

# Ear-check via phone can ease path to diagnosis

December 18 2014, by Nancy Owano

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Ear infections are common in babies and young children. That it is a frequent reason for young children's visit to doctors comes as no consolation for the parents of babies tugging at their ears and crying as the parents try to get speedy appointments and travel to consultations. A system for easing the path to a doctor's diagnosis and treatment is being offered in the form of Oto HOME, a smartphone-enabled ear-checker tool, which families can use at home.

An otoscope attaches to the smartphone; the black conical device is

inserted into the ear. A companion app lets the caregiver take a video of the child's affected ear. The video is sent to a medical professional who can diagnose and provide advice. CellScope said on its blog, "Simply take a video with our app and hear back from a doctor within two hours using Oto CONNECT." The Oto HOME itself costs \$79, on pre-order online during a limited release in California, and remote consultations cost \$49 per consultation, with the first free when you buy the device. The device is only available for pre-order in California. Remote shipping will start, according to the company, in late December. More states are on the way, according to the company. "Consumers outside California can sign up to be notified when it is available in their state, anticipated in mid-2015."

The system from CellScope is HIPAA-compliant, meaning compliant with federal and state privacy laws under the Health Insurance Portability and Accountability Act of 1996. Each user controls a password, and cannot access the account or mobile app without it. For additional security, CellScope uses the latest SSL encryption technology to automatically encrypt each session and any personal identifiable information.

The Oto HOME works with the iPhone 5/5s. The team said iPhone 6 support is coming soon. "Right now the Oto works exclusively with the iPhone 5 or 5s models running iOS version 7.0 and above. Our hardware team is working hard to design newer versions that will be compatible with the iPhone 6 and other smartphones."

The company is offering a \$299 professional version of the device. The Oto PRO is an iPhone-enabled otoscope and software designed for clinicians, and it is available on pre sale nationwide. The smartphone otoscope can capture, view and share magnified [images](#) of the tympanic membrane. The web site said that these devices will ship in four to six weeks.

San Francisco-based CellScope is focused on smartphone-enabled digital tools that can capture diagnostic-quality data. "In the same way that banking has moved from the branch office to the mobile phone, CellScope aims to deliver healthcare wherever you are," said co-founder and CEO Erik Douglas. The company's story is rooted in a bioengineering lab at the University of California, Berkeley. Prof. Dan Fletcher, a professor of bioengineering and biophysics, has experience developing high-resolution [optical imaging](#) systems and other medical devices. The Fletcher lab has worked on cellphone microscopy, creating mobile microscopes for remote diagnosis of infectious diseases like tuberculosis and malaria. Amy Shen and Douglas, CellScope cofounders, said they were inspired by the impact of that work and "spun out" CellScope.

**More information:** [www.cellscope.com/](http://www.cellscope.com/)

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