2023 AATS Annual Meeting
Discussion to: Results of a Postoperative Telemedicine Trial after Cardiac Surgery and Incorporation into Practice

Presenter: Dr. Judson Williams, MD, MHS1,2
Invited Discussant: Dr. Arman Kilic, MD3
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Disclosures: None

S1: 00:01 Unidentified Speaker 1:

Do we have our invited speaker, Dr. Kilic? Discussant, I mean.
Dr. Arman Kilic (Charleston, SC):

Is this on? Thank you to the AATS for the invitation to comment on this paper. Dr. Williams, excellent presentation. We're entering an era where digital health, telemedicine and remote monitoring will have an increasing role in healthcare. Of interest, we will now have a pipeline where patient data from wearable technology can be directly accessed and analyzed by external parties without necessarily the input or interpretation of relevant clinical providers. This is a point that is likely outside the scope of this discussion, but I think it is an important point to consider as big tech has an expanding footprint in the healthcare domain. Clinicians must drive the conversation and framework for how the patient facing technologies are incorporated in the decision making and quality improvement. With that preface, I applaud the authors for their work. I have two questions. Number one, patients can have different risks for readmission based on baseline pre-operative factors, intraoperative course, and post-operative complications. Did you adjust for these differences? And number two, for surgeons or programs interested in implementing these types of programs, do you have any more granular comments on overall cost of the wearables and staffing required. And perhaps some insight into the financial implications and bottom line for hospital finances. In other words, how do we sell this to hospital administration from a fiscal perspective? Thank you.

Dr. Judson Williams (Raleigh, NC):

Thank you. Three great points. I'll start with the first one with data collection and third-party vendors. We actually across our service line, we have nine cardiothoracic surgeons, and not all were excited initially about the remote monitoring. And that was one of the advantages of starting with the trial - the externally funded Perfect Care trial. Many of our surgeons were more comfortable with if the patient has a problem, they want the traditional phone call to a nurse. And a nurse in the office to call the surgeon with control over that flow of information. And as you said, maintaining clinician input and not relying on apps and these other things. So, comfort did have to be developed with many of our surgeons. And your point is well taken. I think the first question was risk adjustment. There are several well-established predictive models for readmission after CABG in particular. We did not apply those. And certainly, the Perfect Care patient cohort was a selected group. At that point, they had to be savvy with the apps and the technology. And we felt that there would be no way to account for-- to adjust for that uncaptured risk between those that participated in Tele-heart, and those that did not. The ones that did not, many of them were discharged to a skilled nursing facility or they were our endocarditis patients with mental health concerns or IV drug use. A very expensive cohort to take care of. Which leads to your third point. Our estimated annualized direct variable cost reduction from the program was $7 million for the system. Which was really a pretty staggering result. That will have to be vetted through a much more detailed cost analysis, accounting for the bias clearly between those in and those not in the program.
Okay. We probably have time for one question. We're going to have very shortened discussions in this session because of scheduling issues.

I'll try to be quick. Rakesh Arora, University Hospitals in Cleveland. Judson, yet again, is really leading the way for all of us in how to do this better. And at a much earlier stage than we've even conceptualized a lot of this work. For these patients, how do you start this process? Is it done whilst they are in hospital, or do you start this study in the stage of what's going to look like the discharge before? And two, leveraging other processes such as hospital-at-home that we've learned through COVID, where do you see the intersection of those two different kinds of in-person versus tele-remote monitoring for patients to improve upon the success you've already shown.

Yeah, great question, Rakesh. We engaged with our marketing team actually, to really promote the program. We learned from the Perfect Care trial that contrary to what you might think, not everyone was really eager to send data through apps and have all this real time collection and you know everything about me, throughout the day and what I'm doing and what's going on in these spikes at different times. Not every patient was on board with that. But we really branded it out. We started with for outpatients in their pre-operative heart center clinic appointment. They were given a handout, a one-page sheet about what this program is and that they're going to be in it. Brandon and I even have a pen, a Tele-heart Care pen that the patients get in their packet, and really tried to drum it up.

Thank you.

Thank you.

[applause].