



Reflections on the Shifting Paradigm Surrounding Food Allergy Diagnosis and Management with AAAAI President Robert Wood, MD, FAAAAI

David Stukus: Hello, and welcome to Conversations from the World of Allergy, a podcast produced by the American Academy of Allergy, Asthma & Immunology. I'm your host, Dave Stukus. I am a board-certified allergist and immunologist and serve as the Social Media Medical Editor for the Academy. Our podcast series will use different formats to interview thought leaders from the world of allergy and immunology. This podcast is not intended to provide any individual medical advice to our listeners. We do hope that our conversations provide evidence-based information. Any questions pertaining to one's own health should always be discussed with their personal physician. The Find an Allergist (<http://allergist.aaaai.org/find/>) search engine on the academy website is a useful tool to locate a listing of board-certified allergists in your area. Finally, use of this audio program is subject to the American Academy of Allergy, Asthma & Immunology terms of use agreement, which you can find at <http://www.AAAAI.org>. Okay, we are very excited to welcome our first guest to the Conversations from the World of Allergy podcast series. Dr. Robert Wood is a professor of pediatrics at the Johns Hopkins University School of Medicine and chief of the Eudowood Division of Allergy and Immunology in the Johns Hopkins Children's Center. Dr. Wood is an internationally recognized expert in food allergy and childhood asthma and has published more than 200 manuscripts in peer-reviewed journals. Dr. Wood has served on the board of directors of the American Board of Allergy and Immunology and the American Academy of Allergy, Asthma & Immunology, where he is currently serving as president. Dr. Wood, thank you so much for taking the time to join us today, and welcome to the show.

Robert Wood: Thank you, Dave. It's a pleasure to be here.

David Stukus: Excellent. Well, we are halfway through your presidential year. What elements of your tenure have been the most satisfying so far?

Robert Wood: Well, I'd have to say that it's really the working with the team around me. Every week we have a planned agenda and then issues that come up that we never planned on ever having to encounter. But with the group that works with the president, including our new EVP, Tom Fleisher, the Executive Committee of the Board, the Board of Directors and our great staff at the EDI, we're really well-poised to take care of virtually everything that comes up in a very timely manner. And that teamwork, I honestly think, has been the most satisfying part of this first six months as AAAAI president.

David Stukus: So it sounds like it takes a village to run an organization such as ours.

Robert Wood: It does, and then the last piece of it is something that my predecessors really established, which was a great working relationship with the College. That's not always been the case, but over the last few years it's

gotten better and better, and we really have a weekly conversation with the College about issues that affect the entire allergy, immunology community.

David Stukus: That's great, and I know that our members receive wonderful communication from yourself and through the academy as well in regards to everything that you're working on, so thank you for that. What advice can you offer for members of the academy who themselves are interested in leadership roles within the organization?

Robert Wood: Well, that's a great question and certainly one of the most important issues to keep the organization moving forward, and my real advice is to get involved early and often. Become an active FIT member. Join the new Allergy Assembly. Offer to join committees and then get involved in committees, and we also have formed over the last six or seven years a leadership institute that has produced a lot of the rising stars in our specialty, and we really encourage people who would be interested in leadership roles to apply for the leadership institute, and with all of these different sort of paths toward leadership, I think there's a real opportunity for whoever wants to get involved to truly be involved.

David Stukus: Excellent, and I know that the members who are interested and who are listening can visit the website at <http://www.AAAAI.org>, and also stay tuned for the many emails that come our way announcing such initiatives as well. Now, to switch gears a bit, you have a long and storied career focusing on various aspects of food-allergy research. How have you incorporated this into your presidential initiative for this year?

Robert Wood: Well, David, as I think you know, the presidential initiative revolves around providing optimal care to the food-allergic patient, and when I think about it, that's actually how I've spent my career, trying to provide optimal care to the food-allergic patient, and that certainly involves day-to-day interactions with patients in the clinic, but it also involves educational activities and working with trainees, all trying to get the message that for each individual patient, you want to get the diagnosis right and provide the best care for whatever that patient may need to keep them safe or potentially intervene in making their food allergy less of a burden on their life.

David Stukus: So it sounds like you've been able to incorporate aspects of your own career, both clinically and in the field of research, and really apply it to your year as president. Have there ever been any challenges that you did not anticipate in regards to implementing that this year?

Robert Wood: Well, it's a rapidly changing landscape, and there are lots of challenges, especially, as I think we'll talk about over the next few minutes, related to emerging therapies for food allergy and really trying to come to grips with where the field stands right now, what we know and what we don't know, what will be best for patients, what the risks and benefits are, and really quite a wide spectrum of opinions within our specialty about how this field of treating food allergies should move forward. So that's something we're working to try to sort of carefully address, not trying to in any way obstruct progress but also trying to make sure that the first bullet in my presidential initiative, which is a rational approach to the treatment of food allergy, is really accomplished.

David Stukus: Excellent. Now, I often get asked the question, "Why do so many children have food allergies today? No one had food allergies when I was a child," and I'm sure you've heard this many times as well. How do you typically answer?

Robert Wood: Well, I certainly hear it every day in clinic, and I wish I had a good answer. What I typically say is that we do agree food allergies are more common. It's not that they didn't exist 30 or 40 years ago, but they're clearly more common and that there are almost certainly multiple factors at play, and I actually believe there're probably multiple factors at play that we've not even come to grips with yet. So I might talk for a minute about the hygiene hypothesis, talk a little bit about nutritional factors, other environmental factors, but really say that this is a field that still has more unanswered than answered questions and that ideally, if we knew the answers, we could intervene to prevent food allergy but that this is something that we don't know enough about the root cause of this rising prevalence in food allergy to truly implement changes.

David Stukus: You certainly highlight how complicated this all is, and I agree. I wish we had a single answer, but we just don't have that at this time. Now, if I may ask, what year did you finish your allergy and immunology fellowship training?

Robert Wood: 1988, 30 years ago.

David Stukus: So what aspects of food-allergy diagnosis and management do you feel are most different from when you first started practicing 30 years ago?

Robert Wood: Well, I'll start out by saying, David, that they're far more the same than they are different. We still practice food allergy largely through avoidance and preparing patients to deal with reactions that might occur. I can tell you that there are some negative aspects that've occurred over this time period, and that would be that as testing for food allergies has become more widespread, I actually think we've seen an explosion in misdiagnosis of food allergy, and that actually gets to the second bullet in my presidential initiative of making the right diagnosis. Now, on the positive side, more allergists, thankfully, are willing and able to do oral food challenges to help sort out which of those positive skin tests or blood tests represent true allergy, and that, thankfully, has expanded greatly partly because the patient need demanded it. There were so many patients that they couldn't just be referred to specialty centers like yours or mine to have their food challenges done. So that's been a positive aspect. Now, I will say the biggest truly positive change has been going from an idea that we had in the 1980s and 1990s that the only way to manage food allergy was going to be through strict avoidance to really thinking that if a patient can tolerate a food, it is likely best to have that food in their diet, maybe even if they're having some mild symptoms with it, maybe even if it is causing a bit of their atopic dermatitis, and that's been especially the case with milk and egg allergy, where we've learned that half or maybe a little bit more than half of all patients with milk and egg allergy can actually tolerate the food in a baked form, and that's been sort of a life-changing change for tens of thousands of patients who are no longer strapped to a strict milk or egg avoidance but can actually eat it in the forms that they tolerate. So that's been a real game-changer just over the last 15 years.

David Stukus: Yes, I also agree, and I find that families find it very helpful when you can loosen some of the strict restrictions that're placed upon them in regards to the food-avoidance measures. Do you have any advice for a clinician, whether it be a primary care physician or allergist or nurse practitioner who is tempted to perform IGE testing on food that somebody is eating in their diet without problems?

Robert Wood: Well, the advice is that unless you have true concern that that food is causing something untoward, you're only going to get bad data back, and then you have bad data that you need to deal with. We would strongly recommend that no one order food panels and that no one order routine food testing on patients with, say, mild atopic dermatitis, and this is not just in our world. It's in the world of primary care, where you and I see patients every day who've had testing done in their pediatric office that wasn't really necessary but led to test results that then had to be followed up upon if they were lucky to get followed up upon rather than just put on strict avoidance of that food that they'd previously been tolerating.

David Stukus: It sounds like a lot of folks are treating numbers and not patients in many different realms of health care.

Robert Wood: It's especially a risk in our field, because our tests are not very good, and when you have a test where half or more positive tests are wrong, you start out with a chance for a lot of bad medicine, unless, as you said, you really look at that patient individually.

David Stukus: Thank you. I think that's very well-stated. Now, over the past 28 years or so, we've had monumental changes in food allergy research and also management, which you touched upon. What would you consider to be some of the most important breakthroughs in the research realm?

Robert Wood: I could probably mention a couple of dozen, but I'm going to highlight three. The first is this aspect of baked milk and baked egg, which really has been a practice changer for all those young kids that have milk and egg allergy, where it not only makes their life easier but where we have really strong data that their path to tolerating all forms of milk or egg will be significantly hastened if we're able to get the food in the baked form in their diet. The second I would highlight are understanding of prevention, and we have an enormous way to go to really be preventing allergy, but we've gone from guidelines back in the 1990s and 2000 to 2008 that really were unhelpful or even harmful to now guidelines that are potentially going to at least prevent a modest number, maybe more, of peanut allergy, and I think this is an enormous breakthrough, and then, thirdly, and maybe most obvious, is development of the immunotherapy approaches that are moving toward clinical use, and this is something that we used to talk to patients about 15 and 20 years ago but really didn't have any controlled studies until about 12 years ago. So this is a field that's moved very rapidly from thinking at one point it would not be possible to feed a highly allergic patient what they're allergic to, to now having treatment modalities that are moving through the FDA approval process.

David Stukus: With all of these landmark studies and changes in the way we think about food allergy prevention and even treatment, it can make your head spin, and I know that there are skeptics out there, including the parents and the patients that we're trying to reach and teach about this. Do you have any advice or your own approach as to how to approach that and discuss the rapidly changing research and evidence?

Robert Wood: Well, I think skepticism is the best thing they can have, and what I worry about more are people ready to charge in anything because it sounds good, and the reality is that the treatments that are moving forward are huge advances compared to having nothing to offer but have limitations. They have risks, and I think that it's most important that we are very careful in discussing these possibilities with our patients, to be clear about the risks and the benefits, what they really mean, how different your life will or will not be when they're being treated,

and I would actually congratulate patients who come in skeptical rather than coming in with intent to be treated, no matter what we say about the potential downsides.

David Stukus: That's a great approach, and then it can hopefully open up a productive dialogue as well. Thank you. Now, where do you believe the next breakthrough in food-allergy research will occur?

Robert Wood: I think the next breakthrough, and it's going to be breakthroughs because there's probably going to be many approaches, but it will be in the next generation of food allergy treatments, and while we're going to have the first generation available, I think that over the next 20 years or so we're going to see treatments that are far more sophisticated and far more effective with less risk. One of the great things that's happened, and this has happened only in the last five years is that pharma has become interested in food allergy. When you go back 10 years ago, we had no pharma support for food allergy, and now we have a dozen companies who are actively involved in bringing products to study and hopefully to market. My dream is that in 20 years, it might take 30, but that in 20 or 30 years we'll be using the word cure around food allergy treatments. That's a big dream, but I think with a bunch of different novel approaches now entering Phase 1 trials, a number more that're going to enter trials in the next 1 or 2 or 3 years, we're really going to be seeing a next-generation of treatments emerge in 10 or 15 years that will represent the next big breakthrough.

David Stukus: That sounds very exciting, and I know that there are a lot of very dedicated researchers working towards those goals. Now, in the world of asthma, our management of individual patients has been revolutionized by our ability to apply phenotyping and use of biomarkers. Do you anticipate that we may be able to take a similar approach to patients with food allergy?

Robert Wood: I certainly hope so, and it's a challenge, but it's a challenge we have to meet, and we need to meet it in a couple different ways. One will be hopefully identifying the right treatment for the right patient, but even before that, we need biomarkers that would help limit the need to do oral food challenges, something that would be far more sensitive and specific than what we're using right now so that we'd be able to reduce not eliminate but reduce the number of food challenges needed, and then one of my biggest worries is that as these treatments become available, we not only want to have biomarkers to identify the right treatment for the right patient. We need to have biomarkers to identify response to treatment. We know that doing food challenges routinely may be difficult, and patients who are being treated will not really know the degree of protection that they have without a food challenge unless we're capable of developing a biomarker, or really it will be a panel of biomarkers, that will help identify the degree of response that someone has achieved with the treatment that they've chosen.

David Stukus: We've touched upon this a little bit so far, but if you could take a moment to please summarize or add additional thoughts, what aspects of food allergy diagnosis and management are most in need of additional attention?

Robert Wood: Well, I'll repeat what I just said about biomarkers and better diagnostic tests. The second is to sort of expand a bit on the prevention idea, because I don't believe that the current prevention guidelines are going to make a huge dent in the prevalence of peanut allergy, and they really don't provide direction for other foods. So I think we need a huge amount of more work related to prevention, both to expand what we know about early

introduction of peanut more widely to the community and to address the other common food allergens so that we can really stop worrying about treating food allergy because we've gotten good at preventing it. I tell my fellows we'll probably be treating it, maybe even curing it, before we're effectively preventing it, so they have a long future ahead of them. But I think that's something that's in great need of future study. And then lastly, as we already sort of alluded to, to really keep charging ahead seeking this next generation of therapies.

David Stukus: Okay. Speaking of which, with the anticipated arrival of FDA-approved products to use for peanut immunotherapy, what challenges do you think we will all face in regards to implementation and use of these products?

Robert Wood: Well, we could do an hour podcast on this question, and I think there are challenges we can anticipate. There are other ones we don't even know about yet. But I think they relate to the patient side and that we need to be able to really educate patients about the realities of these therapies, the risks and benefits, and help them make educated decisions. From the provider's side, every allergist is going to have to sort of think through which of these approaches is going to be suitable for their office, whether they can really ramp up to do a medium or large scale OIT program, and that's something that is going to be, I think, quite different from one setting to another. There are also some nonmedical aspects of this related to the finances of treating food allergy, and there are things we really don't know yet about out-of-pocket costs for patients about provider reimbursement, and these are no doubt going to have an impact on how these treatments roll out. So I think the challenges are certainly being considered. They're very smart people thinking these things through, but it's going to be a process that will take, I think, several years to work through in a way that we become comfortable with.

David Stukus: I've heard you mention a few times in regards to the topics we're discussing the importance of thoughtful implementation. Would you agree that that's really at the heart of what we need to do with our testing and management of patients and new products and things along those lines?

Robert Wood: It is, and it's so easy for a patient to be excited thinking we've created a cure for food allergy. But they need to know the realities. What's been created are treatments that will give them an element of protection but will not allow them to actually eat the food, will not get them away from carrying an Epi-pen, will be a lifelong treatment as far as we know, and patients really need to come into this process with a realistic picture of what the treatments do and do not offer.

David Stukus: I think shared decision-making will be more important than ever as we move forward.

Robert Wood: It's going to keep us busy. These will be long visits.

David Stukus: Yes, they will. Now, what is one actionable recommendation that you can make to allergists that're listening or abroad that can help them immediately improve the care they provide to patients with food allergy?

Robert Wood: Well, I could go back to talk about diagnosis, but I'm going to go to something very straightforward, and it's the fourth bullet in my presidential initiative, and that's treatment of anaphylaxis, and I think that's something we can all do better that's completely actionable this afternoon in clinic is to make sure that every patient is fully equipped to deal with their next accidental reaction with an action plan that is clear and

concise and with 24/7 access to epinephrine, and that is something that every time a new study comes out about these issues, it's shocking how few patients were actually prepared and how infrequently epinephrine is administered in the face of an anaphylactic reaction. So that's something we can take to clinic this afternoon and take action upon with each individual patient.

David Stukus: Excellent. Thank you for that. Now, to switch gears a bit, we know that registration for the 2019 annual meeting in San Francisco is open. What're some of the highlights that attendees can look forward to during this year's meeting?

Robert Wood: I'm excited about the meeting. The program is in place, and I want to thank and congratulate the AMPC, this year being led by Dr. David Chaplin, for working tirelessly to put together a program that will provide the best in CME but also the best in cutting-edge science for all of the topics that we deal with in our specialty, which, as you know, are quite broad. If you want to know about food allergy, you'll be very pleased, because it is really a meeting that is jam-packed with the best education and research in food allergy.

David Stukus: I'm excited for it myself, and I think today's conversation will be expanded upon even more so in person in San Francisco, and, like you said, we'll have excellent members and individuals there to help stimulate some conversation among everybody. So that's great. Now, Dr. Wood, you are an extremely busy man. I can't thank you enough for taking the time to be with us today on our first recording podcast for Conversations from the World of Allergy. Before we sign off, do you have any additional thoughts that you'd like to share with our listeners?

Robert Wood: The only additional thought, I mean, there could be lots, but the main one I want to put forward is to thank you and the staff working on this for a new initiative in the AAAAI, and when we started looking at some needs a few years ago, we clearly saw the need for a better website. We also saw, and I think thanks to input from our younger members and things, a real need to involve social media in a very central way within the academy in terms of its ability to get messages out and be in touch with our members, as well as the public. So thank you, David, for taking on the responsibility to lead this. We see it evolving pretty rapidly, and I think this podcast is a great start in the program that you put together.

David Stukus: Thank you for saying that. I'm honored, and, quite frankly, it's a lot of fun. So I think it's worthwhile as well. We hope you enjoyed listening to today's episode. Please visit <http://www.AAAAI.org> for show notes and any pertinent links from today's conversation. If you like the show, please take a moment to subscribe to our podcast through iTunes so you can receive new episodes in the future. Thank you again for listening.