Non-Clinical Career Opportunities for Physicians in Clinical Research

Edited Transcript from SEAK's 2025 Virtual Non-Clinical Careers for Physicians Program

Moderator: **Now we're going to hear about opportunities for physicians in clinical research.** We're very pleased to have **Dr. Elizabeth Liz Antoo** as our presenter. Liz is a Drug Safety Physician with Scalera Consulting Group and a clinical investigator with Biofortis Research.

She has therapeutic experience in rare diseases and gene modulation therapies. She is a board-certified family medicine physician and has years of experience in clinical medicine, including practice in urgent care, occ med and private practice.

She obtained her medical degree from Manipal Academy of Higher Education, which is affiliated with Loma Linda University of Medicine. She completed Residency training in Family Medicine at Lutheran General Hospital in Illinois.

Dr. Antoo volunteers with Latin American Medical Providers, an organization which provides medical and surgical services to [the] underserved.

She is also the author of the screenplay which recently wrapped Text M for Murder.

Dr. Antoo: Oh, thank you, Jim, for that amazing introduction. Wow.

All right. So Jim did a really good introduction. So I really don't have a lot more to say. I do call myself a SEAK alumna and at that time I was kind of like a recovering family physician. And now, since I'm recovered, **I'm a clinical research physician, and also as a drug safety physician. So I was asked to speak about the opportunities for physicians in clinical research.**

So a little bit of background, I think Jim did go into it. I basically grew up in Chicago. Went to Med school in India, which was kind of a culture shock, I mean, at least they taught in English. But they had these really thick accents. But after coming back I did do family Medicine Residency at Lutheran General in Park Ridge.

From there I kind of moved into urgent care, did a little occupational medicine, and then became the occupational medical director at Lutheran. My husband is also a family physician. He does inpatient and outpatient. So we were both working very full time, and then we ended up having children and so my younger one was in the NICU [for an extended period of time] so with us both working full time, I kind of had to do the physician mom balancing act and figure it out and so basically decided to possibly start going part-time for a little while. So I went into a practice part-time and it was good for

a while. And then, you know, the demands of kids health and the clinic and COVID, it all takes a toll on you, and you feel like you can't give 100% at work and 100% at home. So I kind of started looking to figure out how to manage all of this. And it's kind of what brought me to SEAK and to look at other career choices.

For me the most important thing was really finding more flexibility in my schedule - decreasing the amount of stress because you already have enough. Working as part of a team was really fun for me, so I wanted to try to continue that.

And then I still felt like, I'm not done with medicine. I want to contribute to science. I want to continue to learn, but I also want something that will give me longevity, growth and stability. So I didn't know where to start. I really thought, maybe I'll try Pharma, because it seems kind of fun. I'll try some research and so basically since I started talking to people based telling them like, Hey, I thinking of leaving clinical medicine, what do you think is out there, you know, and through contacts I really learned about Pharma and I started as a consultant with Scalera Consulting Group doing drug safety, and it was a really great experience. It gave me a year to work remotely from home and kind of get my head above water, tried it out as a side gig to see if I'd like it or not, and I felt like I was learning, I was growing, and I was able to get back to some of my hobbies like.

This talk is kind of about what positions are available for physicians as well as how to get your foot in the door. Clinical research is kind of a broad topic. So it kind of has a lot of buckets under it, so let me try to describe it a little bit better.

[Clinical research is] the study of safety, and effectiveness of new treatments, medical devices, techniques involving human participants. So anytime, you have human health and understanding of disease involved you really do need doctors. They're crucial in this kind of role because they ensure that patients are safe, that we're adhering to protocols that are keeping our patients safe. We're collecting data that is reliable and accurate and really collaborating with these teams that are already in place to advance their medical knowledge based on your medical expertise to improve patient outcomes.

So some of the paths that are a good way into clinical research [for a physician]. There's multiple ways [for physicians to get into clinical research] and there's lots of organizations which I never knew about until I actually stepped foot into it. **If you're in clinical medicine, hospitals and clinics also can integrate clinical research into their clinical practice. And this is public because your patients can come and want to be part of a study.**

Academic or University centers also conduct research and provide patient care. And so you could choose or volunteer to be a part of contract research organizations (CROs). CROs conduct clinical trials for pharma companies and food companies. So that's what Biofortis is. **It's a Contract Research Organization. A lot of these Pharma companies, once the drug that they've taken or studied has done lab and animal studies, they move it to human studies, and they need CROs or organizations to conduct these trials for us. And so this is where it's a good start to walk into. If you're interested in switching over to clinical research.**

Pharma companies are pretty big and a little overwhelming, but they do develop drugs and therapies, and they're more private. But there's jobs available there and then government agencies which conduct research. And then they basically look at regulatory stuff.

So clinical research. There's a lot of fields, and I kind of broke it down into certain buckets. **Clinical trials and pharmacovigilance are the ones at least I know the most about, because that's what I do. But there are other openings for physicians in biostatistics, regulatory affairs and medical writing skills and qualifications. Basically, it's good to have an MD [if you want to get into clinical research]. Board certification is important. I know there are some questions about people who haven't done Residency. There are positions for those people. I'm not saying there isn't. It's just that it might be harder to find, but definitely look because it's out there sometimes.** For [non-clinical jobs for physicians in] Pharma specialty is nice to have like, if you're a neurologist or a Gi or a HEMONC. **Pharma, drug companies do have things in their pipeline for those drugs, and they're looking for specialties and a lot of times for [primary care physicians]. It's nice because we can do a lot of it. But we're not specialized. So there's options for both.**

Really one of the qualifications [for a physician to work in clinical research] is understanding of ethics. **Strong communication skills another one which most of us have because we are good with our patients. Research experience.** When you look at the job application - they all want experience in research. And **it's always okay to apply. Even if you don't have that research, just be honest and let them know that you know that you're new to it.** If you do get some research experience, it is valued because that's kind of what they're looking at, just because there's so much to know, and every little bit counts. They do have certain positions that are available Clinical Research Physician, also called Sub I, which you move up to a PI - principal investigator - or clinical investigator is what it's called.

There's also **clinical research associates who do the similar things as a PI**, and I'll break. I'll go into this a little bit more.

Medical science Liaisons and Medical Monitors are all under the clinical trial umbrella.

Pharmacovigilance is more of the drug safety physician. Drug safety angle. Regulatory affairs are more for Big Pharma.

Clinical research physicians work with the scientists and project management team to develop the protocols and the protocols are kind of the standards that we follow. When we're looking at the clinical trial. They use their medical knowledge in determining if a patient could be included and excluded, based on certain criteria for the study, because what we're looking at is the data.

They oversee the patient recruitment and screening, and then they determine if that participant is suitable for the study, because sometimes they may not be. And you have to explain why.

This is kind of what I do as a clinical research physician at Biofortis.

[If you work as a clinical research physician] sometimes [you] can be administering medications or drugs. If we're in a pharma study we have to administer the injection and watch for any side effects and monitor safety.

We also have to report and monitor adverse events and health status changes [for example] if they come and tell you I had a pneumonia, or they had a side effect. From this drug we have to document some of those things and make sure that is reported to the appropriate authority. [Clinical research physicians are responsible for] data collecting and reporting. This is why it's important for physicians to be a part of this [clinical research] team - because we accurately can collect data and report it in a very concise and consistent manner.

Sometimes, when they get it from patients or from pharmacists or people who work at a pharmacy, it may not be as medically accurate, which is why they need our expertise.

Protocol adherence and compliance is, is kind of important to make sure that we have patient safety and data integrity to make sure that we get valid and reliable results for the study. And [clinical research physicians] really do work with a lot of scientists, pharmacists, researchers, sponsors, and they're looking at us to kind of give that medical expertise along with understanding that the patients are safe during these clinical trials.

A clinical research associate is kind of like a sub I, but a little bit of more on hands on with the clinical study. They basically look at the logistics of the study when things should come in. When things are scheduled. They also have to basically be very good about conducting the study safely and ethically.

It's a really good start for physicians. If there is a clinical research associate position, I feel like the pay is not as comparable as it would be for Sub I and PI. But it's a good start, and if you did this it might be a way to get into something a little bit bigger down the line.

Medical science liaisons are field based. So basically, you're not in an office. You could be. But you're moving to sites. **And you're basically the bridge between the companies and healthcare providers.** This can be in pharma biotech and medical device industries. **So we use medical science liaisons for drug safety, because if a patient reports something and a doctor reports something, and there's a discrepancy, our medical science liaisons [are] the ones that go out and kind of clarify and get us the information we need to make the determination of what we are looking for and what we're reporting.**

Medical monitor is basically a physician or medical personnel that oversees the study - an extra pair of eyes on maintaining standards and adhering to the trial protocol. They offer medical expertise to make sure again that the patient is safe during and after clinical trials. This is what I do for an East Coast based company. We basically review a database and look at charts or look at a database to make sure that the patient is safe. **So if they report an adverse event, we basically have to determine the causality of the event related to if it's related to our drug in our trials as well as in the post-marketing environment regulatory affairs.**

And there's a lot of roles for this as well.

So some of the tips that helped me [transition to a physician job in clinical research] was really just getting your updated resume. So I didn't really look at a resume, because when you're done with medicine in a way in the field, you don't need it, and for practice you don't really need it. You just say I'm a family physician, **but when you update your resume and you start networking with other people, they want your resume. So have it ready when you network with other people at conferences.**

It's good to put yourself out there on LinkedIn, and it's good to talk about your plans with other physicians, because there are physicians that do clinical research that have left clinical practice and are willing to help you kind of get your foot in the door. I [would also look for] clinical research jobs and opportunities that are available online. **And you'll see a lot of stuff, and you may be very well**

overqualified for, but if you're interested in learning about it, it's not it's not like you shouldn't look at these positions. It's a good way to get in or try a side gig, and if you do like it, move up from there.

You also want to look for companies that align with your specialty of interest. So I feel like, when I was looking at Pharma, I was like, okay, they have a pipeline for derm drugs. And I didn't really do derm in primary care. I'm not specialized in derm or neurology, or Gi or HemOnc. **But knowing that you can look at these interests you like I liked food, nutrition, and supplements, and which is why Biofortis was interesting to me,**

So figuring out what you like and kind of aligning it with these companies really does give you an upper edge. They know you're interested, and they're willing to kind of say, okay, if you're interested, we want this kind of person.

Moderator What is your current title at the CRO? Are you a principal investigator?

A: Yes.

Q: What's your typical day like [as a physician principal investigator for a contract research organization]?

A: Typically it's a lot less stress. I work part time there because there's another physician that shares my spot. But when I get into work it's like **you're constantly looking at labs** and kind of seeing if the patient's labs look like, is there any issue? Are they safe to be in the study? **We have meetings, basically with the whole team and kind of looking at the Study Protocol Review.** We're all looking at it together medically. So your medical expertise is really valued because you have scientists, but they don't understand the clinical acumen. The CRAs (clinical research assistants) will also ask you questions like, “Is this person okay?” “They're on this kind of Birth Control, can they be in the study?” Because the protocols that we have are very specific and some of those questions they may not know, because they're non-clinical. So they're coming to us for it.

If we do have studies where the patient needs a physical, they're scheduled for a physical. They're scheduled for an EKG, sometimes they're scheduled to get an injection for a study that we're doing for Pharma. Sometimes they're just coming in for vitals and labs. And we're looking at those labs. **So all day long we're getting kind of asked medical questions like you would in a family practice clinic. And you're seeing patients. And you're seeing labs. And you're kind of interpreting it.** And now with [my company], **we're also doing a lot of video stuff which is fun for me because I like video and writing to kind of do scripting so that our patients can**

find our landing sites easy and understand the study before they decide if they want to do it or not, because studies are completely voluntary.

I am on call, but it's for labs, and it's not as crazy as it used to be in family medicine. I mean, I might get called once a month on a critical lab value.

Q: Any nights or weekends [working as a Principal Investigator (PI) at a contract research organization (CRO)]?

A: No. The other team members do come in because the clinical research associates are the ones that run the logistics of the study, so they sometimes might have to do a Saturday morning. And I did have to do a couple Saturdays, but I heard that it's been like years since you had to do a Saturday morning, and it was really they're very so accommodating about. If you're doing extra, take off the half a day the next day. **So it's very flexible, very appropriate. It's not like you're slogging and hustling.**

Q: How much charting is there to do [when working as a Principal Investigator (PI) at a contract research organization (CRO)]?

A: There is a lot of charting. It's not so much the electronic medical record stuff. It's more actually handwritten because it has to be sent to regulatory. We document the heck out of everything. It doesn't hold you back - I feel like the pace is a lot less. **And I do get a lot of time to research and to learn which is huge. [In] family medicine I felt like we were just constantly moving and you're always running behind. You can never catch up. And with clinical research, I feel like I can actually look up this drug. And it's kind of nice to be able to study it, know it well, and to give my medical expertise with that background.**

Q: How would you compare the intellectual stimulation [of working as a PI in a CRO to clinical practice]?

A: At least from my background in family medicine, I was like the jack of all trades, but master of none. With this [I have] the opportunity to be [in] a really cool environment, to learn to be a scientist and to research[er] and it feels like it makes me so much smarter. And I'm not hustling. But I'm actually feeling like I have the time to bring what I know, and to actually dive deeper into things which is so great for me, because I felt like I could never keep up. I was never having time to kind of research. Okay, this patient needs this, but I don't have time to look at it right now. So I got to go home and look at it, and then I got to get back to that patient. But then there's other people waiting, you know, so it's tough. But this I feel like, Oh, I can actually look at this. I can call the patient back. We can have a discussion. I can document it, and I'm moving on to the next one, and there's no hustle because the team works that way. I have another

physician covering me. We all kind of think the same, and we're all communicating all the time and collaborating together.

Q: Are these studies only in academic medical centers or near them? Are they in all parts of the country, in rural areas like, where are they at?

A: I feel like the bigger cities definitely have an advantage. And where Pharma is concentrated definitely has an advantage. So I mean, I'm in Chicago, and I work at a company in Boston, and I worked in a company in Philadelphia now, and so it's like there is a lot of university sites, but we just have to find those universities that are willing, and most of them are medical universities. If there's a good medical university. They probably would have sites for clinical research

Q: How would you find CROs that are active in your state and in your therapeutic area?

A: I actually listened to a podcast about a person who did it. And they basically just went to the university and said, do you guys conduct clinical research? And do you know any CROs? Pharma companies - I live really close to certain ones and you could ask them you could call somebody that works there and just be like, what are, what are some areas that you could use physicians for? What are CROs that you are working with, because it is hard to find if you don't really know what to look for.

Q: How did you get your gig [as a principal investigator working for a CRO]?

A: Networking with people I knew. I literally told a friend who was our financial planner for many years, and I said, Hey, I'm looking to possibly walk away from clinical medicine. I don't know what I really like, I might like Pharma. He basically said, there's a physician who's doing Pharma, why don't you talk to her? I talked to her. Also, when I left clinical medicine, and then my other job, I was actually talking to another physician who was a hospitalist and basically she was burnt out, had kids, didn't know how to manage. Her husband is a physician as well. **And I basically told her what I was doing. I said, I'm going to leave, and I'm going to do Pharma. And she got the [CRO] job. And she basically randomly ran into me when our kids were in college classes together. And I basically said, Hey, how's the job? And she's like, Oh, I love it. And I said, Okay, great. If they're looking for a position, let me know. And she was like, actually the other one's leaving. And so that's how I got it.**

Q: Networking, networking, networking?

A: Yeah, talking about what you want, and maybe just putting it out there because you never know who's listening.

Q: As a sub investigator, principal investigator level on an hourly basis, how does it compare [financially] to being a primary care, doctor? Approximately, and I know your mileage may vary.

A: There is a definite pay cut. There is a ceiling. But my husband does inpatient, outpatient. He makes great money, and I wasn't even making that much, and I was working part-time because I was trying to manage both at home. So for me the pay cut really didn't matter. **And then the fact that I had the drug safety job to supplement the lower clinical research job it kind of made even.**

Q: One of the things that I have heard is, if you want to work for a pharmaceutical company - the sky's the limit in terms of earnings and growth and everything else. [To break into pharma, you could consider building up your resume with experience at a CRO]?

A: Yeah, I mean, I think anything that gets your toe or foot in the door just builds your resume, because what they're really looking for is, do you understand?

Moderator: Thank you again, and I can't wait for the movie to come out - Text M For Murder.