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State of Healthcare Technology Management Insights Report

5 Data-Driven Opportunities to Reduce Operating Costs and Improve Clinical Availability

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Letter from the CEO

Philip Settimi, MSE, MD
President and CEO

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Letter from the CEO

Why healthcare needs a new model for medical equipment service

Every day healthcare providers must deliver safe and effective care using well-functioning medical equipment with little downtime, yet the management directive "do more with less" presents obstacles to the mission. To remain competitive, you need more and better outputs for fewer and less costly inputs. This has never been truer than in today's healthcare economy. Expenses are rising faster than revenue, eating away at profit margins and leaving less for hospitals, health systems and medical practices to invest in new services, new technologies and new people to remain competitive.

Provider organizations must solve and overcome this conundrum. Trying to address it with the same approaches used in the past is not sustainable. Adding more services, buying more medical equipment and hiring more staff isn't possible given the current financial conditions.

Reducing services, buying less technology and cutting positions is possible but not desirable. Providers need a new approach.

That new approach is data-driven, evidence-based, and technology-enabled. It's a new model for problem solving and overcoming challenges. You know what to do because of the data. You know it's the right thing to do because of the evidence. You can do both of those things faster, with less cost and better productivity with technology. Providers are doing more with less by adopting this new approach.

The most illustrative opportunity for this new approach is how your organization manages its medical equipment for clinical availability.

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Medical equipment and all its component parts are strategic assets to your hospital, health system or medical practice. You can't optimize those assets without applying this new approach to their management through your healthcare technology managers, supply chain leaders and others responsible for medical equipment maintenance and service purchasing decisions.

This first annual State of Healthcare Technology Management Insights Report from PartsSource outlines five data-driven opportunities to reduce operating costs and improve clinical availability based on proprietary data from over 5,000 hospitals. This report aims to offer valuable insights and unique data to empower healthcare leaders and technology management teams to address challenges within the medical equipment supply chain. PartsSource PRO® clients benefit from regular data-driven discussions with their Account Managers. Publishing this unique data set more broadly advances the our mission of "Ensuring Healthcare is Always On®" by arming every healthcare leader with actionable insights and recommendations to optimize clinical availability. The PartsSource proprietary data elements driving the five Opportunities include:

- Inflationary price increases of medical equipment parts
- Quality return rates of medical equipment parts
- OEM and independent service organization (ISO) service performance
- Backorders of OEM and compatible parts
- Medical equipment service contract study data

When mission-critical medical equipment is down, clinical lines do not function and patient care is delayed, negatively affecting the bottom line. To optimize clinical availability, the healthcare industry must understand and act on the bigger picture of evidence-based, data-driven, and technology-enabled solutions for medical equipment management to keep clinical service lines operating effectively and reliably. Armed with the right data and technology, doing more with less doesn't need to be a market disadvantage.

Sincerely,

Philip Settimi, MSE, MD

President and Chief Executive Officer, PartsSource

We welcome your thoughts, look forward to your questions and invite you to join us as we leverage data to empower positive outcomes for the healthcare industry.

Contact us at partnership@partssource.com.

2024 HTM Leader Survey

Goals, challenges and strategies

To shape the direction of this first annual State of Healthcare Technology Management Insights Report, PartsSource conducted a survey of HTM leaders from across the country. PartsSource asked them about their top goals this year, the most significant challenges they're facing in achieving their 2024 goals and what strategies and tactics they're using to overcome those challenges.

In ranked order, their top goals for 2024 are:

1. Bringing specific repairs in-house
2. Standardizing processes to increase efficiency
3. Demonstrating value of their in-house team
4. Reducing operating costs
5. Implementing or upgrading their CMMS (computerized maintenance management system) or their ERP (enterprise resource planning) system
6. Taking ownership of capital replacement planning
7. Integrating with another health system
8. Taking ownership of service contracts

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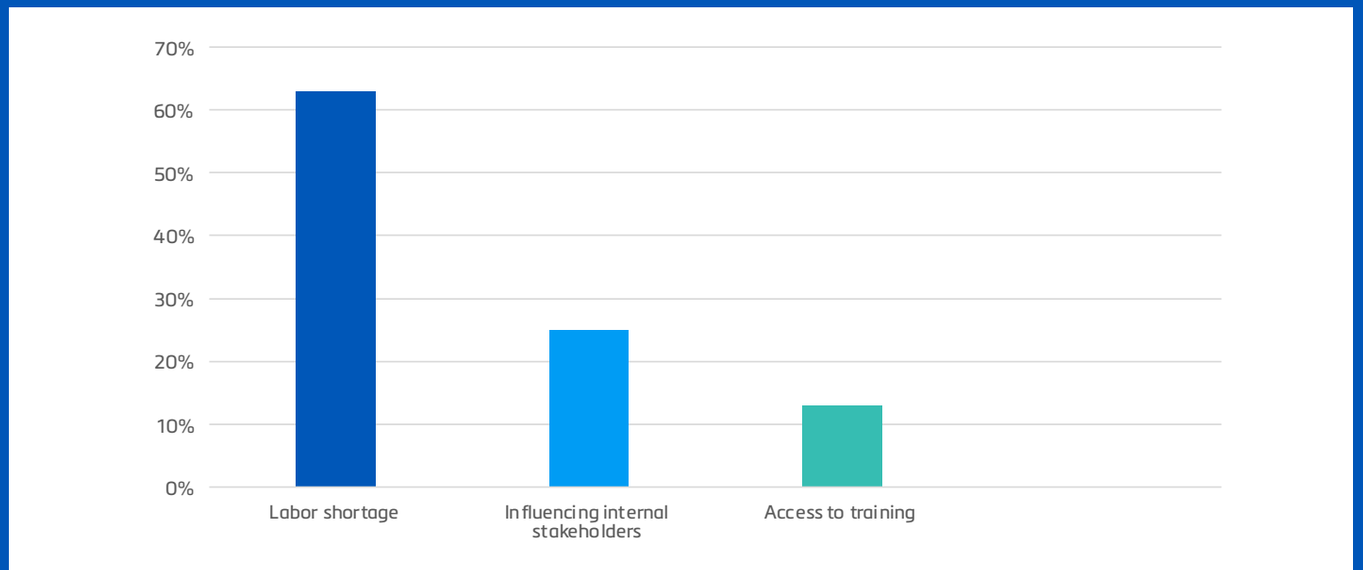
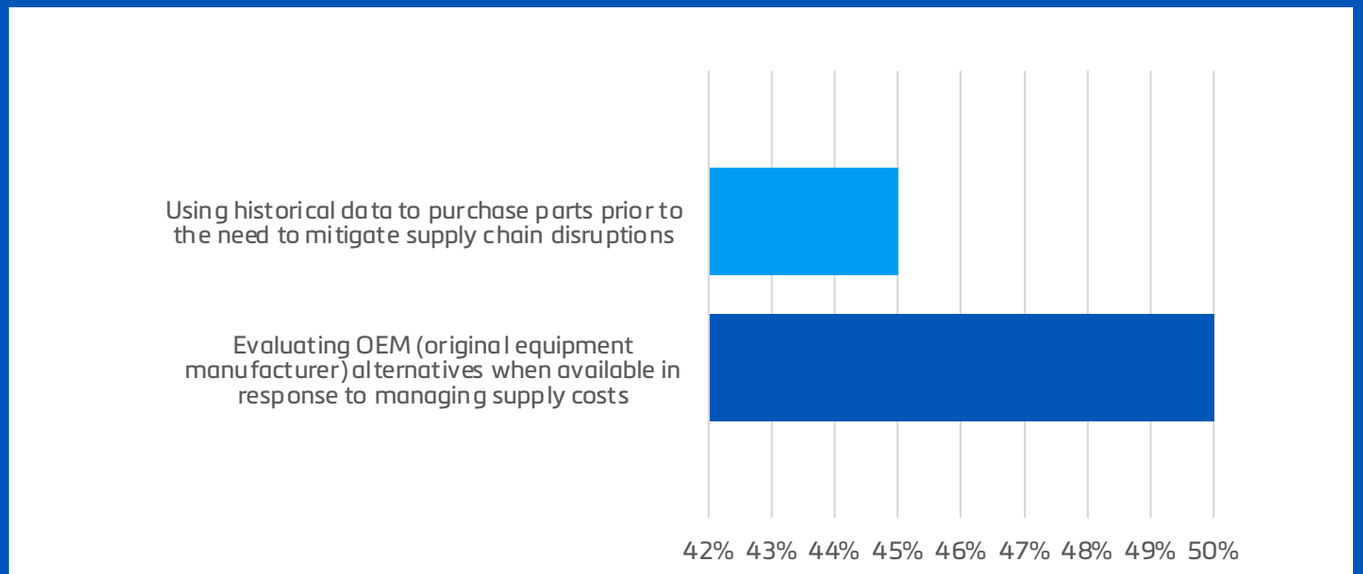
What are the most significant challenges to achieving their goals?

In ranked order, they said their most significant challenges are:



The two most frequently cited strategies or tactics to overcomethose challenges are:



The results of the 2024 HTM Leader Survey by PartsSource underpin the five data-driven opportunities detailed in this report:

- Understand Inflationary Impacts to Inform Budget Planning
- Optimizing Cost and Quality—Parts
- Optimizing Cost and Quality—Service
- Translating Availability Trends to Impact
- Eliminating Complexity and Costs in Equipment Service

These opportunities offer five data-driven strategies to overcome the challenges identified in the survey and to enable HTM leaders to meet their top strategic goals now and in the future.

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Key Findings

Key Findings

Market Forces Are Changing Healthcare Technology Management Forever

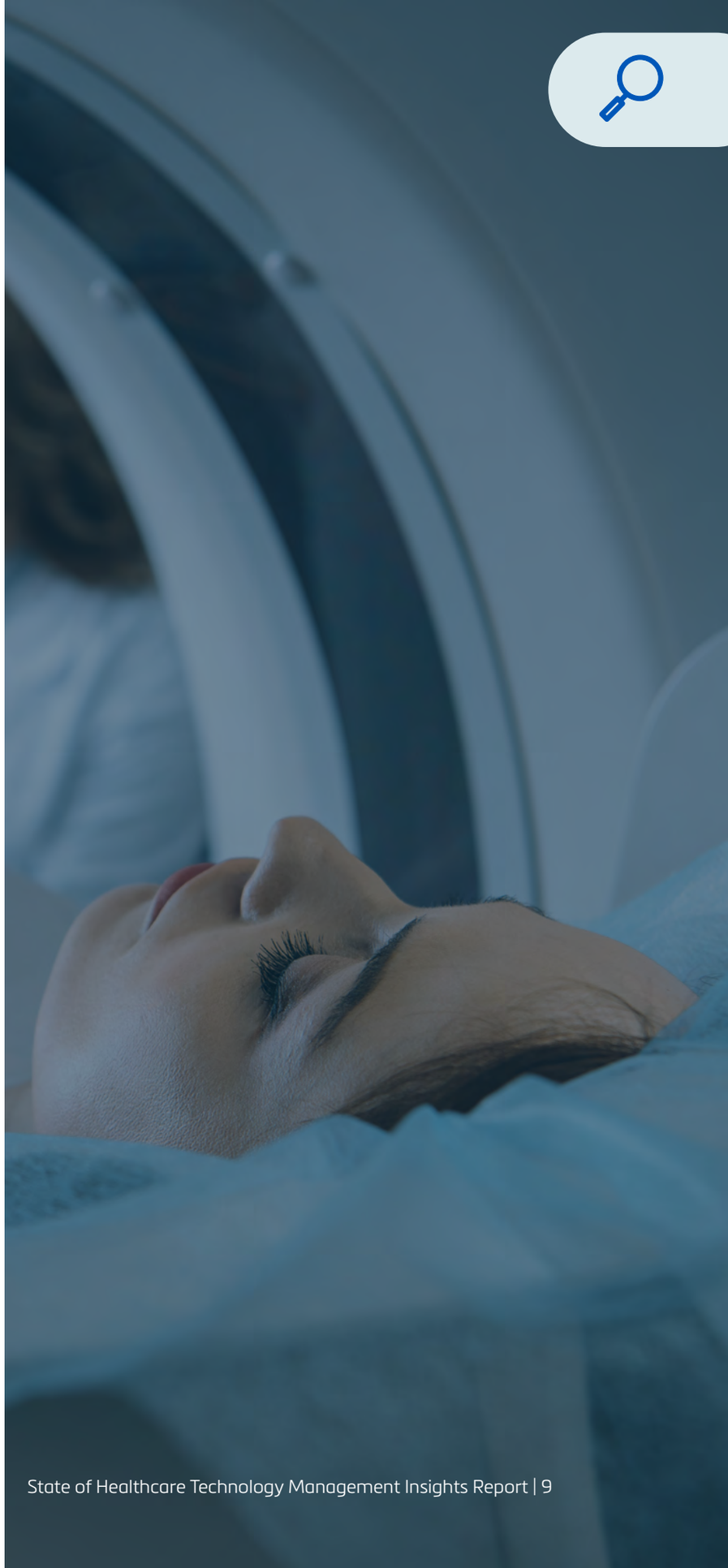
COVID-19 is all but over, and a new series of forces is driving change in healthcare. Healthcare technology management leaders must evolve to help their hospitals, health systems and medical practices thrive in the new healthcare economy.

HTM leaders' ability to evolve depends on accessing the right data at the right time to make the optimum medical equipment and healthcare technology purchasing decisions.

That is the main takeaway from this PartsSource 2024 State of Healthcare Management Insights Report.

This report leverages PartsSource's proprietary data, original research, surveys and interviews with subject matter experts and HTM leaders in the field and is supported by secondary research, surveys and industry reports from leading healthcare organizations to corroborate and quantify our findings.

A number of key findings emerged from the research, survey, reports and interviews. The key findings fall into three themes. These three themes drive this report, plus five opportunities that address how HTM leaders can use data to address the common challenges.



Key Finding 1: Multiple Market Forces Buffeting HTM Leaders at Once

The market forces converging on HTM leaders and pointing to a data-driven future are many, and they're all buffeting HTM leaders at once. The key findings include:

- An aging HTM workforce, nearing retirement
- A growing shortage of HTM leaders as job growth outpaces new graduates
- A volatile economic climate for healthcare organizations characterized by higher operating costs and constrained reimbursement rates
- A fragile economic climate marked by inflation and recession worries
- More frequent and uncontrollable supply chain disruptions

Key Finding 2: Healthcare Organizations Are Placing Enormous Pressure on HTM Leaders to Hold Down Costs

Higher labor expenses, higher operating costs, constrained reimbursement rates and inflation are generating razor-thin profit margins for most healthcare organizations. As a result, C-suite executives are putting tremendous pressure on HTM leaders to hold down cost increases if not cut their budgets at a time when the clinical availability of medical equipment and healthcare technology is paramount. Clinical asset availability affects the ability to serve patients, and patient volume affects revenue. HTM leaders are dealing with the growing pressure in a number of ways, according to the research, survey, reports and interviews. The key findings include:

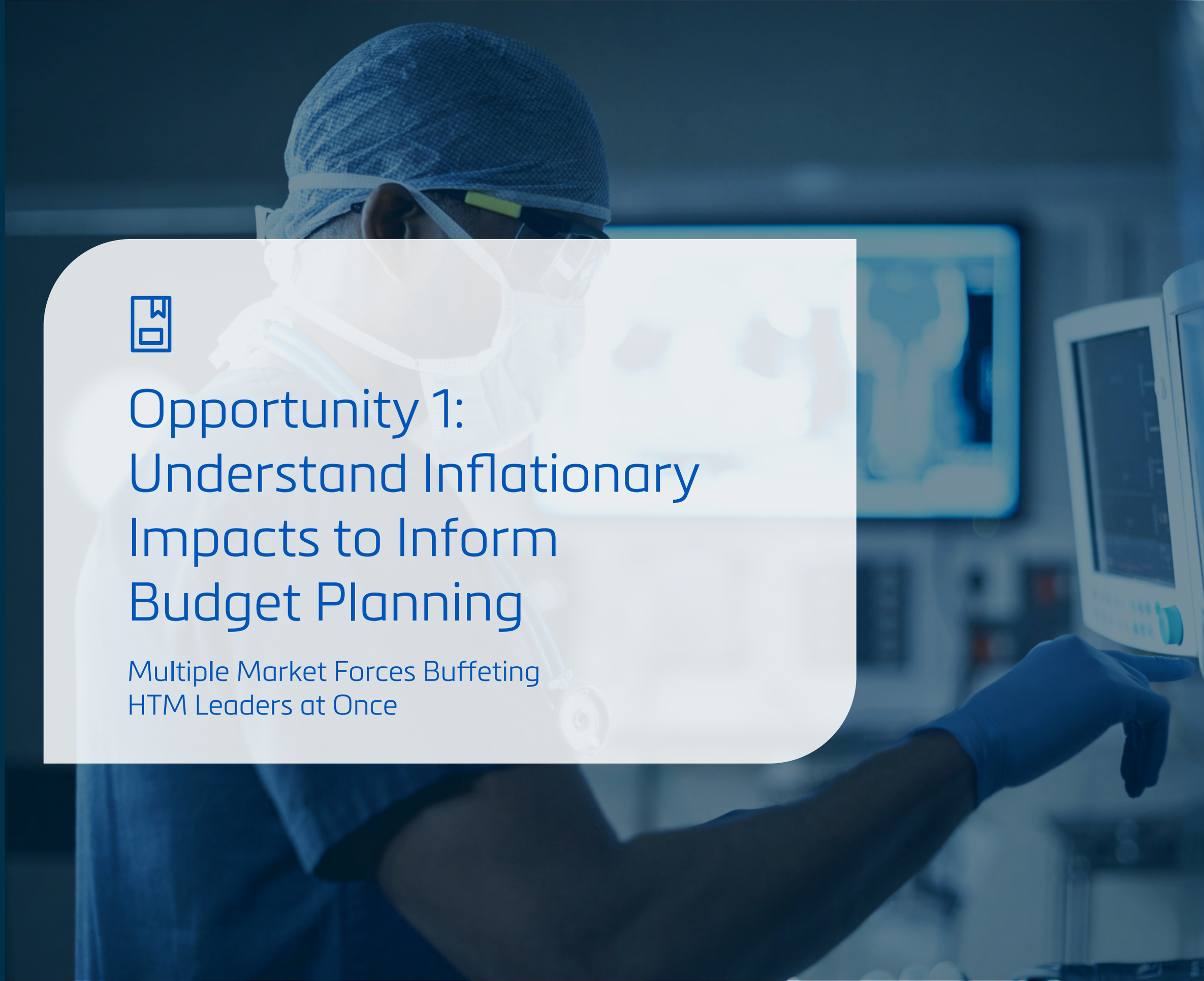
- Delaying asset retirement, extending the life of existing medical equipment and healthcare technologies
- Seeking savings by changing historic purchasing behaviors and patterns
- Looking for high-quality, lower cost parts
- Scrutinizing the relative costs and benefits of various service strategies (OEM, Independent Service Organizations, In-House) by modality or model
- Standardizing expectations across service contracts and the terms and conditions within each service contract
- Adopting new and more granular budgeting and budget forecasting approaches
- Adopting formal medical equipment and healthcare technology service strategies

Key Finding 3: Data is essential for healthcare organizations to respond effectively to this new reality

None of the coping mechanisms are possible without access to credible, verifiable, accurate and timely data. The key findings include:

- Data is essential to making key, recurring decisions on replacing equipment to buying parts to how equipment is serviced
- The past state of HTM is characterized by clinician preference, institutional knowledge
- Data must be actionable to be of value to HTM leaders
- Given their incredible breadth of asset categories but relatively little depth by equipment model count, and variations caused by region, staffing and utilization differences, HTM leaders have limited data sets upon which to draw insights and take action. They need more robust data sets to operationalize this new approach to HTM

The five opportunities in this report demonstrate how HTM leaders can use more robust data sets to overcome the market forces reshaping how they do their jobs.



Opportunity 1: Understand Inflationary Impacts to Inform Budget Planning

Multiple Market Forces Buffeting HTM Leaders at Once

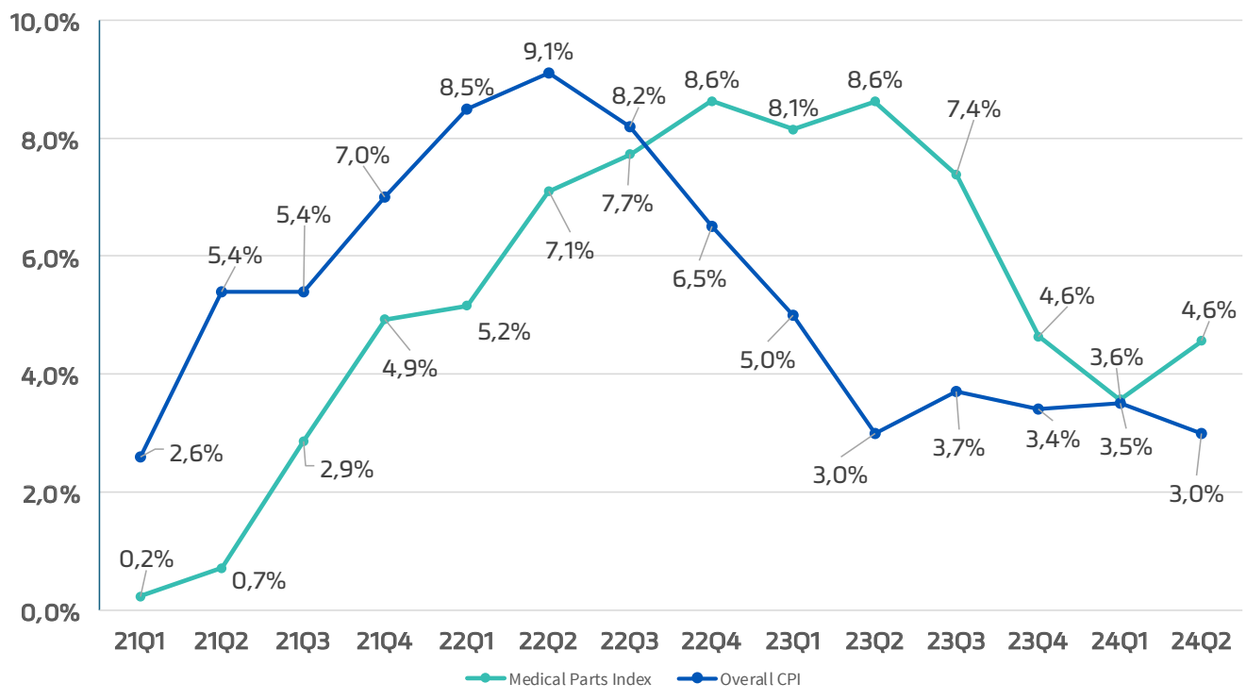
Opportunity 1: Understand Inflationary Impacts to Inform Budget Planning

Providers should track fluctuations in the prices of medical equipment replacement parts in order to accurately budget for upcoming expenditures

A volatile economic climate for healthcare organizations—characterized by higher operating costs and more constrained reimbursement rates—combined with a fragile economic climate—characterized by higher inflation and recession worries—validate the need to closely monitor and track the impact of these cost changes.

PartsSource monitors the rate of inflation for medical equipment replacement parts using a similar methodology to the Consumer Price Index (CPI) released by the US Bureau of Labor Statistics. The chart below provides a historical view of how PartsSource measured the medical equipment parts index and has tracked against the CPI.

Total Inflation (All Modalities)



Prior to the third quarter of 2022, the Medical Parts Index lagged the CPI by 2-5% but this trend has flipped in the years since with medical parts seeing a much higher rate of inflation throughout the second half of 2022 and through 2023. The recent quarters have suggested that the medical parts inflation is tracking more closely to the CPI but is still elevated. PartsSource Pro customers have had some protection against inflation over the past two years due to our community-based purchasing power and aggressive pursuit of new aftermarket options.

Thanks to data and technology, healthcare providers have access to new strategies to offset price increases by standardizing pricing for specific products with formulary rules, exploring high quality compatible alternatives, forward stocking critical parts onsite, and leveraging third-party data to inform proactive planning.

Insights in action

- Understand how historical inflation has impacted budget performance
- Incorporate inflation into future budget forecasts
- Consider including inflation data from other sources such as your regional labor market

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The PartsSource POV

Price increases forcing HTM leaders to be laser-focused on savings

Healthcare organizations historically built inflation updates into their budgets for the following year and for their budget forecasts for the next five or 10 years. That typically has been 3% or less across the board each year. But inflation over the past few years has been much higher. It's outstripping anything anyone would have expected to put into their budgets or budgetary forecasts. It's not only the size of the increase but the frequency of the increases.

HTM leaders are suffering from sticker shock, and they haven't budgeted those types of increases into their budgets now or for the foreseeable future.

4.6%

Annual inflation for medical equipment replacement parts **purchased as of 2024 Q2.**

Source: PartsSource

This has caused healthcare organizations to go over budget. It is an especially a big problem for hospitals and health systems that are operating on razor-thin margins.

At the same time, based on my conversations with HTM leaders, senior leadership is telling HTM leaders to stick to their budget and budget forecasts and find savings any way they can in order to make up the difference between what they budgeted and higher prices for equipment, parts and service. Most HTM leaders are laser-focused on looking for the savings right now as a result.

There are various ways to do that, and they all require data. HTM leaders need to regularly collect price data on equipment, parts and service and understand where they see big price differences and price increases in the market. With those insights, they can try several things, including:

- Renegotiating service contracts to lock in lower rates for longer periods or lowering coverages
- Considering equipment and parts with lower cost-to-service ratios
- Extending the life of existing equipment longer than initially planned by budgeting slightly more for parts and much less for capital equipment replacement
- Replacing across-the-board budgeting with itemized budgeting, building in with inflationary increases for individual pieces of equipment and parts based on historical data

That's why organizations must adopt a new data-driven approach to healthcare technology management.

Mara Pare',
Vice President, Client Solutions
PartsSource

Opportunity 2: Optimizing Cost and Quality - Parts

Healthcare Organizations Are Placing Enormous Pressure on HTM Leaders to Hold Down Costs

Opportunity 2:
Optimizing Cost and Quality - Parts

It is helpful for providers to understand differences in the return rates between OEM and compatible medical equipment parts and balance those differences with potential savings to make informed buying decisions

Time is of the essence when medical equipment goes down and, along with it, procedure volume and patient revenue. At that moment, most providers are willing to pay any price to an OEM for an original replacement part to get the medical equipment back on the line and running again. That decision can be based on assumptions and urgency. But is it the right decision?

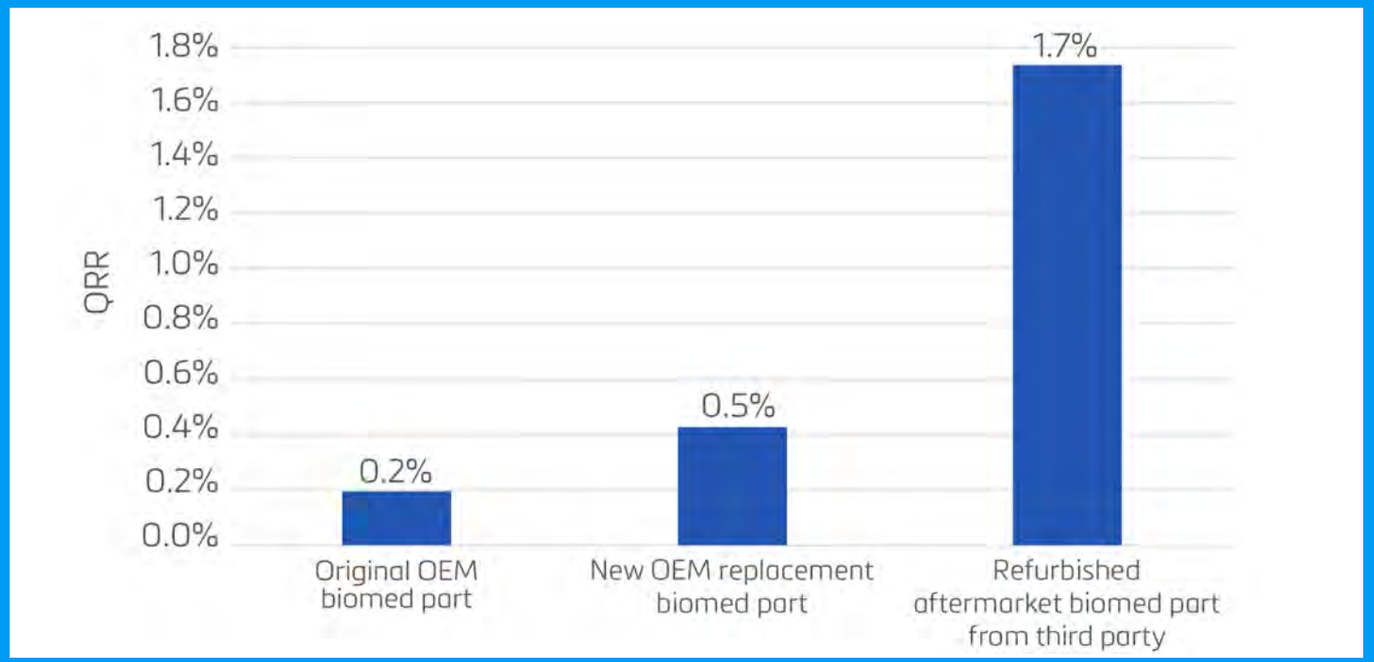
Providers can make the right—and more cost-effective—decision based on data without losing that sense of urgency. The data elements that providers need to optimize cost and quality for parts procurement are:

- The quality return rates (QRRs) of OEM replacement parts, or the rates that purchasers return replacement parts because of quality issues
- The QRRs of compatible replacement parts, or generic replacement parts from third-party vendors
- The potential savings from buying compatible versus OEM replacement parts
- Availability, including in stock status and estimated ship and arrival dates

In theory, if a QRR of a compatible part is about the same or better than a QRR of an OEM part and the compatible part costs less, then that may be the right, data-informed decision to make.

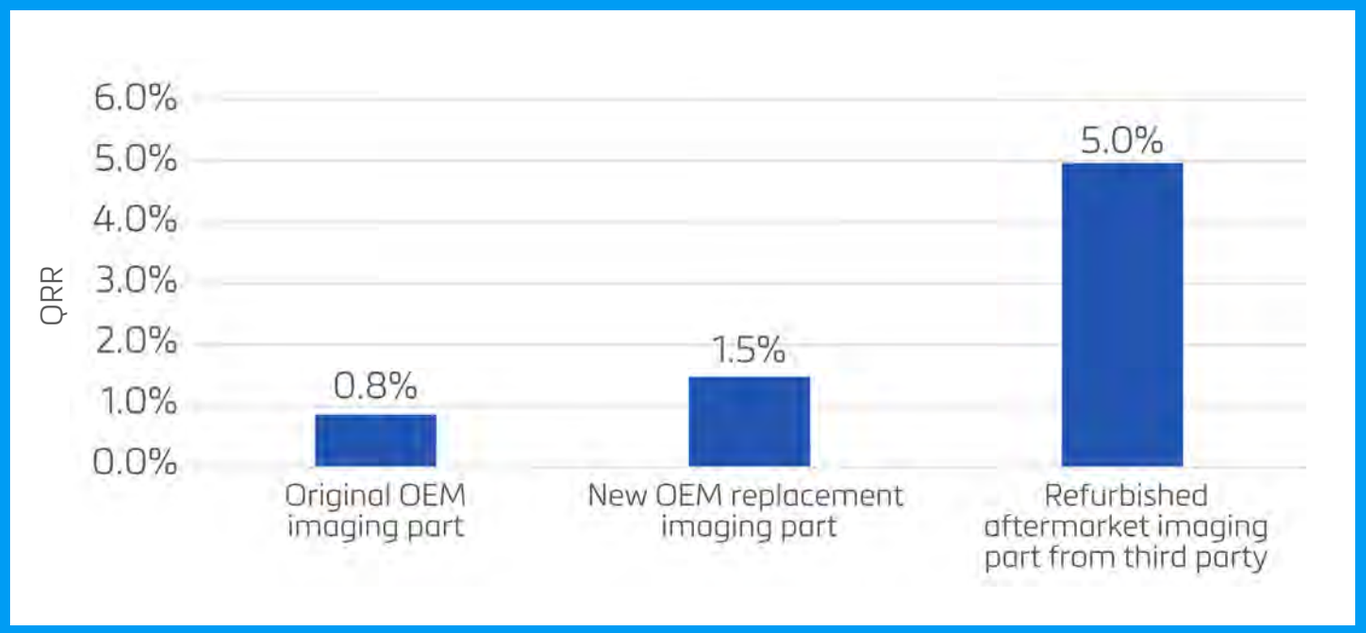
PartsSource tracks all three data elements of all replacement parts for OEMs and third-party vendors in its database and organizes them by more than 20 medical equipment categories. The following two charts compare the QRRs of original OEM parts, new OEM replacement parts and refurbished replacement parts from third-party vendors in two modality categories: biomedical and imaging.

QRR by biomed part type



Source: PartsSource (June 2023-May 2024)

QRR by imaging part type



Source: PartsSource (June 2023-May 2024)

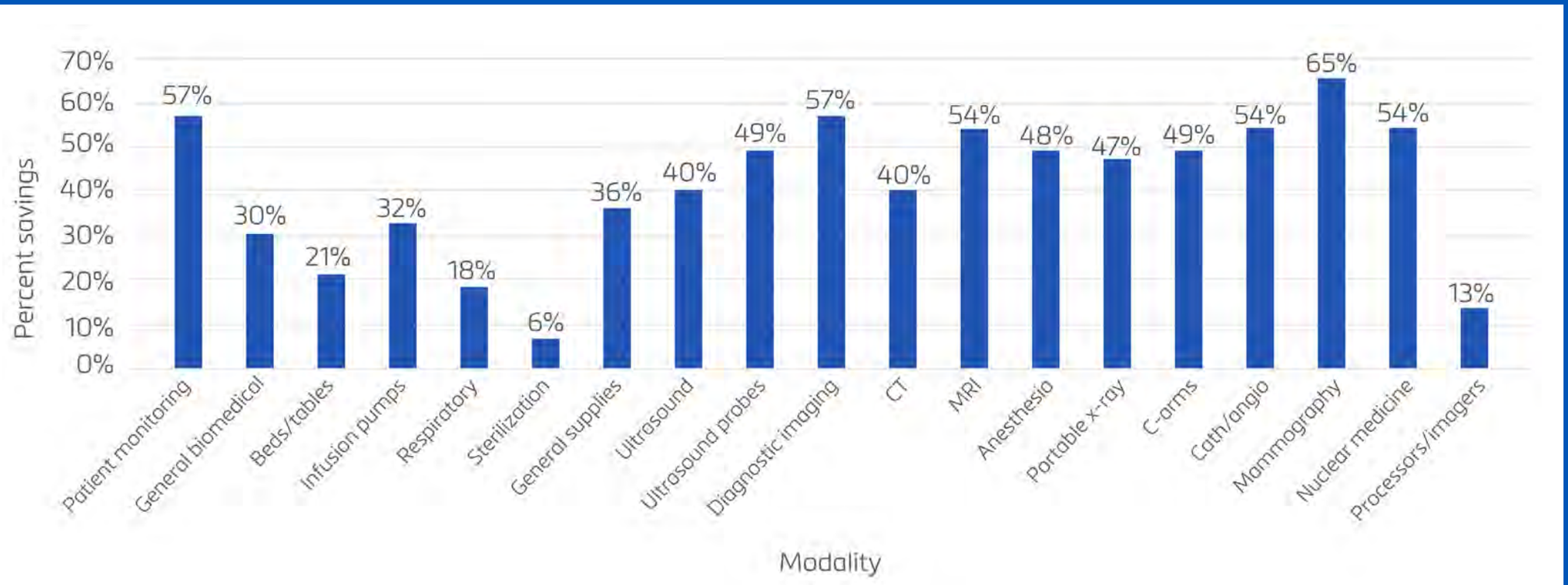
What the data shows is a small rise in the QRR from the original OEM parts to new OEM replacement parts, or new aftermarket parts, and a bigger rise in the QRR from the original OEM parts to refurbished and tested aftermarket parts from a third party for both biomedical and imaging equipment and technologies.

Then the question becomes: is the savings from buying lower priced refurbished and tested aftermarket parts from a third party worth the risk of having a higher QRR on those parts? The chart below displays the average savings from buying aftermarket for 22 medical equipment categories.

As the chart illustrates, the savings—expressed as the percentage difference between new OEM aftermarket parts and compatible aftermarket medical equipment replacement parts—from buying compatible versus from OEMs can be substantial in most cases.

Assisted by those three data elements—QRRs for OEM replacement parts, QRRs for compatible replacement parts and potential cost savings from buying compatible options—healthcare providers can make informed choices when they need to procure replacement parts and return medical equipment to service for patients.

Average Savings on Refurbished and Tested Aftermarket Replacement Parts Compared with New OEM Replacement Parts



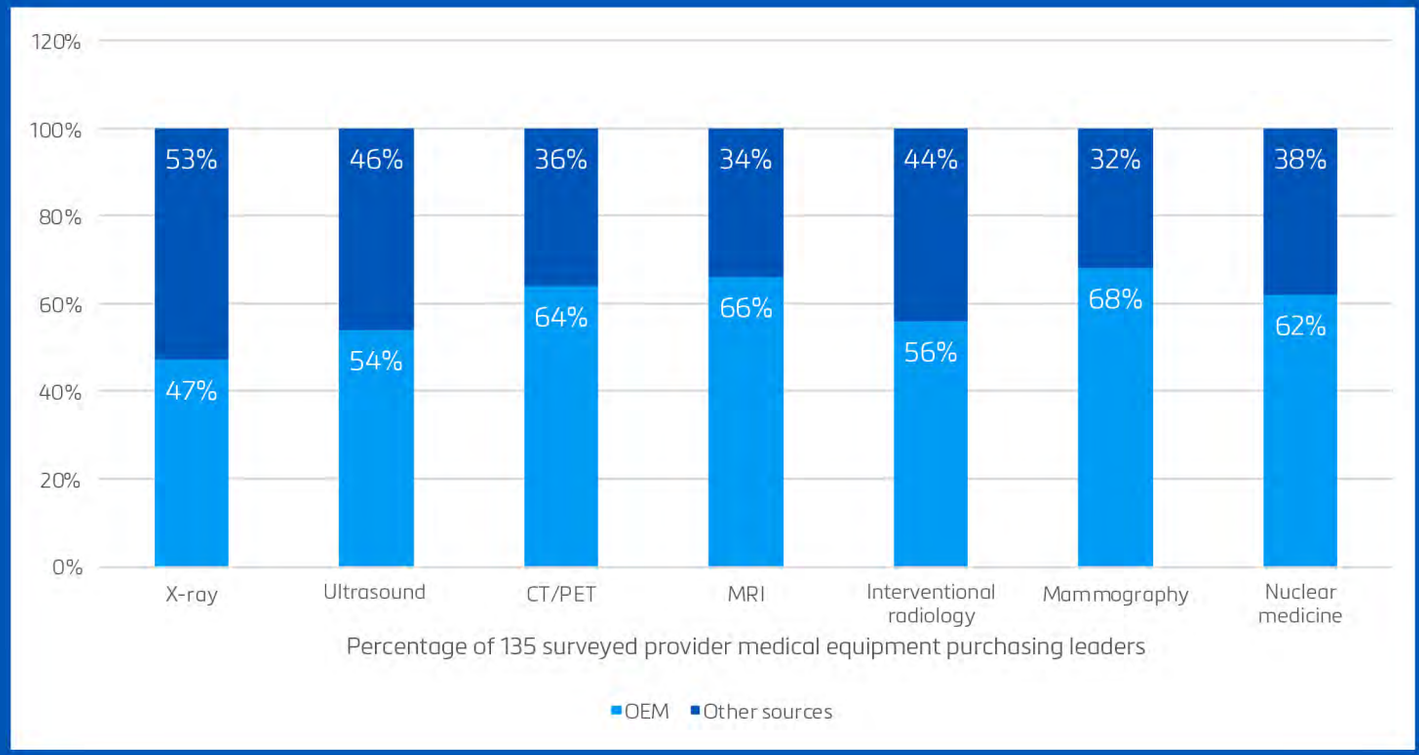
Simplify quality versus savings analysis with Formulary Management controls

Provider organizations can do their own quality versus savings analysis using QRR and savings data for OEM and OEM equivalent medical equipment parts. Or they can have Formulary Management controls from PartsSource do it for them.

Formulary Management reviews every part in PartsSource's entire catalog and evaluates each part using a variety of criteria including cost, quality, product availability, shipping time and peer organization's buying behavior. It then classifies purchasing options for individual parts on a risk scale from lowest risk which allows providers to match the risk level of a purchasing decision to their current quality and financial needs.

A Snapshot of Buyer Behaviors – Imaging

More than half of healthcare providers say they will continue buying imaging repair and replacement parts from OEMs



Data on QRRs for OEM and aftermarket parts supplemented with compatible parts savings data can influence the buying behaviors of provider organizations. PartsSource surveyed 135 provider medical equipment purchasing leaders and asked them about their buying behaviors when it comes to imaging equipment and imaging equipment parts. Here are three noteworthy findings from that survey.

1. A half to two-thirds of the respondents said they plan on buying imaging equipment repair and replacement parts from OEMs in the future for six different imaging modalities.

2. The respondents spend more time shopping for imaging equipment repair and replacement parts due to higher costs. Namely, they say they will spend nearly 20 hours shopping for a part when that part costs more than $25,000.

3. Reliability, on-time delivery and speed to fulfillment are the top three priorities when providers select an imaging equipment repair and replacement parts vendor, according to the survey.

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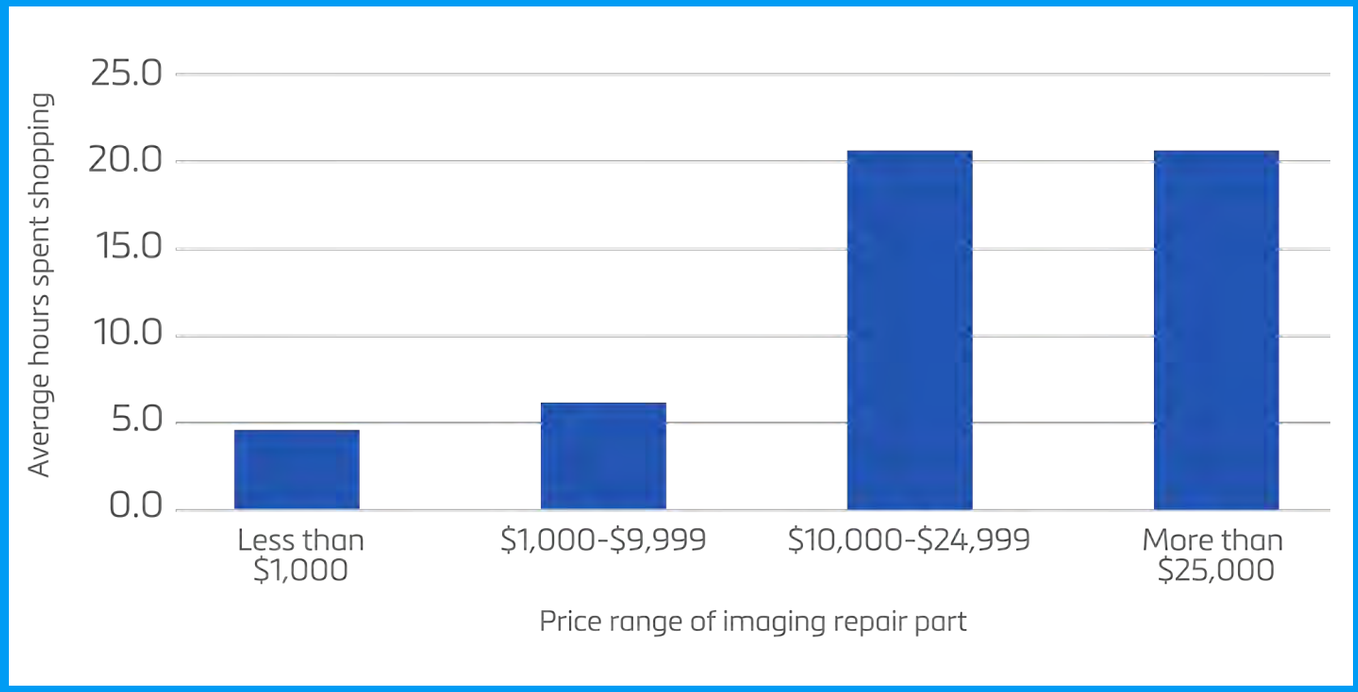
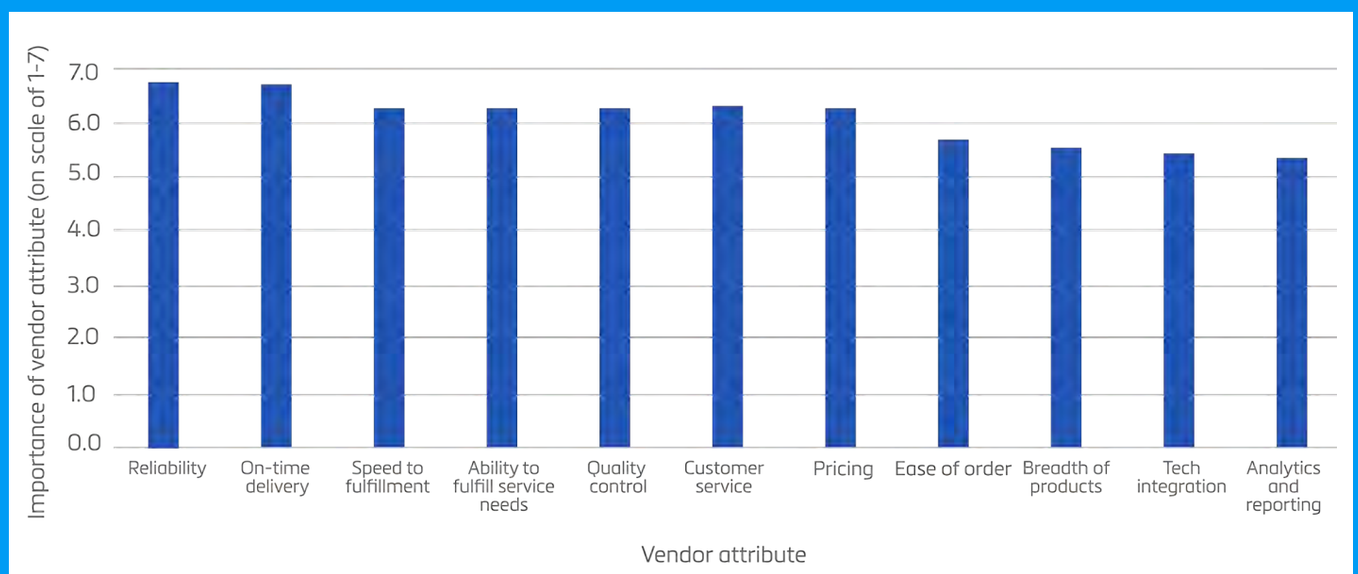
Providers spend more time shopping when they're looking for more expensive imaging repair parts



Reliability is the top priority of providers when it comes to selecting an imaging equipment replacement parts vendor



These engrained buying behaviors by providers when it comes to purchasing imaging equipment repair and replacement parts could be changed or optimized by a new data-driven, evidence-based and technology-enabled approach to medical equipment management.

Insights in action

- Look at the overall budget impact at the site and modality level
- When the QRR is lower for OEM than for compatible, consider setting a threshold that makes sense for your organization, e.g., for new aftermarket parts we recommend a 1% tolerance threshold
- Providers should factor part criticality or the need for redundancy into their considerations
- For imaging equipment, take into consideration several criteria, including whether it's end-of-life equipment, location, whether access is critical, access to redundant equipment, status of back up systems and how quickly the part will be delivered for maximum uptime and revenue
- Select non-new high dollar OEM imaging part if the pricing differential is 15% or higher

The PartsSource POV

Imaging Glassware Offers Glimpse into Providers' Purchasing Options

When it comes to buying replacement parts and glassware for medical imaging equipment, HTM leaders must carefully balance cost and quality. They need to ensure that equipment operates at peak performance while managing costs effectively, avoiding overspending that could impact other critical areas of the HTM budget.

How healthcare organizations purchase glassware for their imaging equipment highlights the careful balance HTM leaders must strike. Glassware, such as x-ray tubes and flat panel detectors, are some of the most frequently replaced medical equipment parts. There are numerous factors to consider when making these purchases, including cost, quality, compatibility, and long-term reliability.

Let's begin with cost. Cost extends beyond the price of the glassware itself; it also includes the labor involved in procuring and installing the glassware. Quality isn't just about functionality—it encompasses the lifespan of the glassware until replacement is needed. HTM leaders often assess quality using MTBF (mean time between failures), as shorter MTBFs lead to additional costs over time. Compatibly and longevity are critical to ensure proper operation and optimal equipment performance.

The key decision for HTM leaders is whether to invest in new glassware that offers longer durability but comes at a higher cost, or opt for used or refurbished glassware that is less expensive but may not last as long. Striking the right balance between cost and quality is essential, and the only effective way to achieve that is by relying on data to inform these decisions.

1.5%

Quality return rate of new OEM replacement imaging part

Source: PartsSource

HTM leaders must know the full cost of new and used glassware and the quality of the new and used glassware. Then they need to find that balance based on what's strategically important at that point in time for the organization. That could be how fast they need to get that piece of imaging equipment up and running, how long they need that piece of imaging equipment to stay running without a repair and whether they have staff time at the moment to shop for the best quality at the lowest price or to install the glassware.

The art of buying replacement parts starts with the science of buying replacement parts.

Francis Vonder Haar,
Vice President and General Manager—Imaging, PartsSource

The Health System POV

Bassett Healthcare Network: Show Me the Data Before You Replace a Piece of Equipment

One way that data will become more important at our health system in terms of managing healthcare technologies and medical equipment is in clinical requests to replace such technologies and equipment. In the past, clinicians would request replacement equipment simply because it was a few years old, and we would with little pushback from senior leadership.

We don't like it. We want to replace it. And that was that.

Objective data, not subjective feelings about a piece of equipment, has started to make that decision for us and certainly will in the future. We will need much more data than simply the age of the equipment and anecdotes about how clinicians feel about it. **We're doing everything we can right now to extend the life of our equipment** and, if that wasn't the case, and we made replacement decisions solely based on age and clinician sentiment, who knows how much of what we have now would be replaced.

In the future, we'll need data on how replacing the equipment will impact patient care, the criticality of the equipment, the ongoing costs to maintain it, the cost of servicing it, the cost of replacement parts, the redundancy of the equipment, you name it.

6.7

The priority score of "reliability" on a seven-point scale when selecting an imaging equipment replacement parts vendor

Source: PartsSource

That's in addition to the SBAR (situation, background, assessment and request) form that we have to fill out now. We'll have to support everything in the SBAR with data.

We'll also have to get very specific and clear about the terminology we use to describe the "end of life" for a piece of medical equipment. For the accounting or finance department, end of life means the piece of equipment has fully depreciated, and they can take it off the books. For us, end of life in the HTM world means there are no replacement parts available, we can't service it, and the manufacturer stopped supporting it. Those are two very different things.

We know, and we are confident, that we can use that equipment long after the finance department fully depreciates it.

Jamie Elderkin,
Director of Biomedical Engineering
Bassett Healthcare Network
Cooperstown, N.Y.

Opportunity 3: Optimizing Cost and Quality - Service

Data Is Essential for Healthcare Organizations to Respond Effectively to this New Reality

Opportunity 3: Optimizing Cost and Quality - Service

In addition to in-house repairs, healthcare providers choose between OEMs and independent service organizations (ISOs) to service their medical equipment. Historically, that choice is subjective and likely based largely on what the organization did in the past. Data can improve that process

Consumers have a choice of where to get their cars repaired or serviced. They can go to the service department at the dealership where they bought their car. Or they can go to an independent or chain automotive shop and get the same work done. The decision is subjective, based on past experience, brand loyalty, location, customer reviews and other factors.

Data, however, is not one of those factors. That's where HTM professionals, supply chain leaders and C-suite decision-makers have an advantage over car owners. HTM professionals, supply chain leaders and C-suite decision-makers have access to data to make an informed, evidence-based choice between an OEM or an ISO to service a specific type of medical equipment.

In the past, HTM leaders with predictable budgets and less pressure to reduce costs, often defaulted to an OEM for all their service needs. A key finding of this report is today, and most certainly in the future, HTM leaders can weigh the benefits between an OEM or an ISO with data central to those deliberations.

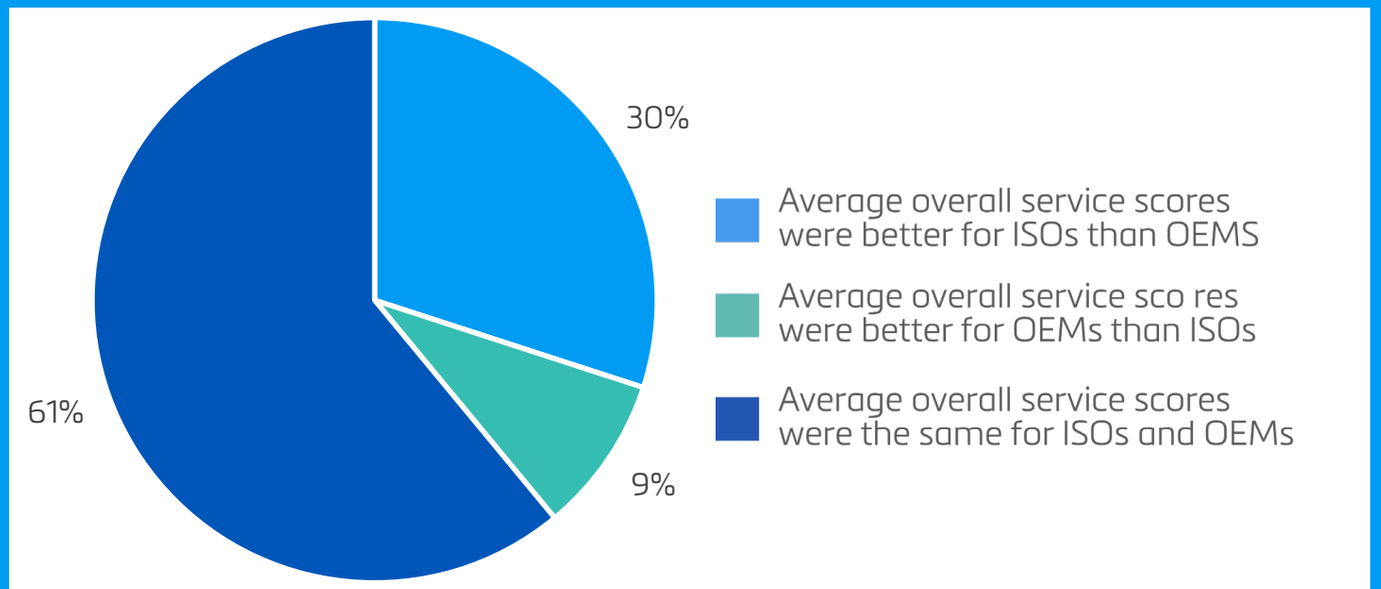
PartsSource conducted an exclusive analysis of OEM and ISO service data across all major medical equipment modalities and found that who services medical equipment can make a significant difference on how fast that equipment can get back online to treat patients.

PartsSource developed an overall service performance score based on the weighted importance of six service performance measures:

- Days to close a service ticket
- Multiple tickets required for the same service
- Customer satisfaction with the service
- Average cost of the service
- Vendor switch for a service
- Customer complaints for a service

PartsSource then compared the overall service performance scores of OEMs and ISOs on 57 medical equipment modalities. An overall service performance score that was 2.5 points or more meant that one service provider was better than the other. An overall service performance score that was 2.5 points or less meant that one service provider was worse than the other. Any difference within that 5-point range (2.5 points better or worse) meant the OEM and ISO service providers performed about the same on a medical equipment modality. The chart below displays the findings.

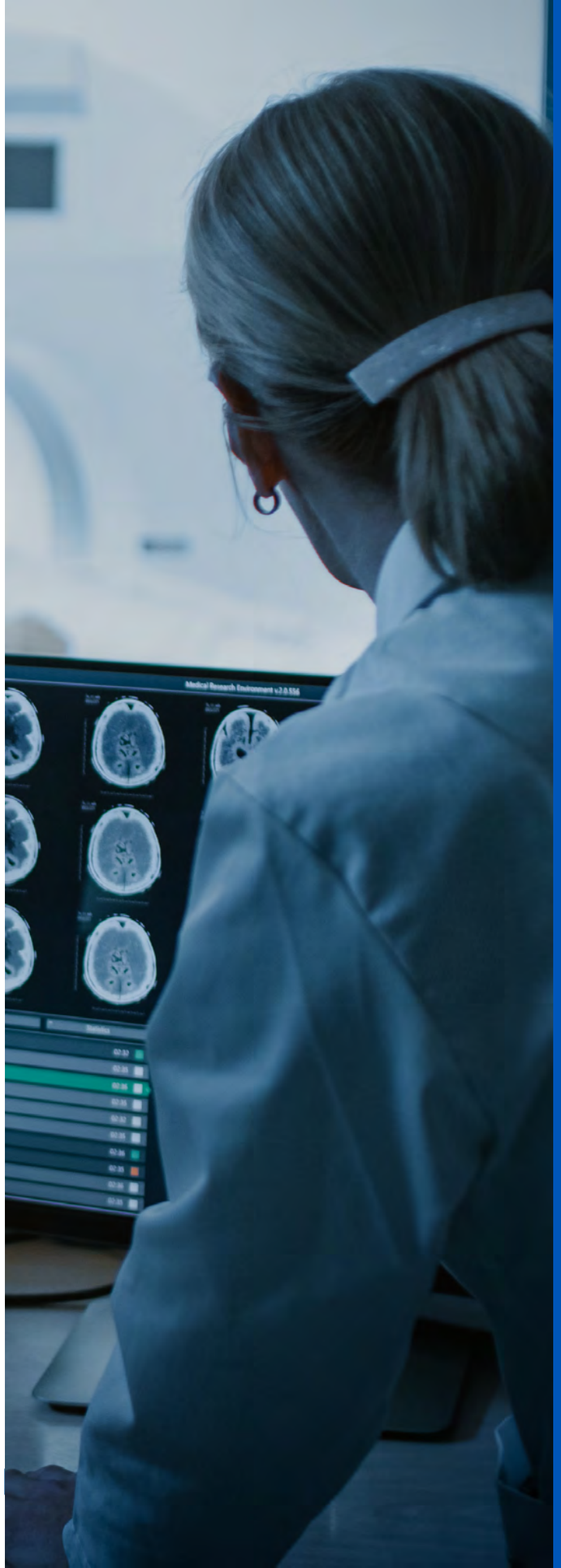
OEM versus ISO average overall service scores across the major medical equipment modalities



To view the data by equipment type, the PartsSource analysis consolidated the individual findings on these medical equipment modalities into three major categories of medical equipment on a 100-point scale using the same six dimensions of service performance:

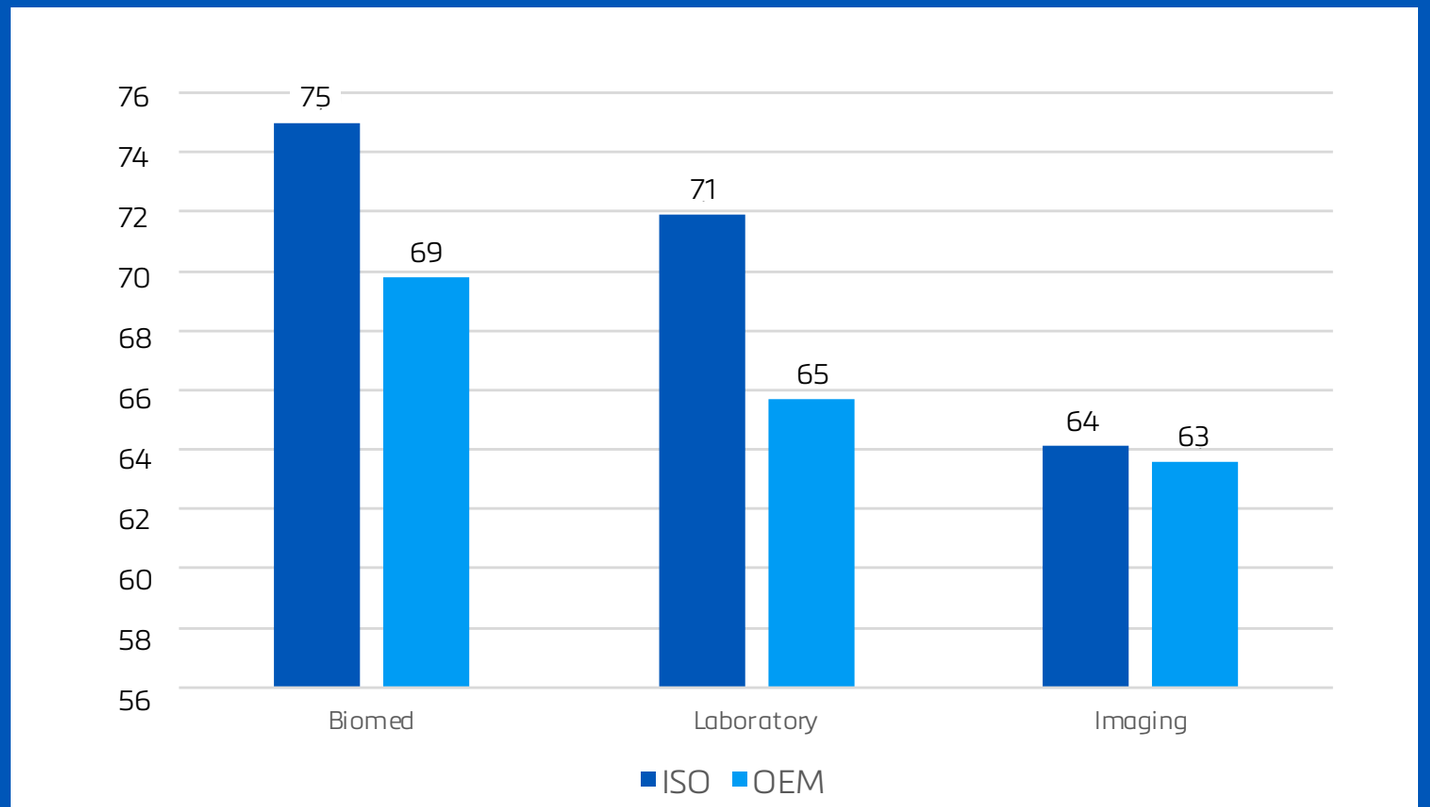
- Biomedical
- Imaging
- Laboratory

As the charts on the next page display, the secondary analysis reveals a similar pattern.



ISOs performed the same or better than OEMs 91% of the time on the analyzed medical equipment modalities.

ISO versus OEM average overall service scores for three major medical equipment categories:



Beyond the findings themselves, the PartsSource analysis demonstrates that provider organizations can use data to make informed and evidence-based decisions on who should service various types of medical equipment—OEMs or ISOs.

Insights in action

- Factors to consider when choosing a service partner: Response time, uptime, contract flexibility/current equipment service
- Will they support service for my EOL equipment? What types? For how long?
- Is there an opportunity for consolidation?

The PartsSource POV

Healthcare Organizations Must "Right Size" Their Medical Equipment Service Strategy

The clinical availability of healthcare technologies always has been a non-negotiable need for healthcare organizations. In the past, without having data, insights from that data and someone to make those data-driven insights actionable, the default that made everyone feel good about clinical availability was a full-service original equipment manufacturer (OEM) contract.

It was acceptable for senior leadership at healthcare organizations to tell HTM leaders to pay whatever it takes to service the equipment because the equipment must be up and running at all times so clinicians can diagnose and treat their patients.

Where we're at now—and where PartsSource has been for quite a while from my perspective—is how do we drive cost out while maintaining clinical availability. It's a necessity that more and more providers are realizing in today's healthcare environment. To do that, organizations must understand the criticality of their equipment assets by clinical department and by patient demographics.

To make those criticality assessments and how they connect to service lines, capacity, utilization and all those things, **healthcare organizations must optimize their medical equipment service strategy to deliver the same or better clinical availability while at the same time reducing costs.** In short, organizations must "right size" their service strategy.

91%

Percent of the time that ISOs performed the same or better on the composite of six dimensions of medical equipment service than OEMs

Source: PartsSource

The first step is to conduct a criticality assessment of their equipment and technology inventory. What do they have and how critical is it to have all or part of that inventory up and running at all times given their service lines and patient population?

The second step is determining the level of service needed for each asset based on that assessment.

The third step is connecting the first two steps to an organization's capital asset replacement strategy.

Each of those three steps requires data to make informed decisions at each step. For example, if an organization wants to assess the criticality of its equipment inventory, it needs to know how many patients it can diagnose or treat with those assets based on staffing, hours of operation and throughput.

It's about compiling all that data, making sense of it and making it actionable.

Jason Behm,
VP Contract Solutions & Services,
Solution and Services
PartsSource

The Health System POV

University of Maryland Medical System: I Need Data to Bring Medical Equipment Service In-House

I hope to bring as many of our medical equipment service responsibilities in-house as possible instead of using an original equipment manufacturer (OEM) or independent service organization (ISO). I want to do that for four reasons: cost, expertise, control and response time.

Rather than waiting four hours to get a return phone call then waiting another 24 hours before I can get someone on site, I could have a trained-up technician working on the equipment in 20 minutes. That is what would be in the best interest of our patients and our clinicians. Right now, we have overqualified technicians recalibrating thermometers that rarely need to be recalibrated.

Right now, throughout our system, we have general biomed technicians at each location and a specialty team that floats through the system that works on lab, some sterilization and imaging equipment, both x-ray and ultrasound. What's done out-of-house depends on each site and the equipment they have. I'd like to have our own people trained up and move all of that out-of-house service work in-house.

146

Average number of service contracts managed by a hospital

Source: PartsSource

To do that, to get our own people the training and move everything in-house, I need to tell a good story, make a compelling case. To do that, I need data.

I need to have the proper data in our system to be able to say, "We typically have to wait so long before we can get a technician in here from this third party. I have people in-house who could do the same work if we get them trained. It could be a 20-minute response time as opposed to the seven-hour response time in the contract with that third party."

I need the right data to show senior management the return on investment in doing that. We can spend $6,000 to send someone to school and get trained one time. Or we can keep spending $1,500 a pop each time a technician from a third-party has to come in.

Data is the foundation of requesting more resources for training to be able to bring medical equipment service in-house.

Kevin Krantz,
Manager, Clinical Engineering, University of Maryland Medical System, Baltimore

Opportunity 4: Translating Availability Trends to Impact

Multiple Market Forces Buffeting HTM Leaders at Once

Opportunity 4:
Translating Availability Trends to Impact

Slow recovery from the pandemic

In sports, they say the best ability is availability. A player is of no value to a team if the player is unavailable because of an injury or other issue regardless of skill level. The same is true for healthcare professionals making procurement decisions. If the best replacement part at the lowest price is unavailable when you need it, it's of no value to its related medical equipment, the clinicians who use it or patients who need it.

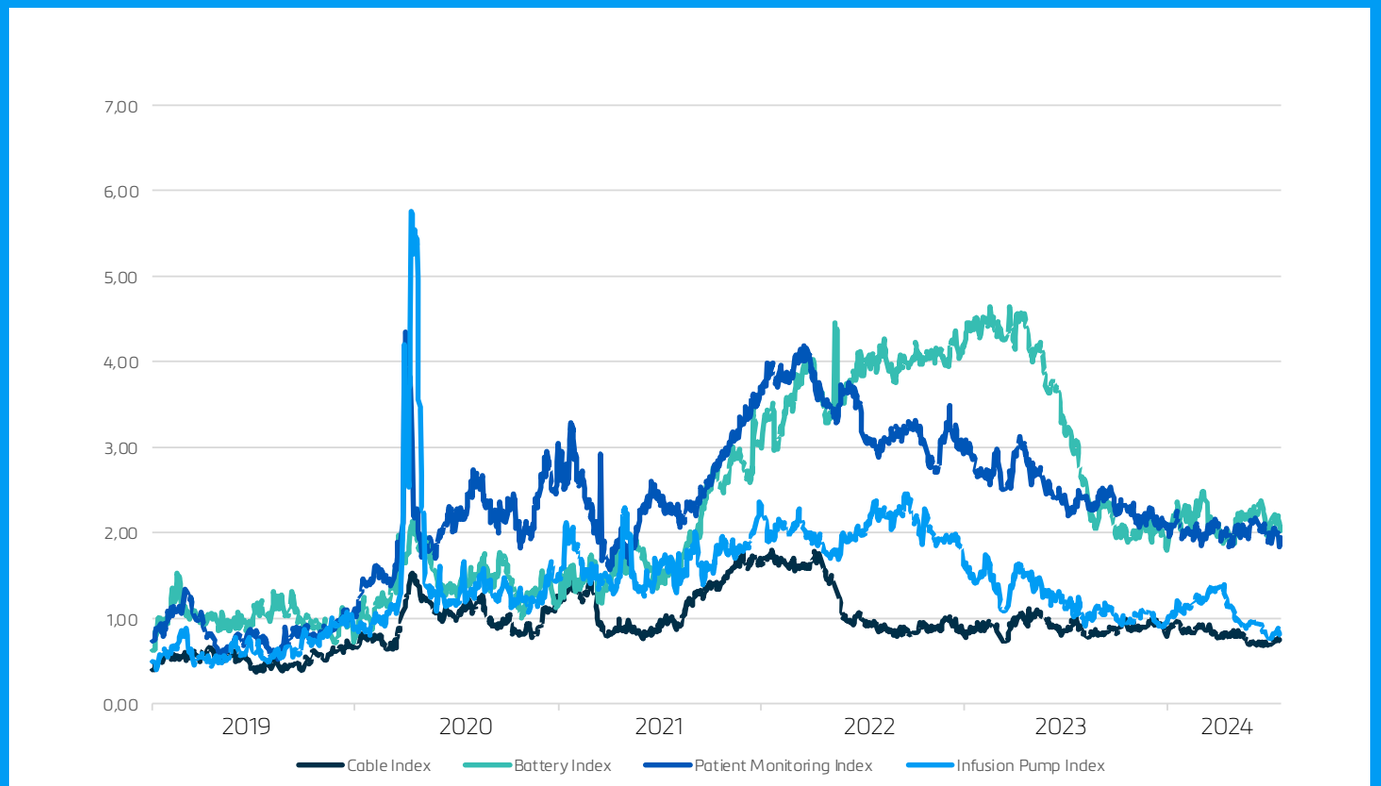
One insight from PartsSource's original research, surveys and interviews is the fact that availability is becoming much more fragile as the frequency of uncontrollable manmade and natural supply chain disruptions rises.

PartsSource tracks the availability of millions of medical equipment replacement parts in its database. The metric used to track availability is the percentage of replacement part orders that are on backorder because they're unavailable at the time of purchase. The higher the backorder or open order percentage, the bigger the availability problem is.

A look back at open order percentages before and after the COVID-19 pandemic puts an exclamation point on the need for providers to use data to know how long they may have to wait for a replacement part. The pandemic disrupted the healthcare supply chain like no other event prior to 2020. The two charts below show that the combined open order percentage for OEM and compatible replacement parts jumped roughly five-fold after the pandemic hit.

Backorder Index

Backorder Index for Top Modalities



Since then, the open order percentage decreased, rose again and has been coming back down. Still, it has yet to return to pre-pandemic levels.

The COVID-19 pandemic culminated in calls to action by all sectors of the healthcare industry to build a more resilient healthcare supply chain. For healthcare providers, that rebuild starts with a data-driven, evidence-based and technology-enabled approach to purchasing and maintaining the medical equipment needed to care for patients.

Insights in action

- Consider alternative sources.
  - Remember the evaluation techniques from opportunities 2 and 3 (cost differential thresholds and QRR thresholds)
- Plan PM part consumption in advance based on availability.
  - Forecast procurement needs for PM parts 2-3 months out
  - Bulk buying when feasible
- Evaluate forward stocking for mission-critical parts.
  - Cost versus availability
  - Downtime reduction

Opportunity 5: Eliminating Complexity and Costs in Equipment Service

Healthcare Organizations Are Placing Enormous Pressure on HTM Leaders to Hold Down Costs

Opportunity 5: Eliminating Complexity and Costs in Equipment Service

Lack of insights into costs and peer-based service strategies for medical equipment maintenance and service contracts can add unnecessary costs and hamper productivity without guarantees of quality or performance. Providers can use benchmarked data to identify and reduce variations in contracts and simultaneously reduce costs and improve service and quality.

Unnecessary and avoidable variation plagues every aspect of the U.S. healthcare system, from how physicians perform surgery to online forms patients complete to set up an appointment with their doctor. Lack of standardization can serve as a drag on each leg of the system's three-legged stool—access, cost and quality. Medical equipment maintenance and repair contracts suffer from the same drag. Complexity, variance and lack of transparency can hamper access, raise costs and negatively impact quality. Given the fact that medical equipment service contracts comprise 50% or more of a typical HTM department's budget, optimizing this critical driver of clinical availability is key.

The move toward standardizing service contracts by modality and the terms and conditions within each service contract is a key finding of this report. That move is powered by data. Providers can use data to identify and reduce cost variances in medical equipment maintenance and repair contracts, identify valuable alternatives and contribute to the overarching strategic objectives and business goals of their organization.

PartsSource conducted an exclusive analysis of provider medical equipment maintenance and repair contracts from more than 100 hospitals to quantify the pain points, including time spent managing multiple contracts, lack of institutional processes for tracking performance, cost variance and service strategies by modality. The study pool included more than 100,000 individual service contracts and more than 500,000 service events.

What is the scope of the challenge? As the charts below illustrate, the average number of contracts per hospital was 146 and ranged from a low of 62 per hospital to a high of 238 per hospital, depending on bed size. Most of the contracts were low-value covering low-risk medical equipment assets.

Portfolio Complexity: Contract Profile Analysis

146

Average number of service contracts managed by providers

140

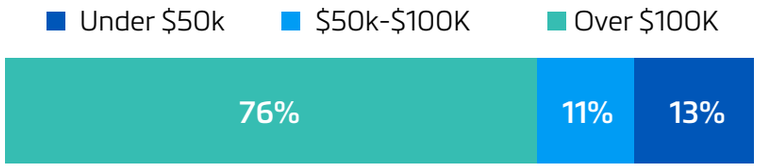
Under 1,000 beds
Min = 62
Max = 236

156

Over 1,000 beds
Min = 101
Max = 238

Stratification of Contracts by **Cost**

Stratification of Contracts by **Quantity**



Contracts are numerous.
The vast majority are low-value contracts covering low-risk assets.

The analysis also found that providers were spending as much time on negotiating and administering low-value contracts as they were on high-value contracts.

Time-Consuming: Time and Motion Study

Team Impact

Price Band	Days to Complete	No. of Contracts	Total Team Days
Under $50k	100.8	111	11,189
$50k-$100K	100.8	16	1,613
Over $100K	100.8	19	1,915

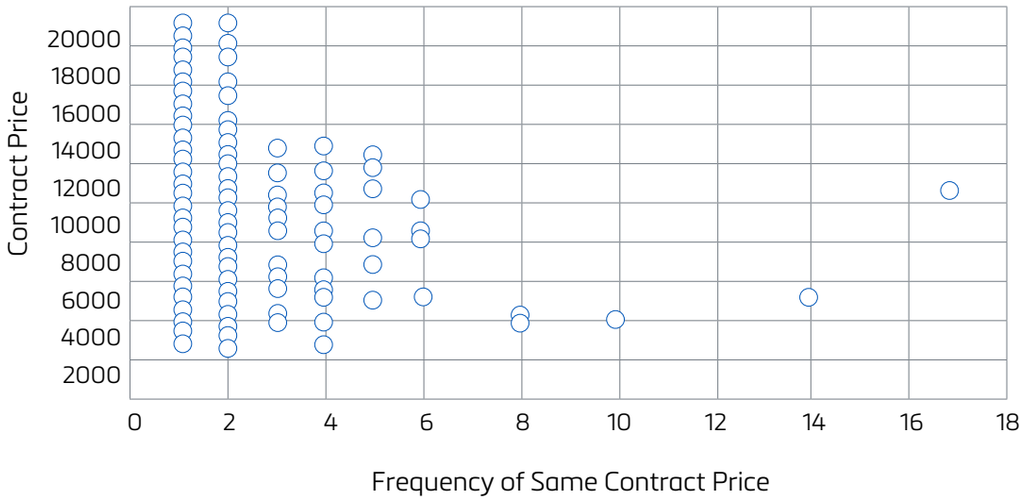
Process Intervals

Teams are spending up to **4 months per contract regardless of price band.**
In theory, lower impact contracts should require less effort.

By taking an "if you've seen one contract, you seen one contract" approach, providers in the analysis were paying 519 unique maintenance and repair contract prices for the same model of medical equipment. Controlling for identical entitlements on the same model, the price of full-service contracts for the same model of medical equipment ranged from $7,920 to $18,600.

Cost-Variability: Asset-Level Analysis

519 Unique contract prices for the same model



OEC 9900
Full-Service Contracts

57%

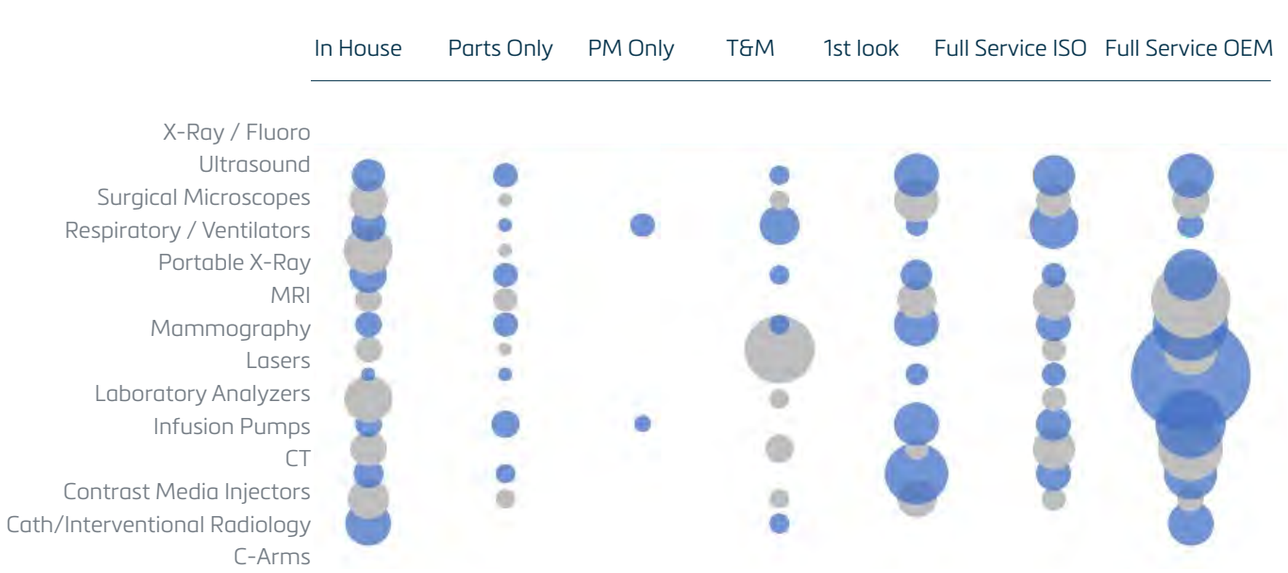
Range from min to max

$18,600	Max
$11,286	Mean
$10,800	Median
$7,920	Min

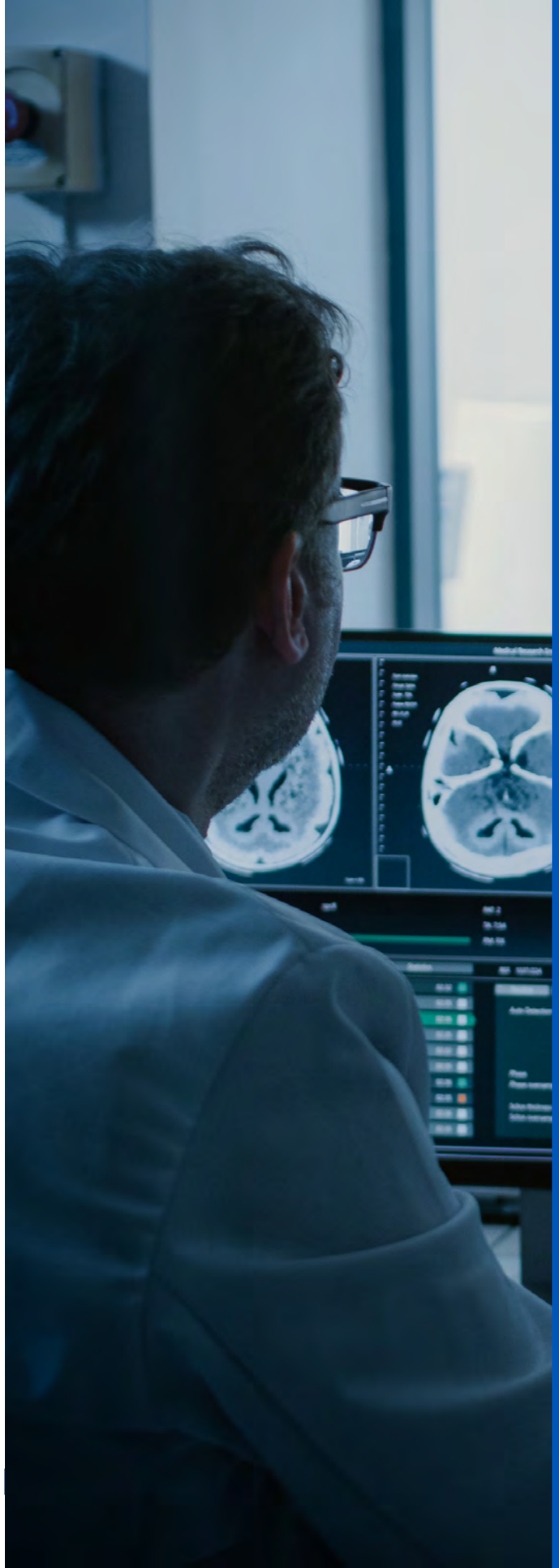
No true cost transparency results in systems **overpaying for full-service contracts and lack of standardization.**

The analysis found an extreme level of variation in the types of service contracts for 15 of the most common medical equipment modalities. The types of service contracts included: in-house only, parts only, parts and maintenance only, time and maintenance only, first looks only, full-service ISO and full-service OEM. This suggests the lack of a clear evidence-based approach to service contract strategies.

Risk Management: Service Contract Approach by Modality



Extreme variation in strategy suggests **lack of a clear evidence-based data approach** to decision



Finally, the analysis considered the potential savings of replacing full-service contracts with time and maintenance contracts for six different medical equipment modalities. As the chart below shows, the potential savings ranged from 16% to 59%.

True Cost Visibility: Cost-of-Service Data

Modality	Coverage Years	Average Full-Service Contract	Average T&M Spend	Savings %	Average Corrective Events
Model 1	463	$3,766	$1,534	59%	1.13
Model 2	962	$5,456	$3,362	38%	0.75
Model 3	694	$10,419	$7,221	31%	1.82
Model 4	615	$11,238	$7,877	30%	1.98
Model 5	334	$11,998	$9,844	18%	2.47
Model 6	340	$5,896	$4,958	16%	0,19

Financial cost/benefit analysis should influence contract strategy. **What data are you using to help make that decision?**

The PartsSource analysis revealed wide variations in medical equipment maintenance and repair contracts entered into by hospitals without any corresponding improvements in clinical, financial or operational outcomes to justify the wide variations. This is why providers need a data-driven, evidence-based approach to service contracts.

Insights in action

- Consolidate and rationalize contracts with evidence-based insights
- Create a data-driven transition plan to bring low-dollar, low-risk service in-house
- Use evidence-based outcome data to lower contract costs by as much as 60%
- Measure asset-level service costs and performance to evaluate contract strategy
- Leverage national benchmark data to make evidence-based decisions

The PartsSource POV

Data Can Level the Service Contract Negotiating Table for Providers

Healthcare technology service contracts have their own form of inefficiency, and that **inefficiency** starts with having multiple contracts from different sources at varying locations and price points. That happens due to a number of factors including consolidation, different contracts across different sites and the impact of the negotiation process.

519

Number of unique service contract prices for the same model of medical equipment

Source: PartsSource

In that negotiation, healthcare organizations are at a significant disadvantage because they don't buy a service contract on a specific asset all that often. They don't have data to know if they're getting a good deal. They don't have a way of sharing that information with peers to know if a peer got a better deal for the same service contract for the same piece of equipment.

There is no standard to help them make an informed decision. All they can do is bring in their best negotiator who will try to negotiate the best price every time.

It's a particularly tricky negotiation for the inexperienced.

That's a hugely inefficient way to do service contracts. It's time-consuming on a one-by-one basis, and organizations aren't benefiting from time-saving efficiencies and the standardization of service contract terms and prices.

This is where PartsSource can come in and help because we have the expertise and the data that most organizations lack. We can look at an organization's contracts and flag all the unnecessary and avoidable variations in terms and prices. Then we can help standardize those contracts and get that number down to a handful a year. That, in turn, puts the organization in a much stronger position to negotiate the best possible prices for those standardized service contracts.

David Brennan,
Senior Vice President,
Product Strategy,
PartsSource

Conclusion: Embracing the Future for Improved Outcomes

Data Is Essential for Healthcare Organizations to Respond Effectively to this New Reality

Conclusion: Embracing the Future for Improved Outcomes

The competitive differentiator for hospitals, health systems and medical practices in the future will be the ability to use data to drive decision-making to improve clinical availability, and that includes the strategies for managing and maintaining medical equipment assets

The healthcare industry is swimming in data, yet few healthcare leaders understand how to harness the power of that data to expand access, lower costs and improve quality. Healthcare technology managers, supply chain leaders and others responsible for making medical equipment maintenance and service decisions can become the exception to that rule.

This first annual State of Healthcare Technology Management Insights Report from PartsSource demonstrates the proof of that concept. The report details five data-driven opportunities to reduce operating costs and improve clinical availability. Never have these opportunities been needed more than now as the healthcare industry lumbers through its clinical, financial and operational recovery from the pandemic and into a new healthcare economy being redefined by new market entrants, nontraditional healthcare companies and healthcare consumerism. The ability to make evidence-based, data-driven medical equipment decisions will be a competitive differentiator. The data is here. The evidence is here. And the technology is here. It is time for HTM Leaders to leave the status quo behind and embrace the data-driven model. PartsSource can show your organization how.

Healthcare Technology Management: Past Versus Future State

Past State	Future State
Across-the-board budgeting	Budgeting by individual equipment modality
Buying majority new OEM parts	Buying high-quality compatible or refurbished parts
Buying replacement parts is art	Buying replacement parts is science
Full-service original equipment manufacturer (OEM) service contracts on all equipment	"Right-sized" service contract strategy that meets service needs of individual equipment modalities
Non-reproducible tribal knowledge	Reproducible data-driven insights
Quality beats cost every time	Balance quality, cost and availability based on specific needs
Replacing equipment at prerogative of clinicians	Extending the useful life of equipment as long as possible
Select vendors by reputation and word of mouth	Select vendors by objective verifiable performance criteria
Service contracts not connected to capital asset replacement strategy	Service contracts connected to capital asset replacement strategy
Zero risk tolerance	Criticality determines risk tolerance

About PartsSource

About PartsSource

PartsSource was founded on the idea that an evidence-based, digital approach to the healthcare supply chain can unlock better delivery, lower costs, and enhance clinical outcomes.

Today, PartsSource is the leading technology and software platform for managing mission-critical healthcare equipment, and is known for modernizing the medical technology supply chain with the industry's first and only clinical resource management platform.

PartsSource serves 5,000 hospitals and 15,000 clinical sites across the United States and is committed to innovating to reduce the cost of healthcare and elevate clinical availability across the sector.

With decades of proprietary data, PartsSource is transforming the medical equipment supply chain to create greater financial, labor and clinical capacity for top providers.

15,000+
US Clients

100,000+
Assets Under Mgmt

750,000+
Events Managed

10,000+
Global Suppliers

5,000+
Nationwide Service Network

Learn more about PartsSource:

- PartsSource Named to Newsweek's List of the Top 200 America's Most Loved Workplaces for 2024
- PartsSource Named One of the Top 100 Healthcare Technology Companies of 2023
- WSJ: Bain Capital Private Equity Scoops Up PartsSource
- PartsSource President and CEO Philip Settimi Named to Top 50 Healthcare Technology CEO List

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