

# K29942\_21005\_RITM0365362\_TheHealthPulsePodcastS3AlexIntrosAntonioDeC

ALEX MAIERSPERGER: In many ways, it feels like the world has gotten further apart. And then, also in many ways, it feels like the world comes closer together. And so as we think about just international travel, certainly, what happens on one side of the world can affect what happens on the other side of the world by that same evening. And so what happens in the morning affects the other side of the world that same day.

And so we're so excited to have this conversation today with a global citizen and one of our own SAS team members. I'm your host, Alex mayor Asperger. And on season 3 of The Health Pulse podcast, we get to celebrate those changing health care and life sciences for the better. And today, we get to celebrate Antonio de Castro, senior industry consultant in SAS' Global Health Care and Life Sciences practice, and importantly and excitingly, guest host for The Health Pulse podcast in Asia-Pacific. Welcome, Antonio.

ANTONIO DE CASTRO: Thank you for having me, Alex. I'm so excited to be here. I'm so excited for this opportunity, and just to be in the same platform as a lot of the health care and life science industry leaders that we've had. So, exciting times ahead.

ALEX MAIERSPERGER: Absolutely. So first, let's talk about how you got to SAS. You were born in one country, you were raised in another, and you're currently residing in a third. Is that right?

ANTONIO DE CASTRO: Yes, that's correct, Alex. So I was born in Manila, Philippines. And I migrated to Geneva when I was around 15 years old. And then, I was expatriated to Singapore where I currently reside, from 2016 onwards.

I joined SAS in 2021, beginning of 2021, so a little bit-- a year and a half and some change ago, and loving it since. But the connection with SAS runs deep, as I'm sure we will speak about later on. My connection with them is through my experience in clinical research back when I was still in Switzerland.

ALEX MAIERSPERGER: Exciting. And I know your education path is somewhat similar in different places and different times. How did that global mindset of getting to experience a few different countries affect what you ended up studying in school, and then your ultimate career path?

ANTONIO DE CASTRO: That's an excellent question. And bear with me here, because I want to sort of make a story. Stereotypically, Filipinos are sort of stereotyped as in the health care space, right? A lot of Filipinos, growing up, certainly when I was growing up, dreamed of being doctors, nurses.

The Philippines is one of the first countries that are exporting, let's say, health care providers, notably around the nurse function, right? So there are a lot of nurses in the US that are Filipinos-- a lot of nurses in the UK, as well as, basically, English-speaking countries. Right?

So in the Philippines-- and I'm sure a lot of our Filipino viewers can relate-- they were basically pushed to that direction with their parents, in terms of education, taking that up in college. I didn't have that pressure, luckily, I would say. I didn't come from a family of doctors or nurses.

I certainly have family members that are in that path, but I didn't have that pressure. I was always inclined with-- I always liked mathematics. I've always been good at it in school. So I've always had that curiosity.

But I was-- the things I liked in math was always the problem-solving part. And I think statistics and data analytics in general is the continuation of that, right? Because algebra can be quite abstract, with all the Greek letters and all that.

It all makes sense to me once we actually plug in the actual numbers. So when we plug in the data, and then we see what the equation gives, and try to understand if it's a good equation, a good model, or not.

ALEX MAIERSPERGER: Yeah, I love that. I think nature versus nurture-- and so certainly, the place-- it sounds like the place and the people where you were at different points really affected sort of where you ended up. And so what a great story.

And you talked about clinical research. And oftentimes, when we hear clinical research, I think it's easy to jump into the pharmaceutical space. A lot of your experience in clinical research was in the nutrition space. What is the main difference between that, between pharma research and nutrition research?

ANTONIO DE CASTRO: That's an excellent point, Alex. And definitely, I've lived through that. I can't tell you all the conferences-- life science, pharma conferences-- I've been to. And I get strange looks when I tell them I'm in nutrition. Like, what are you doing here?

Maybe if I can start with the similarities first, right? The same functions-- because there is a lot, notably around the roles within clinical research, right? So it would be a similar setup, where you have clinical project managers running clinical trials, data management, data managers, and biostatisticians.

So I was a biostatistician, right? And of course, medical directors, investigators, and all of the roles-- most of the roles-- are the same. But of course, there's a nutrition aspect. So usually, we would work with specialists, nutritionists, specialists in proteins or sugar reduction, whatever the case may be, whatever the product we are currently investigating.

And again, it's the same drill, in a way, where a protocol is made. We build ECRFs. There's a statistical analysis plan that is created at the forefront before analyzing the data-- and the rest-- like, the rest of the reporting team. So a lot of similarities, really, in terms of the process and a lot of the functions that are there.

When it comes to differences, one of the main ones would be really the product itself, right? Because of the effect of the products. And this shapes the clinical trial in a completely different way. The effects of food are generally smaller, shorter, and you need to monitor people for a longer period of time before you can see these differences, right?

So typically, a clinical trial in nutrition will be in a longer lifespan, in a longer time frame, compared to pharma, where effect of drugs can be immediate, can be within 30 minutes, within 2 hours. So that changes the design of a clinical trial, making them longer, in terms of the length, and also the effects that we're going to observe.

And this, of course, has an effect on the statistics, on the way I'm going to model the things. Because with a longer length of execution of the trial, I'm more open now to external variables that are affecting my trial. I cannot control everybody for six months, like lock them in one place, and then completely observe them. They cannot stay in a hospital for six months for a nutritional clinical trial. So those are the differences. And therefore, that affects the data I'm collecting, the way I am adjusting for the different biases that might come across there, and the like. So again, it can be a very interesting and long conversation, just around these topics of differences.

ALEX MAIERSPERGER: I love that. It makes sense, and really appreciate the background and both the similarities and the differences. In your experience in both the nutrition side and the pharma side, and

presenting and learning at conferences, are we closer to the promise of personalization in one or the other? Are we closer to personalized medicine or closer to personalized food and nutrition?

ANTONIO DE CASTRO: Well, it's kind of hard to give a-- how do you say-- an estimation of where we are. All these are relatively new. What I can say is that in both fields, we are definitely-- there is definitely a lot of interest, and we are definitely advancing in a lot of things.

So personalized nutrition is of course a thing. Again, a lot of people also want to use precision nutrition, for the same way that people want to use personalized medicine, precision medicine. And again, a lot of similarities in that regard-- looking into different types of data, notably genetic data that can inform what type of, maybe, nutrition that is more adequate or will have a different effect on the person.

Using those type of data as well to look into different risks that might occur-- that nutrition can maybe counteract at that level, at a nutritional level, rather than a drug level. So a lot of intersection there.

Definitely, that space is evolving, right?

And again, multiple angles to that question, because there's the adoption of new technologies, sensors, all the trackers, health trackers, that can, in the end, be used to inform about the patient, or just the consumer in general, and inform how that can affect the general health of that person.

ALEX MAIERSPERGER: You use that word, consumer, and patient, citizen, member-- all of these words get sometimes combined together. And so you have a background in consumer research, and then also in the economics and statistics sides. And so in a lot of ways, after what we've talked about, so after the clinical trial, after getting a medicine or a new food to market, health care-- now, you have the choice. And so health care and life sciences often don't act like other consumer markets. We often don't have the same range of choices, or maybe the necessary-- as consumers, maybe the necessary knowledge to make some of those choices for our own health. Is that true? Is there real consumerism in health care and life sciences?

ANTONIO DE CASTRO: That is an excellent point, Alex. I think the first question for that, that we need to ask ourselves, is that in this setting, in this health care and life science setting, who are the consumers? Who are we going to consider as consumers, right?

It can-- because again, there are multiple ways to look at this. It can very well be the doctors that are participating or running the clinical trials when we're talking about life science. But of course, I think the most obvious consumer would be-- or the most obvious equivalent of a consumer-- would be the patient, either participating in a clinical study or actually just a patient in a hospital.

But I think there are different angles to that. So maybe-- let me separate them in terms of life science and health care. In the end, I think they intersect a lot. There is-- we do expect a convergence between health care and life science. We are observing that convergence, especially with the pandemic happening.

But if I look into life science, I think everybody has heard about decentralized clinical trials or decentralization of clinical trials. And this is really a movement in terms of-- yeah, a movement to put the patient at the center, right? Make it easier for the patient to participate in the clinical trial.

This has enormous benefits in terms of adherence to the protocol, and just simply participation, right?

And some argue that it might even have effects on the outcomes, because then, there's less stress, right? I don't need to stay at the site, or I don't need to answer all these questions-- questions with the person in front of me.

So from a life science perspective, I think the consumerism is very much linked to that decentralization of clinical trials, right? Making it easier for the participants. From the health care side, we can draw parallels, right?

Because what I mentioned-- I mentioned patients. So the same logic applies, right? By putting patients at the center, I think that's really how we can justify consumerism. But I think maybe-- and this is my opinion-- that in health care, it might be a little bit more different.

We are so used to listening to the doctor and really taking-- just taking their instructions, trusting them with our health, that what they say is the best for us. I think that is changing, of course, and the main factor there would be information, right? The data that everyone and the patients are getting-- the abundance of data that's just available out there makes it that-- hey, I can probably-- if I read about something, a particular treatment that I'm curious about, and maybe I can experiment with, I can have a conversation with my doctor. At least, I should be able to have a conversation with my doctor to see whether that's adequate for my particular case or my particular situation.

ALEX MAIERSPERGER: Really interesting. There's a lot of negativity in the news-- certainly has been, and continues to be. Every time you jump on your favorite news source, you sort of get hit with a new angle of something potentially bad that's happening somewhere in the world. What's one thing that you're optimistic about? What keeps you going?

ANTONIO DE CASTRO: So to quote the Beatles, it's getting better. It's getting better all the time. So even with all the things that are happening now, of course, the pandemic is-- we're still deep into the pandemic, even though things are getting better or getting more used to it. It's becoming an endemic now, like we're living with it.

With the markets crashing, with the wars happening before our very eyes, I'm positive that all these experiences will lead to innovation, right? Will lead to new things that are being discovered in order to give us a better outlook for the future.

So again, COVID is an example in which we are seeing that already, right? The workplace has changed because of COVID. A lot of the companies are finding out that hybrid model works. And it has a lot of benefits, and that completely change it.

So the technologies that are supporting this came up during the pandemic. So I'm sure within all that's happening in the world today, there's also a lot of new things that are going to pop up that will be to humanity's advantage. And from a personal note, I am quite optimistic and quite positive about the future of being a host in The Health Pulse podcast to showcase the health care and life science scene here in Asia, and to speak with health care and life science industry leaders.

ALEX MAIERSPERGER: We're certainly excited about that. I can't wait to listen, and to watch, and to continue to learn. And so Antonio, thank you so much for your time today. I know there's so many demands on your time, and so really appreciate what we learned, and what you've shared, and how you expertly broke down so many of the trends and the things that we're seeing across both health care and life sciences. So really, thank you for your time.

ANTONIO DE CASTRO: Thank you for having me, Alex.

ALEX MAIERSPERGER: And as a listener or viewer, we know there's just infinite demands on your time. And so we really appreciate you taking a little bit of time and sharing it with us today. We know there is a lot of negativity out there, and so we hope that wherever you are, you have a chance to either find or be the good around you.

We also invite you into the comments here on YouTube or at our email address. If there are questions, comments, things that you would like to see, people that you would like to be on the podcast, or if you'd like to be on it yourself, please send us an email, [TheHealthPulsePodcast@SAS.com](mailto:TheHealthPulsePodcast@SAS.com). Thank you so much.