

New Procedures Bring Nurses Clean, Functioning Equipment Just in Time

Jill Schlabig Williams

Not all biomedical equipment problems require expensive high-tech solutions. When complaints about missing, dirty, or broken equipment started mounting at University Hospital in Augusta, GA, biomedical manager Robert Stanford and his colleagues came up with a solution. They relocated the biomed shop next to the area where equipment is returned after each use and instituted new equipment checking and decontamination procedures. With these simple changes, Stanford was able to improve service, reduce complaints, and raise the profile of his department with minimal expense.

Challenge

Until recently, nurses at University Hospital who needed portable patient equipment usually had to fend for themselves. Infusion pumps, pulse oximeters, fall monitors, and other such items were assigned to individual hospital departments, and could be squirreled away anywhere on the floor. Once nurses located the equipment, it was up to them to make sure it was clean and operating properly. “There just wasn’t a good, clean flow of equipment,” explains Kathy Zeiler, nursing director. “Frustration with the process bubbled up at nursing leader meetings.”

Under the original system, nurses were supposed to send portable equipment to the central sterile processing (CSP) center for cleaning and decontamination, and central supply would then deliver the equipment back to the nursing floor. In reality, nurses were reluctant to let go of equipment and so rarely sent it to the CSP center. The biomed shop was located on the other side of the hospital and not in the loop on the portable equipment process. When it came time for biomed to perform preventive maintenance checks, even finding the equipment was a challenge.

As complaints mounted, nursing leadership began reaching out to other groups within the hospital for



Subject: University Hospital

Location: Based in Augusta, Georgia

Size: 551-bed community hospital, anchors University Health Care System

Staff: Biomedical department, outsourced to Crothall Facilities Management, has a staff of eight

help, including biomed. “We got involved because nurses were complaining about their equipment,” says Stanford. “It was wasting nurses’ time, and it was embarrassing for them to be connecting non-functioning equipment to patients.”

Zeiler credits Stanford with focusing attention on the problem. “He did a great job of emphasizing that no one wants the nurses dealing with equipment problems,” says Zeiler. “He was instrumental in communicating that nurses shouldn’t have to worry about getting the equipment that they need or whether it is working.”

Solution

As a first step, representatives from central supply stepped up to check equipment, but this effort failed because their staff was not knowledgeable enough about the equipment. Next, representatives from nursing, central supply, CSP, and biomed, led by the hospital’s vice president of facilities, convened an effort to develop a better solution.

The group decided first that the biomed shop should be moved closer to the CSP and central supply area. Since a plan to relocate the biomed shop was already on

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Check Points

What are the benefits to moving the biomed department closer to where equipment is decontaminated and where new equipment is checked in?

- ✓ It may seem like a simple change, but it can actually help clinicians focus more on patient care instead of looking for equipment.
- ✓ It can also help the biomed department better monitor the proper use and maintenance of equipment.

the books, the vice president of facilities stepped in and made it happen. This new location created an opportunity for biomed to insert itself into the portable equipment loop.

Next, rather than assigning portable equipment to nursing units, it was decided that all such equipment would be centrally maintained, with all departments sharing equipment as needed.

Finally, a new equipment flow was developed. Under the new system, portable equipment is sent to central sterile processing for cleaning and decontamination after it is disconnected from a patient. A sticker is applied to the equipment there stating that it has been cleaned. Equipment then goes to the biomed shop, where a technician checks the equipment for proper operation, including an alarm test, battery condition, and general check. The technician signs the sticker stating that the equipment was inspected. Equipment is transferred to the equipment room next door, where batteries are charged and equipment is stored until needed. Equipment room staff delivers the equipment to the hospital floor upon request.

Once the new equipment flow was defined, nursing staff helped write new procedures and train floor staff. Other hospital departments, such as infection control, also supported the effort to provide cleaner, better-functioning equipment. “We saw some resistance to the new process at first,” says Zeiler. “Nurses are very focused on patient care and didn’t trust that the new processes would work—they were unwilling to let go.” Through persistent efforts, biomed and CSP were able to build nurses’ trust in the new system and demonstrate how effective it could be.

Results

Once the new system was in place, the biomed department saw complaints from nursing about portable equipment drop 85%. Equipment failures on the floor were reduced by 95%. University Hospital’s director of plant engineering Dennis Primrose, to whom biomed reports, says that the new procedures worked beautifully. “Now, when equipment comes out of inventory, it’s ready to go,” he says. “We have a good flow established. Nurses are getting pumps that have been cleaned and are working properly. They can focus on using the equipment to take care of the patients.”

Zeiler agrees that, one year later, the procedures are working well. “There is no shortage of pumps and very few complaints from the nurses about equipment,” she agrees. “We needed to have a good process to allow just-in-time availability, and luckily we have that,” says Zeiler.

Costs associated with the changes were minimal. The departmental move had already been budgeted, and turnover allowed Stanford to reallocate biomed staff resources to allow one junior-level technician to spend half of his time doing equipment checks.

From the biomed perspective, performing preventive maintenance (PM) on portable equipment has been greatly helped by the new equipment process. The technician checks the due date on the PM sticker on each piece of equipment and routes it to the appropriate technician for service if necessary. “Equipment is continuously rotating through the shop so we have a chance to check PM stickers, and can avoid searching the halls to locate equipment,” says Stanford. “Plus, it is better to check the equipment when it is physically in our shop, where we can fix it before it malfunctions on the floor. We have the satisfaction of knowing that the equipment is working. We think we’ve solved a lot of problems.”

An unexpected benefit of the new process is a better relationship between nursing and biomed. “Now, the nurses are in the habit of calling biomed immediately when they find an equipment problem. We also get a chance to see if they are not using the equipment properly, and to educate the staff about equipment,” says Stanford.

Zeiler agrees. “The relationship between nursing and biomed has improved. Biomed is seen on the floors more, and are more visible to nurses. Best of all, nurses have more time for patient care.” ■