

Jamaica Hospital Medical Center Leverages Cognosos' Location AI to Achieve Fast ROI

JAMAICA HOSPITAL MEDICAL CENTER (JHMC) is a 400+ bed hospital in Queens, NY. The hospital's emergency department – a designated Level 1 Trauma Center – is the busiest in New York.



JHMC primarily serves culturally diverse and densely populated areas in the boroughs of Queens and Brooklyn.

As of 2023, JHMC annually treats approximately:

- 17,000 inpatients
- 105,000 ED patients
- 352,000 ambulatory patients

As part of the MediSys Health Network, JHMC operates Flushing Hospital, Jamaica Hospital Nursing Home, and a multi-specialty physician group with offices in the greater Queens community.

The Problem

At its flagship facility, JHMC faced two major challenges related to asset management. The hospital's caregivers – especially its nursing staff – were frustrated by the inability to access medical equipment immediately for patient care. Although hospital administrators were confident there was enough equipment in their inventory, they acknowledged that it was hard to find when needed. This situation led to a perceived shortage of equipment among staff and increased purchase requests for additional items. JHMC administration wanted to better control those costs.

The location challenges also negatively impacted compliance with JHMC's medical equipment preventive maintenance program. In several instances, equipment was not maintained on the proper schedule because it couldn't be found. This situation not only posed a threat to patient safety, but it also meant JHMC risked violating Joint Commission and other regulatory standards.

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Finding a Solution

JHMC spent more than seven years researching asset management solutions that could help improve their medical equipment workflow while reducing the budget for additional or replacement equipment.

The ideal solution would:

- Be comprehensive (including hardware, software, and customer services)
- Offer pinpoint accuracy
- Have a user-friendly interface
- Feature high reliability

JHMC also required vendors to agree to deliver proof-of-concept – to install the system on-site to demonstrate exactly how the solution would work in their facility. The hospital vetted seven vendors. Only two vendors offered the "full package" of hardware, software, and customer service. And only two vendors agreed to deliver a proof of concept.

"People have a tendency to talk a lot, but when it comes to proof, it's not that easy," says Nabil Ibrahim, JHMC's Director of Biomedical Engineering Department and Asset Management.

“We’ve already been contacted by some other hospitals who have embraced the older tracking system technologies and are now considering replacing them,” Ibrahim adds, “which means we’re really on the right track.”



Why Cognosos?

Ibrahim says Cognosos’ biggest selling point was its **combination of artificial intelligence (AI) and lightweight infrastructure which delivers room-level accuracy without room-level installation**. Those advantages were evident in the proof of concept, when **Cognosos’ solution delivered much better accuracy than the competing product**.

JHMC also appreciated the opportunity to be on the cutting edge of this use of technology among hospitals in the northeast United States. The implementation of an AI-based asset management system is in keeping with Jamaica’s innovative spirit, Ibrahim says – a key reason why JHMC ranks among the top 100 hospitals nationwide.

Solution Implementation

JHMC and Cognosos implemented the first phase of the RTLS in early 2023. Prior to that, Ibrahim says, Cognosos **mapped the entire hospital** – close to 600,000 square feet – to “train” Cognosos’ LocationAI system.

The first phase of implementation focused on **tracking about 2,500 pieces** of equipment that JHMC’s nursing team and physicians used every day – such as defibrillators, infusion pumps, and feeding and compression pumps. Because the implementation itself didn’t require heavy infrastructure or wiring, it wasn’t disruptive to the hospital’s typical workflow. Ibrahim credits the Cognosos **staff’s extensive experience working in hospitals** as critical to the smooth installation process.



“[It] was really helpful for us to figure out how to be on the same page,” Ibrahim says. “When we had a question—and we had a lot of tough questions—they understood right away what we were talking about, because they’ve had hands in this field.”

NABIL IBRAHIM
JHMC Director of Biomedical
Engineering Department and
Asset Management

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Operational Impact and ROI

Cognosos created customized reports to home in on JHMC's most pressing asset management concerns, and both parties met for quarterly review meetings to review the data. Whenever they noticed a concerning trend, Cognosos and JHMC teams worked together to develop a plan to address it. For example: Early on, the Cognosos data indicated that the hospital's emergency rooms and intensive care units struggled to keep proper levels of certain medical equipment. Additionally, data showed that the hospital's transport department could improve its management of the hospital's stretchers and wheelchairs. JHMC was able to target those locations with protocol changes to **speed up the equipment workflow**, ensuring those areas were replenished faster and managed better.

Since JHMC implemented the Cognosos RTLS solution, Ibrahim says, **reports from caregiver teams about a lack of equipment have decreased**, and staff can direct their full energy toward patient care. JHMC has seen improvement in preventive maintenance compliance because they can locate equipment more efficiently. Finally, the Cognosos RTLS has helped JHMC reduce the amount of equipment lost through accidental loss or theft, which in turn has allowed administrators to **reduce the budget** it allocates for replacements.

What's Next?

JHMC is currently working with other departments to determine their asset management needs with the intention of expanding Cognosos' coverage. Many of these departments were not in JHMC's original plan for the RTLS; for example, Ibrahim's team received a request from the hospital's Language Assistance Department asking for help tracking their iPads. Based on JHMC's positive experience with Cognosos, Ibrahim and his team are planning to implement the RTLS at its MediSys sister hospital in Flushing.

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to schedule a demo
to learn more about
the benefits of the
lightweight, AI-powered
Cognosos RTLS.



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