Narrator:

We are pumping up the adrenaline in this episode of Pathways. Hearing firsthand what it's like being in the room where critical moments unfold.

Emily Bard:

We know what the doctor needs before they even do because it's our job to be ready. Especially when it is an emergent situation you need to be ready. It can be a lot of pressure, but if you're trained well and you gain this confidence, it's pretty incredible.

Narrator:

Interventional, radiologic, and cardiovascular technologists are side by side with physicians helping make life-saving decisions in real time.

Emily Tadlock:

Welcome back to another episode of Pathways, part of Northern Light Health's Healthy, Happy, and Wise podcast series. I'm your host, Emily Tadlock, and today I've made my way down to Portland, Maine to visit Northern Light Mercy Hospital. Continuing with this season's theme, we are exploring career pathways that require two years or less of school or certification to get your foot into healthcare. I'm sitting here with Emily Bard and Katherine Cavallaro, both of whom are cardiovascular interventional technologies, or CVIR techs for short.

Emily Bard:

Yes, correct.

Emily Tadlock:

Awesome. Thanks for joining me, ladies.

Emily Bard:

Thank you for having us.

Emily Tadlock:

Okay, so it's a mouthful. Cardiovascular interventional technologists.

Emily Bard:

Yes.

Emily Tadlock:

Tell me exactly what that is. What do you guys do?

Emily Bard:

Katherine, you want to take this one?

Catherine Cavallaro:

Yeah, I think basically anything that is done invasively through a very small hole, be it in the artery, in the groin, or in the arm. And you're going in and you're repairing, this is the cardiovascular piece, you're

repairing vessels or imaging vessels in the heart or in the legs. And the interventional radiology piece, they're two separate things to us. The cardiovascular is one thing, the interventional radiology is another. So the cardiovascular is the cath lab is what people will recognize that by looking at the heart. The interventional radiology could be anything from biopsies, PICC line placements, port placements, drain placements, anything like that. So there's two different fields, if you will, merged into one.

Emily Tadlock:

Merged into one. Okay. All right. So tell me how in the world did you get into this specifically? Emily, you want to start?

Emily Bard:

Sure. Yeah. So this is a second level of schooling for me. So I went to school for business out of high school, and then I said, "I don't think I really want to do anything for business." So I heard that this was a two-year program, and I was like, "That sounds like an interesting, cool job." I think I broke my arm when I was in fourth grade and I said, "Wow, that's pretty cool." So I was like, "Let's go to school for that." So here we are. Went to school for that for two years in Bangor, actually. And the neat part about x-ray and having this degree is that you can cross train into other modalities.

So I actually started as an X-ray tech in CT. I did CT for a while. And then there was a job opening down here in Portland, and I said, "I want that." I had no experience in it. They took me and they trained me on the job. It took me about a year to train at Maine Med. That's where I trained originally for this in the cath lab there. And I absolutely fell in love with that and then came over here and it's been great.

Emily Tadlock:

Okay. What about you, Katherine?

Catherine Cavallaro:

Well, I had a different approach. When I was in high school. My mother was a nurse with Mercy for 44 years.

Emily Tadlock:

Oh, wow.

Catherine Cavallaro:

And it was sort of almost not expected, but people just assumed that that's what I was going to do. My senior year, I put the brakes on, I said, "No, actually, that is not what I want to do." But I knew I was going to do something at the hospital.

So there was a gentleman named Bruce Graham, I'll never forget his name. He gave us these tests in high school, the ASVAB test, and it was explained to me, and it was a military thing, but it was explained to me that would help decide what your interests are. It said I would be good at two things: x-ray and jet engine repair.

Emily Tadlock:

Okay. All right.

Catherine Cavallaro:

Honest, true story. And I really didn't know much about x-ray, unlike Emily. She had had an experience with a broken arm. I had no idea. So I went in and I shadowed, and I'm like, "Yes, exactly." And here I am, what? 37, 38 years later.

Emily Tadlock:

Wow.

Catherine Cavallaro:

Yeah.

Emily Tadlock:

So just a test. And then, "You know what? Yeah. I think I'll do that."

Catherine Cavallaro:

Yeah, it was spot on because I love it.

Emily Tadlock:

That's awesome. So 37, 38 years, roughly. Talk a little bit about how the field has changed.

Catherine Cavallaro:

Oh my gosh. It has changed so much. And that is exactly why I love it because it's ever evolving. Gosh, when I first started, we had dark rooms and film and certain procedures that we really didn't do because there wasn't the technology. And then I remember when the first arterial stent came out and you had to hand crimp them onto the balloon before you placed them. And now everything is pre-mounted, it's on a catheter, on a balloon, just everything is just in the short even 20 years has changed so, so, so much. But that's the great thing about radiology in any modality is it's constantly changing and constantly evolving to, I don't know, faster maybe, or easier for the caregiver, for the doctor, I think.

Emily Tadlock:

And even for the patients?

Catherine Cavallaro:

Yeah, yeah, yeah.

Emily Bard:

Yeah, absolutely.

Catherine Cavallaro:

To be able to go in and take care of these things through a little hole in the artery and let them go home that day. I mean ...

Emily Tadlock:

It seems crazy that that's even possible.

Catherine Cavallaro:

Right.

Emily Tadlock:

That's awesome. So we talked a little bit about how you decided to get into this career. Let's talk a little bit about the education piece. So you both went to school for x-ray, correct?

Catherine Cavallaro:

Mm-hmm.

Emily Tadlock:

And then you mentioned cross-training. So actually we just had an episode air a couple of months back with a CT tech at Northern Lake AR Gould's Hospital, and they talked extensively about being able to crosstrain. She went to x-ray school and now she does CT and she loves it. So is this the same sort of thing? This is one of those modalities that you can train into?

Catherine Cavallaro:

Correct. Yes. There are schools that you can go to. I think the closest one is it Virginia?

Emily Bard:

Virginia.

Catherine Cavallaro:

Virginia. And there have been some techs who've worked with us that have gone to Virginia, but the majority of them I think has just been on the job training.

Emily Tadlock:

Wow. This seems so specialized. It's absolutely something I'd never heard of before. I mean, you both walked in and I was like, "I can't wait for you to explain to me what this is."

Catherine Cavallaro:

What it is, yeah.

Emily Tadlock:

Because I've never heard of it. Cath lab I've heard of before. And fortunately I've never had to have one of these procedures. So maybe for those people like me who are fortunate like that, explain a little bit what these types of procedures are like and what you do specifically as a technologist.

Emily Bard:

I can hit on the cath lab piece. And how about Kathy hits on the IR piece?

Emily Tadlock:

That would be great.

Emily Bard:

Yeah. So in the cath lab, it's a sterile procedure, so you're going in through an artery. We do also vascular in the vein as well, so you're getting access to a radial or ephemeral artery. So that requires numbing medicine, you go in with a needle and you get access to the artery. Through the artery, we go in with what we call wires and stents or balloons. We actually don't do that here at Mercy. We did that at Maine Med up the hill here. But basically what you're doing is you're opening up an artery that was closed.

So when you hear the term heart attack, that's what we're doing. We're fixing a heart attack. So you've got three main arteries that feed the walls of your heart. So your heart is a muscle, just like any other muscle in your body, it needs blood flow to it. So when somebody's having a heart attack, what's happening is one of those arteries, or multiple of those arteries are being blocked, whether that be plaque or from bad diet, tobacco use, genetics, whatever it may be.

We're going in with a small wire, putting it down into that artery using x-ray and x-ray dye, so we're seeing it up on a screen and we take different images to see exactly what we're dealing with. Go down with a very tiny wire through that artery, so we start in the wrist, goes all the way to the heart. And then over that wire, we use it as almost a railway, and we put down balloons and we blow up a balloon. So it expands that artery. And then we put a stent, so a stent you might've heard of before. So that'll go in and we expand that again with another balloon, and then the stent stays and everything comes out so that it opens up that artery again. And there you go, and you have your blood supply to your heart again.

Emily Tadlock:

And you're doing that?

Emily Bard:

So we are standing along a cardiologist for those procedures. But it's pretty interesting because that's my favorite part is that we know what the doctor needs before they even do. Because it's our job to be ready. Especially when it is an emergent situation, you need to be ready and know what they need before they even need it. So it can be a lot of pressure, but if you're trained well and you gain this confidence it's pretty incredible when it comes down to it.

Emily Tadlock:

Oh, that's awesome.

Okay. So Kathy, why don't you explain the other side of things?

Catherine Cavallaro:

The interventional piece, interventional radiology, again, it covers a lot of different procedures. If a patient has been diagnosed with cancer and they need chemotherapy, because some of the drugs are very caustic to the vessels, they put mediports in, and so we assist with the mediport insertions. If a patient has a funny bump somewhere in their neck or anywhere and they need a biopsy, we're the ones who do that. If the nurses on the floor can't get an IV in a patient and they need a PICC line, we are called to do that. So I mean, it's just a whole-

Emily Tadlock:

There's a whole gambit of things that you guys do.

Catherine Cavallaro:

It really is. It just depends on ... And you jump from one thing to the other. In the morning, you may be doing a liver biopsy, you may be draining fluid out of somebody's abdomen. It's called a paracentesis. And then you go from there to perhaps there's a woman who has been experiencing infertility. And so we

do a procedure where we actually inject contrast into the fallopian tubes to see if they're even open. There's so many different things that we do.

Emily Tadlock:

Oh my goodness.

Catherine Cavallaro:

You can have kind of an emotional day at the end of it all. It's a lot. But it's very rewarding. As Emily said in most cases, you have the results. Boom, right there. You know you were a success. You did it.

Emily Tadlock:

So you guys are also working alongside, very closely with physicians, providers, nurses, to provide this type of care that's needed. And it's so specialized. I had never even heard of the infertility piece, wow. And you're doing so many different things. I would assume no day is similar?

Emily Bard:

Correct, yeah.

Catherine Cavallaro:

No. And things get added on all the time. So there's constantly things coming in, requests being made, phone calls to the doctor, and a lot of times our radiologist will come and say, "Hey, we've got to do this. We need to do that." And it all depends on what's in house or what's coming through the door, what's in the emergency room.

Emily Tadlock:

Oh, wow. Well, what do you guys love most about your job? Emily, we will start with you.

Emily Bard:

Like I said before, it's incredible when you're a part of something where you actually, like what Kathy just said, somebody comes in having a heart attack or a problem, and you can fix it right there. So just going home knowing that you've made a difference and helped somebody that day, it's an immediate gratification with that.

Catherine Cavallaro:

It's very satisfying.

I would say the same thing. It's very satisfying. You really put in a great day's work because you feel good about most of the outcomes that you experience. The other thing I would say is the ever-evolving technology. But I think for me, the number one piece is relationships with your coworkers because you are very tight. You're very tight with the nursing staff because in each case you have the doctor, you have a nurse, and you have a tech, at least one tech and you all have to work so closely together. And you have to read and feed often to each other what's going on. And as Emily had alluded to earlier, anticipating what that doctor's going to need and trying to have that ready, because in some cases time is-

Emily Tadlock:

Of the essence, right.

Catherine Cavallaro:

... of the essence. It really is. So I think the relationships that I've made over the years and just my coworkers is probably why I love it the most.

Emily Tadlock:

Okay, so teamwork is imperative to this profession.

Emily Bard:

Yeah, absolutely.

Emily Tadlock:

Okay. Interesting.

Emily Bard:

Communication.

Emily Tadlock:

So yeah, because a lot of our listeners either we're hoping just to enlighten them into what some of these career pathways look like, or maybe even encourage them to look at this as a potential career path. So what would you say to encourage someone to think about this? And I would also maybe ask you this. As I'm talking to you, I'm like, "Oh my gosh, how hard must this be?" How difficult is the training? Oh my goodness. You have to know how to do so many different things. It seems almost intimidating. What would you say to that or to someone who's maybe feeling the same?

Emily Bard:

I would say it's one day at a time. It does take time to learn, and it can be overstimulating and overwhelming at first. But like I said, it's so rewarding when you're finally at that point where you can read what the doctor needs before they ask for it. That's when you're like, "Okay, I know what I'm doing." And it took me about a year to be comfortable in the cath lab. In IR, I'd say at least a few months and that's after I had already had some experience in the cath lab. So it does take time. But it's so rewarding, it's worth putting in that effort and time.

Catherine Cavallaro:

And I think everybody makes an investment too. If we have a new tech come on board, it's only going to benefit us to get that person up and running because we need the body. It's not always saying who's going to do what procedure. It's like, "Okay, you guys, I'm going to go run and do this in CAT scan, and after that I'll go do this. And somebody's going to go to the skew and put a PICC in." And you just are throwing things at each other and then just going. And I think that if we take the time to train somebody, and if they really like it it's a wonderful investment because we do need good people on the team.

Emily Tadlock:

It's a common theme on a lot of these podcast episodes that we need people. Recruitment in healthcare is very essential right now, pretty much in any sector that you're looking at in healthcare, whatever it may be. So it's not really surprising that you're saying that you need the people. But maybe what's some of the barriers you think to getting into x-ray as a career?

Emily Bard:

I would say a barrier for me was I wanted to be in healthcare, but I have a hard time with bodily fluids, let's say. I don't, however, have a hard time with blood, so that hasn't been a hard thing for me. But that would be my one thing with healthcare in general, it's like I don't think I could ever be a nurse because I can't do some of the things that they do. I don't have the stomach for it. So as long as you can handle blood then you'll be fine. But blood is the biggest thing, I guess.

Emily Tadlock:

It's good to know. It's good to know.

Emily Bard:

I don't know how else to say that, so yeah.

Emily Tadlock:

And I think we hear that a lot from different people that say ... We had a CNA on, and they are someone who does have to deal with a lot of bodily fluids and they're saying, "Oh, I couldn't do any other thing." Taking care of this person and their direct needs, making sure that they're comfortable after a procedure that you guys may have done, who knows? It's so interesting to hear each person say, "Oh, I couldn't do what they do. I couldn't do what they do, but I love what I do." So I think maybe it's finding your niche, finding exactly what it is that you want to do.

Emily Bard:

Absolutely.

Catherine Cavallaro:

Absolutely.

Emily Tadlock:

And there's so many facets in healthcare.

Catherine Cavallaro:

Absolutely. Yes.

Emily Tadlock:

I think there's something for everyone, just depending on what it is you think you can handle. Hi. I can't handle any of what any of you guys do, but I can talk in a microphone. I can talk to you guys about what you love to do.

Emily Bard:

I love it.

Emily Tadlock:

So we all find something that we can do in healthcare.

So yeah, any parting words, any final words that you'd like to leave with our listeners about your job or what you do or encouraging others to pursue this career?

Emily Bard:

I think x-ray is a great route to go in if you'd think you want to be in healthcare, again, if the bodily fluids thing isn't huge for you. It's a good starting point and you can train it to different modalities, whether it be CT, MRI, ultrasound, what we do in the IR cath lab. So definitely a lot of options, and I do recommend it to people that are like on the fence. Just do it. There's so many things you can do with it.

Emily Tadlock:

Kathy?

Catherine Cavallaro:

When I went to school, we were trained by the Sisters of Mercy. It was a long time ago. And as Emily said, you can go into so many different modalities because not only do I do the IR piece, but I also do a day in mammography. So it's very, very common for RAD techs to cross train into other modalities and I think it's more of a supportive role. CAT scan needs help, and there are some tests that may be are diagnostic tests that can cover in CAT scan, or eventually going to CAT scan and maybe fill in a full-time position. I think it's very, very common for x-ray techs to wear many, many hats.

Emily Tadlock:

And I think one of the important things to point out is patients, a lot of times imaging is their first stop. So when you say, "Oh, it's typical for us to cover here, to cover there," it's because there are so many patients. And many of them, their first stop is imaging. So there is a need for lots of imaging specialists.

Catherine Cavallaro:

How else would the doctor know where to send the patient next? It is the first place that they're going to discover exactly or potentially what's going on and have a better idea of where to send that patient from there. So whether it is a CAT scan, or whether it is an ultrasound, or whether it is a diagnostic x-ray, that's going to be the first stop for a lot of patients who come in.

Emily Tadlock:

Awesome.

Catherine Cavallaro:

It's the tell-all, usually.

Emily Tadlock:

The tell-all, I like it.

Emily Bard:

Yeah, sure. We can see right through you.

Emily Tadlock:

Oh, that's really ... I like how you put that. Nice one.

Awesome. Well, ladies, thank you so much for being on with me today and explaining exactly what you do. I really appreciate it.

Emily Bard:

Okay. Thanks for having us.

Catherine Cavallaro:

Thank you.

Narrator:

Thank you for listening to this episode of Pathways. Please join us next time for a new episode. There are several ways you can tune in, on our website at northernlighthealth.org/healthyhappywise. We are also on Apple, YouTube and Spotify, which makes it easy for you to listen on the go on your favorite app.