Hello and welcome to One World, One Health with the latest ideas to improve the health of our planet and its people. I'm Maggie Fox.

Planet Earth faces many challenges: pollution, climate change and new and reemerging infectious diseases. This podcast is brought to you by the One Health Trust with bite sized insights into ways to help.

In this episode, we're talking to Dr. Bethany Young Holt, founder and executive director of CAMI Health, an organization dedicated to advancing the health of women and girls worldwide. She's also the co-founder and director of the Initiative for MPT’s, that's Multipurpose Prevention Technologies, and a principal investigator at the Public Health Institute. She's been working to advance the development and use of multipurpose prevention technologies, products that would provide not just contraception, but protection against HIV and other sexually transmitted infections for people around the world. Bethany, such a pleasure to speak with you.

Yes. Hi, Maggie. It's such a pleasure to be here. Yes, I've worked in different parts of the world. I've been really fortunate to be able to do that. Working in sub-Saharan Africa, you know, I've seen just the devastating effects of HIV in women and girls. And I think HIV is sort of gotten and AIDS, it's gotten off the radar of so many people recently, but yet it remains a really devastating disease for young women and girls in sub-Saharan Africa. In parts of sub-Saharan Africa, they account for 63% of all the new infections for HIV and it remains the leading cause of death for women of reproductive age.

Well, and what you're working on is combining protection with contraceptives. Contraceptives already exist. Why do you need to combine them with products to protect against HIV and other sexually transmitted infections?
Yeah. You know, if you just think about women and, you know, our risks are really interlinked. You know, when HIV, other sexually transmitted infections, the risk of unintended pregnancy, you know, this can all be caused by having unprotected sex or unsafe sex. To have single products that can combine prevention for these different risks can be real game changers for women's health. Because contraceptives are already on the market and people are used to them, there's less of a stigma around contraception as compared to HIV or other STI's. So another advantage of combining prevention from HIV with contraception could be increased uptake of HIV prevention.

Maggie Fox

And you've actually asked people, and especially women, what they want. What have they told you?

Bethany Holt

It's really interesting because there's no single answer except that, I mean, what we do here is that women want choice, you know? At different times of their life, depending on their stage of life or where they live, they want different types of products. So, for example, young women who may have just infrequent sex might want one kind of product that they could use on demand, say, you know, something that they might only need to use a couple of times a month. Someone who's married or in a long term relationship with their partner might want something that's long acting that gives them, you know, pretty much constant protection. We need to have more choice for women's health.

Maggie Fox

And women need something they can use privately as well, right? There are very complicated issues with a woman's husband or partner knowing that she's using a product at all right?

Bethany Holt

Yeah. I mean, you have different situations, but that's exactly right. I mean, some women do need to have something that is like a stealth product, something that she can use... if she's in a situation where she needs to have discretion for what she's using, you know, maybe her husband or partner will feel threatened if she's using something, you know, for HIV prevention or contraception. So some women are sort of in controlling environments and in relationships. So to have a method that she can use and control herself can be very empowering.

Condoms are an example of a method that is out there on the market, male and female condoms that provide protection against HIV, other STI's, and contraception. But even the woman's condom or the female condom, you know, the male partners are aware of it and so it's not something that is truly in control of the woman or girl. And so there is this growing field now of multipurpose prevention technologies, which researchers are developing these products that, you know, rings and films, even
injections that can be given to women, that would provide women with an array of different types of protection in different dosage forms and durations.

Maggie Fox

This all seems like a no brainer. Why is it so difficult to get this field going?

Bethany Holt

It does seem like such a no-brainer and people have been working towards this for decades, frankly. The fields of HIV and contraception and other STI's have long been siloed politically and due to funding streams. But about 12 years ago, researchers came together from across these disciplines: family planning, HIV, other areas of sexually transmitted infections to really come together, bridging these silos to advance this field of multipurpose prevention technologies and so there is a growing field. The NIH is funding it, USAID, some other other funders are, but the funding, huge challenges of funding. So, you know, there's no for the most part, no big pharmaceutical companies are involved in this space. So you have small biotechs and academics.

And so you know, it just takes a lot of time to raise the funds and then to get even promising products through the development pipeline. There could be very promising products that go through early stages of development, but if the funding stops, then that product can't move forward, can't get into the clinical trials, and ultimately can't reach the hands of women and girls.

Maggie Fox

Can you tell us a little bit about some of the stuff that's in development?

Bethany Holt

Yeah, it's really exciting. So there are intervaginal rings. There's an array of different types of intervaginal rings. So if you imagine like the NuvaRing that's been on the market for a really long time for contraception, but this would be a ring that actually delivers different drugs for, if you will, for different indications. So, you know, a ring to deliver a drug for HIV, for herpes, and for contraception.

There are also some vaginal films in development. So if you can imagine sort of, the Listerine film that you put on your tongue. There are researchers that are developing sort of a film that could deliver as a way of delivering drugs for contraception and diseases like HIV and there are also long acting injectables. So if a woman comes into a clinic for her contraceptive injectable, injection, rather, she could also get either co-administered with a drug for HIV, or maybe it can be even in the same in the co-formulated in the same application.
I would say that my organization, CAMI Health and the Initiative for Multipurpose Prevention Technologies, we actually tracked the different products that are in development in a database at MPTS101.org and it's a growing field and it's evolving. Things get funded and then they stop getting funded.

Maggie Fox

Sounds like it's a bit of a challenge.

Bethany Holt

It's definitely a challenge.

Maggie Fox

What's scaring the pharmaceutical companies away from this area?

Bethany Holt

Prevention doesn't tend to make as much money as treatments. There's few, even in the contraceptive space, there's few big pharma in this space anymore because of perceived lack of return on investment and other risks that they might see when, you know, testing products and, you know, for prevention. Working on it, you know, big pharma is looking at this space. It's just, you know, putting in sort of, I guess, a big toe instead of, you know, the full leg.

Maggie Fox

And that's where organizations like yours come in. You kind of fill those gaps.

Bethany Holt

We try yes. We are really working to try to find other types of investors, get the word out. You know, there's a growing cadre too, of impact investors and social impact investors who are willing to invest but take maybe a smaller return on their investment. So we're really working to try to identify these types of new investors that are out there and get them excited about this growing field.

Maggie Fox

Well, some people might not be excited about this field at all. They might say, look, women just need to be in a marriage if they want to have sex. They need to learn how to say no. Why can't people just control themselves? And then we wouldn't have any of these problems at all.
Bethany Holt

It's very mind blowing to think that people really think that. But I know you're right.

I'll tell you a story about what really inspired me. One of the reasons I'm so dedicated to this work. I had the privilege many years ago of working in Mauritania, which is a country in West Africa and I was a health volunteer. I was working in a rural village. Mauritania's on the edge of the Sahara Desert. I was working in a village on the edge of the Sahara Desert. Mauritania, a lot of it is the Sahara desert. But so, you know, in this region, women and girls are often married very young and have to drop out of school.

I was living with a family which really valued the education of their daughters. And two of the young girls that lived with me were really excited to go to school. And they went off to a neighboring village, probably a half a day's away by horse cart. And so it was a big adventure for them to go to this village. And they wanted to go to school, they were in school. I went to visit them a couple of months later, and I came to realize that my one little friend, she was 12 or 13. She was so sullen and then and it turned out she had gone lived with her uncle and had been raped by a family member. And, you know, all she wanted to do was get an education and do something really exciting with her life. And this was completely out of her control. And, you know, she ended up getting pregnant and yeah, it's devastating.

So I think, you know, those kinds of stories, it's not just in, you know, villages in Africa, but you hear about that all over the place in California, in Iowa, you know? So it's a very sad reality where girls are not empowered, necessarily.

Maggie Fox

Around the world even married women don't have any control over what their husbands do. Women in other types of relationships don't have control over what their partners do. And so this would provide them a way to protect themselves.

Bethany Holt

Absolutely. Yeah. You know, these multipurpose prevention technologies, these products that can provide women with opportunities to protect themselves, if in all sorts of situations. Even, you know, young women, if they're dating, you know, not always, you know, and married women who are in situations where they just want to protect themselves from unknown risks that are out there.

Maggie Fox

And, of course, these multipurpose prevention technologies can also help men, right?
Yeah. There is a growing field now of male contraception, which could empower men and enable men to also take responsibility around family planning and some of these, you know, are being looked at to actually provide protection against STIs as well. So that's one possibility but then also, if the female partner is protecting herself, then that protects everybody, the male partner and the family.

You know, when you empower women to protect themselves around their health, when and if they want to have children, you know, that improves not only the woman's life, but the economic well-being of her family and the whole community.

So when women are protecting themselves from HIV and unintended pregnancy, they're protecting their children that are living and the ones that are to come.

Maggie Fox

Bethany, this has been great. Thank you so much for taking some time to speak to us.

Bethany Holt

Oh, it's a pleasure. Thank you so much for the honor to be on your show.

Maggie Fox

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