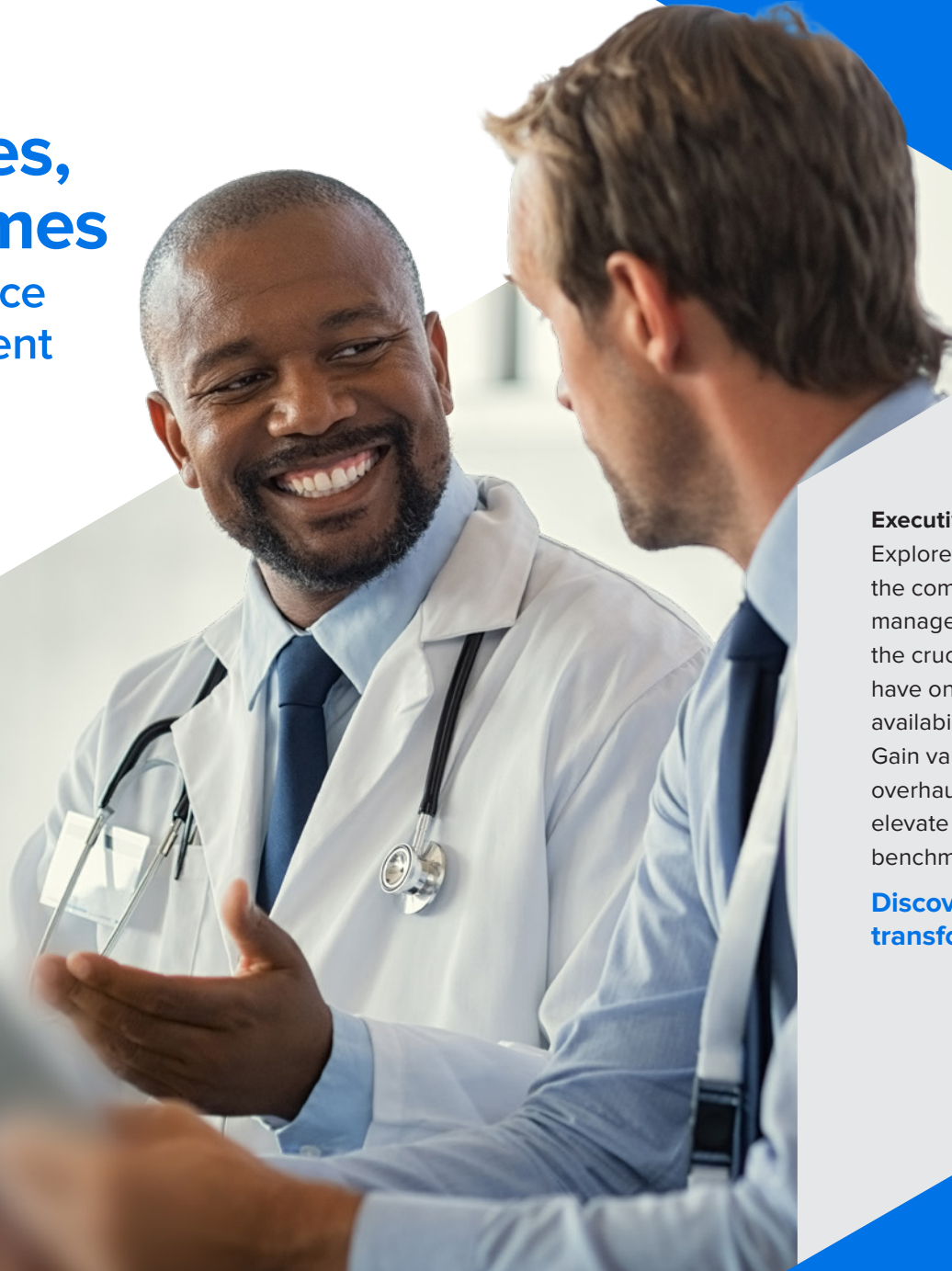




Hospital Vision Study

# Critical Supplies, Critical Outcomes

The Quest for Excellence  
in Materials Management



## **Executive Summary**

Explore a pivotal study that reveals the complexities of materials management in hospitals. Uncover the crucial impact non-clinical teams have on patient care in ensuring the availability of essential medical assets. Gain valuable insights into how strategic overhauls streamline operations and elevate patient care, setting new benchmarks in healthcare excellence.

**Discover the digital strategies transforming hospitals.**

## Material Matters

In the high-stakes acute-care hospitals, inventory management is crucial. It's the heartbeat of healthcare delivery, where efficiency in managing supplies, equipment and pharmaceuticals is critical to patient outcomes. This goes beyond mere logistics; it's the foundation of patient care. For clinicians, having the necessary tools at the right moment is crucial to help reduce workloads, alleviate stress and provide the highest standard of patient care.

### Essentials on the Line: Inventory's Impact on Life-Saving Care

Precise inventory management is critical in healthcare as patient safety and outcomes depend on the consistent availability of essential medical supplies.



**84%** of decision-makers agree their role in managing inventory directly impacts patient safety



"Not being able to buy toilet paper or a television set is certainly an inconvenience. But not being able to get a chemotherapy drug or mechanical ventilator is life threatening."<sup>1</sup>

Wallace (Wally) Hopp, Chair Committee on Security of America's Medical Product Supply Chain

### Healthcare's Trust Challenge: Procedure Delays Linked to Supply Inefficiencies

Inventory shortages that lead to canceled procedures disrupt care and diminish trust in healthcare, emphasizing the need for better supply management.



**74%** of respondents report cancellations of procedures or surgeries due to out-of-stock/low stock/lost supplies are a significant problem for their organization



"If the patient's procedure has to be canceled due to supply issues, that reduces the patient's trust in their facility. They don't see it as a supply issue; that demonstrates to them a lack of dependability in their healthcare."

Hospital Chief Nursing Officer, United States

### Inventory on the Clock: The Race Against Shortages

Adverse event reporting systems help increase transparency within healthcare organizations as clinicians begin reporting previously unvoiced concerns, motivated by the potential for impactful change.



**76%** of non-clinical decision-makers agree their organization needs to improve systems for clinicians to report adverse events caused by out-of-stock/low-stock/lost inventory, equipment or supplies to better support patient safety



"People are reporting things that they didn't use to report because maybe they felt no one would care, or maybe they felt no one would do anything."

Health System Chief Medical Officer, United States

### Lost in Translation: Unifying Voices in the Battle Against Stockouts

Digitized inventory systems standardize stock level terminology, ensuring all staff members clearly and consistently understand inventory status.



**72%** of respondents report that their organization is under pressure to update and digitize inventory management and tracking systems



"We all don't really speak the same language when it comes to stock out. We say there's no stock. What does that mean? Is it a minimum par? Is it less than the maximum par? Is it within the range? Is it less than the minimum or is it zero?"

Hospital Operating Room Nurse Manager, United States

<sup>1</sup>National Academies of Sciences, Engineering, and Medicine. 2022. Building Resilience into the Nation's Medical Product Supply Chains. Washington, DC: The National Academies Press

# Unraveling Hospital Supply Complexity: A Quest for Seamless Operations



## Obsolete ERPs

Decision-makers rank outdated Enterprise Resource Planning (ERP) systems as the top obstacle impacting inventory management.

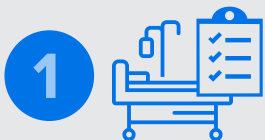
Hospitals confront complex supply challenges, including tedious manual counts in storerooms, monitoring stock in clinical departments and managing a variety of assets and devices that are frequently on the move. These persistent issues not only hinder operational adaptability but also demand urgent and innovative solutions.

Reflecting on this reality, a U.K. surgical chief nurse shares a vivid example of the demanding efforts to navigate these supply hurdles. “So, it’s lots of phone calls and [resorting to unconventional methods] where you’d call a rep, you’d call another hospital, you’d send a taxi out, you’d send a colleague out to a local hospital to pick up the equipment. It is really time-critical and an awful lot of pressure.”

The logistical challenges recounted by the surgical chief nurse reflect a wider systemic issue. Decision-makers report that inadequate IT infrastructure and outdated legacy systems form substantial barriers to progress. These systemic challenges disrupt the integration of modern devices and technologies across hospital departments. Compounded by outdated, compartmentalized processes, they impede the vital communication between clinical and non-clinical staff, stifling collaborative efforts within hospitals’ operational frameworks.



## Seamless Supply Replenishment: Decision-Makers Rank Challenges to Inventory Accuracy



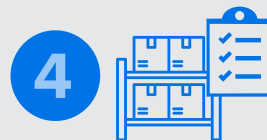
1 Manual inventory cycle counting in clinical storerooms areas or wards



2 Lack of real-time recording of supplies and equipment used in surgical theaters/operating rooms



3 Order fulfillment or replenishment in hospital goods-in central storeroom



4 Manual inventory cycle counting in hospital goods-in central storeroom



Search Strains

77%

agree clinical staff at their organization spend too much time locating medical equipment, supplies and materials when needed.

# Revolutionizing Care: Hospitals' Technology Backbone

As digitization becomes more deeply integrated into supply management, it's clear that the efficiencies gained are not just about better stock control. They resonate more broadly with healthcare's overarching goal of delivering the highest-quality patient care. By streamlining inventory management and minimizing the need for clinician workarounds, digital tools directly contribute to improved patient outcomes.

While the integration of digitization in supply management promises to enhance patient care, gaps in its adoption reveal significant strains on healthcare staff. The consequences of slow progress in digital transformation are brought to life by a U.K. surgical chief nurse, who shares a firsthand account of the operational strain. "It's obviously very time-consuming. Instead of doing clinical work, [nurses are] spending time doing stock management, stock counting, [and] checking stocks come in." These inefficiencies divert skilled professionals from their essential duties in patient care and undermine the efficiency and effectiveness of healthcare delivery.

## Tech Boosts Efficiency and Safety

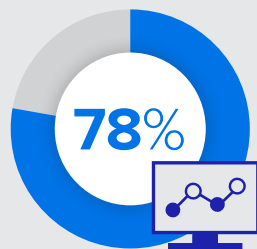
Industry leaders are turning to technological solutions to alleviate the burden on clinical staff and streamline healthcare delivery. Decision-makers are initiating investments in analytics to better forecast and improve supply management. At the same time, they are crafting investment plans for technologies such as barcodes and Radio Frequency Identification (RFID) to improve inventory tracking. There's a growing consensus that technology helps reduce errors and boost patient safety. As healthcare advances, prioritizing digital systems at the bedside is seen as crucial to enhancing patient care.



## Tech-Enabled Healthcare: Data, Tech and Precision Lead the Charge in Transforming Patient Care

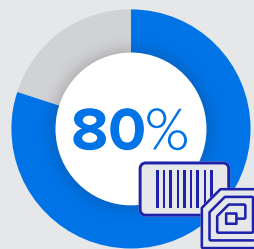
(Percentage of Decision-Makers)

### Data-Driven Decisions



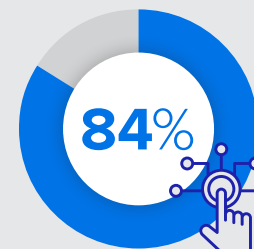
Believe using **data and analytics** to forecast demand and achieve appropriate stock levels is a priority for their organization

### Error-Reducing Allies



Agree that the **combined use of RFID and barcode technology** to track and manage inventory would significantly help prevent and reduce medical errors

### Point-of-Care Precision



Say **automating and digitizing tracking systems** at the point of care is a priority for their organization

# Redefining Hospital Inventory for Next-Gen Patient Care

Many hospitals' internal supply chains are a complex mix of automated and manual systems, leading to operational inefficiencies. Pharmacy departments may leverage automation for medication management, yet other areas struggle with outdated processes. Experts predict a unified approach to inventory management will emerge, utilizing transparent communication to ensure continuous supply availability.

As decision-makers recognize Artificial Intelligence's (AI's) transformative power, they envision a future where technology refines forecasting and procurement. Alongside AI, innovative solutions like track-and-trace technology, Real-Time Location Systems (RTLS) and RFID are revolutionizing materials management. These systems offer precise traceability, which is crucial for handling recalls and reducing waste, critical for preventing shortages and supporting hospitals in responding dynamically to patient needs.

## Innovating Care

The impact of these technological advances is perhaps most evident in pharmacy management. A U.K. chief pharmacist illustrates a near-future scenario: "It won't be too long before AI does the dispensing and prints out a list of side effects that are potential for patients on this medication. Then it's just the pharmacist who's providing that counseling ... without having to do any of the dispensing process." This shift signifies a broader trend toward digital systems that not only enhance patient safety but also allow healthcare professionals to concentrate on providing direct patient care.



## Tech Optimism: Leaders in Non-Clinical Roles Foresee a Brighter Future with Emerging Innovations

### Top Three Game-Changing Technologies in Inventory Management

Decision-makers agree that adopting innovative technologies can improve the accuracy and visibility of inventory in their organization.



Real-Time Location Systems (RTLS)



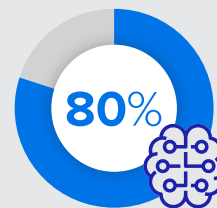
Radio Frequency Identification (RFID)



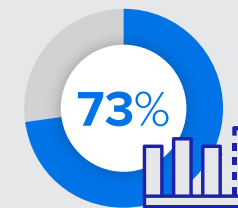
Handheld Mobile Computers

### Data-Driven Decisions: Leaders Bank on AI and Analytics for Inventory Precision

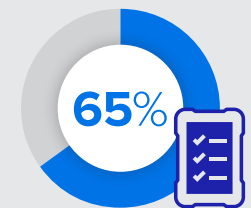
An overwhelming majority of decision-makers believe advanced software solutions would enhance inventory accuracy and visibility in their organization.



Artificial Intelligence



Predictive Analytics



Prescriptive Analytics

# Embracing Digital Precision

**The hospital is an acute-care environment where clinical and non-clinical staff are under immense pressure to do more in less time.** Collaborative efforts between healthcare providers and technology experts can usher in a new era of streamlined and responsive supply processes. This transformation enhances operational fluidity and ensures that hospitals are well-equipped to meet the ever-evolving demands of patient care in the modern healthcare landscape.

## About the Study

Zebra commissioned Azure Knowledge Corporation to conduct an online survey among 280 non-clinical decision-makers in large hospitals (1,000+ beds) in the United States and the United Kingdom. Respondents are responsible for overseeing one or more of the following inventory categories: medical devices, durable medical equipment, implants, consumables, medical supplies, pharmaceuticals or sterile instruments.

### Expert Voices: Clinical Perspectives

All direct quotes in this report were exclusively derived from comprehensive one-on-one interviews with clinical leaders in the United States and the United Kingdom, providing a unique and rich qualitative dimension to the research findings.

The study results are summarized in a three-part series:



**Unmasking Complexity**  
Elevating Healthcare with Strategic Supply Management



**Healthcare's Digital Pulse**  
Elevating Precision in Inventory Management



**Healthcare Horizons**  
Navigating the Future of Inventory Intelligence

To view the Hospital Vision Study series, visit [zebra.com/hospital-materials-mgmt-vision-study](https://zebra.com/hospital-materials-mgmt-vision-study)

Discover how Zebra can help transform your hospital's materials management processes to help drive greater clinical efficiencies and safer patient care. Visit [zebra.com/healthcare](https://zebra.com/healthcare)

## About Zebra Technologies

Zebra (NASDAQ: ZBRA) helps organizations monitor, anticipate and accelerate workflows by empowering their frontline and ensuring that everyone and everything is visible, connected and fully optimized. Our award-winning portfolio spans software to innovations in robotics, machine vision, automation and digital decisioning, all backed by a +50-year legacy in scanning, track-and-trace and mobile computing solutions. With an ecosystem of 10,000 partners across more than 100 countries, Zebra's customers include over 80% of the Fortune 500.



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