A Greater Purpose

In maximizing its resources, the biomed team at the Southern Arizona VA Health Care System has one ultimate goal: improved patient care.
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BayCare Health System

By David Tandet

Before Walter Barrionuevo was hired to direct BayCare Health System’s Clinical Engineering Services (CES) in 2005, BayCare’s network of 10 not-for-profit hospitals, outpatient facilities, and locations in the Tampa Bay area outsourced nearly all of its maintenance to outside companies.

The new director called upon everything he’d learned in 20 years of clinical engineering service experience to begin bringing the program in-house. “My department currently manages over 49,000 medical devices,” Barrionuevo says. The integrative approach to CES has been an enormous success.

Kimberly Guy, COO of St. Joseph’s Hospital and COO of St. Joseph Women’s Hospital, emphasizes the importance of continuity in the current approach. “Walter runs a fantastic shop. Our folks know them [CES], and they know who to call immediately to help. It’s great to have that support available.”

There’s a practical advantage and special attitude accompanying in-house service. “First and foremost is the ownership factor,” Barrionuevo says. “No one can take care of our customer better than we can. Another advantage to the in-house model is consistency. There were a lot of personnel changes when it came to our previous service vendor. In the past, a BMET was assigned to a specific hospital and was replaced after a short period of time. This resulted in a lack of ownership and follow-through. Just as the hospital staff would be getting to know someone, that person was moved out. An investment in training along with a daily working relationship on a first-name basis allows the customer to know the BMET’s experience and capabilities. We are better able to identify our customers’ needs, priorities, and expectations and adjust our program accordingly.”

THE CUSTOMER COMES FIRST

Barrionuevo refers to the people he serves as “customers.” He wants everyone at BayCare to know that his team of 64 staff members is there to provide the highest level of service possible. At the same time, all benefit from the advantages provided by long-term personal interaction.

Michael Hance, director of imaging for the Hillsborough County side of the BayCare Health System, believes BayCare’s in-house system makes for a more symmetrical match of needs and implementation. “What Walter’s done is organize it so that in each facility there’s a point person. My team has a great relationship with those point people—they’re always working with them. It’s like having your own personal assistant when it comes to clinical engineering. In a system as large as BayCare, having one consistent contact makes for better relationships. Your communication is clearer. It just works better.”

To maintain the superior service now synonymous with BayCare CES, the department is organized into interactive parts. There are BMETs of all levels supporting the equipment within each facility. Staffing levels at each are based upon the size of the facility. St. Joseph’s, a larger hospital, has 13 BMETs.

In addition to on-site BMETs, CES includes field service specialists (FSS). They travel through all 10 hospitals servicing equipment by specialty. There are, for example, laser specialists, diagnostic imaging specialists, ultrasound specialists, sterilization specialists, and anesthesia specialists.

Barrionuevo at times recruits FSS team members from outside the system to ensure that appropriate-level individuals fill specific roles. “We’ve recruited OEM engineers that have worked for Siemens and GE. Most have more than 20 or 30 years of experience,” Barrionuevo says.

BayCare CES also promotes in-house. Barrionuevo says, “We’ve had BMETs who have been promoted into field-service positions to perform ultrasound and sterilization services, for instance.” And he’s proud of the numerous promotions from BMET I to BMET II to BMET III. “The best thing we can do is cultivate our own.”

One reason individuals like joining BayCare is quality time. “Being a field service specialist for BayCare, you know you’re going to be home today. Working for any other field service company, you might be driving perhaps 4-plus hours and won’t get home till 8 PM tonight,” Barrionuevo says.

Barrionuevo is passionate about creating a culture of proactivity. “We attempt to identify systematic problems before they happen. We instill in our team that we cannot operate the same way we used to. We can’t sit here and wait for the phone to ring. We operate more like an independent service organization. Let’s say we have an outpatient imaging center that has a CT, MRI, a couple of rad rooms, and some ultrasound. There might not be a planned maintenance inspection scheduled for a couple of months. We will check in and ask, ‘Everything OK?’ Perhaps it’s a nuisance problem we identify. Well, it’s useful for everyone if the FSS says, ‘Let me take care of that now,’ before it gets to a more serious stage.”
This approach ensures that the entire system takes full advantage of advancing technology.

Guy points out that under the BayCare system, as things have become more technologically advanced it's not a challenge deciding who to call to help. Hance provides this example. "We've got some CT scanners and MRIs that are chilled with cooled and chilled water rather than air. If we have an interruption in our chilled water supply system, we've got issues. Tonight we've got a chilled water shutdown here at St. Joseph's because we're doing some construction. We're able to rely on Walter's team to get involved in how that's going to affect our CT scanners or MRI scanners. His team's the interface between our facility and the manufacturer such as GE or Siemens. At midnight or 1 AM when the water is going to come back up, his team is available to help make that happen."

"As a customer of that service, that's a really big benefit," Hance continues. "And it's saved a lot of money."

Hance says that the ultimate goal of BayCare's efficiency is achieving the highest standard of care. "Our focus is on patient care, one standard of care. We put the patient at the center of all we do. As [BayCare Health System CEO] Steve Mason puts it, we take care of patients one patient at a time."

STAYING AHEAD OF THE CURVE

"We're moving into iPad implementation," Barrionuevo says. "All of BayCare's BMETs and FSSs will use tablets to input real-time data, which will help us manage our program better."

Staying ahead of the curve is a necessity for Barrionuevo. He explains how the BayCare system makes that possible:

"We have numerous equipment dashboards which identify key equipment service metrics. I have the capacity to identify what is mission-critical equipment within each hospital.

"An example of this is portable x-ray equipment. Most hospitals have multiple portable x-ray devices. If one is broken, there are others that are available for staff to use. We queried our hospitals regarding what is their mission-critical equipment. One of our hospitals said, 'My portables are critical because I only have four. We're a large hospital. When one of our portable x-ray units malfunctions, it's almost like our CT being down.' So that raised our awareness. That device now is mission-critical. We are able to track that with our equipment dashboards."

"We can tell exactly when we responded to the customer and when we arrived on-site. So when the director of the hospital calls us and says, 'What's the status of this medical device?' we can go right to our system and say, 'We arrived at this time. We troubleshooted it. The part was ordered. It will be here tomorrow at 8:30 AM.' Some of our vendors can provide that data. I feel we need to be better than the vendors we are replacing. Our wireless iPads interface with our equipment management software. Our CMMS software vendor is making some necessary changes to the software so that we have all that data available to us and we can react properly to the customer."

"A lot of times we might be made aware of a system issue, and we are able to go right to our IS counterparts and say, 'Listen, this customer is having a problem with this device or with the network.' We may not be in charge of that—IS is—but we'll make sure the proper IS person then becomes aware of that so that the issue is resolved."

What is the main factor in implementing a CE department as effective as BayCare's? As Guy puts it, "You have to have a good infrastructure, and you have to have good leadership to implement it. They [Clinical Engineering] know we're in the business of taking care of patients, and they're doing that as efficiently and effectively as they can. Patient safety comes as one of their number one priorities. We can't ask for more than that."

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