Perceptive leadership fosters collaboration among hybrid OR staff

The expanded volume of interventional cardiology in recent years has played a major role in the growing prevalence of hybrid ORs. As a result, many perioperative services leaders have had to develop systems for managing hybrid ORs along with traditional ORs.

“Management of hybrid ORs is really a collision of traditional hospital management and service line management,” says David Wyatt, MA, MPH, BSN, RN, CNOR.

“We are starting to talk seriously about the business case for hybrid ORs, along with interprofessional standards and how we are staffing these rooms,” says Wyatt, administrative director of perioperative services at Vanderbilt University Medical Center (VUMC), Nashville, Tennessee.

Cardiovascular services has been at the forefront of service line development, with the focus primarily on getting cardiac surgeons and cardiologists to work together to refer patients to the hospital. “For many years, that did the trick,” says Wyatt.

But now more procedures are being performed in the cath lab than in the OR, and cardiac surgeons and interventional cardiologists are credentialed to do some of the same procedures. These changes have created tension between surgeons and cardiologists, and turf wars have cropped up not only in the cardiovascular world but also in neuro intervention, which is performed by neurologists, neurosurgeons, and neuroradiologists.

“The neuro intervention specialties are even more complicated to deal with than cardiac,” notes Wyatt, “because they don’t have the background in collaboration that cardiac has had over the years.”

Key Stakeholders

Ownership
- Determine primary room use
- Determine the project owners as soon as possible!

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<th>Specialist</th>
<th>EP</th>
<th>Cardiothoracic Surgeon</th>
<th>Interventional Cardiologist</th>
<th>Interventional Radiologist</th>
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• AAA
• TAA
• CAS
• Peripheral angioplasty, stenting
• Peripheral bypass
• Aneurysm coiling
• Intracranial stenting
• CAS
• Intra-arterial TPA
Collaboration between service lines

Successful management of hybrid ORs and their utilization begins with collaboration between the service line and operations administrators, notes Wyatt.

A cardiology (service line) nurse administrator and Wyatt, the perioperative (operations) administrator share the top spot on the management structure for cardiac hybrid ORs at VUMC (sidebar, p 23).

The director of the cath lab, electrophysiology (EP) lab, and cardiac surgery reports to both Wyatt and the cardiology administrator, and a matrix report goes to both service line and operational management.

This management structure also holds true for the neuro and vascular hybrid ORs, with Wyatt as the operations administrator over all 3.

The service line approach is very provider- and patient-centric, notes Wyatt. Though service line administrators may not fully understand operations, they do understand how to promote the flow of referrals between physicians and the hospital, how to bolster collaboration among physicians, and how to ensure optimal patient flow through the system, he says. On the other hand, the service line approach can become too costly for the system.

“We have had to balance moving forward with new technology and services for our patients without draining our resources,” says Wyatt.

Each new request for hybrid technology has brought forth change in how business is done in the OR and the need for a more systematic approach to collaborating with services performing image-based procedures.

“For example,” he says, “biplane imaging technology is tremendously expensive, and you really have to think systematically about who will be using it or there may not be a return on investment.” VUMC has a stroke program that is highly dependent on hybrid ORs because of the need for biplane imaging by the neuro specialists. Cardiac and vascular specialists may also use biplane or single plane imaging.

Before building new hybrid rooms, Wyatt says, they look at which specialists would potentially use the rooms, the like procedures they perform, the like equipment they use, and the best placement for each room (sidebar, p 23).

Placement of hybrid rooms, equipment is key

Several years ago, VUMC built its first hybrid room adjacent to the cath lab on the first floor. The main OR suite (with 35 rooms) is on the third floor.

“When the cardiac nurses and anesthesiologists had to venture off the third floor, they were out of their comfort zone,” says Wyatt. “It took them a while to get comfortable doing coronary bypass surgery on the first floor because they knew if they ran into an emergency situation, the cath lab staff weren’t much help, and they couldn’t go next door to get help.”
In early 2014, VUMC opened 4 new hybrid rooms on the fifth floor of the hospital—2 are used primarily for EP cases and 2 primarily for interventional cardiology cases, and the surgeons are able to use any of them for open cases if necessary.

The third floor main OR suite has a neuro interventional hybrid room and a vascular hybrid room. Another neuro interventional and potentially a cardiac surgery hybrid room will be built on the third floor this year, and the urologists also want a room, says Wyatt.

The rationale for building the cardiac hybrid room on the third floor is that it will allow cases that are primarily surgical with some imaging rather than cases that are primarily imaging with the potential for open to be performed close to the rest of the cardiac surgery and anesthesia teams.

“When we built our first hybrid OR on the first floor, we learned a lot about space and placement of equipment,” notes Wyatt. Cardiologists were more involved in the initial design than was the surgical team, and the perfusionists had limited space for the pump and their equipment. “The perfusionists had a lot more input in our design of the fifth-floor hybrid rooms,” he says.

Input from the anesthesiologists is also important, he adds. “Placement of anesthesia equipment can make or break you.”

Wyatt recommends having a construction crew build a mock room. Then move as much equipment as possible into the mock-up to see how everything fits.

“Your construction manager may not understand that a column that juts out of the wall only 12 small inches can [radically affect] placement of your sterile field and the anesthesiologists’ equipment,” he says.

VUMC hybrid rooms are typically larger than non-hybrid rooms. Wyatt recommends targeting a space that is 1,000 sq ft in order to accommodate the equipment and staff required to do these complex cases.

“The room will look as big as a football field when it is empty, but when all of the equipment is in, it looks so crowded it is amazing,” he says (sidebar at right).

**Cross-training teams is challenging**

Historically, when an interventional team and an OR team are both working in the same room for a hybrid case, 1 team is doing nothing while the other team is working.

“This made us start thinking about how to have more versatile teams and cross-training staff,” says Wyatt. A new interventional hybrid team model was designed that included staff competencies and standards of practice.

The difference in standards of practice between specialties caused problems early on. For example, in cases that are primarily image-based, radiation expo-

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**In the Cardiac Hybrid Suite, Collaboration is Key**

Combining the tools of the Operating Room and the Cath Lab to provide care to an increasingly complex patient population

*Source: Vanderbilt University Medical Center, Nashville, Tennessee.*
sure is a concern. Radiation detection devices need to be placed at the point where the team members are at the highest risk—their hands—so they wear radiation detection rings under their gloves.

Because AORN recommends against wearing rings under sterile gloves, this practice made OR staff uncomfortable. “We had to educate the OR staff on the balance between putting staff and physicians at a higher risk by not allowing them to wear the detection rings or going against the standards,” says Wyatt.

On the other hand, staff from the interventional settings sometimes found themselves involved in procedures that changed from percutaneous to open, and they did not have the skill sets to assist in these procedures. “They had to learn the supplies and equipment and sterile technique needed to transition from a percutaneous to an open procedure.”

Cross-training began with staff from the cath lab; however, they found working in the OR challenging and they had low competency scores. “What we failed to take into consideration was that people work in the cath lab because they like to do cath lab procedures, and people work in the OR because they like to work in open procedures,” says Wyatt.

Forcing OR staff to work in an environment where they are limited to handling wires and balloons all day is not satisfying for them. Taking nurses out of the cath lab or interventional suite where they were used to doing a variety of things, such as providing sedation and monitoring patients, was too big of a shift for them.

Instead of cross-training all staff, Wyatt says, they had to change their strategy and be more selective of the people they cross-trained.

“I have had to realize, the hybrid arena is a different world,” says Wyatt. “People are working in new practice settings and with standards of practice that are new to them. We have to think very clearly about that and be sensitive to those differences to foster the collaboration needed to manage hybrid rooms successfully.”

—Judith M. Mathias, MA, RN

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