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In this episode Taren Grom, Editor-In-Chief of PharmaVOICE magazine, meets with Corlis Murray, Senior Vice President and Head of Engineering, Abbott.

Taren: Corlis, welcome to the PharmaVOICE WoW podcast program.

Corlis: Thank you for having me today, Taren. I'm happy to speak with you.

Taren: Oh, it's our honor. And I'll tell you, I am so intrigued by your background and I can't wait to dig into it and hear your story in terms of your career journey, and how you went from fast food to top engineer at Abbott. And then we'll get into your passion around STEM. So tell us about how you got started.

Corlis: Well, actually, to the point of high school and working in fast food, I recognized my career as having actually begun when I was in high school. And I do that because it was through my junior year of my high school that I was exposed to IBM and I had an opportunity to work as an engineering intern with one of their field engineers. And in some of my senior year, I worked at Norfolk Naval Shipyard with an industrial engineering group. So for me, that was my recognition and what I acknowledged as being the beginning of my career. Prior to Abbott, I worked for two other companies. I worked with Xerox and a company called Recognition Equipment, where I wore a number of different hats. And I attribute how I have continued to advance my career in Abbott with the foundation that was established between my early internships, and quite frankly, my early experiences.

But I've been with Abbott now since 1989, so well over 30 years, and the primary areas of focus that I've had include the areas of quality, operations, manufacturing, as well as engineering across several of our businesses. And my responsibility, I've been very fortunate that it's increased over time. My current role is that of a senior vice president for the quality assurance regulatory and engineering group at the corporate level and my team supports Abbott's businesses worldwide. We operate in 160 countries, and we're more than 100,000 employees. And I really do believe that it was my early initiation into exposure to engineers that I got to a point of, I guess, maybe recognition and acknowledgement in my own career where, as much as I feel I had been giving back over time as I had grown, I wanted to do something more



substantial that would help create opportunities for other young people in a similar fashion as to what I had gotten. So out of that was born the high school STEM program.

Tarlen: We're going to get into that high school STEM program in just a minute. But I'd love to know where did your passion or love of engineering come from? Was this a natural skill set for you? Is it something that just... because it is atypical, right, for girls to go into engineering?

Corlis: It is. It continues to be a bit atypical, unfortunately, but I would say that, like most of the students that I had the fortune of working with, I love math and science. It wasn't something that was just a subject to me. I really loved it. And I was intrigued and fascinated by it, but I didn't know what to do with it. So I was having a discussion with one of my math teachers when I was in high school, and she had started describing the field of biomedical engineering, which back at that time was in its probably infancy from a development standpoint as far as a curriculum offered by most universities. There were only a small number of universities in the US that had begun to offer that as a major. But probably within, maybe that same year or a year or that, I was called into my high school council's office and I was presented the opportunity to work for IBM. And I think it was having had a discussion with my math teacher about what am I going to do in life, and is there a way that I could apply the love that I have for engineering and science, and then that opportunity presenting itself, and I embraced it and took full advantage of it. And I think that really... you will see that I often use the term demystified. I think that's exactly what it did is, it took the mystery away of what I could actually do with math and science. And it was through the exposure to computing systems and we were problem solving, and I think, quite frankly, most of my career has been engaged around problem solving. And that's what I had the opportunity to do with the engineer that I work with in the field.

Taren: That's fantastic. And kudos to that high school counselor who recognized your talents early on, because you could have gone down at any kind of different path. Had you not been encouraged?

Corlis: That's exactly right. And I mean, it was easy during those days, right, for girls in particular, to be encouraged to become a teacher. And we need teachers and as I said, I credit my teachers with having steered me to consider something else. But maybe they saw potential in me with an ability to do something else and they didn't give up on me and I didn't give up on myself.

Taren: Well, and that's the biggest part of it, right? You recognized them what they recognized, and you were able to use that confidence to propel yourself forward, which I think is really what's missing when you start to talk with girls at that young age. You just don't have the confidence sometimes. And hence, let's talk about the STEM blueprint that you're in charge of, that you were instrumental in formulating at Abbott.



Corlis: Okay, so we recognized that Abbott alone could not reach the massive numbers of young people that deserve the same kinds of opportunities that myself and so many of my colleagues have had. So we wanted to come up with a way to further expand the program that we were doing because we believed we were seeing success in the program. If you were to ask what is one of the things that fundamentally I see very different in this program, then maybe one that's less structure, and that would be that I believe we increased the probability of success because we're exposing these young people to what engineering and other STEM majors really truly are about. So we take the fear away, and we do build the confidence because as you said, one of the things that happens is, these are smart, young people, but they don't necessarily have the confidence in themselves to be able to know what to do and their parents want to help them, but they may not know how.

So we developed the blueprint, and we were able to conduct a webinar as well as we have posted it on a website to make it available, a 30-page document that we created working with STEM connector, who is able to reach a lot more companies, if you will than us alone. And we're seeing downloads from it. We are seeing that companies have interest in wanting to help to make a difference in their communities, but may not know exactly how. So all the great things they may be doing with tours and professional speakers in class, they should keep doing those things, but by bringing a discipline structure program in that exposed young people to hands on work under trained professionals, will most certainly increase their probability of being able to be successful.

Taren: It's amazing, and it's great work that you're doing. Is this a program that could be replicated by other companies? And obviously, Abbott has a huge footprint across the globe, but is there a way to coordinate with some of your peer companies to help elevate what they're doing in STEM as well?

Corlis: It is definitely scalable, and it's practical for organizations of all sizes. We began as large as we are. We actually began our pilot with three students, one high school. And this past summer, we were working with roughly around 13 high schools, nine different Abbott locations, and 40 students. This is something that regardless of size of organization, it is absolutely something that any organization can do. Many organizations already have college intern programs. Our high school program almost directly replicates our college program. So we are doing things that it could be where individuals are assigned to work in cyber security. They could be in, let's call it the basic areas of IT infrastructure or application. They could be assigned to different types of disciplines of engineering, R&D. We even had a student working in patent law. So when you step back and you look at it, any company that is dealing with any area of STEM, science, technology, engineering, or mathematics, then they have probably a structure where they could bring in a number of students that they can able to handle and that's what's



really important is to make certain that you don't bring on more students in your organization as ready and able to support.

Taren: Great advice. Do you think that interest in STEM should be started being promoted earlier? High school feels a little bit late. What about junior high or is that too early for students and for schools to manage?

Corlis: No. Middle school and junior high is not too early by any stretch of imagination. It is actually a beautiful age to begin, and while I'm talking a lot about the high school program, Abbott has initiative that we actually do that touches the middle school and maybe even in some cases, elementary schools, depending upon where you are in the world. And so we invest a lot, and we have for decades, in STEM. And I would say that absolutely, companies could begin a partnership with a middle school or junior high school and then advance it. The high schools that we work with tend to either be Project Lead the Way schools or the International Baccalaureate program. And there is a feeder pool that comes out of middle schools that is associated with those same two programs.

So being able to identify a middle school that is STEM oriented would absolutely be a great starting point, especially for a company that may not just be ready yet to bring the high school program into their environment. They can start by engaging professionals with the middle school, and then maybe try following those students into high school and encouraging them, and actually then by that time, converting them into a high school program. Every advancement and every touch that you offer increases their probability of being able to stay in these fields.

Taren: That's excellent. And are you following these kids then once you get them involved in the program and seeing their progression through high school and then into college, and have you seen some of these students make their way into the Abbott organization?

Corlis: So we're doing more than follow. We were actively engaged with them. We've had roughly about 130 students to go through our program since inception, and that goes back to 2012 when we began our pilot. Ninety-seven percent of them have actually gone on to study STEM in college and that is, if they converted and remain with us or if they chose something else. Some of the students as they're finding their way, they may choose a field of STEM like ocean engineering, for example, and we don't hire ocean engineers but still a field of STEM. So we recognize that and we continue to encourage them to advance in their profession. Now, however, we have started seeing conversion because our students that began with us have started graduating out of college, and as of today, we have 11 that are working with us full time, eight of which are actually women. So we are seeing that pull-through now from converting from our high school STEM program, which we consider to be our entry-level development program formally and convert from high school into college, from college into our professional



development program, from our professional development program into full-time Abbott employees.

Taren: That's amazing. Congratulations. You must be filled with pride. That is an incredible accomplishment.

Corlis: Yeah, it is. I mean, I'm really excited about it, but I'm more excited to see how much support we get across our organization. I had a question posed to me once with. Sometimes it can be difficult to get people to want to mentor young people or make time to support them through efforts like this and how you conquer that. And I told him I couldn't relate to that question because my situation is the total opposite. I have more leaders coming to me, wanting to take part in the process than what we're able to supply talent to them. So I don't know how to respond to a lack of support from the organization because we have so much support here in this company for this development program just as we have for all of our development programs.

Taren: That's wonderful. So let's talk about what else Abbott is doing to promote STEM in its communities. You talked about going into maybe even the junior high and other community programs that Abbott is fostering.

Corlis: Yes, we do teacher programs, we do parent programs in some of the local schools. We've gone into communities that are water-constrained communities, such as areas of Arizona where we may have plants, or areas of California where environmentally, we want to make sure that we're helping individuals to learn more about how to conserve water, to use water and what have you. So we do go into communities to teach not only the students, but also parents to help raise awareness. So we have initiatives through the Abbott fund that we go in and do that. We also are sponsors in two different Abbott locations for FIRST Robotics, and we've been supporting FIRST Robotics for a number of years and we're very actively engaged with scientists and engineers coming from across the locations where we have those teams working directly with the schools on that. And then outside of the US, we have a number of different initiatives that are done to engage students with science and with engineering, and it's often done by the local. It could be anywhere from commercial teams that are engaged in them too, because a lot of those individuals have science backgrounds and engineering backgrounds, to the local manufacturing sites that will do science fairs for students in the community and things of that nature. So Abbott contributes back to our communities on a lot of different fronts when it comes to STEM.

Taren: It's very exciting to hear because it really shows Abbott as a healthcare company's involvement in its local communities. So that's wonderful. And as you say, you have so many more executives who are willing to be involved, then you have the resources to lend them to.



So it's just going to continue to grow and hopefully, you'll get that more response from some of those high schools and more students will come on board, as well.

Corlis: Absolutely.

Taren: Let's change subjects just a little bit. You have noted that women of color are sorely underrepresented across all areas of senior management. And in fact, you are the only or one of the only African American women who is a top engineer at a fortune 500 company. So how does that feel to be in one of just only in a room full of men? And then let's talk about what's some of the barriers are in terms of women of color being promoted to senior and executive roles.

Corlis: Yeah, I think for me, when I think about, what does it feel like? I've been at this so long and I've been one of very few, if not only female, and/or a person of color for so long in meetings that you tend to acclimate to your environment, but when your environment is also one that fosters inclusiveness, it makes a huge difference. And I have been truly fortunate to be able to be a part of an organization where male or female around me, there's been support. And I've had mentors that were women, and I've had mentors in this company that probably more that have been men that I've learned from, that have served as advocates for me to be able to advance.

One of the things that I think that is important for, especially women in STEM fields to be open to, is that value learning and receiving mentorship from anyone, from people that look like you and some people that don't look like you because, the fact is, is that we've got to be able to navigate the complexity of the business landscape and all that it brings, and it does bring diversity. So we want to understand that, and I believe that I've tried to leverage my experiences to work, to help me in being able to do that. I often will coach my protégées, making sure that you see a barrier not as a barricade to prevent you from doing something, but it is something temporary that you have to learn how to work through, and mentors are key, I think part of that. What I do believe that continues to hinder advancement from women and people of color from entering these fields is still a lack of seeing people that look like them, and even in some cases where they see people that look like them. Our willingness to be open to having hard conversations about how you can overcome those obstacles to be able to advance yourself and really receiving feedback, genuinely receiving it, and being committed to doing something with that. And sometimes that means that you've got to understand the politics of business as a component of that.

Taren: I think that's really an important piece of it. And going back and talking about mentoring, you give so much of yourself to mentoring that next generation. How do you carve



out the time amongst all of your other various responsibilities? It's obviously very important to you. And what does that show then to others within your organization?

Corlis: You probably just touch on something that is so dear to heart to me because I believe that the energy and the time that I make for others, I devote same kind of energy and time for my organization. And for me, it is I believe fundamentally, that when you're passionate about something, you really care about it and you want to make a difference, you will find time and you'll find a way to do it. I believe in being efficient. I believe in leveraging the resources that are around me. I do not believe that I have to be the one to do everything. So there are times when I may come up with an idea that, thankfully might be a really good idea, but I may not be the only person and the single person to execute that idea, so you learn to leverage the value of complete knowledge, total knowledge, and that is bringing others and around you to be able to help in the process. When we go back to even the concept of the high school program that began, yes, based on my experiences, but how are we able to do it, is me partnering with our Human Resources Organization and University Relations, and them helping me to see the way to do it. And how do we get better and better at refining a program over time? It was partnering with leaders that run their college intern program, so we can start duplicating and understanding how do we take this program, and we replicated for minors, and really be able to do that. And then continue to build on that success is the corporation's commitment to say, we see this as a part of our talent pipeline. We're committed to helping these young people to convert within our company. And then to go so far as to say, you know what, it's not just about us, it's about the community of our industry and across industries that all need these skill sets. So I believe that when you really are committed to something, you want to make a difference, you find a way to get it all done.

Taren: And I hear it in your voice. There's definitely a passion for this and for giving back. Obviously, you are a huge role model and have a huge bit of visibility in terms of this topic, even featured in *The Washington Post*, *Forbes*, *US News*, and *World Report*, etc., etc. How do you manage that limelight? And what has been the response from folks in regard to the topics that you're discussing? Has it been exponentially advantageous to what you're doing?

Corlis: I think so. I mean, it's really filled my heart to see the responses. I received LinkedIn comments from individuals early in their career that may have been struggling and they felt that it gave them the vote of confidence that they needed, where they may have been thinking about doing one thing and this helped them to see, hang in there. It is worth it when all is said and done, and they will continue to push forward to achieve their life aspirations. I've had entrepreneurs to reach out and say, you know, I've been considering trying to come up with something like this or something to do our way to give back. We've had academia reach out and want to help build bridges or they make us aware of problems that they are already offering in their areas and how potentially I was made be able to be leveraged with theirs. We've had



downloads on the blueprint, as well as posting of some of the material that we've made available by the Society of Women Engineers, and I was really impressed and honored to see why NASA agree to pick up one of the articles that we most recently ran in the *Wall Street Journal*.

So I would say that we are seeing more externally with how people are being touched and affected. We have parents to come to us and have reached out to us and say that the exposure that they've gotten has helped their child matures so much, that they are so grateful, or parents that didn't understand what their children wanted to go into. They have a better feeling for that, so therefore, now, they know how to better encourage their child. So from all walks of life, we're seeing so many different reaches and contacts and we're trying to respond to many of them to the best of our ability, so it's coming from so many different places in total.

Taren: That's wonderful. Speaking just a little bit of housekeeping, if folks wanted to download the blueprint, how could they go about doing that?

Corlis: So they can download the book at www.stem.abbott.

Taren: Perfect. Thank you. Along the way, you must have... And I'd loved what you said about barriers, not barricades, but you had to have run into some obstacles along your career journey. What advice do you have or lessons that you learned along the way that helped you to achieve the success you've gained?

Corlis: Taren, I'm going to come back to something that my mother told me many, many years ago. And that is that, you have as much right to success as anyone else. And when I'm sometimes so stuck or don't feel that I can't totally see my way at that moment, I reflect and I allow that to reground me, and then I gain energy because I recognize that my failure to be able to understand how to navigate barriers that I even today may still run into an obstacle, let's say that I may still run into. If I don't continue to push forward, then what message am I sending to those that are watching me? And how do I continue to help pave the path for those that will come behind me. I had a protégée to ask me, she made the comment to me once and she's a little deep further into her career now, but she said, you're always talking about how great the Generation Z is, and all of the great work that they're doing. And she said, what makes them so unique to you? And I said, one, the young people that I work with, what I see in each of them is the best of almost every generation has come before them. And I also see that we have a responsibility to pave the path for those that will come behind us. It's not just about our own path, but it was the path for those that follow. And for me, I think I allow that to continue to serve as a driver, for me not giving up. I don't even know that I know how to give up. I recognize when I need to maybe move on from something, but that within itself is a strength.



Taren: This is a clumsy analogy, but you're creating more than just a path and you are really creating a snowplow effect, where it's much bigger than one single line where one person can come behind you. You're creating an entire movement, so that many people can come behind you. And for that, everyone should be grateful. So thank you so much. You talked a little bit about your leadership style and the fact that you believe you can't do everything, nor should you probably do everything, but how else would you define yourself as a leader?

Corlis: I would describe my leadership style as being one that is inclusive. I am straightforward. I believe in understanding those that are around me because I don't see how I could bring a team together without understanding the strength of each member, as well as development needs that they have. And I tried to leverage the strength of each member of the team that's around me. I believe in touching every level of the organization, so you will find me, if my housekeeping team is in a meeting, and third shift or something, and I'm walking around, you're going to see that I stop and engage with them, or if it's a group of engineers that are working on a project and I'm out, touring their project with them, I'm going to be actively engaged with them on their project. So for me, it's about making certain that I am treating every level of the organization with the utmost respect, hearing what they need and hearing what they feel that I need to provide that I may not be providing. So the feedback works both ways. As I'm able to receive feedback from my team, then that should help to strengthen me as a leader, to be more effective in providing and serving them. I do believe in servant leadership, and I try to embrace all that it represents.

Taren: That's excellent. Is there any advice you would give to your younger self, something you wish you knew then that you know now?

Corlis: Yeah, I would say for sure, I would tell my younger self to trust myself more, and to not allow the self-confidence to be shaken. So when people see me today, they see a person that does project confidence, that has strength, but it is because I have overcome so much over time. And I would go back and say, you know, Corlis, you can do this, you know, you've got this. I would tell myself to continue to maintain that hard work ethic because that's something that I've had most of my life, but I would remind myself of how important that is and value the need for learning over time how to create, let's call it an integration of other things in life in addition to work. Because outside of work, we have life that has to coexist with that as well. It took me a while... my husband actually was key in me relocating for the first time that I did a relocation after being married because I was anxious about that. And his military background and his training, I think, helped me to become less fearful of it.

So I would tell my 17-year-old self, it's okay to be mobile as you advance in life, to be agile. It's okay to move away from those things that are the most familiar to you, so that you can learn how to be flexible and adaptable into new environments if you will, because that's critically



important in order to take some of those next steps and those moves that may come as opportunities later in life. Now, while you hear me talk about value and feedback, I can't say that I've always been there, right? So I would tell my younger self, embrace feedback, know that it helps you to become stronger, know how to filter those things out of the most important to you, so that you become a better version of yourself and you're more aware of what you need to do to be positioned to advance your career. And I would say that, remember, when people say the sky's the limit, it truly is. And if you can try to envision it, you can strive to make it happen.

Taren: That's great advice for everyone. So thank you so much for sharing those personal insights. Finally, I would love if you could identify, and I know it's going to be tough because you've had such a storied career, one wow moment that either changed the trajectory of your career or that truly inspired you to do something to reach further.

Corlis: Yeah, I think I'd like to focus on one that just continued to inspire me to reach further because, as you said, I've been extremely fortunate to have a number of wow moments that have advanced me professionally. But that something that I'd say makes me want to strive even more, to do more is after one of the recent media engagements that I had. My oldest granddaughter, I found out, was on her way to school and she was actually watching the broadcast on her phone while she was on her way to school. And ever since then, it's two things she's consistently done, she's worn a STEM t-shirt most every week and she has made her mind up that, yes, she is going to be an engineer, but she's not going to be an engineer just for anybody. She's going to be an engineer for Abbott. And so, for me, that is like, yes, you're touching, not only the community and the young people I work with, but I'm touching my family too. And my oldest grandson, which is her 13-year-old brother, I just found out also after that, is that he posted on his Instagram account, I'm so proud of my grandmother. So things like that you don't actually think about, that for me is what it's about. It's like, yes, I want to make a difference that I will continue to work hard to make a difference in the lives of our communities, this company, its employees and all we serve, but to know that within your own family, you're also making a difference, I couldn't ask for a greater inspiration.

Taren: That is so totally cool. I have chills. That is amazing. I can't imagine. What is your granddaughter's name? Are we allowed to say?

Corlis: Yes. It's Arianna. Arianna is in a video with me that our public affairs team did also.

Taren: Very awesome. So what a role model you are, again, not just for your community, the company, but for your family as you say? You're not creating ripples, you're creating waves, and that's just an amazing legacy. And for your grandson to step up also, now was that partly because his younger sister said that or is it a true calling?



Corlis: No, no. They both are really, really smart in math and science, and I think he did this on his own. As a matter of fact, his mom just happened to be perusing his account, and she saw the posting, and so we didn't even know that he had posted it, and he's really quiet. And so I was just so happy when they told me that, Trey put you on social media and I was like, what, what are you doing? He said he was so proud of you, and I just couldn't ask for anything more special than that.

Taren: Yes, for a teenage boy to put his grandma on social media, I think that's about the pinnacle of everything, right?

Corlis: Exactly.

Taren: That is awesome. What a legacy you are creating and living, so I can't thank you enough for being part of our WoW podcast program. It's been fascinating to learn about your journey, and I look forward to see what you continue to do.

Corlis: Oh, thank you so much, Taren. And thank you for the opportunity.

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