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www.reachmd.com info@reachmd.com (866) 423-7849

A Peek Inside the Pavilion: Exploring Penn Medicine's Newest Facility

Announcer:

Welcome to *Medical Breakthroughs from Penn Medicine*, advancing medicine through precision diagnostics and novel therapies. Here's your host, Dr. Charles Turck.

Dr. Turck:

A newly-opened, 17-story, 500+ patient room facility on Penn Medicine's Philadelphia Campus known as "The Pavilion" is one of the most state-of-the-art medical centers in the world and among the largest hospital projects undertaken in the U.S. But at the heart of this construction was a design mandate centered entirely on the patient experience. And it's the story behind this design that will be the focus of today's program.

This is *Medical Breakthroughs from Penn Medicine* and I'm Dr. Charles Turck. Joining me today to take a closer look inside Penn Medicine's new pavilion are Penn Medicine Clinical Advisors, Kathy Gallagher and Kate Newcomb-DeSanto. Kathy Gallagher is a former Surgical Critical Care Nurse and Nurse Manager at Penn Medicine and a member of the pavilions design and construction leadership team. Kathy, welcome to you.

Ms. Gallagher: Thank you. I'm happy to be here.

Dr. Turck:

And Kate Newcomb-DeSanto is on the project team for the pavilion and previously served in various capacities at Penn including as a Surgical Clinical Coordinator and Resource Nurse. Kate, great to have you with us.

Ms. Newcomb-DeSanto:

Thank you so much for having me, Dr. Turck, I'm happy to be here.

Dr. Turck:

Kathy, starting with you, can you give us some additional background on the scope of this project and your main concentrations as part of the design team?

Ms. Gallagher:

The scope of this project was enormous, trying to plan 1.5 million square feet of space, 504 rooms, 47 ORs, and the emergency room and all of the operational supported needed for such a large building. Our guiding principles for this project were design for change, patient experience, unrivaled care, innovation, and an investment in the community.

In every aspect of the design, we made sure we were following our guiding principles. My role as the clinical advisor on the project was to be the clinical voice on the design team and the liaison between the clinical teams and the project team.

I focused on the inpatient floors, the ED, and some of the clinical operations departments, such as pharmacy, lab, respiratory, PT/OT gym. This meant coordinating focus groups, planning design meetings, conducting simulations, the training and education of thousands of staff, dress rehearsal, and planning for move-in day. This was all to ensure the clinical teams had a voice in helping to plan their spaces and also making sure they were prepared to work in their new space.

Dr. Turck:

And Kate, turning to your experience on the advisory team, how has this project looking to change the way patient care is

operationalized and delivered? Did you have setting a totally new precedent in mind?

Ms. Newcomb-DeSanto:

I think we did. I think that we really wanted to focus on being able to take care of our patients in a way that was comfortable for them, was able to incorporate technology that would benefit them, was able to incorporate their family in their space so that they could have that touch point, we could include their family in their care. We know that when patients and families are together and the teaching can take place and the learning can take place and the healing can take place, that our patients get better faster. We know that that's a better experience for them. We know that they feel comforted more. So, being able to incorporate those small things on a large scale really did feel like we were innovating and changing the way patient care was delivered.

Dr. Turck:

Let's focus on some of the facilities in particular. I understand that the pavilion features 47 operating and interventional rooms. Kate, staying with you for a moment, would you share some of the special considerations that went into developing these rooms?

Ms. Newcomb-DeSanto:

Sure. Operating rooms are very different places. They are not designed the same way a patient room is designed. They're not designed really the same way any space in the hospital it designed. They operating room is a living, evolving space that changes throughout the day. It changes with each case, with each surgical procedure with each intervention, and sometimes the teams change and the technology changes. So, one of the most important things about building operating rooms and building interventional platforms is really to provide a flexible infrastructure so that when innovation comes along, the room can incorporate the innovation, the teams can incorporate that new method of care, that new modality without having to take the rooms apart or change the way it looks or change how much time it takes to invite those things into the room. So, from this perspective, this was really about the innovation and the flexibility and the operating room platform.

Dr. Turck:

And Kathy, given your involvement in the development at the pavilion's emergency department, what special design considerations went into that part of the building?

Ms. Gallagher:

The pavilion emergency room is pretty unique because it is on two floors to accommodate the number of exam rooms that would be needed as emergency care continues to grow. We planned flexible spaces so all level of care, whether it's resuscitation, rapid assessment, or regular exam rooms are all private rooms. There are no open patient bay areas.

We also focused on the forward flow model that the ED implemented to improve patient flow, decreased wait times and discharge time by providing a comfortable forward flow lounge for patients to stay in. There is also a CT scan and X-ray on each level of the ED, as well as satellite pharmacy. This allows for care at the point of service, helps with efficiency and flow, and provides a better patient experience.

Dr. Turck:

For those just tuning in, you're listening to *Medical Breakthroughs from Penn Medicine* on ReachMD. I'm Dr. Charles Turck and today I'm speaking with Kathy Gallagher and Kate Newcomb-DeSanto about Penn Medicine's new pavilion and how its design is modeled on changing the patient experience.

So, now that we have some background on the pavilion's development, let's cover a few of the unexpected challenges encountered along the way and how your team addressed them. Kate, starting with you, did any phases of the project stand out in terms of creative problem-solving?

Ms. Newcomb-DeSanto:

So, one of the unique things about the intraoperative platform at the pavilion is that we have an intraoperative MRI suite. There are only a few intraoperative MRI suites in the country and I think we're only one of two in the state of Pennsylvania. The intraoperative MRI suite brings together our radiological partners, as well as our surgeons and our staff into a suite of rooms that allow for our patients to be treated and scanned and have interventions that involve an MRI.

Because of the MRI and the magnet involved, there's a unique set of circumstances that you really have to work with and work around and incorporate into the design. This was the first time that our staff would be using this kind of technology, so the design really had to incorporate all of their needs and there were many, many stake-holders. That was probably one of the biggest and uniquest challenges in the pavilion project from an operating room standpoint.

Dr. Turck:

And Kathy, same question to you on any challenges that needed some out-of-the-box thinking?

Ms. Gallagher:

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Be part of the knowledge.

Well, I think one of the biggest challenges for the design team was our site. It's a very narrow and linear footprint, so we had to design the spaces based on our footprint and the building layout. But, in some ways I think this helped us because we were able to get three, 24 bed units co-located on each floor and this helps with our service line approach to care model.

For example, the neuroscience, ICU, medication-surg, and progressive care/patient care areas are all co-located on the same floor. This allows for more collaborative and cohesive care models. Some things we did thinking out of the box we have pneumatically-driven trash and linen shoots, less collection of waste and soiled linen on floors, less interaction with staff on elevators and less staff to handle the trash and linen. We have a remote ISC sterile processing, off-site sterile processing center, this allowed us to put more clinical spaces in the building. The entire building is 100% outside air. We have an on-stage/off-stage concept where the patients are on-stage and the equipment, medication rooms, supply rooms, and staff work rooms are off-stage. This allows for a quieter, uncluttered patient care area. We also designed for malleability, growth, flexibility by initiating all 504 rooms to be ICU-capable from day one. All rooms can be easily adapted to be an ICU room just by adding some medical equipment.

Dr. Turck:

Now, I also understand this facility just received a special distinction called "The LEED Gold Building Certification for Sustainability." Kathy, staying with you, can you speak to the relevance of that and which sustainability measures have been put in place?

Ms. Gallagher:

Yes. So, LEED Certification was important to our organization because we understand the importance of preserving and protecting our planet and I think we are the only academic medical center to ever achieve Golds LEED Certification globally. As you may or may not know, there are many layers of LEED Certification, Gold being amongst that top. There are not many hospitals able to achieve at such a level and we were more than proud to be the one that was. This LEED Gold certification says that we made a conscious effort to go above and beyond to reduce our carbon footprint.

Thermally-enhance exterior glass, green roof and a very urban setting, low emission boilers, advanced building automation systems, rain cisterns that feed our cooling towers for water makeup, energy recovery wheels, full-building lighting controls, and the list goes on.

Dr. Turck:

Before we close out our panel today, I want to come back to the patient experience at the heart of this building's design and get your thoughts on how you see this translating into better patient outcomes. Kate, what are your thoughts on this?

Ms. Newcomb-DeSanto:

So, specifically from an operating room and a recovery room perspective in the pavilion, one of the unique patient experiences in the pavilion that our patients will see is that our PACU, what used to be PACU bays, where there are curtains and the patients are kind of lined up in a row has changed dramatically in the pavilion.

Our PACUs consist of individual patient positions. They have hard walls and doors with lighting controls, televisions, and soundattenuating materials. We anticipate that the patient experience in those spaces will be dramatically different than any other PACU that we've seen because it really will reduce noise and allow our patients to recover with less stimulation; hopefully needing less pain medication and being able to leave the PACU more quickly.

Dr. Turck:

And Kathy, let me give you the final word. Anything to add on the potential impacts of the patient-centric design?

Ms. Gallagher:

Yes. I think we were given a task to put the hospitality in hospital and we did that in our patient room. We designed the space for comfort, there's a lot of natural light, which will help with patient's sleep/wake cycle and delirium. They have the ability to control their space, control their lighting, control their shades, control their privacy. They have the ability for family members to sleep over in a comfortable space, so we're promoting family-centered care. All of this will contribute to the care of our patients, their comfort, and their ability to get well quicker.

Dr. Turck:

That's a great way to end our discussion. I want to thank my guests, clinical advisors Kathy Gallagher and Kate Newcomb-DeSanto for sharing their experiences in the design and development of Penn Medicine's new pavilion. Kathy and Kate, it was great speaking with you both today.

Ms. Newcomb-DeSanto:



Thank you so much.

Ms. Gallagher: Thank you so much.

Announcer:

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