higher service levels at a lower cost.

## Is ValueLink® Par Optimization right for you?

- 1 Do you know the total cost of your supply chain?
- 2 How much time do your clinicians spend on non-clinical tasks?
- 3 Do you have expired or inactive inventory in your storeroom or at the point of use?
- 4 Are your supply chain expenses aligned with clinical demand?
- 5 Are your clinicians satisfied with the availability of products they need?

For more information, visit [cardinalhealth.com/valuelink/paroptimization](http://cardinalhealth.com/valuelink/paroptimization) or contact your Cardinal Health Sales Representative.



## About Cardinal Health

Headquartered in Dublin, Ohio, Cardinal Health, Inc. (NYSE: CAH) is a \$108 billion healthcare services company that improves the cost-effectiveness of health care. As the business behind healthcare, Cardinal Health helps pharmacies, hospitals, ambulatory surgery centers and physician offices focus on patient care while reducing costs, enhancing efficiency and improving quality. Cardinal Health is an essential link in the healthcare supply chain, providing pharmaceuticals and medical products to more than 60,000 locations each day. The company is also a leading manufacturer of medical and surgical products, including gloves, surgical apparel and fluid management products. In addition, the company supports the growing diagnostic industry by supplying medical products to clinical laboratories and operating the nation's largest network of radiopharmacies that dispense products to aid in the early diagnosis and treatment of disease. Ranked #21 on the Fortune 500, Cardinal Health employs more than 30,000 people worldwide. More information about the company may be found at [cardinalhealth.com](http://cardinalhealth.com) and @CardinalHealth on Twitter.



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