ZEBRA

Hospital Vision Study

Healthcare Horizons

Navigating the Future of Inventory Intelligence

Artificial intelligence, advanced analytics and the Internet of Things (IoT) are actively reshaping healthcare materials management. Explore the current trends and breakthroughs that are redefining inventory management practices, promising substantial improvements in patient outcomes and care delivery efficiency.

Explore the innovations transforming the future of healthcare.

Transparency in Materials Management: Redefining Hospital Efficiency

Artificial Intelligence (AI) and analytics are vital in transforming materials management. Hospitals are increasingly planning to deploy these advanced tools to predict inventory needs, optimize materials management and guide decision-making processes. Together, they offer a robust approach to improving resource allocation and patient care, marking a significant step forward in the efficiency of healthcare delivery.

Transforming Hospital Outcomes: Leveraging AI and Analytics to Reshape Materials Management

Artificial Intelligence (AI)

- Uses algorithms to analyze historical data, forecast demand, optimize inventory levels and reduce surpluses.
- Enhances supply chain visibility and proactively flags shortages or overstocks.
- Powers predictive maintenance for equipment reliability and reduced downtime.

Predictive Analytics

- Employs models to anticipate inventory requirements and schedule timely restocks.
- Identifies potential supply disruptions, allowing hospitals to mitigate risks and maintain continuity of care.
- Manages perishable supplies in real time to decrease waste and reduce costs.

Prescriptive Analytics

- Advises strategies to boost efficiency and economize operations.
- Streamlines supply processes for improved operational effectiveness.
- Pinpoints process enhancements for informed materials management decisions.

Embracing AI: The Inevitable Shift to Augment Care Delivery

For some clinical professionals, AI is viewed as an inevitability. "**It's not a question of if we're going to use it; it's how we're going to use it**," says one U.S. hospital's chief nursing officer. In the hospital environment, AI, predictive analytics and prescriptive analytics can help enhance efficiency by forecasting demand, optimizing inventory levels and informing strategic procurement decisions, ultimately improving resource allocation and patient care.

Strategic Transformation: Embracing AI for Next-Generation Inventory Management

In today's healthcare landscape, advanced software solutions, particularly those augmented by AI, are universally recognized as pivotal for the evolution of inventory management. A chief medical officer in the U.K. lends a voice to this transformation, asserting, "When the trend analysis is a lot more proactive, there can be more emphasis and time spent on providing meaningful outcomes." This stance is shared by 80% of decision-makers who anticipate AI will significantly enhance inventory visibility and accuracy, reflecting a commitment to shift from reactive to proactive approaches in patient care and operational efficiency.

Predictive Analytics: Shaping the Future of Healthcare Inventory

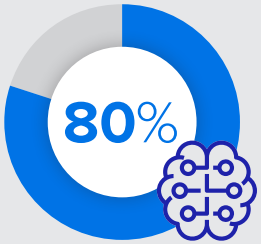
Predictive analytics is also gaining traction among decision-makers, with 73% recognizing its critical role in anticipating demand and improving inventory management. This strategic embrace of data-driven forecasting marks a significant development in hospital operations, moving beyond immediate responses to cultivating a resourceful, outcome-focused environment.

Prescriptive Analytics: Informing Proactive Decisions

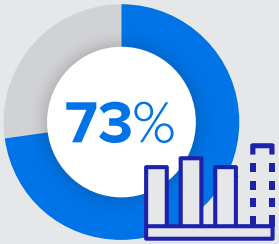
The adoption of prescriptive analytics is changing the landscape of decision-making within healthcare, acknowledged by 65% of decision-makers for its substantial impact. This form of analytics transcends prediction, offering actionable recommendations that streamline operations and enhance patient safety. As a result, healthcare systems are becoming more agile, with a reinforced commitment to delivering quality patient care through efficient resource management.

Unlocking Efficiency:
Decision-Makers Eye Software Solutions for Inventory Management Advancements

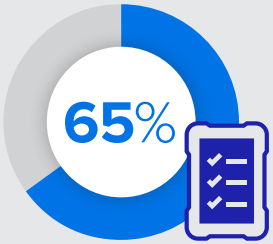
Percentage of respondents who agree that software would improve inventory visibility and accuracy



Artificial Intelligence (AI)



Predictive Analytics



Prescriptive Analytics

The Analytical Edge: Current Adoption and Practical Applications

AI and advanced analytics are swiftly moving from cutting-edge notions to core operational tools in healthcare, reshaping current practices. These technologies are actively transforming inventory management and enhancing patient safety. With the strong endorsement of decision-makers, AI and analytics are refining traditional inventory systems into data-enriched models for strategic resource management.

Forecasting the Future: The Surge in Analytics Adoption

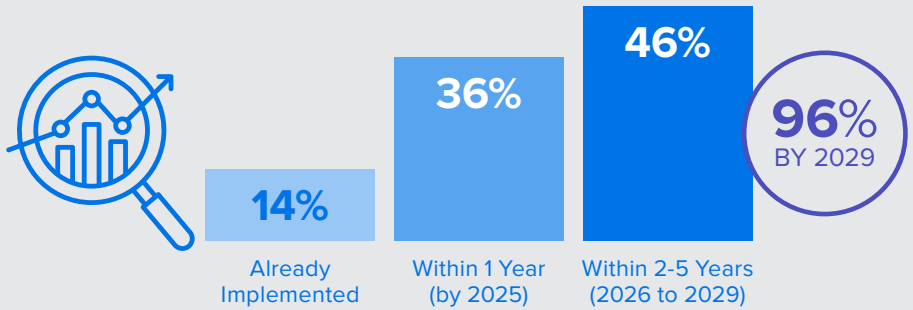
Prescriptive analytics adoption is on a fast upward trajectory, with 36% of healthcare leaders set to implement these solutions within the next year. Moreover, an astounding 82% of respondents plan to integrate these technologies within the next five years, signifying a sweeping industry shift toward AI to streamline operations and enhance patient safety.

Front-Line Insights

Many front-line healthcare professionals echo the promising capabilities of AI in enhancing operational workflows. “There are a lot of preventative measures that we could put in place with AI,” states a U.S. operating room nurse manager. Expanding on this, she notes, “From a supply chain perspective, it will enhance collaboration and the overall efficiency of [care] delivery.” These remarks highlight the multifaceted benefits of AI, affirming its role in elevating healthcare efficiency and the quality of patient care.

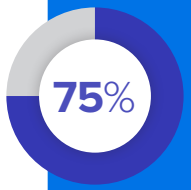
Strategic Stocking: The Shift to Predictive Inventory Analytics

Percentage of decision-makers who have / plan to implement advanced data analytics for inventory demand forecasting

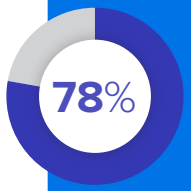


Non-Clinical Leaders Set Sights on Advanced Analytics

Percentage of decision-makers who agree



Use of AI to power our inventory systems would advance our organization’s ability to monitor inventory and predict demand, resulting in increased patient safety



Use of data and analytics to forecast demand and achieve appropriate stock levels is a priority for my organization

Instilling Intelligence: Shaping Tomorrow's Healthcare Landscape

Hospitals are looking beyond the horizon, crafting detailed roadmaps that place AI and analytics at the forefront of their materials management strategy. This forward-looking approach is grounded in the analysis of historical data and is supported by a growing trend: with predictive analytics already leveraged by 29% of decision-makers, a rise to 69% is expected within the next five years, indicating a solid trajectory to data-enhanced healthcare ecosystems.

Strategic Forecasting: Data-Driven Healthcare

Detailed strategic planning is increasingly characteristic of healthcare institutions, where the integration of predictive analytics informs a more nuanced approach to resource management. The aim is to anticipate healthcare needs proactively, utilizing AI to align resource allocation with patient demand. The data points to a burgeoning commitment, with 31% of leaders already integrating AI into their operations, a figure expected to double in the next five years, promising a future of informed, responsive care delivery.

Precision in Practice: AI's Role in Pharmacy Management

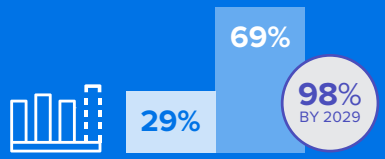
Precision in pharmacy management is vital. A chief pharmacist from a U.K. hospital states, "In pharmacy as a whole, there is a big policy of look-alike, sound-alike drugs being separated." She adds, "Already we have dispensing systems that flash up with warnings about things or say, 'Do DVT counseling or make sure the patient doesn't take any other non-steroidal anti-inflammatory drugs with this product.'" She expects, "Those sorts of errors should be reduced by more automation because robots go by barcodes rather than by names," and suggests, "but it probably won't be long before it's even more automated," hinting at imminent technological advancements.

Hospital Areas That Would Benefit Most From Tech in Materials Management

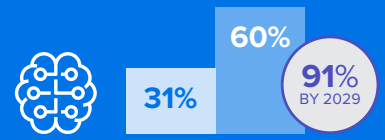
Percentage of decision-makers ranking area in top three

- **48%** Pharmacy or pharmaceutical dispensing stations
- **41%** Hospital Goods-in Central Storeroom
- Clinical storerooms (smaller stock areas in clinical nursing areas or wards)
- **39%** Operating Rooms / Theaters
- **38%** Central Sterile Services / Sterile Processing Department
- **28%** Emergency Department

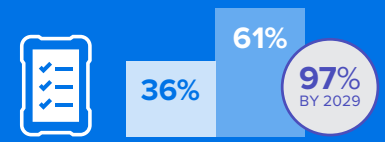
Decision-Makers' Plans to Implement Enterprise Inventory Management Software



Predictive Analytics



Artificial Intelligence (AI)



Prescriptive Analytics

Already Implemented | Plan to Implement by 2029

Boosting Resilience in Inventory Management

The technology trends commanding attention today are reshaping hospital materials management with undeniable impact. By harnessing data-driven insights, hospitals are proactively streamlining inventory levels, curbing waste and ensuring the availability of essential supplies. More than that, they're bolstering their internal supply chain against potential disruptions, fortifying resilience and paving the way for superior patient care outcomes. It isn't just about keeping pace with technological advancement; it's about setting new standards for healthcare excellence.

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**

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**

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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