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Loren Roth: Good day and welcome to the [UPMC Western Psychiatric Hospital](#) podcast series. [I am Dr. Loren Roth a distinguished service professor](#) and a senior psychiatrist at the hospital. This podcast's series presents innovative research and patient centered programs at the cutting edge of psychiatry and the behavioral sciences. These are of special interest to psychiatric, psychological, nursing, and rehabilitative professionals as well as the interested public. Our hospitals and clinics are the behavioral health division of the UPMC health system. [The hospital houses the clinical, educational, and research mission](#) of the Department of Psychiatry at the University of Pittsburgh School of Medicine.

Loren Roth: The University of Pittsburgh academic psychiatry department is a national leading recipient of research funding from the NIH, National Institutes of Health, including research grants from multiple institutes such as mental health, aging, and the National Institute of Drug Abuse. I want to introduce today's guest. My guest today is [Dr. Eva Szigethy, a highly trained physician and PHD](#). She is professor of psychiatry and medicine at the University of Pittsburgh. She is the director of behavioral health with the inflammatory bowel disease specialty medical home. So congratulations and welcome Dr Szigethy. Perhaps we could begin this conversation by your explaining to us what exactly is a medical specialty home.

Eva Szigethy: Thank you Dr. Roth for having me today. And so, let me start in general by medical home and then we'll move into specialty. So, [medical homes](#) were developed and tested in primary care and pediatric settings first and really with the goal of coordinating inpatient and outpatient care across defined populations. An important component of all of these homes include attributes like accessibility, the care coordination involved, and as you mentioned a team based delivery model. But also important is the way that these homes leverage available clinical databases to inform care delivery and their emphasis on providing compassionate, culturally sensitive and patient and family centered care across these diseases.

Eva Szigethy: And of course to be comprehensive since behavioral health issues are prevalent across medical conditions, these homes have a focus on behavioral health. That behavioral health focus starts with training the medical staff on the team to be able to conduct things like basic mental health screening, the delivery of brief behavioral interventions, motivational interviewing skills, and really collaborating then with specialized behavioral providers that are part of the team for the more complicated behavioral issues. A subspecialty medical home then takes all these concepts, puts them together for one specific disease. Our disease model is inflammatory bowel disease. It's a lifelong disease, it's an

expensive disease, and there are many behavioral health issues, mainly anxiety, depression, chronic pain that compromise medical care if they're not addressed.

Loren Roth: Well, Dr. Sziethy [IBD is a chronic illness](#) and I'm simply wondering whether you believe that this might someday be appropriate for other patients having other kinds of disorders such as arthritis or heart disease?

Eva Szigethy: Absolutely. So, when I think about chronic medical diseases I really think about patient struggles in three different areas when it comes to psychosocial or behavioral issues. The first and what we classically associate with behavioral health are diagnoses like [anxiety disorders](#), depression, chronic pain syndromes. And as I mentioned before, those are elevated across many diseases. The second is how well the patient can self-manage their disease. So, there really is behavior thinking associated with how a patient views their disease and then whether they're active or passive in managing their disease, whether they're adherent at all with what their medical doctors are telling them.

Eva Szigethy: And then last but not least but I think an often neglected part of our healthcare is what is happening in patient's lives. So, you already have this chronic stressor of the disease itself but then life happens. So, the patients go through divorces, they have losses, they become financially strapped, and keeping track of that and giving them the resources that they need to help with those additional stressors is also a very important component and again something that the medical home is really thinking about a wraparound service for the whole patient. And so therefore, yes, applicable I think across many different disorders.

Loren Roth: Well, I think you've made two major points here. First of all, as we know patients have diseases. Today we're talking specifically about [inflammatory bowel disease](#) but you've just mentioned the very wide number and type of behavioral issues or behavioral disorders that patients may also have at the very same time. Now I know that recently we've begun to call this integrated care. I wonder if you could just put that into a framework for our listeners.

Eva Szigethy: Absolutely. So integrated care basically combines primary medical or specialty medical care with mental health in one setting. So, that's the basic definition. But I think to give it that perspective for decades we really practiced medicine in one silo and behavioral health or mental health in another silo. And there were various degrees of perhaps some communication, perhaps some referrals back and forth, but there really wasn't coordination of care. There really wasn't a true understanding of what was happening in that other silo with the patient and so care was disjointed. And I think what we found is that disjointed care is expensive care and our medical costs kept going up, and up, and up really nationally. But outcomes with patients either from patient satisfaction perspectives, from their quality of life, or from improving the conditions, both the behavioral and the medical conditions that they suffered with, those were not improving. And so, the integration of care is really to get these different

silos combined, communicating, sometimes like in our case co located, but more importantly acting as one unit to take care of the whole patient.

Loren Roth: Well that really does sound exciting. You and I are both physicians but we're both patients too I'm sure over the years and have experienced the various difficulties that you just enumerated for us. So, I am interested since there are many diseases how is it Dr Sziethy that you began this work in the depth to which you're doing and which we're going to discuss? Why did you pick the gastrointestinal disease or IBD as a major place to develop and to sophisticate your ideas and concepts?

Eva Szigethy: So I actually started my professional career in basic neuroscience with a PHD in neuroanatomy and I studied interactions of peptides and neurotransmitters in the brain. And so, even as a neuroscientist I had an interest in how those two systems communicated. I did my training at the Montreal neurological institute where clinical care neurosurgery is prominent. And as I was working in the rat brain I really decided that the human brain would be much more exciting. So I ...

Loren Roth: Good for you.

Eva Szigethy: I whisked off to medical school and there also was very fortunate to have Dr John Romano, one of the fathers of bio-psychosocial care model of care there as one of my mentors and again continued to have an interest in the brain, the body, and the bi-directional communication there. And as I went through my child psychiatry residency I had an opportunity to build a behavioral clinic in pediatric inflammatory bowel disease. And that's really where my career started now about 20 years ago which is amazing in some ways.

Eva Szigethy: And what I noticed working with these pediatric IBD patients is how much unaddressed psychosocial distress there were both with the [kids and depression](#), anxiety, chronic pain, not engaging in their social activities. Many of these children stopped going to school but then also how much the parents were lost. "How do we handle this lifelong disease that my child was just given?" And so, that really had me very interested in developing ways that we could better treat those behavioral issues. Being the scientist that I am I decided to go at it with grants and I chose to implement a depression screening program, at the time I was at Boston Children's hospital, and study how cognitive behavioral therapy working both with the children and the parents, so teaching coping skills to deal with this disease, could then improve outcomes.

Loren Roth: Well that's really interesting because Dr. Romano was one of my heroes and it looks from what I've heard so far that you're going in the same direction.

Eva Szigethy: Well, yes he was very prestigious. So, I'm not sure that I will attain the point that he did.

Loren Roth: Well, I said going in the same direction. So, I think you've given a nice explanation of what it is you're doing and why. Could you tell us a little bit more about the progress that you've made to date as you see it within the IBD specialty home?

Eva Szigethy: Absolutely. So, when we were approached by the health plan in 2015 myself and my gastroenterology colleague co-director we were actually asked to change care delivery. Inflammatory bowel disease here at UPMC is the third most expensive disorder because of all the expensive medications, the surgical complications that await many of our patients with this disease. And so, we were asked to think about what it would take to improve the care but also improving the care in a way that would be scalable. And this is where my research background ... So I think once you think empirically I think you apply that across your different endeavors.

Eva Szigethy: And so, from the beginning we set up a research registry, and we really studied what we did, and we really thought about how could we take things that were developed and empirically validated. Like for instance the cognitive behavioral therapy techniques that I had shown for adolescents, emerging adults could really alter their course of disease both the inflammatory bowel disease component and their depression improving and how could we then get those to be applied in real world settings and using this team model. And so, that's how both Dr Roger and I thought that this was the right model, this medical home model, to apply.

Loren Roth: So I have a read some of your papers along the way and I know that at this point you did some preliminary work to see whether some of those ideas could be put into practice. So what were some of your initial findings related to this work?

Eva Szigethy: So, our earliest findings were, would patients engage in this model? Could we get patients to sign up for this medical home and would they stay? And then also we were taking all of the specialists that make up the team as you mentioned. So, we have nurse practitioners, nurses, the social worker, a dietary specialist, myself a psychiatrist, and a gastroenterologists. And most of them were used to practicing traditional ways. So they did just their part in either a medical or behavioral setting. And so, we also needed to learn early on if we could actually get the team of providers to engage and practice a different type of care.

Eva Szigethy: Smooth and efficient. And so, what our earliest findings were is that patients engaged, patients stayed, patients had higher satisfaction scores when they rated their care delivery, and providers had high satisfaction. And I actually measured burnout rates in the team when we first started and then look at it about every six months and we've had increasing satisfaction with team process so not just being in the home but how we're functioning and the burnout rates going down. So, those were our earliest positive wins.

Loren Roth: Okay. Well, you did mention that the UPMC health plan was involved. And I wonder whether you have at this point any empirical data about what this now excellent functioning team has been able to accomplish.

Eva Szigethy: Absolutely. So we work very closely with a branch of the UPMC health plan which is the UPMC center for high valued health care. And this is a group of individuals that they study how either different innovative projects like the medical home or routine care how efficient is it, how effective is it, and effective both in improving quality and reducing costs. So, as we partner with them we are able to really mine the data and we have clinical data that we collect. We have clinical big data that we use that the system through big data clinical analytics program mines for us through the medical record. And then, we have access to some of the claims data in terms of the actual costs.

Eva Szigethy: So, the health plan has been instrumental in helping us put this data, all these data sets together, and to really think about not just where we are but where we need to go to improve to make our model scalable. So, right now we have, at our peak we had 700 patients in the medical home and we're continuing to evolve and grow. So, the health plan is interested in can this model of care be scalable, can it be sustainable, and sustainable both in terms of continuing to show good outcomes as well as eventually reducing costs overall again given that this is a lifelong disease.

Loren Roth: So has this had any impact on patients, for example they're coming to the emergency room or they're being hospitalized with this new kind of care?

Eva Szigethy: Absolutely. As you had mentioned earlier, we looked at medical outcomes and we looked at medical utilization outcomes. And what we did is we took patients and compared their year before they entered the medical home to their year being in the medical home. And what we found is that we saw significant improvement pre, post, improved quality of life. They had improved depression, they had improved disease severity, and then in the medical utilization we showed a significant reduction both in their emergency room visits as well as their hospitalizations and hospitalizations due to their IBD.

Loren Roth: To me this is very exciting because the problems you're addressing here are so central to the problems that all of us are experiencing these days really trying to keep people out of the hospital and for them to have a very good experience. Now, just the other day I read that you got a brand new grant and a pretty big grant in this very area and do you think you could tell us a little bit more about the grant which will give us an idea where new work is coming on in this area?

Eva Szigethy: You're talking about [the PCORI grant](#), so that's the Patient Centered Outcomes Research Institute. It's a federal granting agency and they give contracts to study care models that exist. So let me give you some background here. That while we had this great functional team in place and this team of really five core individuals can handle about five to 700 patients efficiently. But we actually have 6,000 patients with IBD in our system and half of those, so about 3000 and

growing, have health plan insurance. So, we needed to figure out how could we allow this team to be optimized. And what we started to look at about a ago is how we could use health technology for that optimization.

Eva Szigethy: So, health technology consists of things like remote monitoring. So, can we use digital means to get patient reported information from patients between visits both medical and behavioral? It involves the use of telemedicine and both again for the medical, for the gastrointestinal, as well as the psychiatric and behavioral aspects of their care. And then, could we start using digital applications that some of them come with coaches, some of them are self learning models. So things that patients could download on their phone and use to become better self managers of their disease or to get some of the behavioral trainings, like for instance, cognitive behavioral therapy, mindfulness, meditation, help with insomnia, things like that that then they have right on their phone and sort of a therapist in their pocket so to say.

Loren Roth: So, how are you going to show whether or not this is effective or really as I know about PCORI they're interested in what they call comparative effectiveness research. So, I wonder if you have any controls here or other ways of approaching the patients that you've been thinking about.

Eva Szigethy: So, with the strength of our model and our early findings we strongly felt and again this grant, as the program is, has been a collaboration with the health plan and the center for high-valued health care. So, we really decided that this medical home model is the model of care. So, we have also known and others have shown this, but we validated this concept again, that when patients have unaddressed behavioral issues their medical care becomes more costly and really doesn't come along with those improved outcomes as I said earlier. So, what we decided to do is to take adults with IBD and we started with 18 year olds and up and we wanted to show that within a medical home model that there are two comparable treatments because we have very strong pilot data in both to address behavioral issues.

Eva Szigethy: So, what we're comparing in the medical home are two arms of care delivery. One arm is our team. So the team functioning, the patients come in, they usually if they have more severe inflammatory bowel disease they come in and see the medical part of our team about every three months or so. And if they have behavioral issues, they're coming in to see our social worker for behavioral therapy every two weeks to monthly again depending on the severity and nature of the issues. And then, if they need psychiatric medications, psychotropic medications, they will come in and work with me. And so, that would be our team approach that we're testing here. And then, we decided to have a technology arm, so this is the patients will still come in and meet us at their first visit, still see us about once a year as a team, but we will be providing as much of their care, both medical and behavioral by tele medicine means, by digital behavioral and disease self management apps, wellness apps.

Eva Szigethy:

We're very fortunate with our health plan that they have developed some very innovative care management apps that include wellness. So things like smoking cessation, relaxation, or stress management training. So we're taking advantage of really all that our system has to offer and testing not only if these two arms, how they compare to improve clinical outcomes, but also we're looking importantly at patient preference as well as which patients do better with which of these two treatments. And so, to achieve that aim for really these prediction analyses we're recruiting almost a thousand patients. As you mentioned earlier, we are the lead site here at Pittsburgh but we are also recruiting patients from Mount Sinai Medical Center and Harvard's Brigham and Women's Hospital. And both of those institutes have a IBD, adult IBD program that does include some kind of behavioral and nutritional or wellness component.

Loren Roth:

Well this sounds really exciting and I suppose it'll take a couple of years to really know whether one of these treatments or the other is appropriate and most likely which types of patients might benefit from one or the other. So Dr Szigethy I want to thank you very much for all that I personally have learned in our conversation. And I would also note since I go back many years even to my friends in high school, a couple of whom who had this disorder and I know how disabling it is and potentially even life shortening. So, I think this is very significant work and we're very happy that you and your team are engaging in this type of important research here at the UPMC Western psychiatric hospital and with our department of psychiatry.

Loren Roth:

For our listeners. I do again want to thank you and secondly to note that this entire podcast will be available for some time on online. And if a person goes to the UPMC website they will find that different hospitals are listed. And if you come to the one for the UPMC Western psychiatric hospital you'll be able to hear this podcast or perhaps inform other people how interesting, it was interesting to me, this is. And also, we will have this on the department of psychiatry at the University of Pittsburgh website. So once again I want to thank you very much and really we wish you the very best in your research as well as your clinical work.