TAVR in Prime Time: An Interview with Manuel Reyes, M.D.

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Manuel Reyes, M.D., is an interventional cardiologist at Houston Methodist Hospital. He began performing transcatheter aortic valve replacements (TAVR) in 2011. He is an investigator in multiple TAVR-related clinical trials and recently coauthored a review of TAVR outcomes in the *Methodist DeBakey Cardiovascular Journal* with Michael . Reardon, M.D.

I sat down with both authors to ask them about their experiences on the frontlines of the TAVR revolution and their message to physicians not yet acquainted with the procedure. This transcript has been edited for length and clarity. My interview with Dr. Reardon will be published next week.

How has TAVR changed your interventional cardiology practice over the last several years?

MR: Interventional cardiology has been around for decades, but thanks to e pansions in technology, we're now moving into doing bigger and more complicated procedures, which is increasingly blending our e pertise with the surgical frontier. TAVR is a natural place to play with that overlap.

TAVR was originally created because we didn't have options for people who were really, really sick people who had critical aortic stenosis, who we wouldn't dare send to surgery because they would probably not survive. Critical aortic stenosis is a deadly condition itself, so we didn't like having zero options for our patients. TAVR was conceived as a minimally invasive way of providing these patients a valve replacement option.

During the initial TAVR trials, the patients did great it was so much better than not being able to do anything. Since then, we've seen a dramatic evolution in technology. TAVR is no longer ust reserved for people who are not surgical candidates. We have advanced the use of TAVR into other surgical groups. TAVR now has an FDA indication for intermediate-risk patients with 75% less mortality and stroke when compared to surgery. To further increase potential indications, we are currently enrolling in our low-risk TAVR trials. We are very e cited to see how that turns out.

Manuel Reyes, M.D.

How do you predict the relationship between surgery and TAVR will progress over the years?

MR: I don't think you're ever going to see surgical valve replacement go away. We're always going to have a need for open procedures for certain patient populations. That said, I think that we are definitely seeing a decline in the number of patients for whom open heart surgery is their only option. TAVR technology is evolving very quickly. The valves and delivery system are improving and we are getting better at the procedures, so the shift to TAVR is just a natural evolution. We are increasingly discharging patients home the day after the procedure—that would have been unfathomable before TAVR.

Has TAVR changed the working relationship between surgeons and interventional cardiologists?

MR: Oh, absolutely! Before TAVR, very rarely would we sit down and discuss options for a mutual patient together. Rarely did we bring our different expertise together for a single case.

Because of TAVR, we now have that kind of collaboration. I think one of the greatest things that TAVR has brought to the medical community—beyond the ability to treat patients we weren't able to treat before—is this platform to bring two specialties together. Now we say, "Wow, I never realized you could do that!" We're learning from each other and making each other better. I've seen a phenomenal symbiosis through this entire process. I think we have a greater appreciation for our surgeons and what they do, and vice versa.

If a cardiologist or PCP is evaluating a patient for aortic stenosis and considering TAVR, what are key things they should look at?

MR: The thing that you should focus on is whether your patient is symptomatic. If they are, even if symptoms are relatively mild, the patient should be referred urgently to a surgical center or a transcatheter valve center. However, it's not always obvious if a patient is symptomatic. Our patients are very adaptable and may not think they're "feeling bad," but will notice that they've cut back on their activities because they're starting to have limitations. Severe aortic stenosis does not happen overnight; it's a very slow, deliberate process and patients might not realize how bad they're feeling. It's such a steady, slow decline that the ultimate phase of severe symptoms can be recognized too late.

We're finding that we need to recognize aortic stenosis in our patients earlier, even before the obvious symptoms. Whenever we see a bad echocardiogram, we need to have a sit-down evaluation with the patient and say, "Well really, how are you feeling? Let's talk a little more. Are you able to do now all of the daily activities you were doing a year ago? If not, why? Are you scaling back intentionally?" If they truly don't have symptoms, a formal follow up must be mandatory. These are the questions that a primary care doctor or general cardiologist can ask to help determine who needs to be treated.

What information is helpful for you to have from the referring doctor when they send a new patient to you for evaluation?

MR: First of all, I want to know how healthy this patient was before they were diagnosed with aortic stenosis. Are they very sick? Do they have lung issues, kidney issues, or liver issues? What can you tell me about their overall health? Second, have they seen a cardiologist before? Have they had any cardiac evaluation? And if they have, what was found? Have they had previous open-heart surgery? It's tough to go through open-heart surgery one time, let alone a second or third time, so we would like to offer those patients great results without the trauma of a repeat operation. Getting this information from the patient's primary doctor helps us triage so that we can get the best therapy for the patient as quickly as possible.

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Now that TAVR is being offered for patients across the risk spectrum—whether routinely or in low-risk–patient research trials—what makes a patient unsuitable for TAVR?

MR: One issue is that we are still limited in the valve prosthesis sizes available for TAVR. Right now, we basically have small, medium, large, and extra-large valves, but there are some people who need an extra-extra-large or extra-extra-small. So those are the patients, unfortunately, that we have more trouble treating with TAVR. We've been working on developing those different sizes, but for now valve sizes are still a limitation.

What are some common concerns that you hear from PCPs and cardiologists who refer patients to you?

MR: Their biggest concern is, "Am I ever going to see my patient back?" Obviously they've established a great relationship with their patient, so I want to reassure them that they are key to the patient's treatment. They will get all the data from the very beginning of the evaluation. I'll share the valve team's thought process and updates on how the patient is doing from procedure to follow-ups. And the patient, more importantly, is going to go back to their original doctor to maintain that relationship.

Another question I get is whether TAVR is "ready for prime time." My answer is: Resoundingly yes! It's been ready. We already are in prime time, and it's doing great. Since the indications for TAVR are changing so fast, I think many doctors wonder, "Is my patient not sick enough, or are they too sick?" We can answer those questions and find the best route to take care of the patient.

What's your take-home message for your healthcare colleagues reading this interview?

MR: We are in a new era of medicine. It's quickly evolving and now we are able to offer therapies that we never could before. That's not just in the aortic valve realm with aortic stenosis, but now also with other degenerative valves, even surgical valves. Now we are doing things in the other parts of the heart that are pretty astounding. I think it's important for general cardiologists, internists, and primary care doctors to have a good resource that they can go to for help with complicated cases. It would be unfair to expect physicians to know all the options outside of their specialty, so having colleagues who they can call anytime is invaluable. I think the most important thing is knowing when you need to "phone a friend." Just call us. We are here to help.