

## Tool Transforms Analog Stethoscope to e-Stethoscope



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Stanford startup Eko Devices has developed a digital accessory for analog stethoscopes to transform them instantly into electronic stethoscopes, *MedCity News* reported.

The aim is to have a clinical decision support tool with a digital capability without the price tag of an electronic stethoscope, according to Eko. The device will enhance the ability of clinicians to detect nuances in heart sounds, thus reducing the error rate for misdiagnosed cardiac events and cutting the costs of unnecessary tests, the company said.

The Eko Core attachment can be connected to an analog stethoscope in about one minute, and users just have to use a switch to go from analog to digital. The device uses low-energy Bluetooth to transmit audio and analyse heart sounds by using a cloud-based heart murmur detection algorithm, said Jason Bellet, Vice President of Business Development at Eko.

### Audio-Visual Display of Heart Sounds

A mobile app provides an audio and visual display of the heart sounds that can be saved in a patient portal and added to an electronic health record (EHR). This innovation makes it easier to share heart sounds, thus helping primary care physicians with referrals to cardiologists, Bellet noted.

“Our goal behind Eko is to create an affordable and easy-to-use stethoscope solution that will advance the adoption of digital stethoscopes, increase the ease of heart murmur screenings, and reduce unnecessary echocardiograms,” said Bellet.

In addition, the digital device can be used by paediatricians to detect faint murmurs in young patients. It could also serve as a useful training tool for aspiring cardiologists, the Eko official said.

As EHR adoption is projected to reach 90 percent by 2016, healthcare professionals are keen to integrate the Eko product with their EHR/EMR for them to securely save and share patient heart sounds, Bellet said. Eko plans to file an application for 510(k) clearance for a Class 2 medical device with the Food and Drug Administration (FDA) this fall, and hopes to bring it to the market in the spring of 2015.

The company will not be the first digital stethoscope accessory to obtain FDA clearance, according to the *MedCity News* report. In 2013, Rijuven received FDA clearance for its cardiosleeve but its website is still taking pre-orders.

### Electronic Stethoscope Market is Fragmented

Not everyone supports the use of electronic stethoscopes. Critics claim these devices do not significantly improve the sound quality. In fact, they can make it more difficult to accurately hear heart sounds because they combine too much ambient sound, critics say.

Apart from 3M, the market for electronic stethoscopes is fragmented. Global Industry Analysts estimated that the electronic stethoscope market would reach \$342 million by 2017.

While the market opportunity is not huge, this does not seem to have daunted Eko's investors nor its collaboration partners. The company has received \$800,000 in seed investment and is developing strategic partnerships with hospital systems, EHR companies, and medical associations, according to Bellet.

Source: MedCityNews.com

Image Credit: Eko Devices

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