



# Encompass

Search less. Care more.

Encompass real-time location system helps a New Jersey hospital save nurses' time, lower costs, and expedite patient care





# Carepoint Bayonne

A patient about to be admitted to the hospital will need an IV pump; none are in the room. The attending nurse taps on her smart phone screen; in seconds the locations of several pumps on the same floor appear, enabling her to have the equipment in place and ready when the patient arrives.

Such scenarios play out daily at Bayonne (NJ) Medical Center, which in June 2017 installed the Encompass real-time location system (RTLS) from GE Healthcare. The Bluetooth Low Energy (BLE) wireless system enables staff members to locate critical care equipment quickly instead of searching through rooms, corridors and closets. Hospital officials say Encompass allows nurses to devote more time to patient care. The system has also helped right-size mobile device inventories and reduce rentals, expedite planned maintenance (PM) and, most important, enable more timely care.

Rita Poss-Brant, Assistant Vice President, Patient Care Services, estimates that nurses can save as much as an hour per day previously spent searching for equipment. For example: “We have only one vein finder per level, and nurses were frustrated when they had to start an IV and couldn’t find it. Now they can just go to a computer or use a mobile device, locate it and go get it.”

## Simple and effective

The Encompass system tracks device locations with a network of beacons and receivers using Bluetooth low energy technology by way of the hospital’s WiFi system. This includes receivers on badges staff members wear. Any authorized staff member can locate equipment from any computer or mobile device.

“Using Encompass to see where things are is so much more efficient than walking room to room,” says Catherine Shull Fernald, Chief Operating Officer. “Since using the system we’ve been able to find items easily, get them cleaned, and put them back into the field a lot quicker. In Critical Care, the intensivists have their own ultrasound machine. In the past, it seemed every night it was being borrowed and left somewhere else. Now that there’s a tracking system, they know every morning at seven o’clock where that ultrasound is.”



Enables staff to locate critical care equipment



Allows nurses to devote more time to patient care



Expedite planned maintenance

Because Biomedical Service staff can quickly locate items that historically had been hard to find, it is easier to achieve 100 percent their targeted preventative maintenance compliance. In addition, Central Supply Services can easily locate devices that need cleaning.

### An end to hoarding

Before the Encompass system was installed, nurses often hoarded equipment to make sure they had it when patients needed it. “They had little stashes,” says Poss-Brant. “When we looked for equipment for PMs, we would find things in closets, pushed into showers, or in patient bathrooms.”

Hoarding made it difficult to keep track of inventory: IV pumps could appear to be in short supply even though the hospital owned enough of them. Shull Fernald reports, “One day the Emergency Department called to say they didn’t have enough IV pumps, and asked the managers to look on their floors. We immediately said, ‘What about the locator system?’ Within minutes, we were able to harness 22 pumps that were supposedly lost or just not available.”

That’s financially beneficial, because it means the hospital now has to rent fewer pumps. Rentals may still be needed to meet patient peaks during winter months, but not at other times. Rental savings of \$44,000 per year are projected. “The system is going to be an asset when we do our capital budget, because now I can truly see what we have,” Poss-Brant adds.



“Financially it has helped because now that we can find equipment, we don’t have to rent things we really didn’t need. In the past we actually had it, we just couldn’t find it.”

### Rita Poss-Brant

Assistant Vice President,  
Patient Care Services

“Our patients get ‘on time’ care because we’re no longer doing searches for equipment that routinely delay responsiveness to our patient needs. At the end of the day, the patients are the beneficiaries of this technology.”

## **Catherine Shull Fernald**

Chief Operating Officer

### **Easy deployment**

Shull Fernald notes that the Encompass system installation was smooth because the equipment requires no cables and no opening of walls and ceilings: “It was quiet and it didn’t disrupt our operations, unlike previous experiences with system or equipment set-ups.” Since the system uses the existing WiFi network, the in-house IT team does not have to support a new dedicated infrastructure.

Before and during the two-week installation process, a GE Healthcare team led a training program that included change management techniques, a network of unit champions and peer coaches, ample demonstrations, and operational rounding in which GE personnel checked on system usage and encouraged adoption.

“GE showed us how to be super users,” says Poss-Brant. “The user interface is very easy. You just have to put in your password and it’s right there.” With unit-level access, all staff members on a unit can log on to the system with a single user ID and password.

### **Looking to expand**

The Bayonne team is looking to add locating beacon tags to more devices: bladder scanners, feeding pumps, ventilators, telemetry boxes, hover mats and hover jacks, mattress blowers, BIPAP units, and even larger

equipment such as mobile X-ray systems. They are also targeting uncommon equipment rentals to track time in use versus returns. Likewise, the team will seek to monitor when equipment is idle in order to determine whether it is necessary on site or can be relocated for use at one of the other facilities in the health system. “We anticipate that by maximizing existing resources, we can find further cost savings by reducing capital expenditures,” Poss-Brant says.

“I know we’re going to be talking to our two sister hospitals (Christ Hospital in Jersey City and Hoboken University Medical Center) to look at how we can expand this technology at a system level,” Shull Fernald says. Systemwide deployment would help keep track of equipment that may be loaned from one hospital to another or travel with a transferred patient.

Poss-Brant concludes, “I like anything that helps nurses take care of patients in a timely manner, so they can give the kind of care they need to and make the patients happy. This is definitely one of these products.”

Shull-Fernald adds, “Our patients get ‘on time’ care because we’re no longer doing searches for equipment that routinely delay responsiveness to our patient needs. At the end of the day, the patients are the beneficiaries of this technology.”

# The Organization

Bayonne Medical Center, founded more than a century ago, is a 278-bed, fully accredited, acute-care hospital providing quality, comprehensive, community-based care to more than 70,000 people annually. It is one of three hospitals under CarePoint Health which delivers patient-centered healthcare to Hudson County, New Jersey.

## Results



Less time (up to one hour per day per nurse) spent searching for mobile equipment



More timely availability of equipment for patient care



\$44,000 in first-year savings from reduced IV pump rentals



Easier location of equipment needing planned maintenance



More accurate equipment inventory data to support capital planning



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