**Title: ACC 23: BMAD Trial: μCor in Ambulatory Decompensated Heart Failure**

**Participants: Dr John Boehmer**

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**Dr John Boehmer**

"- My name is John Boehmer. I'm a professor of medicine and surgery at Penn State College of Medicine.

What is the importance of this study?

We're looking at ways of preventing re-hospitalization following an admission for heart failure. That's a major problem because the excess of 20% of patients are readmitted within 30 days and an excess of 40% by 90 days. The main reason they're readmitted is for another diagnosis of heart failure. So we need a better way of managing those patients during a high risk period for a heart failure hospitalisation.

Could you please tell us about the MicroCor System

So MicroCor is a small adhesive patch. It's a wearable device that uses low energy, radiofrequency energy in order to get a measure of lung fluid contact. By doing that and combining it with data on heart rate and respirations, it's able to provide information to clinicians, which is then actionable.

What was the patient population and study design?

Benefits of MicroCor and acute decompensated heart failure trial is a two arm concurrent control clinical trial. It's not a randomised controlled trial, but had two arms, an intervention arm and an observation arm going on concurrently. We then compared the results for heart failure hospitalisation between those two arms.

What are the main findings?

So the intervention arm where clinicians were able to see the data as well as the patients able to see the data, and the clinicians were able to act on it, there was a 38% relative risk reduction in the risk of a heart failure hospitalisation. When we looked at the risk of a combined event of heart failure hospitalisation, and emergency department visit, or death that was also reduced by 38%. That is a 7% of patients total who would've had a heart failure hospitalisation, did not as a result of this intervention, or a Number Needed to Treat of 14.

How can these findings be put into clinical practice?

Well, we hope that this will be a new tool that you will have for heart failure patients. And one of the good things about it is it's a wearable device. It's not a long-term device that's implanted and goes on and on. This is just for the period of time where patients are at increased risk. Meaning that once you, the patient is beyond that period of risk, you can utilise it on a different patient. So we hope that this will be utilised in practice now and will be another tool that we have to monitor patients through a high-risk period. And further analyses are coming to help us understand exactly how this work and exactly what interventions work best.

What are the next steps?

So the next step is going to be delving into the database more, looking at what interventions were made by practitioners, and then seeing which interventions had the most impact on reducing heart failure hospitalizations, and then coming up with the the best practices based on those findings.”