

AI-ECG helps physicians detect hidden heart condition

INTRO: A simple 10-second heart test with the aid of artificial intelligence is helping physicians detect a serious, often-overlooked disease.

For Rochester businessman Mike Busch, that technology proved life-changing. After months of unexplained symptoms, an AI-enhanced ECG helped doctors at Mayo Clinic quickly uncover a diagnosis that might otherwise have been missed.

Jason Howland shows how AI is transforming cardiac care and helping patients get the treatment they need sooner.

VIDEO	AUDIO
	"Just a lot of good people."
Jason	At the age of 77, Mike Busch says he has no plans for retirement.
10:27 Mike	"I still work full time."
Jason	Spending time with Carol, his wife of 51 years, running his business and promoting youth wrestling in the region means Mike is always on the go.
Jason	But in 2023...
03:40 Mike	"... felt like somebody was sitting on my chest."
Jason	... his health became a concern.
04:12 Mike	"I kind of lost my balance, and kind of fell a little bit."
04:15 Mike Busch Rochester, Minnesota	"I knew I had to probably go in and see somebody. I had been putting it off too long, and went into Mayo."

Jason	His doctor ordered an electrocardiogram, or ECG. It's a simple 10-second test that records the heart's electrical signals. Unbeknownst to Mike, he had developed a heart condition called cardiac amyloidosis.
Martha Grogan, M.D. Cardiovascular Medicine Mayo Clinic 00:59	"Cardiac amyloid is a condition where abnormal proteins deposit in the heart."
Dr. Grogan 01:41	"It makes the heart stiff and causes problems with heart failure."
14:14 Mike	"I kind of suspected something, but I didn't think it was that serious."
Jason	His doctors were able to quickly diagnose him, thanks in large part to AI.
16:24 Mike	"Artificial intelligence, isn't it? I think. I'm not sure."
24:35 Dr. Grogan	"The algorithm that we have to detect amyloid was strongly positive. Our scale goes from zero to 100, and he ranked a 98."
03:30 Paul Friedman, M.D. Cardiovascular Medicine Mayo Clinic	"It begins to learn what the patterns are, and then when it's all done, we can give it an unknown ECG and say, 'Is the pattern that suggests amyloid heart disease present, yes or no?' And it's a very powerful classifier. It can see signals that are hidden to humans."
Jason	That's vital for patients with cardiac amyloidosis, which is often misdiagnosed as other types of heart problems, delaying important treatment.
07:59 Mike	"I couldn't believe it, put it that way."
Jason	This AI-ECG tool was developed at Mayo seven years ago, and recently received FDA clearance.
Dr. Friedman 06:52	"Since the introduction of the AI-ECG at Mayo Clinic, it's now been used over a million times by clinicians in screening for various heart conditions."
13:09 Dr. Friedman	"It's a powerful test, and it can have us point not our stethoscope, but maybe our looking glass in the

	right direction, so we don't miss things that are important and that are treatable."
Jason	Mike takes his medication, continues to follow up with his doctors, and still stays busy.
10:37 Mike	"I don't see any changes as far as my work ethic goes."
13:06 Mike	"I'm fortunate to be where I'm at, and I'm happy with Mayo Clinic and what they've done."
Jason	For the Mayo Clinic News Network, I'm Jason Howland.