



# 'Fixed' X-ray makes sense in the OR

## Vascular surgeons broaden their procedural horizons

**Who/where**  
Heartland Health Heartland  
Regional Medical Center  
St. Joseph, Missouri USA

**Challenge**  
Make high-quality X-ray imaging  
available to surgeons during complex  
interventional procedures.

**Solution**  
Install a Philips Allura Xper FD20 X-ray  
system in the operating room.

Forty-five minutes north of Kansas City, Missouri amid the gentle rolling hills of St. Joseph, sits Heartland Health's Heartland Regional Medical Center. For two years the surgical staff at Heartland has enjoyed the benefits of a 'fixed' Philips Allura Xper FD20 interventional X-ray system in the operating room (OR).

"After we built the room, it was like, 'Wow, how could we be doing procedures without it,'" recalls Dr. Matthew Lukens, Medical Director of vascular surgery. "Now I have top-of-the-line equipment where I can do any kind of hybrid procedure I want to do with all of the advantages. I can have excellent imaging and all the resources of an operating room at the same time. I don't have to compromise either one."

### Seeking alternatives

What about using a mobile c-arm in the OR? Although this is a typical solution, surgeons at Heartland insist there are drawbacks:

- Limited availability
- Reliance on operator skill set
- Inferior image quality

Vascular surgeon and colleague, Dr. Timothy Hodges offers another caveat, "What if you are not expecting to use the mobile c-arm and someone else has it. Then suddenly you need it? You're out of luck."

There is an option. For fast, detailed, multi-dimensional views of the heart and vasculature, the surgical staff can use Heartland's cath lab. Featuring a Philips Allura Xper FD20, the lab provides exceptional images, but the room is constantly busy. "Sometimes we have run-ins with others about getting time in the cath lab," says Lukens. "And there are procedures we simply cannot do there," adds Hodges.

With consensus that an alternative should be found, management at Heartland Health chose to move interventional X-ray capability right into the operating room by installing a new Philips Allura Xper FD20 system.



Dr. Timothy Hodges



Dr. Matthew Lukens

### A collaborative effort

Construction and renovation manager Les Monroe was tasked with converting an existing empty space into a state-of-the-art operating suite. "Construction of a room like this is so high tech



and so intensive as far as infrastructure requirements,” Monroe says, “that every minute spent planning will save hours or days once construction begins.”

Essential to success was involvement of all those who would work in the room. The Heartland team solicited input from doctors, radiologists, anesthesiologists, nurses, central supply, even housekeeping. Each had something meaningful to offer. Allura Xper FD20 experts from Philips also provided advice and input to ensure a smooth installation.

After nine months of planning and three of construction, the room was unveiled to an enthusiastic staff. Monroe acknowledges that any success was the result of a collaborative effort. “It took a partnership between Philips and all of the other key players to accomplish this. It was obvious that Philips was willing to invest the time to work with us throughout the entire process.”

### New procedural options

The hard work paid off. Now physicians doing endovascular abdominal aortic aneurysms and carotid artery stenting alike can be supported by high-quality interventional imaging. Surgical confidence is reinforced.

“I find I work it into my procedures, says Dr. Lukens. “I use it more than I ever used the c-arm simply because it’s there and easily accessible. In cases where I would normally have relied on additional physical examination alone, now I can add quality imaging to the evaluation. It has changed the way I practice.”

Dr. Hodges believes the addition of the ‘fixed’ system expands his procedural options. “Before we had this system in the OR, you really couldn’t effectively do an iliac stent and

a leg bypass at the same time. Now you can do both procedures together very easily.”

“The fixed system facilitates more precise placement of an endograph,” agrees Lukens. “There’s no guesswork, the speed of the procedure is quicker, and I’m much more confident in what I’m doing. It makes challenging cases a lot easier.”

### Working with the FD20

“Our FD20 is very easy to run,” says Hodges. “So, if for some reason I don’t have my normal staff, I can run the thing myself and get done exactly what I want to get done.”

In fact, the Allura Xper FD20 brings all system functionality tableside to the touchscreen for customized ease-of-use, including 3D interventional tools, multimodality information and archived studies. With portrait and landscape modes, the 30 x 40 cm FD20 flat detector provides optimal flexibility for interventional procedures of all types.

Hodges also is impressed with the dose savings capabilities of the FD20. He recalls the case of a patient with renal insufficiency. “This patient came back to me 18 months after I had placed a right renal artery stent. He had stenosis in the stent I put in, plus he needed another stent on the left side. We were able to do the entire procedure with only 32 milliliters of contrast. He actually

“With vascular surgery changing from open procedures to more minimally invasive and hybrid procedures, you just can’t have second rate imaging.”

Dr. Matthew Lukens

had no change in his createine the day after the procedure. So he didn’t take any ‘hit’ from the contrast at all. And the quality of the study was great—it always is.”

### Room flexibility is key

Heartland Health has designed its new OR to accommodate both endovascular and conventional procedures. The flat detector can be moved off to the side and the angio bed rotated away to make efficient use of the space.

“We’ve created a very flexible room,” says Clinical Specialist Warren Baker. “We can move the X-ray equipment aside and bring in a traditional OR bed. There are days when we start with the Philips system, move it aside to bring in the other bed, then change it back again. It converts very easily and makes our room more productive.”

### A win-win situation

For patients who hail from northwest Missouri, northeast Kansas and southeast Nebraska, this multifunctional operating room offers some of the best technology currently available. It provides Heartland Health with a competitive edge and surgeons with increased procedural efficiency.

Dr. Hodges concurs. “Having the FD20 in the operating room gives us access to every tool we require,” he says. “We are able to do anything we need to do. I think it’s becoming the standard of care for modern vascular surgery. At this point I can’t see doing without it.”

“I feel like this is state-of-the-art and no one in the Kansas City area has as nice a unit as we have here,” concludes Dr. Lukens. “That helps us provide better care through better procedures.”



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