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TAPE: INA VANDEBROEK INTERVIEW FOR TRANSCRIPT_MIXDOWN

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I'm Shannon McCormick from Cigna. This podcast is part of a continuing series we're doing at Cigna focused on health equity. I recently interviewed Dr. Ina Vandebroek [VAN DE BROOK] in her office at the New York Botanical Garden. Dr. Vandebroek's office was filled with all kinds of plants – and plant materials. In this interview, she talks about her work as an ethnobotanist and how her research on the use of medicinal plants in Carribbean and Latino communities can lead to improved health equity in those communities. Here's Ina [EENAH] introducing her work...

INA VANDEBROEK

Well, I'm a researcher here at the New York Botanical Garden and the Matthew Calbraith Perry Assistant Curator of Economic Botany and the Caribbean Program Director at the Institute of Economic Botany of the New York Botanical Garden. My research is focused on the links between culture, health, and plants – botany. So, I study how cultural groups, communities in New York City, and I'm focusing on Caribbean communities and Latino communities, use medicinal plants for their health care and what their cultural beliefs about health are, and that research, those results are used to develop cultural competency training with health care providers.

SHANNON MCCORMICK

What is cultural competence and what does it look like?

INA VANDEBROEK

Cultural competency training is teaching medical students, residents, and healthcare providers on how to become more culturally sensitive with their Latino and Caribbean patients. It's about opening a dialog about their patients' cultural beliefs about health and what their preferred treatments are, so it's about opening a discussion between healthcare provider and patient that is non-judgmental and in which the patient feels comfortable enough to talk about what they think causes their disease and what kind of treatments they have used or are using, sometimes in combination with pharmaceutical drugs, to treat their conditions, their health conditions.

SHANNON MCCORMICK

How do you open up a dialog, as a healthcare provider, if someone comes to you saying that they are exploring this type of medicine? What is your suggestion for healthcare providers to engage with the patient?

INA VANDEBROEK

It's a very good question. It's also a difficult question because residents that I've worked with, even though I gave them kind of tools to engage in a dialog with their patients, they often come back and tell me, well, nobody wanted to say something about it or my patients just said I'm not using herbal remedies. The fact is that patients are often reluctant to disclose their use of herbal remedies to their healthcare providers, especially the communities I work with, from the Caribbean and Latin America. They don't want their healthcare providers to think that they're using something that they may be scorned for because it's not by a medical or it's something from the countryside that poor people use, so people are often reluctant. They're also very reluctant to, to talk about what their cultural beliefs are of what causes certain health conditions. For example, like the evil eye or empacho, which is a gastrointestinal blockade, are things like 00:04:05 witchcraft or...which are not only health conditions that you see in communities that are living remotely, in rural areas, but also here in New York City. When immigrants come here, they bring their cultural beliefs and their ways of treating ill health and well-being with them, so how to approach that? First of all, being genuinely interested and having that non-judgmental attitude and seeing things like, you know, I'm interested in herbal remedies. I know a lot of people use it if you know, as a healthcare provider, what cultural group your patient belongs to. You can do some self-study. We're developing materials here also and learn something about those herbal remedies and say, you know, I know in your country you use a lot of guinea hen weed, for example. Dominicans call it anamu. It's a plant called *Petiveria alliacea*. I've read about that. I'm very interested in it. I mean, do you use herbal remedies sometimes to treat your health conditions? I'm interested in learning more. So patients do not expect their healthcare providers to know it all, but they do like that they're approached in a non-judgmental manner about this topic.

00:05:38

SHANNON MCCORMICK

Do you find that it's a common occurrence that when someone approaches their healthcare provider stating that they want to explore alternative medicine, do you find that they are usually suggesting something else, like a prescription, and do not want to support the patient in that way?

00:05:58

INA VANDEBROEK

Well, before I answer that question, I would like to make...distinguish between what we call CAM, complementary and alternative medicine, which is a grouping of all kinds of different practices that are often also modified according to our Western lifestyle. You know, yoga, acupuncture, acupressure, chiropractic, and so on, but you also have the cultural use of herbal remedies, which is not necessarily going to a health food store and purchasing a bottle. It is going to specialized Latino and Caribbean shops that exist all over the United States, called Botanicas, in which you can purchase fresh or dried plant material. Here I have one of those. This is, for example, a herbal remedy called bitter melon. Have you ever heard of that?

00:07:01

SHANNON MCCORMICK

No, I haven't.

00:07:04

INA VANDEBROEK

It is available as a vegetable in Asian health food stores. However, there are many varieties of that particular species and this is the wild variety and it has very small fruits and it's a vine and it's bitter, not only the fruit is bitter, but the whole plant specimen, and it's used to treat diabetes. Because it's bitter, the bitterness counteracts the sugar in the blood. Now there are some..., pharmacological studies, laboratory studies done on this particular plant species and, even though a specialized group of researchers called the Cochrane Group has evaluated that more evidence is needed to establish the effectiveness of this herbal remedy, there are several studies that show lowering of blood sugar levels in laboratory animals, but also in clinical studies. The evidence is not overwhelming, but it's enough to issue a recommendation that patients should be careful to combine insulin, for example, with this herbal remedy.

00:08:35 This is something you see in a lot of the communities I work with. I'm working with Dominicans, Puerto Ricans, Mexicans, and Jamaicans in New York City, and I'm also doing the comparative research in their countries of origin, focusing mainly on Dominicans, people from the Dominican Republic and more recently with Jamaicans. Then, also, part of our research is to understand what happens when people migrate. Which are the plants that they bring with them? How do their culturally-held beliefs change? So the transnational dynamics of medicinal plant knowledge and use. What we're seeing is that, even though people come here, New York City, there may be more healthcare options available to them and in other cities in the US, but they still keep using herbal remedies. It's still very popular and they persist also in their cultural beliefs, and it's those cultural beliefs that drive the healthcare-seeking process. So it's very important that healthcare providers study this and find ways to engage in a productive dialog with their patients.

00:10:01

SHANNON MCCORMICK

How do these remedies gain traction among the communities? Is it a certain level of trust or is it a success story that turns into another and then, all of a sudden, it's sort of being used across the entire community? How does that work?

00:10:15

INA VANDEBROEK

Well, that's why I want to distinguish between CAM, complementary and alternative medicine, and traditional medicine. Traditional medicine is culture-based, so it has its historic roots in culture, meaning that people transmit that kind of oral knowledge from generation to generation and it persists because those communities come from countries, especially the ones living in rural areas, where healthcare was not readily available and still, to date, continues to be lacking. So it's a very important component of people's cultural heritage and they have faith in it. They believe in it. That's something we encounter in our research also and it's important that we transmit that information to healthcare providers, that it's very important for patients from the Caribbean, from a cultural perspective. It's part of their biocultural heritage. They have faith and strong beliefs in it. So it's already a strong component of the community. It's not something that is acquired, even though it's not a static knowledge nor a static practice. People keep adapting their herbal pharmacopeia all the time. What we see here in New York City, from the original research that we are conducting here at the New York Botanical Garden, is that people use herbal remedies more to treat hypertension, to treat cholesterol, and so on.

So, diabetes...diabetes is actually the second ranking health condition for which immigrants from the Dominican Republic use herbal remedies here in New York City, so that's kind of impressive. The first one is the common cold, which is something that you find all over the world people use herbal remedies. They drink their teas to treat the common cold. Again, it's not those tea bags that we are used to. It's those fresh and dry herbal remedies and those botanica shops in New York City, those shops that import those herbal remedies from the Caribbean, but also from Florida, from California, even from Israel, so it's coming from all over the world, they have boxes and boxes of dried herbal remedies and that's what we're trying to document.

We're trying to document herbal remedies that people use. Then we have those common names, like what you see here. If you look at the plant sample and you look at the label, it says cerasee. No, this one says cundeamor. The Jamaicans call it cerasee, so the Dominicans call it cundeamor. So, you go to another island in the Caribbean, it has another common name. Sometimes within the same country, it has a different common name. So we need to know what herbal remedy it is. When you look at the healthcare literature, like the <u>PDR for Herbal Medicines</u> that you see here and other, you know, standard works, there's often those herbal remedies, like chamomile, linden, cat's claw, that are better known from a Western perspective.

Those herbs that you see here, that we record in our study, like cundeamor, *Momordica charantia*, guinea hen weed, also called anamu, which is *Petiveria alliacea*, these are tropical herbal remedies that are under-studied in laboratory and not a common part of those <u>PDR for Herbal Medicines</u> manuals that are used for CAM training.

So, again, we're studying a sort of...I would describe it as a sort of invis...invisible healthcare system, practices and cultural beliefs and cultural knowledge that remains largely undocumented.

SHANNON MCCORMICK

What is evil eye?

INA VANDEBROEK

The evil eye. Okay. It's one of the, what we call folk illness or culture-bound syndromes. There are many of them and, again, by doing our research, we found that, and what you see here are...you see these questionnaires. This represents...it's 84 questions, is one person we interviewed. So a whole list of questions that we have for them and one of those questions was, "Do you believe there exist health conditions that a physician does not understand or cannot treat?" 00:16:22 Almost 80%, 79% said yes, and that's in New York City. That's of the 175 people...you see we interviewed 175 people in New York City, 145 in the Dominican Republic, to do that comparative research, so 79% said yes and then I asked which [ones]. Evil eye was among that list, let's say within the top 10 of health conditions that people reported, and patients believe that if you have the evil eye, which everybody can get the evil eye, but it is mostly the weak and children are considered still developing, those vulnerable to disease.

Evil eye can be transmitted by a person, according to the Dominican community in New York City, by a person who admires a child's beauty without saying God bless the child. For example,

if you have a baby and I say, "Oh, what a pretty baby," I can intentionally but also unintentionally transmit the evil eye. Now, if that child gets sick the next day and there's a whole range of symptoms, and if we look at those symptoms, and I always ask healthcare providers during my training sessions, if you look at those symptoms, even though it's something as exotic as the evil eye, which we think is witchcraft, what is this?, but if you look at those symptoms, do you think they're worthy of medical treatment, like delirium, convulsions, one foot is apparently smaller...one leg is longer or shorter than the other, vomiting, crying, the child can't sleep, doesn't want to eat, but when I ask healthcare providers let's not look at the name of the disease, of the illness, but let's look at the symptoms, do you think this is worthy of medical treatment? Everybody says yes, I want to see that child.

What we know about folk illnesses or culture-bound syndromes, as they are called, is that there does not exist a 1:1 correspondence with biomedical disease, so you can't say, okay, the evil eye is epilepsia or the evil eye is a gastrointestinal infection. There may be different health conditions related to it. It is listed as a psychiatric disorder, even though if you look at the symptoms, a lot of them are physical, so it's worthy of medical treatment. We know from the medical anthropology literature that these conditions are linked with increased morbidity and mortality, so increased sickness, increased death, and very importantly, patients believe that a healthcare provider does not understand the illness and cannot cure it.

And, here's the catch now, one in two people who originated from the Dominican Republic and from a rural area in the Dominican Republic, now living in New York City, believed in the evil eye and one in four who grew up in an urban area, now living in New York City, believed in it. So, of the 175 people we interviewed, so it's not just something from the past, something that is a myth or a legend. It's reality.

SHANNON MCCORMICK

Does talking about it bring it into our presence? I hope I don't walk away with that. Who dispenses herbal remedies in botanicas?

INA VANDEBROEK

So, botanicas, that's a very interesting concept because these are stores all over New York City. They're like invisible healthcare systems. We don't know how many there are in total. We found 60 in the Bronx. There's almost no research on them. In the Bronx, the majority of botanica staff and owners are Dominican and Puerto Rican, reflecting the ethnicities that live and work in the Bronx. So, if you go to Queens, no studies have been done on it, but my prediction is the few I've visited are more according to the ethnic make-up of Queens, for example. I think there will be more South American botanicas. I found one owner who was from Venezuela. In the Bronx, we had one owner who was from Brazil, but all the others were Dominican or Puerto Rican, so it's a community-based store that sells products of spiritual and religious healing and also physical healing. The physical healing is often the plants. The religious and spiritual healing are statues, amulets, saints. They have spiritual consultancies. It's about, you know, as an immigrant undergoing the immigrant experience, which may cause stress, depression, there may be problems with the law or with citizenship, and the botanicas offer a solution and it's people from

those communities selling products to the communities in order to improve or maintain their spiritual or their physical health. So, in that way, and that is something that I like to stress, is that botanicas represent health that adheres better to the definition that the World Health Organization has issued. Health is not only the absence of disease. It's also a state of complete physical, emotional, and social well-being, so that's what botanicas offer and that's why they are so popular.

SHANNON MCCORMICK

At each botanica, is there someone there who would be, I guess, the equivalent to the pharmacist?

INA VANDEBROEK

Yes, you have plant specialists on the premises. It can be the owner, but it can also be a staff member and you always have someone on the premises who does spiritual readings or spiritual healing, so you have that kind of divide, even though the ones who sell plants also always stress that a plant has two components and that's something that, in medicine, it's hard for us because we have this mind/body division, but for communities, for cultural groups and for botanicas, this kind of healing, that mind/body divide does not exist. So plants have a spiritual component, they have a physical component, and both work together to promote healing.

Now, people ask me, do you believe in it, does it exist, what's the effectiveness? What botanica owners and clients say, and also I completely agree with that, it does not matter what we personally believe. It does not matter what your healthcare provider believes. It matters what the patient believes. So that's all that kind of information from our research that we want to bring to our training exercises with medical students, with residents, with healthcare providers, and Cigna is helping us to do that.

SHANNON MCCORMICK

For each spiritual and physical healer at each botanica, how do they gain credibility among the communities?

INA VANDEBROEK

They already have that credibility because, again, people believe in the herbal remedies in their traditional cultural recipes. At the same time, what I have noticed when we, when we are doing our research is that a lot of those botanica owners are very charismatic and they are not only...and they look at their clients from a holistic perspective. So, in a botanica, you can find something to ward off evil forces, but you can also find a remedy to cure gastritis, to cure your ovarian cysts. At the same time, you can have a meal there sometimes. People play dominoes. There is Caribbean music playing, so it's a sense of home and belonging, at the same time an environment where people speak the same language about health and healthcare. You... there is no problem going to a botanica and talking about mal de ojo, evil eye, or talk about empacho or talk about brujeria or talk about *, culebrilla. People will know what that means. You can't go to your doctor and say, well, I, you know, I think I have the evil eye. No. So, at the same time, even though during our cultural competency exercises with healthcare providers, we find that they

struggle with that, but then again, you know, the exercises, it's not what I believe, what you believe, but what your patient believes. You have to form that alliance with your patients.

SHANNON MCCORMICK

I know there is a virtual herbarium on site.

SHANNON MCCORMICK

What is that, exactly?

INA VANDEBROEK

So, the plant that you hold in your hand here, that plant specimen, that is stored in a physical herbarium. So we have a physical herbarium here at the New York Botanical Garden. almost 8 million plant specimens and more than 2 million have been digitized, meaning that the plant specimen, the herbal remedy that you're holding here in your hands, you can also go to the virtual herbarium of the New York Botanical Garden and zoom in into all the details on that plant remedy. So it's a tool for healthcare providers to, to have that option. If a patient comes and tells you I'm using cundeamor, you can go to the search engine and look that up and you can even show it to your patient and say, "So, is this what you're using? Let's have a dialog about this."

At the same time, we're also working on things like plant monographs. Here you see the one on *Momordica charantia*. It's in the cucumber family, so it's that same bitter melon that you can buy in an Asian store, which is a long fruit with kind of bubbles on it and you can cut it and it's very bitter. It's nice to combine it with curries, but that's the same plant species that you're seeing here. You see the fruits here. These fruits are a lot more little because it's a non-cultivated form. It's still the same species.

So, we have our plant monographs that show, give a little description of the plant, give pictures of the living plant specimens, detail what they're used for. This is for the Jamaican community, but we also have that for the Dominican community. We're working on putting that all together. The most common uses, according to how many people reported each plant use for diabetes, for belly ache, for fever, and then we have a summary of clinical information from the biomedical literature, but also safety information. What are the adverse effects that have been studied in the literature? What other safety information do we know about its use for pregnant or breastfeeding women and so on? What kind of plant or herb drug interactions exist? Everything that we find in the literature, we put that together and we tried to not make it too technical language, so it can be understood by a lot of people.

It's hopeful...we are hopeful...we hope that this is something that not only the community can use in their contacts with healthcare providers, but something that healthcare providers can also use in their dialog with patients.

SHANNON MCCORMICK

You mentioned that there's one for the Dominican community and one for the Jamaican community. Do you ever see, I guess, a Dominican researching into the Jamaican uses and implementing those?

INA VANDEBROEK

What we see in New York City, because that's where all the communities live together, probably also in other cities in the United States...I'm talking about New York City because this is where I live and work. I see it in the Bronx all the time. In the community gardens, there was Puerto Rican man and he was actually talking about cerasee, but the Spanish name is cundeamor, and I said, so you don't know this as cerasee? He said, no, I didn't know this plant species, this herbal remedy at all, but I know from the Jamaican lady here that she uses it for so-and-so. So he had not learned that from his community, but from another community, so there's a lot of exchange of information. In our research, we also see that in New York City, after immigration from their countries in the Caribbean, that people start using a lot of food plants as medicines, so foods are very versatile. You can not only eat them, but you can also boil a tea with them. You can use other plant parts, the non-food parts, like the leaves, to make a tea to treat a health condition, and it's information that's not proprietary, so it's not restricted to plant specialists who might be reluctant to share their knowledge of herbal remedies.

What I'm finding also in New York City is you go to a grocery store and I overhear people in Spanish speaking about the benefits of cucumber or celery for hypertension or for diabetes or something, so people are exchanging information. Even when I take the public transportation on the bus, I sometimes overhear ladies chatting about, you know, some herbal remedies that they've tried and that they think others should try.

There are some people here in New York City who we interviewed that said, no, in New York or in the United States, I don't want to talk about my herbal remedies the way I did in my country because here you can get sued. So people also have that kind of fear sometimes.

SHANNON MCCORMICK

What is the most popular type of ingestion for these plants? I know it probably depends on what you're looking to treat, but why does the way you ingest these differ from symptoms and curing...I'm sorry, remedies? Why is that so important? Like the way, say you put it on your skin or you put it in tea, I heard you mention, so why would you use a different type of method?

INA VANDEBROEK

I think that depends on the health condition that you use the plant remedy for, but it's also linked to cultural beliefs. I told earlier that cultural beliefs drive treatment and drive the choice of treatment. In Caribbean communities, there is this belief, and probably also in other communities...I'm speaking about Caribbean communities because these are the groups I'm working with. There is the belief that if you have bumps on your skin, that is because your blood is too sweet or your blood is not clean, so you can use a fresh herbal remedy, rub it on your skin to treat the skin bumps, but you should also drink it so you can purify your blood. That concept

of purifying the blood, also purifying the body, have a wash out, these are important concepts that healthcare providers also learn about. Caribbean patients like that when they take a herbal remedy, something happens with their body.

Something that I heard over and over again during interviews was that pharmaceutical products, they hide the illness; they don't cure it. They calm the pain, they hide the illness, whereas when I take an herbal remedy and I see something expelled from my body, I might have slight diarrhea, I might have to vomit, something comes out, I feel a change, I know that disease is...my body is getting rid of that disease. It's leaving my body. That is reassuring.

In Jamaica, I hear a lot...and also Jamaicans living here in the US, I hear a lot "to feel fresh." You know, to get, you know, dirt out of your body, and the belief that pharmaceuticals only hide the disease, but not cure it or that they may cure one organ, but then they're going to affect your liver is very prevalent. These are among the reasons why people are reluctant to use pharmaceuticals.

SHANNON MCCORMICK

Do you find that most of the ingredients in the remedies are easily accessible or I know that you mentioned there are some that you might need to order from another country or climate. Is there a way to go shopping at the grocery store and find almost everything you need, or...?

INA VANDEBROEK

No. That is the thing. So, even though when Caribbean immigrants come to New York City, they start using a lot of foods as medicines and these are commonly available in supermarkets, foods and spices, botanicas are the shops, and there are several hundreds of them in New York City, the total number probably, maybe approaching 300, 400, 500, even more. We don't know, but they carry the more exotic tropical remedies that you do not find in other places. So, actually, together with a student from Columbia University, I did a survey of botanicas in the Bronx and we did in-depth interviews with 12 botanicas. We looked at the health conditions for which botanicas used herbal remedies. We also looked at what are the most popular herbal remedies that are sold and the majority of them, if they could be found in surrounding markets and supermarkets, and that was not the case, especially the ones that are used for spiritual healings. Like you have things like cleansing baths. You boil a number of herbal remedies or a certain herbal remedy. You have abre camino is road-opener in English. You have quita maldicion, take away evil. So you have what we call bitter baths, bitter tasting plants that are boiled and then applied as a bath, and the bitterness takes away the evil and then you have the sweet baths that are used to attract positive things and good luck.

SHANNON MCCORMICK

How did you become an ethnobotanist?

INA VANDEBROEK

Well, I originally studied neuropsychopharmacology. That's what I did my PhD in and when I finished my PhD, I thought I don't want to be just working in the lab for the rest of my life, looking at two individual neurotransmitter systems and trying to make big assumptions about what happens in the brain. I was studying stereotype behavior, which is what you find in autism, children with autism, symptoms of...one of the symptoms of autism, but also in schizophrenia or amphetamine addicts, so I was looking at that specific behavior and looking at two neurotransmitter systems in separate areas of the brain, and I thought this is too reductionist. I'm a biologist. I did my PhD in medical sciences and, after that, I wanted to do something, you know, that was more real life, and I came to this and this is as real life as it gets. You know, it's medicine, it's biology, it's people, it's culture, it's everything. So it's very interesting. It's a field of study that, it's incredible the amount of information that is still out there, that 00:52:59 needs to be researched. I came here in 2005 at the New York Botanical Garden. It's now 2016. There are still so many things to do, so many communities to compare, more work in botanicas. As I said, botanicas differ according to their, probably the plants they sell, who runs them, according to borough in New York City, their interaction with communities, and their lack of interaction with biomedical healthcare. So, I mean, I still have a lot more to do in the next 20 years.

SHANNON MCCORMICK

Thank you so much for your time, Ina. I really appreciate it.

INA VANDEBROEK

You're welcome, Shannon.

SHANNON

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